Breaking Ground
(in Northeastern Ontario) SUMMER 2008

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

Earlton Farm Show Results

This years event was very successful, with over 1400 admissions to the arena, including about 200 "children". More than 80% of the attendance came from Timiskaming, with about 3/4 having a direct farm background. The number of vendors was similarly large, with almost 90 attending.

The addition of a "Maple Syrup Festival", supported by the producers of the Powassan and South River area was a major success, complemented by arts and crafts vendors from both Ontario and Quebec. The Saturday morning "Maple Syrup Pancake Breakfast" resulted in a line-up extending from the door and up the stairs to the restaurant for about 1.5 hours! Our thanks to the Timiskaming "Katimavik" program for supplying volunteers to help in the clean-up chores for the event.

The NEOSCIA would also like to send out a special thanks to LABONTE SEED of New Liskeard for their donation of 3 bags of certified Alfalfa and Timothy seed that went to the winners of the forage and seed show. Likewise, a big thankyou goes out to the Seed Potato Growers of Ontario who supplied prizes for the Potato Show of high-grade "mini-tubers", grown at the NLARS "SPUD UNIT" at New Liskeard.

The winners of the Forage, Seed, and Potato show are as follows:

A.J.'s Acres (Allan & Joanne Aitchison): Top Showman, with Robertdale Farms of Earlton in second place and Clement Rainville of Nipissing District in third.

A.J.'s Acres was the grand champion hay exhibitor, followed by Robertdale.

In haylage, A.J.'s also came out on top, followed by Emiry Farms of Massey.

Gerald Beaudry of Verner was the Grand Champion seed exhibitor while Kevin Runnalls of Kerns won the Reserve designation.

In the potato field, Phillips Seeds of Kerns narrowly defeated Doug Edwards of Englehart, while Kevin Runnalls and Gerald Beaudry rounded out the event.

New Liskeard "Harvest Queen", Caitlan Carlton, presented the "Golden Pitchfork" to Timiskaming.

Next year, the NEOSCIA Earlton Farm Show will run on April 4&5 at the Earlton Arena. It will be a great warm-up for the IPM to be held in Earlton in September of 2009!

Canadian Energy Expo

The most experienced and dramatic speaker of the event was Jeff Culp of the Woodstock based OXFORD MEDIA GROUP <www.oxfordmediagroup.com>. Jeff is also the G.M. of SUPER E OFFICE <www.super-e.com> with many years of experience in designing and retrofitting homes for environmental improvements. Consider his approach to evaluating the energy efficiency of the urban home and apply his ideas to the farm house!

First, you have to understand the attributes of your dwelling. What is the home's energy consumption? An average house heated with only electricity will use 23,400Kwh/yr. Natural gas is less efficient and uses 42,500kwh/yr. (Home heating oil or propane is even less efficient.)

Continued on page 4

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.

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NEOSCIA Members *Classifieds*

Are you a member of your local Soil & Crop Improvement Association in Northern Ontario? If so, that membership entitles you to one free classified ad each year. Subsequent ads will cost $10.00 per issue. Next deadline is September 01, 2008.

Note that the editor may "shrink" the amount of info in any given ad due to space limitations in a specific issue.

For more information, Contact Graham Gambles, editor, at 705-672-3105 or e-mail to gamblesgraham@yahoo.ca

USED EQUIPMENT

FOR SALE: 1998 Kubota (85HP) FWD (5500 hr.)
#660 Alo Loader SL & 4 post ROPS/sunroof. Maintained regularly & shedded.
300 USgal Century Sprayer with new PTO pump (21 tip x 20 inch on 35 ft boom).
Contact: Darren Gray 705 676-6710

HAY 4 SALE

FOR SALE: Hay for Horses & Cattle
Big Rounds @ $20
Small Squares @ $2 - $3
Contact: Roy Brubacher (Massey) 705 844-9992

USED EQUIPMENT

FOR SALE: New Holland 790 Harvestor (like new) & 44 head 3" Stainless Steel Pipeline (complete).
Contact: Paul Oikari (Desbarats) 705 782-6823

USED EQUIPMENT

FOR SALE: JD335 Round baler $5800
JD7000 4-row corn planter $4800
Both are very nice units, stored inside and field ready.
Contact: James Parsons (Cache Bay) 705 753-0116

NEOSCIA Regional Update

By Janet Parsons

The NEOSCIA Summer Tour is in Algoma this year and you can read all about the events planned in the coming events on page 3. This is an opportunity to see first hand what's going on in Algoma.

