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NEW LISKEARD

Breaking Ground

(in Northeastern Ontario) WINTER 10/11

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

SDSCIA Summer Crop Tour

On August 06, the Sudbury District SCIA toured "The Valley" with an open invitation to all NEOSCIA members to join them. An enthusiastic group boarded the bus at 10 a.m.and headed to the first stop - a visit to the Xstrata Onaping Tailings Management site. Here they viewed energy crop research plots growing in organic residual covers on the mine tailings.



Later in the day, they would visit Greenzone Farms in Chelmsford to compare the same plot layout growing on agricultural baseline soils. Lunch was held at Beaulieu Farms in Blezard Valley where the meal consisted primarily of food grown on this produce and berry farm.

After lunch, the bus made a stop at Valley Growers in Blezard Valley, for a visual evaluation of the potato growing, processing, and packing operation. There was also a short stop at Sudbury Downs before returning to Market Square in downtown Sudbury for a BBQ hosted by "Eat Local Food Sudbury" and the Farm ON Alliance where the meal again gave focus to local producers.



NOTE: Sponsors/Advertisers needed for coming year. \$500 for 4 issues!

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

COMING EVENTS

Special Event

On Thursday, January 06, 2011, The Northern Ontario Regional Office of OMAFRA is holding a special event for northern farmers. They will be holding a "Webcast" of the South West Ag Conference (Ridgetown) at the Sturgeon Falls and New Liskeard campuses of College Boreal. Pierrette Desrochers will host the Nipissing link while Dan Tasse will host the Temiskaming connection.

There will be 2 concurrent sessions to chose from. The Pioneer lecture will include a panel on the Future of Agriculture; a study of "Roots- The Foundation of Yield; Managing Glyphosate Resistance; Quest for 300 Bu. Corn; Top Yielding Soybeans; Corn Strategies 2011; and Wheat- Raising the Bar.

In the Syngenta lecture we will examine Better Crops for Safe Water; Farmstead Energy Options; Succession Planning; Tillage, Erosion, and Field Variability; Variable Rate Opportunities; Would More Nitrogen Pay?; and Biomass Marketing Opportunities.

Registration at the door will be \$60, but be sure to let OMAFRA know that you are coming so that they can order your hot lunch! Call them at 1-800-461-6132 and let them know which site you will be at.

Earlton Farm Show Grows Again

NEOSCIA President Janet Parsons

For those living outside of Temiskaming, it's not too early to start thinking about attending the Annual Farm Show and Conference in Earlton. The trade show, speakers, and seed fair are currently being planned. A couple of years ago a feature on maple syrup from Powassan was added and that has been a great success.

For 2011 a new feature called "Living in the Country Expo" will take over the upstairs hall. The "Living in the Country Expo" will focus on rural life skills and farming on a small scale. Amy Hallman, FarmOn Coordinator for Northern Ontario, is working with Graham Gambles on the Expo. She adds that the Expo would be of interest to owners of small acreages, newcomers to farming, looking for manageable points of entry to the business, and people who would like to gain practical homesteading-type skills.

While planning is in the early stages, it is hoped that a 'chicken tractor' will be on site with all the information one needs to have a few layers to provide fresh eggs all year for the family. Also a topic of interest to the horse owner is in the works. There will be lots of vendors catering to the needs of anyone living in country.

The number one attraction will be the Canning and Preserving Workshop by BerNARdin . This event will take place on Friday evening and there will be a fee (canning kit included). This workshop has been held in other communities and has been extremely successful so you will need to sign up early. Attendance is limited.

So mark your calendar for April 8 and 9 and plan on attending the evergrowing Farm Show, Conference, Seed Fair, and Living in the Country Expo in Earlton. And don't forget, the annual meeting of NEOSCIA is being held on the Friday afternoon. Everyone is welcome.





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Brocking From (in Northeastern Ontario)

Acknowledgement of Good Animal Care at NLARS

by John Rowsell, Head of NLARS Research

We take very good care of our cattle at New Liskeard Agricultural Research Station (NLARS). At least, that is the opinion of the Canadian Council on Animal Care (CCAC), and their opinion counts with us, BIG TIME.

The University of Guelph adheres to guidelines for the care and use of animals in research developed by CCAC. If we are not in compliance with the CCAC guidelines, we could jeopardize major sources of funding to the University that affect everyone from the animal researchers to the astrophysicists, even if they don't use animals. The guidelines on the use of farm animals for research, as well as other guidelines, can be found at www.ccac.ca.

CCAC performs a site assessment of our facilities every 3 years. Their most recent assessment was on November 24.

They aren't the only ones who take a look at our operations. We are inspected at least once a year unannounced by the Inspector, Animals for Research Act, OMAFRA. As well, we perform our own site assessments at least twice a year. Members of the Animal Care Committee from the main campus come to New Liskeard to help us with those assessments. We also depend on the assistance and opinions from our attending veterinarians from Temiskaming Veterinary Services.

Our interest in providing good animal care is not just compliance with rules. Valid research results demand that the animals be well cared for. All of the cattle at NLARS belong to the Ontario Cattlemen's Association and they trust us to give the best care possible.

So, when the Assessment Director of CCAC stated that NLARS has the 'best managed beef research facility in Canada', we were indeed proud.

On Farma Grain On Farma Grain Marketing Summary Soil Sampling & Analysis - You tube Wideos

by Janet Parsons Profit

You tube has made to ustewart the mipf you market grain using delivery contracts and are looking for a way to keep track of all those contracts then maybe you should watch the You tube video 'On Farm Grain Marketing Summary'. When you check this out you'll be clicking into the newest approach to sharing good ideas amongst farmers.

Janet Parsons, a former dairy farmer turned cash cropper, had a problem keeping track of grain contracts and sales. As she says "marketing hundreds of tons of multiple crops over multiple years is a different kettle of fish to selling milk to the marketing board."

Grain marketing is done year round and typically over three years: the year before the crop is grown, the year it's grown, and the year following. As she explains, "this way the farmer can even out crop pricing." Janet figures she's not alone with this problem and decided to share her solution with other farmers. "With today's technology it's simple to do." She used a 'minoHD Flip video' camera.

After making the video she uploaded it to You tube and that was it. The quality of the video is lacking with respect to the spreadsheet clarity but you still get the idea. Whatever the marketing strategy a farmer uses, he needs to keep track of the grain. This video shows one way. Janet notes that you can use a pencil and graph paper as well but it's just not as flexible.

There are no formulas used in the spreadsheet so you can add more columns for more information and more rows for more contracts at will. You do the calculations manually but you could use formulas if you wanted. To see the video go to google and type in 'On Farm Grain Marketing Summary', then click videos (top left of screen) and look for it. You'll see a picture of a spreadsheet with yellow lines.For those who can't access high speed internet the column headings are split in three sections.

Section 1 is headlined with Crop, Acres, Predicted Production per acre (based on crop insurance farm averages), Total Predicted (tonnes), Crop insurance coverage yield per acre, Total crop insurance coverage (tonnes), Tonnes to contract.

Section 2: Date taken of production contract, contract delivery date, price, tonnes, running total of quantity left to contract, % sold of predicted production.

Section 3: Actual production, tonnes left to sell, Date taken of production contract, contract delivery date, price of contract or direct sale, tonnes, Running total of tonnes left to contract or sell, and % of actual production contracted or sold. On the left side under 'crop', you enter your first crop followed by fields on the next line and then acreages. Leave a few spaces and repeat with the next crop. On the computer spread sheet you can scroll from year to year whereas if you were using paper and a pencil you would probably put one year per page.



BAR (in Northeastern Ontario)

CSCIA Annual Meeting

Over 20 members of the Cochrane SCIA met on the evening of Dec.09 to plan for the coming year. District Director Mack Emiry (from Massey) was there to discuss the proposed Provincial Fee Increase to \$7.50 per member, and also promoted the upcoming OSCIA Annual Meeting in Niagara Falls come February.

The group made the necessary commitments to sustain the leadership of the local organization, and discussed potential summer projects as well as the annual picnic.

OMAFRA representative Dan Tasse spoke on the highly successful past season for canola production, and demonstrated the effective use of developing your own "Field Crop Budget" sheet.

Graham Gambles, the Regional Communication Coordinator for NEOSCIA. discussed the 2011 Earlton Farm Show and Conference (April 8&9) and gave a brief description of the new "Living In The Country Expo" that will be staged upstairs at the Earlton Arena. He also outlined the development of a major (4 day) bus tour for regional members in the summer of 2012. It is proposed that the north-eastern farmers visit the thriving farm community that surrounds Lac St. Jean (Saguenay Region) in Quebec. Although isolated, the area is very comparative to our region in terms of climate, soils, topography, and farm production.

Germany in the Fall

By Sharon Lane, Regional Correspondent to Breaking Ground

I recently (September 28 to October 20) had the opportunity to travel to Germany with my daughter. We decided to visit a city in the north of the country that we had not had time to explore properly previously. So after a couple of days in Frankfurt, we headed to Schleswig-Holstein province in the northeast to Lubeck, a restored

medieval walled city. We took the train from Frankfurt via Kassel to Hamburg and finally to Lubeck. From Lubeck, we travel southeast, again by train, to Berlin. After five days in Berlin, we went south to Auasbura and on to Munich and then back west to Heidelberg. From Heidelberg, we again headed east through Kassel to Gottingen and finally back to Frankfurt to fly home. In all of these train rides, we traverse Germany several times.