I'm showing my age but I recall visiting Algoma on a similar tour more than 20 years ago and thoroughly enjoying the experience. I find it interesting how the many isolated/ insulated pockets of agriculture in the north are so different in many ways.

Along with the tour is the NEOSCIA summer regional meeting which will be held as a breakfast meeting prior to the tour. The meeting will focus on finalizing the constitution, deciding on how to elect the OSCIA board member for 2009, planning the Nutrient Management Solutions Caravan, implementing other aspects of the business plan, and reviewing the ongoing activities of NEOSCIA.

If you have ideas that NEOSCIA could use to better serve the farmers of Northeastern Ontario, please let me know.

RESOURCES • E-Bulletin

Parry Sound, Nipissing, Sudbury East
Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
Northern Ontario Regional Office (NORO)
Toll Free: 1-800-461-6132
Fax: 705-594-9675

Please note that the target publication date of this bulletin is the first Friday of each month. Submissions for the bulletin and requests to subscribe/unsubscribe may be forwarded to: shanna.james@ontario.ca.

Upcoming local events:

1. West Nipissing East Sudbury Soil and Crop Improvement Association Field Day

July 16th – 12:30 p.m. – Late Afternoon

This year, the field day will be held in conjunction with a North Simcoe bus tour. Everyone is welcome for this great learning experience and a chance to meet and welcome farmers from North Simcoe.

12:30 p.m. – Co-op, Verner

1:30 p.m. – New Liskeard Research Station test plots, Verner

2:30 p.m. – John and Janet Parsons Canola trial

3:30 p.m. – Leisure Farms, Sturgeon Falls

For further information, contact Normand Delorme at: 594-2324

2. July 24, Temiskaming SCIA Summer Tour.

Producers are invited to take part in a bus tour to visit local Soil & Crop projects & area crops. A BBQ will be held at 4pm at the KOCH grain elevator at Earlton. the bus will depart from the site at 5:30 and return at dark.

For info, contact Morley Shepherdson at 647-7108.

3. August 06, NEOSCIA & Algoma Soils & Crop Summer Tour.

Breakfast at "Bobbers" (7am) and meeting at Bruce Mines Library (8am). Catch the bus at Les Hillstrom's home (420 Deplonty Rd.) at 9:45 am. First stop at Vic Fremlin's farm (corn trials)at 10. Second stop at Paul Oikari's to see wheat. Lunch at Hillstrom's. Information session and demo by Jordan Wallace of GPS Ontario on reducing Fuel and Input Costs.

For more info call Murray Cochrane (842-5622) or Les Hillstrom (782-6744). Book rooms at the Bavarian Inn (705-785-3447).

Upcoming provincial events:

1. Cattle Handling Clinic – Northumberland Cattlemen, OCA & OMAFRA

July 12th, Cordington Hall/Homac Acres, Northumberland County

Featured guest is Dylan Biggs from TK Ranch, Hanna, Alberta. Cost is $40 and includes lunch. To register, contact the OMAFRA Brighton office at: 613-475-1630.

2. ***Eastern Ontario Crop Diagnostic Day being held in Winchester (near Kemptville)***

July 15th - 8:30 am to 3:30 pm.

For questions or to register, contact the Kemptville Resource Centre, OMAFRA at: 613-258-8295. The registration fee is $50.00 before July 4th and $70.00 after July 4th

3. Innovative Farmers Association of Ontario 2008 Bus Trip

August 18 - 21, 2008 - For further information or to download a brochure, visit www.lfao.com

4. Community Shared Agriculture Conference

November 21-23, Theme is: "Seeding the Future, Growing Together. For details visit: www.csaconference2008.ca/resources.html

Resources

New and revised publications – Available through Northern Ontario Regional Office (1-800-461-6132)

a) Factsheets:

The Swede Midge – A Pest of Crucifer Crops, 08-007, Agdex 625/252; this factsheet replaces 03-035

b) InfoSheet:

- 2008 Forage Crop Variety Performance brochures: http://www.plant.uoguelph.ca/performance_recommendations/ofcc/ofcc.htm
- 2008 Dry Edible Beans Performance Trials: http://www.omafra.gov.on.ca/english/crops/facts/ebperf08.htm
- Information about Environmental Management - Agricultural Operation Planning Certificate for producers.

c) Additional E-Resources:

OMAFRA HORT Matters: http://www.omafra.gov.on.ca/english/crops/hort/news/news_hortmatt.html

OMAFRA Agricultural Business Update: http://www.omafra.gov.on.ca/english/busdev/news/index.html#agbus

OMAFRA on Organic newsletter: http://www.omafra.gov.on.ca/english/newsletters.html.

New Business

1. Advantage Good Agricultural Practices – Enhancing Food Safety at the Farm

OMAFRA has created a new resource for Ontario's conventional and organic farmers looking to adopt food safety at the farm. Advantage Good Agricultural Practices is a resource tool covering food safety practices at the farm for both crop and livestock. These practices can be applied to any farm, regardless of size, production methods or products produced. For multi-commodity farms, the Advantage manual allows farmers to use one resource and keep one set of records.

Advantage Good Agricultural Practices will give you:

- Tools to identify risks on your farm
- Practices to manage the risks
- One set of records for your entire operation

For more information or to order a copy, call the Agricultural Information Contact Centre at 1-877-424-1300 or visit our web site at www.ontario.ca/good-ag-practices.

2. New Version of NMAN 2:

A new version of NMAN 2 is now available. This fully bilingual version contains enhancements including updated interface modes, expanded grazing functionality and a new transfer linking tool. The upgrade (NMAN 2.0.2) only works for users already running NMAN 2.0.1. If you are currently using a version of NMAN June 14, 2004 R4 or older, it is strongly suggested you attend a Nutrient Management training course to get the latest version of the software.

To download NMAN 2.0.2, follow the link below and follow the instructions. http://www.omafra.gov.on.ca/english/nm/nman/software.htm For more information, contact: 1-866-242-4460

3. 2008/09 Tile Loan Program:

The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) announced the details of the 2008/09 Tile Loan Program. If you plan to install a tile drainage system on agricultural land you own in Ontario, you are eligible for a tile loan under this program. A property owner can receive a loan for 75 per cent of the cost of his/her tile drainage work, up to a maximum of $50,000 per owner per year. The term of the loan is 10 years and the interest rate is six per cent, fixed for the full term of the loan. For more information, visit: www.omafra.gov.on.ca/english/engineer/facts/07-061.htm or contact your local municipality.

Energy Efficient Housing

Continued from page 1

What are the physics of heating? Heat goes from hot to cold areas, warm air rises, condensation occurs when warm air hits cold surfaces, warm air holds more moisture than cold air, and all particles move from areas of high to low concentrations. Furthermore, a house is an ecological system that involves heat, air and moisture flow.

You need to think of the WHOLE house as a UNIT to provide human health, comfort, and peace of mind.

Heat flow happens by conduction, convection, and radiation. The rate of heat loss in winter is dependent on the size of the house, the temperature difference between inside and out, the thermal resistance of the barrier, and the air leakage through this barrier, which is the combined shell of the house.

Air flow through the house is dependent on 3 factors that work at the same time. First, wind effect is air movement going through the house. Next, stack effect (winter) refers to the air pushing out of the house. Third, the chimney and venting fans provide a flue and ventilation effect.

Moisture flow is dependent on gravity, capilliary action (through brick and concrete), air leakage, and diffusion through all building materials. (Much of this can be stopped by polyethelene sheets.)

The National Research Council in Ottawa has done extensive research on improving the energy efficiency of Canadian homes. This is in response to the re-insulation experiences of the 1970,s, when a radical increase in the price of fuel led to some nasty experiences including moulds and general "house sickness" from enclosed chemicals in an overly air-tight house.