My impressions of the German countryside as we criss-crossed the country were that it was very neat and tidy. I don't remember seeing any unkempt plots of forest or fields. Fields are very small when compared to Canada and appear to be well managed. The sheep pictured in the photo were in a small field in the village of Seeburger beside a bus stop between two homes.



Sheep (Possibly Shetland – a rare and old breed from the Shetland Islands) grazing in a paddock in Seeburger near Gottingen

Continued on page 5







BAR (In Northeastern Ontario)

Germany in the Fall

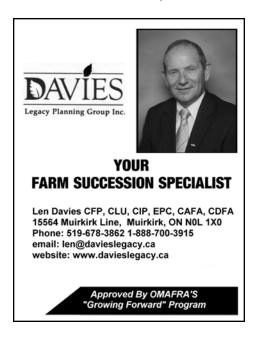
All land is utilized in the North German Lowlands. The Basin area north of Munich to Berlin and Luceck has loess soil with a moderate continental climate and a long growing season. This is the "breadbasket" of Germany. The extreme weather from June to August this summer affected crops, resulting in a 12% drop in yield from last year. Heavy rain damaged the wheat crops and yields were down 5% but not enough to cause a shortage only forcing the price up. Silage corn yield was down. Fields of corn had not been Continued from page 4

harvested yet in early October probably because machinery could not get on the fields. Some rivers were in flood conditions as we travelled from Berlin south to Augsburg. Farmers may have to harvest it after a frost like they are doing in Southern Ontario. Some crops – beans, turnips and sugar beets – were still growing in mid October. There is a high yield in potatoes and beets this year. Winter barley was affected less because it ripened earlier. This was probably good news to

Continued on page 19

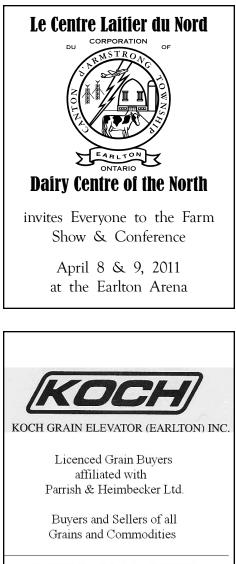


Farmers' Market in Marktplatz in Lubeck





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Breaking Ground (in Northeastern Ontario)



OSCIA News...

November 2010

A NEWSLETTER TO UPDATE OSCIA MEMBERS, PRESIDENTS, SECRETARIES, TREASURERS, DIRECTORS, AND OMAFRA AGRICULTURE DEVELOPMENT CONTACTS —

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Ontario Soil and Crop Improvement Association 1 Stone Road West, Guelph ON N1G 4Y2 Phone: (519) 826-4214 or 1-800-265-9751 Fax: (519) 826-4224 E-mail: oscia@ontariosoilcrop.org Web site: http://www.ontariosoilcrop.org



Date: February 8 & 9, 2011 Place: Sheraton Fallsview Niagara Falls

Message from the President



In my last letter I was happy to point out the tremendous efforts put forth by the local associations in producing excellent workshops and summer field day events for their members. Volunteers are the lifeblood of this organization and we can't thank them enough.

Barry Hill So too with our OSCIA Board members, who continue to volunteer but with additional commitments added to their already busy farm life. Since we reduced the number of Directors sitting on the Board, we have at the same time raised the bar of expectations for their involvement in the organization.

OSCIA Board members are assigned to represent the organization on 15 Ontario Agricultural Research Committees and 3 agricultural coalitions. Oftentimes our representative is the only farm voice at a table of academic and industry research experts. For this reason alone we need to have aggressive, experienced farmers as our representatives. Hardly a week goes by without a meeting report coming through our e-mail system.

Each month the OSCIA Executive hold a teleconference with the full Board, where activities are discussed, minutes reviewed and any issues can be aired. The Directors are provided with a handbook which is intended to help with the performance and administration of their regional and provincial duties.

At our strategic planning sessions, held on three occasions over the last two years, support to local associations was identified as a high priority item. Consequently steps to assist the locals are under way. We are beginning with the issue this week of a Local Association Handbook, filled with useful information for the local executives and secretaries to manage their interactions with both members and our OSCIA office in Guelph. We look forward to your feedback to make this book a strong link in our chain of operation.

The Regional Communications Coordinators, so critical in our link to you and to the dissemination of OMAFRA

BAR (In Northeastern Ontario)

information, have been supported by providing them with a voice in Guelph, a lead RCC to help ensure that all issues are addressed and that all RCCs are equipped with the skills and resources they need to do the right job for their region.

We continue to devote resources to our website. Just this week we added another link, this one to the Ontario Invasive Plant Council. Look under the "About OSCIA" tab on our website task bar and you will find 32 links to resources and organizations important to your farm. We even have a weather link.

Try what I do each morning: with that first cup of coffee, while the house is still quiet, I log onto OSCIA, (I have it as my home page), link to the markets, (I added my favouriet market link), check the weather and the top news stories field which is constantly updated on our website.

In the future, I hope to share some of the involvement the Executive has with university and government agencies, as well as direct contacts with the OMAFRA Minister's office.

For now, let me close by wishing for you a safe and successful harvest season.♦

2010 OSCIA Annual Meeting Speakers

A number of excellent speakers were featured at the 2010 Annual Meeting, whose presentations have been summarized in each issue of OSCIA News during the year by members of the OSCIA Regional Communication Coordinator team. Following is one of those summaries.

"NEW TECHNOLOGIES ON THE HORIZON" – Adam Hayes & Hugh Martin, OMAFRA

as summarized by Krista Gladstone, RCC, St. Clair

At the 2010 OSCIA Annual Meeting that was held in Niagara Falls, Adam Hayes, Soil Management Specialist, OMAFRA Field Crops, and Hugh Martin, Organic Crop Production Lead, OMAFRA Horticulture, offered some insight into new technologies in agriculture.

Adam Hayes started off by discussing soil health issues. Why do we even assess soil health? There are many reasons for this, including targeting management practices to address soil constraints, quantifying soil improvements from implementing new or modifying current soil management practices, facilitating applied research and assisting with land valuation (putting a value on soil health).

The Cornell Soil Health Assessment looks at the physical, biological and chemical properties of soil. Using various equipment including a penetrometer and megadripper, the Cornell researchers looked at physical properties such as surface and subsurface hardness, aggregate stability and available water capacity. Biological properties that were looked at included organic matter, active carbon, potentially mineralizable nitrogen and root health rating. Chemical properties included pH, extractable phosphorus, extractable potassium, magnesium, manganese and zinc. OMAFRA soil management specialists are evaluating the test for Ontario soils. In 2009 samples were taken from the long-term tillage and rotation plots at Ridgetown and Elora in cooperation with David Hooker and Bill Deen of the University of Guelph. In 2010 samples will be taken from farms across the province. Following that, the data will be analyzed to see if the assessment will work for Ontario.

Adam also updated the group on the recent changes to the Non-Agricultural Source Materials (NASM) framework. On September 18, 2009, the Ministry of the Environment and the Ministry of Agriculture, Food and Rural Affairs jointly announced new rules and guidelines for applying non-agricultural source materials (NASM) to farmland. These changes to the management of nonagricultural source materials are designed to strengthen the rules and remove overlapping approval processes for farmers and generators of NASM. They will also ensure that all nutrients are managed in an environmentally responsible manner.

Basically, there are two types of prescribed materials: Ag Source Material and Non Ag-Source Material (which includes yard waste, fruit and vegetable peels, food processing waste, pulp and paper biosolids and sewage biosolids). All of these materials are regulated under the Environmental Protection Act. Some of the changes to the framework include NASM generators being allowed to remove NASM Nutrient Management Strategy requirement from their operation, remove 240 days NASM storage requirement, and broker certification is not required to transport NASM. A plan will now need to be developed for each site that NASM materials are applied to as well an odour classification system will be implemented affecting setbacks.

There will be a 5-year transition period for these changes to take effect that will be broken down into two stages. Stage 1 changes will take effect immediately upon filing of the regulation and consists of general requirements that establish the framework. The general requirements are needed to transition to the requirements of the new system for managing NASM which take effect at stage 2 on January 1, 2011. The OMAFRA website is in the process of being updated with this information. Michael Payne, Environmental Specialist with OMAFRA, is the resource person for this topic.

Adam also updated the group on some exciting new software developments. Mike Cowbrough, Weed Management Field Crops Program Lead, OMAFRA, has been developing two new websites related to weeds and weed control.

<u>www.weedinfo.ca</u> was designed to be an ever-growing knowledge base of weed information. Combining biological and identifying characteristics of top interfering species along with new emerging research articles, media, and control options, weedinfo.ca provides the tools to make informed risk-reducing weed control decisions. Adam gave a brief tutorial on how this new

BFFERIE (In Northeastern Ontario)

website works. This easy-to-use tool should be an effective resource for producers and agri-business. It is also available in smart phone format at m.weedinfo.ca

www.weedpro75.com is an online herbicide selection tool that focuses on profitability and environmental stewardship. In 4 simple steps, registered herbicide options are presented which best match your chosen weed spectrum. You can sort through these herbicide options and determine the best match based on your priorities as a producer. It is also available in smart phone format at m.weedpro75.com

Hugh Martin presented an update on organic crop production. Basically, it is a blend of modern techniques and traditional wisdom. Hugh announced that certified organic regulations have now been passed and a new Canadian organic logo has been developed. Imports are now regulated and they must meet Canadian organic standards and regulations. Most people don't realize that the majority of organic produce in Canadian grocery stores is imported from the USA.

Crop rotation is essential in organic crop production. It is imperative that organic farmers effectively manage soil fertility and health while employing strict weed management. Many organic farmers use manure or compost to control their soil fertility. Cover crops are also used.