Mould can be caused simply by replacing a furnace. Old inefficient ones send more moisture up the chimney, but new high efficiency units reduce air exchange, allowing for more moisture on the walls and ceiling, or wherever hot inside air meets cold outside air. A house should have 30 to 55% relative humidity inside, yet adequate ventilation for control of air contaminents. Therefore you need mechanical "heat recovery ventilation" to control humidity, ventilation, and provide heat distribution, while being filtered to reduce contaminents.

Air leakage is a major source of moisture loss. In Canada, poly is needed on the warm side of the wall to keep moisture inside. Interior surfaces must be warm enough to prevent condensation and resultant growth of mould. Traditional Canadian houses have a tendancy to be extreamly dry in winter because warm air holds more moisture AND this warm air is rapidly expelled through the roof in winter. On average, a house will lose 50% of the heat available due to air leakage BUT you do not want to reduce air leakage to zero. All houses require ventilation balancing. The "R-2000" house is ideal with 1.5 air changes per hour, while the regular home has 10 to 30 air changes per hour.

Installing renewable energy sources may be the ideal ultimate change from using carbon based fuel, but it is a very expensive proposition compared to upgrading the house as a whole. An average upgrade for "air tightness" saves about $750 in energy annually. Air sealed windows provide an additional average saving of $150 per house.

Currently, the Canadian government offers $5000 in upgrading grants, and this is matched by the Ontario government. (see www.oee.nrcan.gc.ca)

What gadgets can help you achieve energy efficiency in the home? A drainwater heat recovery system (shower) can be retrofitted for $1000, and saves about $180/yr. Photoactivated window blinds can be used for winter night-time heat loses. (Note: use in the heat of summer can damage the windows themselves.) An "Ekocomfort" system that provides both water and space heating, as well as air conditioning and ventilation from one unit will save energy. A "Zone Comfort System" will save 25% of your heating costs by putting a thermostat on each floor in conjuction with a damper in the heating ventilation system.

Currently, there are a number of environmental add-ons that can be used to replace traditional energy sources, in whole or in part. All have both pro's and con's to their operation.

Geothermal heat pumps will both cool and heat a house and they are inexpensive to run. They will contribute up to 70% of your required heat. They are eligible for government grants. The exchange unit will last 25 years while the inground tubing should last at least twice as long. However, they are expensive to install and hard to retro-fit.

Direct solar air heating (corrugated metal wall) is cheap but lacks controls. Possible better use on garages and barns rather than houses.

Solar water heating can provide 75% of a households needs, and even works well in winter. It is best used where there is a huge demand for hot water, such as in hospitals, hotels, restaurants, elderly care facilities, or in houses with pools. The main problem is excess hot water in the summer that needs to be drained off. It needs a tank storage system for night-time use.

Solar photovoltaic systems are efficient but expensive, and only work in daytime (although clouds are not a major problem). Used commonly in Europe, an area that is located further North (average 50 degrees latitude) than most of Ontario. Perhaps best used when energy is sold directly to Hydro One at an inflated price under the "Standard Offer Program" (SOP).

All direct solar energy may be next to free, but it requires a method of storage, and this component is expensive. Similarly, wind energy is proven reliable, and is available for a small price IF you have the adequate wind resources.

In the future, a "Stirling Engine" (external combustion engine) could be installed. This unit will use ANY heating source to generate electricity.

In conclusion, to obtain energy efficient housing, first reduce your energy load (and energy demand). Only then do you consider adding "renewable" energy at a level to meet your requirements and economical limitations.

The Premier's Agri-Food Innovation Excellence awards McGuinty

Government Rewards 7 Local Farms for their Innovations

Innovative ideas grown by Ontario farmers are contributing to the local economy, boosting the agri-food industry and offering more choices for the consumer. Those ideas were celebrated May 30th at a ceremony honouring local winners of the province's regional awards for innovation excellence.

The Premier's Agri-Food Innovation Excellence awards are part of a $2.5-million, five-year program (now in its second year) established to recognize innovators who contribute to the success of Ontario's agri-food sector. Winners of the $100,000 Premier's Award and the $50,000 Minister's Award were presented last month at the Premier's Summit on Agri-Food.