Crop health and crop competition must be closely monitored. To control insects and disease, many organic farmers use biopesticides including plant extracts such as oils/pyrethrums/etc., biological controls including microorganisms, and other methods such as hydrogen peroxide, sulphur, copper, insecticidal soaps, pheromones, etc. Resistant crop varieties are also key to managing these pests. Weed management in organic crops is difficult but can be obtained. The number one tool for effective weed management in organics is time management and the ability to manage weeds before they get ahead of you!

All of the management strategies listed above must be applied in a time-sensitive fashion. There has been some discussion about no-till in organic crops. Research is ongoing in this area but has not yet been perfected.

For further information on Organic Agriculture, please go to:

http://www.omafra.gov.on.ca/english/crops/organic/ organic.html

Seed Bytes - New Online 'Seed Locator'

- Harold Rudy, Secretary Manager, OSGA

Starting in late November, the Canadian Seed Growers' Association (CSGA) will have established a user friendly, searchable data base of all pedigreed seed growers in Canada. It will list pedigreed seed crops produced in the current year for varieties that are eligible for sale in Canada. This online seed directory will be the go-to source to find Certified seed. This service is provided free to CSGA members growing pedigreed seed and will provide a direct link to each grower's website. Look for the 'Seed Locator' in the weeks to come at the CSGA website: www.seedgrowers.ca ◆

Farm Business Management Benchmarking Study

- Mick Terpstra, Program Manager, Farm Business Management, OSCIA

OSCIA is partnering with IPSOS Forward Research Inc. to conduct a baseline evaluation of awareness, familiarity and usage of farm business management programs and tools among Ontario farmers. IPSOS will contact producers to participate from an OSCIA eligible list as well as an IPSOS producer database. The OSCIA eligible list is made up of producers who have completed an enrollment form for the Business Development for Farm Businesses program.

The study includes six focus groups of eight to ten producers to be held across the province later in November. IPSOS will be contacting producers in early November seeking their participation.

IPSOS will contact a sample of producers in January for a telephone interview that will be approximately 20 minutes in duration. The interview will also include a few questions regarding the producers experience with the Business Development for Farm Businesses program.

The study will also evaluate the types of business management activities producers plan to complete by reviewing action plan summaries on file with OSCIA.

Participation in the study will provide great insight into the types and extent of business planning activities that are being undertaken by farmers. This information will be extremely useful in identifying ways to better meet the needs of the agricultural community. Information collected will be kept strictly confidential and analysis will be conducted and reported on an aggregate basis.

OSCIA wishes to thank producers in advance for their participation. Your contribution will be a critical component in the success of the study.

The study is made possible by the Agriculture Management Institute (AMI) with funding made available through Growing Forward, a federal-provincial-territorial initiative.♦

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BARE THE FAILING (in Northeastern Ontario)

Benefits for OSCIA Members

This fall and winter, the provincial Director for your region will be providing an overview of membership benefits and future opportunities to benefit members.

In response to a recent recommendation by the OSCIA Membership Committee, the Board passed a motion of support of their proposal to increase the membership fee per member from \$5 to \$7.50. The motion will be voted on by the delegates at the annual meeting on February 8, 2011, with a resulting change to the OSCIA Constitution for the membership year 2012.

The benefits to members are many, and local associations are asked to reflect on these benefits. Suggestions for future opportunities to support the local associations and members will be most welcome. ◆

Local Annual Meetings

Need a gift idea for your local annual meeting? What about an OSCIA vest and matching hat?



Double-sided fleece vests with the OSCIA logo embroidered, and embroidered OSCIA hats are available for your local association to use at upcoming winter meetings as gifts for a special member or speaker, or as fundraising items at upcoming local annual meetings. Also available are OSCIA member gate signs and Tru-Chek rain gauges.

These items are available to local and regional associations on a cost-recovery basis by contacting the provincial office.♦

ATTENTION SEED GROWERS

Watch for the notice of the OSGA Annual Meeting coming to your door in November.

Promote Your Local Association

OSCIA has four stand-up displays that highlight the grassroot involvement, membership, and activities of local Soil and Crop Improvement Associations.

These displays work well as a group, and can also be very effective when displayed individually.

This item can be provided to local and regional SCIAs by contacting the provincial office. \blacklozenge





CROP TALK

OMAFRA Field Crop Specialists – Your Crop Info Source

Ontario Ministry of Agriculture, Food & Rural Affairs, Crop Technology Branch

Agricultural Information Contact Centre: 1-877-424-1300 Publication Order Centre: 1-888-466-2372 Northern Ontario Regional Office: 1-800-461-6132 OMAFRA Web Site: www.omafra.gov.on.ca

Additional Information from OMAFRA



En françcais!

L'inforation du Ministère de l'agriculture it di lalimentation de l'Ontario est disponible sur le site web du MAAARO en françcais au www.omafra.gov.on.ca

At this boliday time of the year may we all reflect on the blessings and opportunities we enjoy in this great country of Canada.

With wishes for Health , Happiness, Peace and Prosperity in your life and the lives of your families in the coming year.

Mack Emiry, Provincial Director

Can I Apply Nitrogen In The Fall?

Keith Reid, Soil Fertility Specialist, OMAFRA

Advertisements are appearing in some farm papers promoting fall application of "protected" forms of nitrogen (N). This has led to questions about whether this is a good idea.

Climate

Fall applied N is a common practice in the western half of the cornbelt, and in the prairies, where:

- the cold over winter tends to be consistent so N applied as ammonium will stay in that form, and
- there isn't much excess moisture around (most years) to leach the N out of the soil profile before crop uptake the next spring. If temperatures warm up in the fall or early spring, then the ammonium can convert to nitrate. Nitrate is subject to losses through leaching or denitrification during the spring before the crop is there to absorb the N out of the soil. These variable fall and winter conditions are much more common in Ontario than in theprairies. This means that the amount of fall applied N that remains in the soil available to a following crop ranges from 100% (rarely) to 0% (frequently).

Fall Manure Application

We do apply manure in the fall, with varying success. Solid manure tends to give better results with fall application, since the organic N in the manure benefits from extra time to mineralize and there isn't a lot of mineral N to be lost. Fall applied liquid manure gives variable results, since much of the N is already in the ammonium form. However, the best results are from manure that is applied after the soil cools down in the fall.

Controlled Release Products

Various products are promoted to delay the release of N into the soil (e.g. polymer coatings), but Ontario trials to date have not been promising. The delay isn't long enough to ensure the N will be held consistently until spring. Controlled release fertilizer is great in theory, but so far has fallen short in practice under Ontario conditions.

Economics

The other consideration is economic. Does it make sense to spend dollars in the fall when the same dollars invested in the spring will give a better return, and you

won't have to pay interest for an extra 6 months on borrowed money? It takes a significant increase in fertilizer prices over winter to justify borrowing money to

buy in the fall (rare in the past 30 years), and you get the same cost savings by prepaying fertilizer that stays in the bin rather than spread on the soil. In short, the correct answer to the question, "When should I apply my N in the fall?" is, "Spring."

Quest For NEW FARM VALUE - Value Plus Workshop

OMAFRA is once again promoting a 2-day workshop for farm and rural based entrepreneurs. The participants will learn the best practices regarding the adding of value to tap into new and existing marketplace opportunities.

For the North-Eastern Ontario region, it will be held February 3 & 4, 2010, in Elk Lake at the "Eco-Center" (accommodation is available). Call 1-877-424-1300 for details and registration.

BAR (in Northeastern Ontario)

Herbicide Resistant Weeds On The Rise In Eastern Ontario

Gilles Quesnel, Pest Management Specialist, Kemptville & Mike Cowbrough, Weed Management Specialist, Guelph, OMAFRA

Judging from the number of soybean fields in eastern Ontario that have single species weed escapes this year (Figure 1), it looks like we are faced with a significant jump in the acreage infested with weeds resistant to "group 2" herbicides, specifically Pursuit, Classic, Pinnacle and FirstRate.



Figure 1. Pigweed escapes in a soybean field. A single species escape like this when all other weeds are controlled would strongly indicate a potential herbicide resistant population.

Lack of weed control in a field does not automatically point to weed resistance. It may be the result of unfavourable weather conditions, weed emergence after herbicide application, or error in application.

Key Weed Resistance Indicators

Key indicators to look for in a field include:

- a weed species that should have been controlled, but is healthy while all other susceptible species have been controlled,
- a weed control failure, even when the correct herbicide rate was used and applied at the appropriate weed stage and under favourable environmental conditions, and
- single weed species, which should have

been controlled by the herbicide program, is present in an irregular pattern in the field at the end of the growing season.

Weed escapes may or may not be severe enough to cause yield loss this year, but if that weed escape is Eastern black nightshade, even a small amount can cause significant staining and a reduction in economic return (Figure 2).

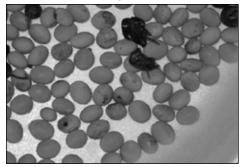


Figure 2. Soybean seed staining from Eastern Black Nightshade

Herbicide Resistance Testing

The seed of suspicious weed escapes should be tested to determine if it is resistant to the applied herbicide in order to avoid bigger weed control problems in the future. The best way to test for herbicide resistance is to collect a ripe seed sample of the suspected resistant weed population (from about half dozen locations in a field) prior to soybean harvest. Have the sample tested for resistance to the herbicides applied in the field. To ensure weed seed viability for testing, place the collected plants or seed heads in a breathable bag or container to allow the sample to dry naturally. The Department of Plant Agriculture at the University of Guelph can test for resistance by growing and spraying the suspected weed species. For more details on submitting samples

refer to: www.plant.uoguelph.ca/resistant-weeds/services/index.html, or phone 1-877-424-1300.

Best Management Strategies

Step 1: Herbicide Selection

Refer to Ontario's online herbicide selector at www weedpro75.com to identify herbicide solutions that will control any resistant weeds in your field. Strategies for three of the most common "group 2" resistant weed species are:

- Target weed Eastern Black Nightshade (Group 2 Resistant) Best Solution - Dual II Magnum (PRE - 0.7 L/ac), Reflex (POST)
- Target weed Pigweed (Group 2 Resistant) Best Solution - Boundary (PRE), Reflex (POST)
- Target weed Common Ragweed (Group 2 Resistant)
 Best Solution - Lorox (PRE – 1.87 L/ ac) or Boundary (PRE), Reflex (POST)

A more in-depth summary of research on management strategies for herbicide resistant weeds can be found at www. uoguelph.ca/plant/resistant-weeds/resistance/control2.html.

Step 2: Reduce Weed Seed Bank

The use of cover crops or tillage following crop harvest should be used to inhibit weed seed germination and production. This is particularly important following cereal production as there is a considerable amount of time to allow for new weed seed germination after straw removal.

"Business Development for Farm Businesses Program" Extended

On December 21, OSCIA announced that more than \$2 million has been allocated to permit almost 1000 business management projects to be funded in 2011. The new financing comes under the federal-provincial-territorial initiative "Growing forward". (The program funded about 500 projects in 2010.)

The program provides for producers to aquire more management skills that producers need to grow more profitably, and develop more advanced business plans - up to \$20,000 for as many as 3 plans per farm.

BAR (in Northeastern Ontario)

Crop Rotation and No-till Improve Yields and Soil Health

Adam Hayes, Soil Management Specialist - Field Crops, OMAFRA

You probably have heard about the rotation plots at the University of Guelph's Elora Research Station. There is a similar plot at the University of Guelph's Ridgetown Campus (UGRC) that was established in 1997 by Doug Young. The plot is currently managed by David Hooker. Five crop rotations are evaluated. No-till and conventional tillage with a mouldboard plow is compared on a clay loam soil. The rotations are:

- continuous corn;
- soybeans-wheat;
- corn-soybeans;
- corn, soybeans, winter wheat (underseeded to red clover), and
- continuous soybeans.

Four nitrogen rates are also applied to the corn and winter wheat treatments.

Yield Differences Apparent

Unlike the Elora plots, no-till yielded similar or better than conventional tillage. The yields of corn, soybeans and winter wheat all improved as the rotation moved from a single crop to a three crop rotation (*Figure 1*).

Soil Health Assessment

Differences in crop growth, earthworm populations and soil structure between the different tillage and rotation treatments (Figures 2 & 3) were becoming apparent in recent years. The plots were sampled last year as part of a project to evaluate the Cornell Soil Health Assessment. A few years ago samples were taken to a depth of 1 meter to see if there are differences between treatments in organic carbon content. These are currently being analyzed.

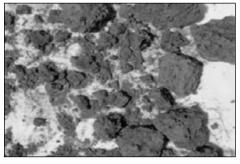


Figure 2. Soil structure continuous soybeans conventional tillage.

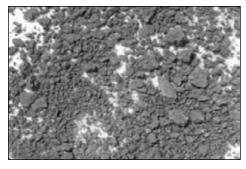
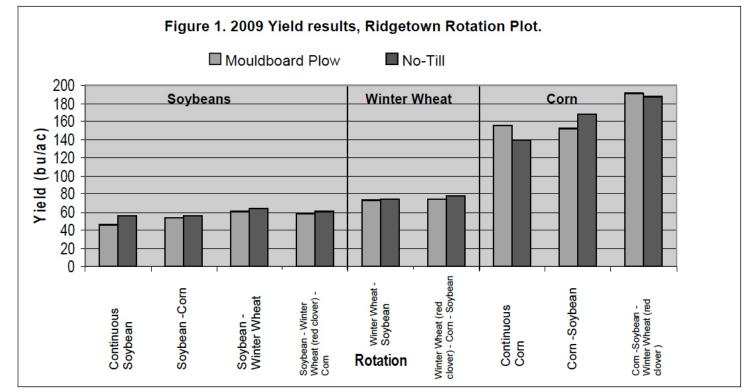


Figure 3. Corn-soybean-winter wheat notill soil structure (notice the smaller aggregates).

The soil health assessment also confirmed what had been seen visually in the soil. No-till treatments received higher scores as did the three year rotation (*Table 1, on page 13*). Aggregate stability is a measure of the soils ability to resist erosion and maintain soil structure. It generally increased as the number of crops in the rotation increased. Cereal crops help improve aggregate stability. It was significantly higher for no-till treatments. Tillage breaks down aggregates. Organic matter scores were mostly higher in no-till, but there was not a

Continued on page 13



Note: the yield is for the crop first listed in the rotation i.e. Winter Wheat -Soybean is the wheat yield for that rotation.

Breating From (in Northeastern Ontario)

Crop Rotation and No-till Improve Yields and Soil Health

Continued from page 12

consistent trend for rotation. Active car bon is an indicator of the portion of organic matter that is readily available as a carbon and energy source for soil microbes. It appears to be a poor indicator of treatment differences. Potentially mineralizable nitrogen indicates the soil's ability to convert nitrogen from organic residues to plant available ammonium. It was higher for no-till, and somewhat higher where legume crops were present.

Nutrient scores reflect the soil test levels of phosphorus and potassium and were fairly consistent. The average score for the treat-

ments was higher for no-till. The rotation scores did not vary much for the tillage treatments. As expected, the moldboard continuous soybeans scored the lowest.

Tillage & Residue

No-till systems provide many soil health benefits - protecting the soil from erosion, preserving organic matter, improving soil structure (as well as aeration and drainage), increasing soil-life and aggregate stability. In many cases, it is the best system from an economics perspective. No-till may not work for all crops or in all situations. When tillage is required, whether it be for a single crop or several crops in the rotation, the minimal amount of tillage should be done to be able to plant the crop. Leave at least 50% residue cover on the soil over winter. If that is not possible, plant a cover crop if there is time for it to provide adequate cover. Many types of tillage equipment can be used to achieve 50% cover. The soil should have about 30% residue cover after planting, so don't get carried away with tillage in the spring.

Table 1. Soil health assessment scores for Ridgetown rotation plots	Table 1.	Soil health	assessment	scores for	Ridgetown	rotation plots	
---------------------------------------------------------------------	----------	-------------	------------	------------	-----------	----------------	--

Rotation (Tillage)	Aggregate Stability Score	Organic Matter %/ Score	Active Carbon Score	Potentially Mineralizable Nitrogen Score	Nutrient Score	Average Score
Continuous Corn (Mouldboard Plow)	15	4.0/63	39	37	89	49
Continuous Corn (No-Till)	45	4.9/90	40	85	92	70
Corn -Soybean (Mouldboard Plow)	23	4.3/71	39	28	90	50
Corn -Soybean (No-Till)	33	4.2/65	40	40	88	53
Corn-Soybean-Winter Wheat (Red Clover) (Mouldboard Plow)	28	4.1/63	37	32	84	49
Corn-Soybean-Winter Wheat (Red Clover) (No-Till)	49	4.4/77	40	78	89	67
Soybean-Wheat (Mouldboard Plow)	19	4.8/84	40	53	85	56
Soybean -Wheat (No-Till)	77	5.0/88	40	81	87	67
Continuous Soybeans (Mouldboard Plow)	10	3.8/50	35	15	83	39
Continuous Soybeans (No-Till)	58	4.5/80	40	65	90	67

Note: not all of the assessments are shown. Scores are out of 100.



Joyeux Noël et bonne heureuse année



BAR (In Northeastern Ontario)

Developing Real World Use of Agriculture Biomass Crops

Scott Banks, Emerging Crop Specialist, & Steve Clarke, Energy & Crop Engineering Specialist, OMAFRA

Lafarge Cement Company has being conducting research and development into the replacement of fossil fuels (primarily coal and natural gas) with biomass fuels for the manufacture of cement. One of the central components is a "real world", full scale demonstration test of fuelling the Lafarge plant with a mixture of biomass fuels. The biomass fuel delivery system was provided by Mesa Reduction, Auburn, New York. The fuel delivery process, the product, and the emissions were tested. The emission test data is in the process of being analyzed.

Lafarge held an Open House in October at the plant in Bath, Ontario. They invited project participants and other stakeholders interested in the development of biomass fuels, including farmers, biomass suppliers, to see the equipment in action.



Figure 1: Biomass fuel mixture is delivered through the pipe on right side and the coal mixture on the left side of this picture.

"Ag Biomass" Sources

The agricultural biomass mix included the perennial crops of switchgrass, reed canary grass and poor guality grass hay, and annual biomass crops of hybrid sorghum, millet, a 'tropical' corn (a long season hybrid that would not mature to produce grain, but maximizes vegetative growth for maximum biomass yield) and fibre hemp. Annual biomass crops can be used to fill the supply gap if additional biomass is needed on a short term basis. In 2009, LaFarge contracted with local cash cropper Herb Hart, to grow annual crops to supply biomass for this test burn. Given the less then idea growing conditions of 2009, of these annual crops, corn yielded the most biomass per acre.

The biomass crops were cut and large square baled. Some biomass deteriorated due to the storage of the bales outside over the winter and summer. The biomass was chopped twice to get the fibre length down to the 2.5 - 3.5 cm (1 - $1\frac{1}{2}$ inch) required to flow through the delivery system to the furnace. The fibre hemp was much more difficult to chop than the other biomass materials. Oat hulls were included in the biomass fuel mix to aid in the flow of the material into the cement furnace at a ratio of 75% oat hulls to 25% mixture of crop material.



Figure 2: Bales of biomass crop and chopped product



Figure 3: Biofuel mixture of crop material with oat hulls

Demonstration Test Burn

For this demonstration test, the biomass fuel mix replaced 25% of the kiln energy requirement. Most agricultural residues have heating values which fall in the range of 7,500 to 8,500 btu/lb, whereas coal typically ranges from 9,000 – 13,000 btu/lb. Because of the lower energy content by weight (MJ per kg) of biomass fuel, approximately 30% more volume had to be delivered to the furnace to get the equivalent heat. Lafarge's goal is to increase the biomass mix to 50% or more of the energy requirement.

Cost of Production

Grower Herb Hart estimated that 'the price for biomass would need to be 5 - 7 cents per pound (approximately \$110 - 155 per tonne) FOB the plant to make growing annual biomass feasible for him as a farmer'. However, perennial biomass crops generally have fewer inputs and a slightly lower cost of production than the annual crops.

To assist growers to calculate the feasibility of growing biomass and other crops, the following is available on the OMAFRA website:

"Switchgrass Enterprise Budget" www.omafra.gov.on.ca/ english/ busdev/bear2000/Budgets/Crops/ Forages/ switchgrass_static.htm

"2010 Field Crop Budgets, Publication 60": www.omafra.gov.on.ca/eng-lish/busdev/facts/pub60.htm.

Temiskaming Weather Summary 2010

For those who experienced it in person, there was no denying that 2010 was an excellent year for crop production. The weather stats are now out to prove it!

From the standpoint of moisture, it was a pretty average season, with accumulations of 426 mm of precipitation compared to the 10 year average of 411mm. There were no drought - or flood - periods anywhere in the season. Only in September was rainfall significantly higher than average (153 vs 89 mm).

The real story was in the Corn Heat Units. The 2010 total was 2467, vs the 10 year average of 2380. For a change, the heat came early, with a May scoring of 361 Units against the 260 Unit average. The rest of the summer was pretty normal, unless you compared it to only the last 2 years when every month seemed to be too cool (and too wet!)

BARE MILL CALLED (in Northeastern Ontario)



MAAARO – des spécialistes en grandes cultures



En françcais!

L'inforation du Ministère de l'agriculture it di lalimentation de l'Ontario est disponible sur le site web du MAAARO en françcais au www.omafra.gov.on.ca

Débouchés pour "le foin de l'Ontario" sur les marchés d'exportation

Auteur : Joel Bagg, spécialiste de la culture des fourrages/MAAARO

Avec la hausse des coûts de transport, le ralentissement de l'économie américaine et la baisse du dollar américain, l'exportation de foin aux États-Unis se complique quelque peu. La concurrence est grande au sein de ce marché, tout comme la pression exercée sur les prix.

Nous avons toutefois l'avantage d'offrir un produit de grande qualité. Les exportateurs tentent vraiment de trouver d'autres débouchés afin d'améliorer leur rentabilité. En mettant en place une stratégie de promotion de l'image de marque, nous pouvons créer une identité unique pour le « foin de l'Ontario », laquelle nous différenciera de nos concurrents et nous permettra d'obtenir un prix supérieur.

Continued on page 16

Achetez du foin de l'Ontario pour les chevaux

Vous cherchez du foin de qualité uniforme, vert, propre, de texture agréable, appétent et exempt de poussières et de moisissures? Alors, achetez du foin de l'Ontario pour les chevaux. Les régions productrices de foin en Ontario sont uniques à cet égard. Elles jouissent d'un climat septentrional et sont entourées des Grands Lacs, qui leur procurent un microclimat plus doux permettant d'obtenir des graminées non rugueuses, à maturité tardive et à faible teneur en lignine ainsi que de la luzerne à tige fine, non rugueuse.

Le climat septentrional de l'Ontario est idéal pour les graminées de saison fraîche, comme le mil, qui est la graminée la plus couramment cultivée pour le foin. Le mil préfère les journées longues et les nuits fraîches que l'on retrouve en Ontario ainsi qu'une certaine quantité de précipitations. Ces conditions permettent au mil de croître lentement et réduisent la lignification, ce qui donne un foin moins rugueux et plus fin. En fait, pour les variétés à maturité tardive, l'épiaison ne survient pas avant la mi-juin, ce qui allonge la période de récolte.

En plus du mil, l'Ontario produit couramment des mélanges de foin de qualité contenant de la luzerne et du mil. On peut aussi se procurer des mélanges contenant du dactyle pelotonné et du brome de maturité tardive. La valeur nutritive et l'appétence de ces graminées de saison fraîche sont très semblables à celles du mil. Puisque le mil, le dactyle pelotonné et le brome poussent si facilement en Ontario, la fétuque élevée qui risque d'être infectée de parasites endophytes n'est que très rarement ajoutée aux mélanges de foin. Les graminées de saison fraîche présentent en outre une meilleure appétence et comportent moins de risques pour les chevaux que les graminées de saison chaude cultivées dans le sud des États-Unis, comme le chiendent pied-de-poule.

Le foin cultivé en Ontario est « sain ». En effet, peu de maladies des fourrages ou d'insectes ravageurs survivent aux rigueurs des hivers ontariens. Une fois passée l'année d'implantation, presque tout le foin de l'Ontario est produit sans herbicide ou insecticide. Les méloés sont extrêmement rares et ne causent pas de problèmes. Les sols fertiles de l'Ontario sont plutôt calcaires puisque leur teneur en calcium et leur pH sont élevés. Ces sols d'origine glaciaires sont relativement jeunes et se sont formés après la dernière glaciation; ils sont donc naturellement riches en oligo-éléments. Le foin ontarien, de grande qualité, favorise le développement d'une bonne ossature chez les chevaux ainsi que la croissance de ces derniers.

La frontière Detroit-Windsor n'est qu'à six heures de route de Lexington, au Kentucky, et à 18 heures d'Ocala, en Floride. Les tarifs de transport sont concurrentiels puisque les camions qui transportent le foin de l'Ontario vers le sud des États-Unis sont ceux qui ont été utilisés pour expédier des fruits et légumes ou d'autres produits au Canada.

Pour une qualité uniforme, choisissez le foin de l'Ontario!

Anthracnose : un problème gérable dans les haricots secs

Auteur : Brian Hall, spécialiste de la culture des haricots comestibles et du canola/MAAARO

Bon nombre de producteurs de haricots secs ont connu cette année leur plus grosse récolte à ce jour. Il est fort probable que même à l'échelle de l'Ontario un nouveau record soit battu avec un rendement moyen de plus de 2000 lb/ acre. Toutefois, certains producteurs de fèves blanches et de fèves noires ont récolté une plus grande quantité de fèves atteintes d'anthracnose.

La tolérance des transformateurs diminue

La dernière éclosion importante d'anthracnose remonte à 2003, alors qu'on avait découvert une nouvelle souche en Ontario, dans le cadre d'une inspection du MAAARO, qui fut désignée sous le nom de " Race 73 ". Au cours des dernières années, on a observé que les transformateurs devenaient moins tolérants envers les produits infectés par l'anthracnose. Certains transformateurs du Royaume-Uni utilisent davantage de sauce claire dans les produits en conserve, ce qui fait que les imperfections ne sont pas aussi bien masquées qu'avec la sauce tomate traditionnelle. Cette année, certains courtiers ont réduit les prix offerts pour les fèves infectées par l'anthracnose, en raison des opérations de transformation additionnelles requises pour retirer les fèves atteintes. Le retrait des fèves tachées exige en effet une deuxième et une troisième opération à l'aide d'un balayage électronique, ce qui élimine aussi des fèves acceptables.

Taux d'infection élevés

Globalement, on estime que le niveau d'infection de la récolte de fèves blanches est de moins de 2,5 %. Certains producteurs ont toutefois eu des taux allant jusqu'à 10 %, ce qui a donné lieu à d'importantes réductions de prix. Les champs où les taux d'infection étaient élevés avaient généralement des rendements inférieurs. Les plus hauts taux d'infection ont été observés dans les régions où la saison de croissance est plus courte, soit dans les comtés de Bruce, de Wellington, dans le nord du comté de Huron et dans le comté de Perth, où les averses fréquentes et les rosées marquées du mois d'août fournissent les conditions idéales pour une " tempête parfaite ".

Les variétés de fèves blanches cultivées dans ces régions à saison plus courte, AC Compass et OAC Thunder, présentaient les plus hauts taux d'infection. La maladie est apparue plus tôt en 2010 qu'en 2009. Les infections plus hâtives, cette année, ont accentué la décoloration des fèves. Les applications de fongicides ont parfois été retardées en raison de la température, ce qui a permis à l'anthracnose de bien s'établir. Même des applications répétées de fongicides dans certains cas n'ont pas été efficaces.

Variétés résistantes

Le contrôle de l'anthracnose commence par l'utilisation de variétés résistantes. Malheureusement, il y a seulement la variété de haricots blancs T9903 (une variété à utiliser au début de la saison par Hyland) qui est résistante à la race d'anthracnose la plus courante, la Race 73. De nouvelles variétés résistantes à toutes les races connues d'anthracnose seront cependant offertes sur le marché d'ici quelques années.

Traitements des semences

Les traitements des semences avec Dynasty 100FS ou DCT permettent de lutter contre l'anthracnose transmise par les semences en début de saison seulement (p.65, publication 812F du MAAARO, Guide de protection des grandes cultures). La source principale de l'infection initiale est la semence infectée. La majorité de la production ontarienne est cultivée à partir de semences ontariennes. La multiplication des semences se déroule habituellement sur un ou deux ans en Ontario. Bien que le secteur des semences ontarien ait accru ses efforts de lutte contre l'anthracnose, les problèmes survenus avec des semences ontariennes infectées ont ébranlé la confiance des producteurs cette année. Les fournisseurs de semences doivent suivre un programme rigoureux d'application de fongicides foliaires, inspecter attentivement les champs et surveiller le nombre de générations de semences produites en Ontario. Ces mesures contribuent à réduire la transmission de la maladie par les semences, sans toutefois éliminer complètement les risques d'infection. Les semences importées proviennent surtout de l'Idaho, du Montana et d'autres régions sèches où l'anthracnose n'est pas un problème. Ces semences importées sont toutefois plus chères et leur teneur en humidité est habituellement plus faible; les producteurs doivent donc les manipuler avec soin. De plus, les semences dont la teneur en humidité est moins élevée prennent d'un à trois jours de plus pour lever.

Contrôler l'entrée dans les champs

Il est important de limiter l'entrée dans les champs pendant la saison de culture. Les recherches de l'Université de Guelph, à Ridgetown, ont montré que les spores des maladies peuvent facilement se propager dans un champ par la machinerie, les pantalons, les animaux ou l'eau de ruissellement. Les spores sont lourdes, ce qui fait que la transmission par le vent est limitée, contrairement aux spores de la moisissure blanche.

Dépistage et fongicides foliaires

Il est parfois difficile de dépister tôt l'infection sur le feuillage ou les tiges. Il est facile de confondre les premiers signes d'infection des nervures foliaires et de la tige avec une blessure associée aux herbicides du groupe II ou des meurtrissures physiques. Nous disposons aussi maintenant d'un test de laboratoire rapide qui peut confirmer rapidement la présence de la maladie. Le dépistage et une utilisation efficace des fongicides foliaires sont les outils essentiels des producteurs. Consulter la publication 812F du MAAARO, Guide de protection des grandes cultures. Le premier traitement de fongicide devrait être effectué à un stade végétatif avancé ou en début de floraison ou encore lorsque les signes d'infection se manifestent très tôt. Une deuxième application de fongicide, 10 à 14 jours suivant le traitement initial, peut être nécessaire si les conditions sont propices au développent de la maladie. Les infections gui surviennent tard en saison peuvent causer des taches importantes sur les fèves. Les fongicides ne peuvent pas éliminer à 100 % la maladie; les producteurs de semences et les producteurs commerciaux doivent donc avoir recours à plusieurs méthodes de lutte.

Brecking From (in Northeastern Ontario)

Débouchés pour "le foin de l'Ontario" sur les marchés d'exportation

Continued from page 15

Des marchés basés sur l'image de margue existent déjà pour le foin de l'Ontario destiné aux chevaux et exporté en Floride, au Kentucky et dans d'autres États du sud. Le foin de l'Ontario possède des caractéristiques uniques qui sont très recherchées pour le marché des chevaux. En faisant la promotion du foin de l'Ontario comme étant toujours de qualité supérieure comparativement aux autres foins offerts, les exportateurs peuvent accroître leur clientèle de base et hausser la valeur de leur produit. Ainsi, nos concurrents producteurs de foin dans les régions irriguées de l'Ouest américain ont utilisé avec succès le slogan « pure luzerne de l'Ouest » pour du foin de grande qualité et séché rapidement au soleil qui demeure vert et contient beaucoup de protéines et d'énergie.

Le texte qui suit présente un exemple de certaines des caractéristiques du foin de l'Ontario qui sont recherchées par les acheteurs de foin pour chevaux. Ces caractéristiques pourraient être utilisées pour la promotion et la mise en place d'une stratégie de valorisation de l'image de marque. On pourrait également rassembler des caractéristiques du foin destiné à d'autres secteurs, comme le secteur laitier par exemple.

Le Forum sur la commercialisation du foin de l'Ontario Forage Council, avec l'appui de la Direction du développement des entreprises du MAAARO, prévoit créer une marque pour le foin de l'Ontario en vue de développer des marchés pour les exportateurs et les producteurs de foin. Pour plus d'information sur ce projet et sur la marche à suivre pour y participer, communiquer avec Ray Robertson, directeur de l'OFC, au numéro 1 877 892-8663. Pour plus d'information sur la production et la commercialisation du foin, consulter le site suivant : http://www.omafra.gov.on.ca/ french/crops/facts/makinghorsehay.htm

Les carences en azote et le rapport carboneazote des amendements organiques

Auteur: Christine Brown, chargée de programme, gestion des éléments nutritifs/MAAARO

Les déséquilibres du rapport carboneazote représentent un type de carence en azote. Du temps de mes grands-parents, les agriculteurs parlaient de « sol suret ».

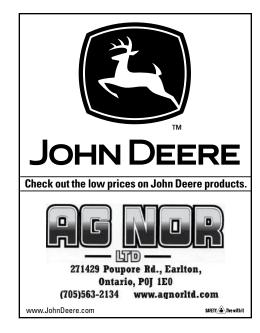
Dans un champ sur lequel on avait récemment épandu des biosolides de pâtes et papiers, les nouveaux plants se sont très bien développés jusqu'à ce que les pousses n'aient plus été en mesure de puiser des éléments nutritifs dans la semence et commencent à utiliser ceux du sol. La culture est alors devenue d'un jaune blafard. Que s'est-il donc passé?

N organique et N ammoniacal

Un amendement organique épandu sur un sol enrichit ce dernier en éléments nutritifs et en matière organique, laquelle contient environ 60 pour cent de carbone organique. Le rapport carbone-azote (C/N) correspond à la proportion de carbone organique contenu dans le fumier ou la matière organique par rapport à son azote total.

L'azote est une source de nourriture pour les microorganismes du sol qui décomposent le carbone organique qui s'y trouve. L'azote peut provenir de la matière organique ajoutée au sol ou du sol lui-même. Au cours de la décomposition du carbone, les microorganismes du sol meurent et se décomposent à leur tour. L'azote microbien retourne alors dans le sol et devient disponible pour les plantes, accroissant ainsi le réservoir d'azote organique dans le sol, qui s'ajoute à la matière organique ajoutée. La durée du processus de décomposition du carbone dépend du rapport carbone-azote des amendements du sol.

Continued on page 18



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a partnership of:

Temiskaming Soil & Crop Improvement Association

> N.E. Ontario Wheat Growers

Temiskaming Grain Growers

SUPPORTING TEMISKAMING FARMERS

Les carences en azote et le rapport carbone-azote des amendements organiques

Continued from page 17

Rapports C/N des biosolides de pâtes et papiers

Le fumier de porc liquide possède un rapport C:N de l'ordre de 10:1. L'azote contenu dans le fumier de porc liquide devient rapidement assimilable lorsque les microorganismes du sol sont actifs. Les biosolides de pâtes et papiers ont un rapport C:N situé entre 25:1 et 200:1, selon la quantité d'azote ajouté par l'entreprise qui produit les matières utilisées comme biosolides. Les biosolides de pâtes et papiers qui ne contiennent pas d'azote ajouté ont un rapport C:N de 200:1. La contribution en azote de ces biosolides peut prendre beaucoup plus qu'une saison de croissance pour devenir disponible. Pour compenser le rapport C:N élevé, certains transformateurs de pâtes et papiers vont ajouter de l'azote pour équilibrer la teneur en carbone et réduire le rapport à environ 25:1. Les produits offerts varient selon les entreprises d'où l'importance de les faire analyser.

Rapports C:N élevés

Le rapport carbone-azote du sol est d'environ 10:1. Lorsque du fumier solide ou d'autres matières organiques ont un rapport C:N supérieur à 30:1, le risque que les microorganismes du sol s'approprient l'azote du sol et le fixent est plus élevé. Cet azote devient non disponible pour les plantes et contribue à accentuer la décomposition du carbone. Une culture dont les besoins en azote sont plus élevés, comme le maïs ou le blé, va alors manifester des carences en azote. Lorsqu'une matière possède un rapport C:N inférieur à 20:1, il y a habituellement suffisamment d'azote dans la matière organique pour décomposer le carbone sans provoquer de carence en azote. Le tableau 1 présente une liste des rapports C:N approximatifs de divers types de matière organique épandue sur les sols.

Rapport carbone-azote de différents types de matière organique

Matériel	Intervalle du rapport C:N			
Microorganismes du sol	4:1 à 9:1			
Matière organique du sol	10:1 à 12:1			
Fumier solide de bovin de boucherie	20:1 (litière mince) à 40:1 (litière profonde)			
Fumier de cheval	27:1 (litière de paille) 60:1 (litière de sciure de bois)			
Fumier de volaille solide	5:1 pondeuses 10:1 poulets à griller et dindons			
Fumier de porc liquide	< 8:1			
Fumier liquide de bovin laitier	15:1			
Résidus de légumineuses	20:1 à 30:1			
Tiges de maïs	80:1			
Paille de blé	80:1			
Sciure de bois	500:1			
Biosolides de pâtes et papiers	25:1 (azote ajouté durant le procédé) jusqu'à 200:1 (peu ou pas d'azote ajouté)			

Figure 1. Biosolides de pâtes et papiers épandus. Avec l'aimable autorisation de R. Alton Terratec Environmental



Brecking From (in Northeastern Ontario)

Germany in the Fall

the organizers of the Oktoberfest, which is observed October 1 and 2 in Munich. The extreme weather in Germany means a reduction in crop yield, not a shortage of grains in German. It does mean Germany will have less to export.

The Hallertau area of Bavaria's production of hops makes Germany the top producer in the world of this ingredient for beer. Germany has had a law since 1516 that the ingredients for beer could only be pure water, barley and hops. William's Purity Law (Reinheitsgebot) with only minor changes to allow Bavaria's wheatbased beer has remained to this day and even withstood a challenge by other EU countries. All German breweries have reaffirmed their commitment to Reinheitsgebot.

The Central German Uplands include the Moselle and Rhine Valleys and the area from Frankfurt to Hanover with Kassel in the centre. The steep hillsides overlooking the rivers are terraced for vineyards. Because they are steep, manual labour is used to tend the grapes. The many vineyards produce approximately 1.2 billion bottles of mainly white wine. Apple orchards abound in the Saar and Moselle River valleys, and the Viezstrasse can be bicycled or walked linking cider- making villages. Cider and apfelwein (apple wine) are only available in the Frankfurt and Hesse area in the fall and can be purchased for less than 1 euro \$1.50 Canadian) in the arocerv stores. Heller is produced when apple wine ferments longer and is served after Christmas. The wine was developed in the sixteenth century when a disease wiped out the vineyards.

On a bus trip to visit the salt lake at Seeburger (near Gottingen), I saw a freerange farm with hens and geese with moveable pens. Eggs were available at the farm gate similar to here in Ontario. There is a huge movement in Germany for organic produce, and Germans spend about 5.8 billion euros per year on organic food. In 2008, Germany spent 121 million euros of public money on organic farming. 4.5% of the farms do not use chemicals.

Twenty-five percent of Germany is wellmanaged woodlands, but the country is experiencing loss of forest due to acid rain. Germany has fallen behind the rest of the EU since the unification with East Germany in environmental issues. Powerful interest groups have made it difficult to pass legislation to regulate Continued from page 4

farming practices and pollution controls. The present government is trying to change over from coal and nuclear power plants to wind. By June 2010, Germany had 26 387 windmills generating 7% of the net electricity consumed. Many of these windmills can be seen from the train between Lubeck and Berlin and Berlin and Kassel.



Windmills near Kassel

Winter canola is often planted in the fall and harvested in July. This year there was a 10% lower yield due to the weather. Canola is used primarily for biodiesel fuel not food. This field in the photo at Eppelheim near Heidelberg will have to be harvested this autumn, as it was in full bloom in mid October.



Canola crop on outskirts of Eppelheim near Heidelberg

Germany is appropriately the same size as Newfoundland & Labrador. Only 37% of the country is arable with 17% in meadows and pasture. Only 2% of Germans are involved in agriculture, but production has increased dramatically in the last 20 years.

German agriculture is heavily subsidized by the European Union's Common Agricultural Policy (CAP) and the German government.

(Observations are the authors, but statistics were taken from Germany government information on the Internet.)

Update on Bedstraw Control

by Grabam Gambles, RCC

At the November 18/10 Annual Meeting of the Temiskaming Crop Coalition, Dan Tasse of OMAFRA spoke on the progress that has been made on the chemical control tests for "Bedstraw". This project has been funded by the OSCIA as a regional NEOSCIA project. 2010 was the second year in a 3 season study at the Temiskaming location. (Algoma initiated their portion of the project in 2010.) This was a significant stop on the summer bus tour of the District.

It is clear that visual control appears good in the second year after spraying with Milestone. Even the half-rate application produced a clean growth of grasses, including brome, timothy, and quack. Virtually all broadleaf species (bedstraw and other weeds, plus clovers, alfalfa and trefoil) were eliminated. This was in vivid contrast to the bedstraw over-run control plots and even the plots that combined Milestone with 2,4D.

Another (cheaper) chemical, "Trophy" was tested this year with disappointing results. Applied at 180g/L fluroxypyr at .24L/ac, the cost was \$10/ac. However, the Bedstraw control did not exist, (in comparison to Milestone) so there was no economic benefit in real terms.

At the end of September, the entire site was once again trimmed to lawn height. Next year each plot will receive a 1 meter square plant count to determine the percentage of various plant species in the third and final year of this trial. Beyond that point, only casual observations of bedstraw re-infestation will be taken annually, until the time that the site is plowed down.

Soybean Plots at Kermac Farms

Sean Mackey and Kerry Schubert of Temiskaming tested seed spacing of soy variety DKC 25-04 this year. It was planted May 13 into a 2009 wheat field, and harvested on October 10 (149 days) at 13% moisture. The land had been conventionally tilled then rolled before seeding. Treatment was CruiserMax. Herbicide was 1L/ac Round-up and Classic, with 1L/ac of 6% manganese in this mix.

The 7 inch rows yielded 54.1 Bu/ac, while the 15 inch rows gave 53.5 Bu/ac.

Breaking Ground (in Northeastern Ontario) 88th Royal Agricultural Winter Fair Nov. 5-14, 2010

By Sharon Lane, Regional Correspondent to "Breaking Ground"

FedNor sponsored over 40 agricultural and equine businesses and organizations in Northern Ontario with a \$364 950 grant. Rainy River Cereals from Fort Francis in the northwest, Savour Muskoka in the south, Thornloe Cheese in the northeast, Purvis' Fisheries from Manitoulin and many businesses and organizations in between had booths.

The Lieutenant Governor of Ontario, David Onley, opened the 88th Royal Agricultural Winter Fair Nov. 5 and toured the Northern Ontario section.



Guy Paquette, FedNor officer; Lieutenant Governor of Ontario, David Onley; Gayle McPherson, Royal Board of Directors

The Honourable Tony Clement, Minister of Industry and FedNor, cut the ribbon officially opening the Northern Ontario section as well as a special ribbon of hand-woven Northern Ontario tartan, provided by Belle Vallee Wools' owner David Wight.



Guy Paquette, FedNor officer; Bob Jadavi, Royal CEO; Aime Dimatteo, FedNor Director General; Honourable Tony Clement, Minister of Industry about to cut the Northern Ontario tartan; Gayle McPherson & Michael Belcourt, Royal Board of Directors

Belle Vallee Wools is the only fully integrated operation of its kind in Canada. The Wight family have raised sheep and pro-

duced wool since 1856. They make wool yarns and blankets.



David Wight of Belle Vallee Wools with a customer

Northern Ontario Agri-Food Education and Marketing had three booths at the Royal. Agricultural Technology Demonstration booth showed the robotic system for milking with a live feed from the Mooney Farm in Massey as well as visits from Oprah, OFAC's robotic spokesperson for agriculture. Oprah asked the children questions concerning agriculture. Northern Maple was a regular stop for school classes. Boreal Harvest booth promoted and provided information on rural life in Northern Ontario and assured people that "yes" we can grow potatoes and garlic in Northern Ontario. Ken Lane, a director of NOAFEM, explained worm composting. The third booth for NOAFEM had members' products for sale. These included honey, maple syrup, jams, jellies, pickles, wool and woollen items, rugs, walking sticks, garlic and many more products from the North.



Aime Dimatteo, FedNor Director General & Sharon Lane, Director of NOAFEM in front of NOAFEM 's booth

Continued on page 21

Breaking From (in Northeastern Ontario)

88th Royal Agricultural Winter Fair

Continued from page 20

One Northerner who stopped to visit was Ron Cook of St Charles and Holland Landing. Ron was a NOAFEM member and visited Sudbury area schools presenting Horticulture in the Classroom program. He was showing his granddaughter, Shyanne Ross, around the RAWF.



Ron Cook & and his granddaughter, Shyanne Ross, with Pat Marcotte, NOAFEM, coordinator of the Boreal Harvest booth

Approximately 350 000 people, Canadians and visitors from as far away as China, came to the Royal this year. It opened at 9 a.m. and except for the first Sunday closed at 9 each evening. Booths included entrepreneurs who had samples to taste, city, provincial and federal governments and schools with information, cooking demonstration with samples, food vendors and agricultural and horticultural displays. Then there was the "agricultural fair" aspect. The animals and home crafts that are judged, the competitions that are held, the bids made at auctions for prize animals and embryos and the dog and horse shows to watch. City people got a chance to see and pet animals from the farm and interacted with all things rural. For those of us from the farm and the North, we got to see the best that both the city and the farm can produce.



Brown Swiss Cow in the Ring of Excellence



Oprah spokesperson for agriculture in Northern Ontario area



Children playing in Ontario grown canola seed grown canola seed

Grain Farmers of Ontario

Annual Meeting Wed., January 05, 9:30 a.m. Kerns Hall (Temiskaming) Speakers: Rob McLoughlin, Brian Hall, Luc Bourgeois, Dana Omland

Breating From (in Northeastern Ontario)

Proposal: NEOSCIA BusTour to Lac ST. Jean in 2012

By Graham Gambles, NEOSCIA Regional Communication Coordinator

Over the last decade (and more), I have made numerous trips across the Province of Quebec. Many of these travels led me through the Saguenay region that surrounds Lac St. Jean. What caught my eye was the outstanding similarities between the agricultural industry in this area to the situation that we experience here in northern Ontario.

The district is centered on the 48th parallel, the same latitude as Englehart. South of this line is a vibrant dairy and crop production area that includes Canola and corn. As you travel North, expect to see more beef farms and small grain operations. The east side of the lake is noted for its blueberry production as well as the regional potato farms.

The main difference is the extensive development of on-farm (higher value) marketing opportunities, the likes of which OMAFRA is now promoting in their "Quest for New Farm Value" workshop series. The Saguenay area has developed an agricultural tour of over 50 locations around the Lake. Here we find that onfarm entrepreneurs have expanded the core agricultural business to meet the needs of the urban population, while increasing the profitability of their own farm. Enterprises range from the traditional riding stables and fruit growers to massive flower gardens, cheese and chocolate makers, eco-tourism and microbreweries.

Agricultural research figures prominently in Normandin, located in the north end of the region. Here, an Agriculture Canada research and experimental station examines the future of agronomy in this northern climate. Seed and chemical companies also run trials in the 300 year old agricultural district.

There are some obvious challenges to this proposed bus tour. The first is the distance that must be traveled, and the time required to undertake such an adventure. In all likely-hood, the coach bus would be boarded at a location in Temiskaming and proceed north to Rouyn-Noranda. We would then head East to Chibougamau, where we would stay the night. This drive will take about 12 hours. The following morning we would head south to the Normandin research station, arriving before noon. From this point we would tour specific farms and businesses located around the Lake. We would be in the farm district for 2, possibly 3 days, before retracing our route back to Ontario. The whole event will take at least 4, and more likely 5 days in late July of 2012.

The second limitation is language. About 95% of the population is unilingual French speaking, so a great effort must be made to develop links to the bilingual members of the farm community. The region does host visitors from around the world, so with time, we should be able to develop a great tour for both our English and French speaking farm operators.

More details, pictures and maps will be available at the April 8&9 Earlton Farm Show. Stop by the NEOSCIA booth and pre-register for this great event!

TCC Summer Bus Tour

Well over 100 people attended this mid-July evening event that was highlighted by a supper provided by Koch Farms of Earlton. This year, the area between Earlton and the Quebec border was traversed in this 6-stop tour. There was lots to talk about!

First stop was Kevin Runnalls field of white beans. He had planted the "Lightening" variety at 50#/ac in 15 inch rows on May 24. Sprayed with Reflex and Assure on June 19. This crop was directly compared to a soybean field planted May 18.

Terry Phillips Winter Wheat field was examined next. Hard Red varieties "Harvard" and "Princeton" had been seeded Sept. 21 of 2009, with a starter fertilizer of 100#/ac.6-30-30. In the spring, (Apr.13) they received 220 #/ac of 80-0-0, then sprayed with Refine SG and Ag Surf on May 20. As American experimental work shows a return on Sulphur application for wheat, Urea and Ammonium sulphate was used. The only problem that he observed was an issue with getting rid of green canola straw, as the site had been planted to Liberty canola in the previous year.

Darren Gray was proud to show off his field of alfalfa (Quality Seeds Guardsman-2) that was truly one of the best in the area. The branching roots of this variety worked well in the heavy wet clay of this field.

The Bedstraw test plots were observed next, and are described elsewhere in this bulletin.

Ben Schapelhouman of Grant Farms showed a demonstration of DST Canola plots that were planted May 22. Plots 1 through 8 received 65# Urea and 53# ammonium sulphate with 18 #/ac potash, all banded below the seed with the drill. This gave all 8 plots a nutrient level of 112#/ac.N; 31#/ac.P; 111#/ac.K with 13#/ ac.S. A ninth plot received double the rates of urea/ammonium sulphate and potash to test for the "safe" rates. Average population counts on the first 8 plots were 8-9 plants/square foot, but that density dropped to 6 plants/square foot on plot #9. All plots were sprayed with Liberty, select and Proline at appropriate timing.

The final site, located at the Quebec border, was the "observation plots" of Synagri (Ferme Denis & Alain Touzin) that had been seeded on May 10. Here we compared the growth of wheat (Megantic, Orleans, and Major), barley (Oceanik, Synabelle, and Synasolis), oats (CDC Dancer & Synextra), as well as alfalfa (Gaia and Stella) and a forage mixture. Fertilizer on the plots was 175 #/ac. triple 14, plus .29 B. 10.6% with MES (Phos/Synagri). On June 26, the cereal had been sprayed with Puma+Refine SG + crop booster.

A great time was had by all, and a special thank you was delivered to NEOSCIA (FedNor) intern Kelly Bird on the last event of her stay in the North.

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Northern Ontario Agri-Food Education & Marketing Inc.

American Students Visit the RAWF

(<u>Toronto</u>) Students from Normewaug High School, Woodbridge, CT, travelled 14 hours to the Royal Agricultural Winter Fair.

The students slopped at NGAFEM's *Agricultural Technology Demonstration* booth to see Northern Maple. Sharon Lane, a director of NGAFEM asked if they had milled a cow before. Sharon learned that the students have a unique program at their high school entitled Ellis Clark Agro-Science Program, which offers courses in agro-science, agro-production, veterinary science, horticulture, agro-mechanics, landscaping, conservation and horse management. This program prepares them for careers in the agricultural and horticultural fields. They can get up to two year's credit from their college or university time by graduating from this special program.

Wouldn't it be great if our government encouraged students to pursue careers in agriculture?



Koomenany Suderts at RAWF Any Barme, Melica Gyba, Jessica Goggia

OPRAH attends National Science Week!

(Sudbury) OPRAH, the Ontario Fam Animal Council's animal care specialist attended National Science and Technology Week at Science North in October. OPRAH is a robotic puppet that interacts with people, especially children. Prior to the event at Science North, OPRAH visited students at MacLend Public School. As part of the NDAFEM exhibit, OPRAH was popular with visitors of all ages and quickly became the unofficial greeter for Science North, welcoming everyone who came through the door. Exhibitors at this event included 1540 Hwy 17 E Wahnapitae ON POM 3C0 PH: 705-694-5688 FX: 705-694-4396 noronLegrifood@sympatics.ca noronlegrifood.org

Great Lakes Forestry Service — Fire and Insect Lake, Northern Ontario Aquaculture Assoc. SNOLAB, rethink Green Sudbury and NORCAT. NOAFEM exhibits included Northern MAPLE and a unique link to the barn cameras on XONELLA Dairy Farm in Massey where the cows are milked using a robotic milking system.

Thanks to Jean Marc Lalonde, Science North, Mack and Beth Emiry, Neil Tarkon, Alana McEanchen and Valerie Michaud for their awesome help with this project. Special thanks to the Mooney family for allowing us to visit their farm via the internet! This exhibit will be repeated at the Royal Agricultural Winter Fair in November.



CPRAH meets are of the Mars Landing Rovers, part of a mining in space presentation.

"Living in the Country"

April 8 & 9, 2011 Opstains at the Eastton Faces Show

Join us for the first annual trade show genred to the small accesse landowner and backyard farmer! There will be vendors of seeds, garden and small farm tools, workshops on topics like canning, beekeeping, chainsaw safety and small flock poulity. Also, info on farm internship programs, future skill training opportunities, and farming/garden books.

Presented by NOAFEM, FarmON and NEOSCIA Want to be a vendor or offer a workshop? Call Amy: 705-521-6717

Breaking Ground (in Northeastern Ontario)

Geospatial Agricultural Research Project Update



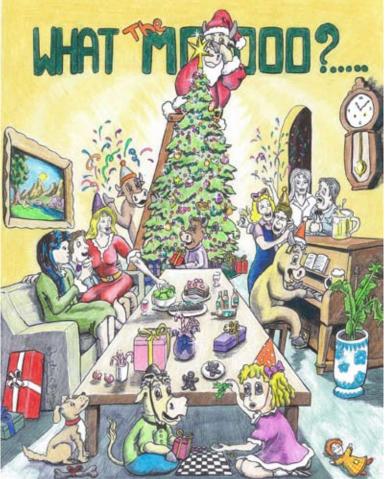
Announcement of NOHFC Funding on October 1, 2010 Photo from left to right: April James, Chris Dobson, Sean O'Hagan, MPP Monique Smith, Dan Walters, Mark Wachowiak, John Kovacs, Graham Gambles.



Researchers in Nipissing University's Geography and Computer Science and Mathematics departments in partnership with the NEOSCIA, OMAFRA, Agriculture and Agri-foods Canada, University of Guelph, and others are developing a web-based geospatial decision support tool that integrates real-time field measurements, such as soil moisture and air temperature, with satellite imagery and other relevant spatial data. The goal is to enhance the competitiveness and profitability of agriculture by creating opportunities for information and knowledge sharing, and by integrating new and existing technologies to generate knowledge.

Faculty and students from the Geography and Computer Science and Mathematics departments have made significant progress on the development of the web-based visualization tool. Several prototypes of the system were recently demonstrated at the Temiskaming Crops Coalition and West Nipissing District Annual Meetings. We thank those in attendance for their valuable feedback. We installed an additional weather station on Leisure Farms in the Sturgeon Falls region. You can now access all three weather stations through Nipissing University's website (www.nipissingu.ca/weather/). Several satellite images (SPOT-5 and WorldView-2) were acguired for the Verner and Temiskaming regions. The images are useful for detecting variation within fields. We also want to thank Steven Roberge for allowing us to use his canola fields this past summer. This project is made possible thanks to funding from NOHFC, Nipissing University, Co-operative Regional Nipissing-Sudbury Ltd, Temiskaming Crops Coalition, Koch Farms, and Brownlee Equipment.

We will be organizing workshops in Verner and Temiskaming Shores in February or March 2011 to receive input on the web interface design and function, and additional sights for weather stations and field monitoring.



This month's artwork comes from Justin Burre of Englebart. View more of his work at http://justin-burry.tripod.com