Local events across the province will recognize 55 regional award winners, who will receive $5,000 each for their innovations. Area winners announced May 30th were:

Northern Quality Meats (Bruce Mines)
– Marcel Betty (Verner)

Burt Farm
– Max and Johanna Burt (Gore Bay)

Martin Farms
– Jim and Birgit Martin (Gore Bay)

Jonella Farms
– John and Suzanne Mooney (Massey)

Ferme Blanche Rive
– André Saintonge (New Liskeard)

Terza Farms
– Matt and Carol Duke (Thornloe)

QUOTE

"I am pleased to recognize our local farmers with these awards. Their hard work and innovative ideas are helping to make our rural communities stronger," said Michael A. Brown, MPP for Algoma-Manitoulin.

QUICK FACTS

- Since its launch, the Premier's Award for Agri-Food Innovation Excellence has attracted 358 applications highlighting on-farm innovations.
- Ontario's agri-food sector is the second-largest goods manufacturing industry in the province (after the auto industry) and contributes $30 billion to the economy every year.

Les Prix du premier ministre pour l'excellence en innovation agroalimentaire

Le gouvernement McGuinty récompense sept fermes locales pour leurs innovations

Les idées innovatrices que mûrissent les agriculteurs ontariens apportent une contribution aux économies locales, stimulent le secteur agroalimentaire et offrent plus de choix au consommateur. Ces idées ont été célébrées le 30 mai à une cérémonie qui a rendu hommage aux lauréats locaux des prix régionaux qui soulignent l'excellence en innovation agroalimentaire.

Les Prix du premier ministre pour l'excellence en innovation agroalimentaire font partie d'un programme d'une durée de cinq ans (c'est sa deuxième année), doté d'un budget de 2,5 millions de dollars, dont le but est de récompenser les personnes innovatrices qui contribuent au succès du secteur agroalimentaire de l'Ontario. Le lauréat du Prix du premier ministre (100 000 $) et le lauréat du Prix de la ministre (50 000 $) ont été annoncés le mois dernier lors du Sommet agroalimentaire du premier ministre.

Des cérémonies locales ont été organisées à divers endroits de la province pour féliciter les 55 lauréats des prix régionaux, qui recevront chacun une récompense de 5 000 $ pour leurs innovations. Voici les lauréats locaux qui ont reçu leur prix le 30 mai :

Northern Quality Meats (Bruce Mines)
– Marcel Betty (Verner)

Burt Farm
– Max and Johanna Burt (Gore Bay)

Martin Farms
– Jim and Birgit Martin (Gore Bay)

Jonella Farms
– John and Suzanne Mooney (Massey)

Ferme Blanche Rive
– André Saintonge (New Liskeard)

Terza Farms
– Matt and Carol Duke (Thornloe)

CITATIONS

« Je suis heureux de pouvoir féliciter nos agriculteurs locaux en leur remettant ce prix, a dit M. Michael A. Brown, député de la circonscription provinciale d'Algoma-Manitoulin. Leur gros travail et leurs idées innovatrices aident à renforcer nos collectivités rurales. »

FAITS EN BREF

- Depuis son lancement, le programme des Prix du premier ministre pour l'excellence en innovation agroalimentaire a attiré 358 demandes reliées à des innovations émanant d'exploitations agricoles.
- L'agroalimentaire est en Ontario le deuxième plus important secteur de production de biens (après le secteur automobile). Il apporte 30 milliards de dollars à l'économie chaque année.

ALTERNATIVE ENERGY OPTIONS

In late May, the Canadian Energy Expo was held for the second time at Woodstock. Sponsored by COUNTRY GUIDE magazine, the goal was to make the farm community (and the public at large) aware of the technical progress and funding opportunities that are currently available for those who wish to consider alternative energy options. This was done through a series of one hour seminars held throughout the three day event, in combination with an energy "Trade Expo".

Due to the late, wet spring, the event was poorly attended by the farm community, and this issue of BREAKING GROUND will be used to spread the message that was very professionally delivered at this event. All energy related stories in this issue have been interpreted and written by the NEOSCIA Regional Communication Coordinator. As such, please use the associated contacts provided to clear up any questions that you may have and to follow up on technologies that you consider to have potential on your farm.

To learn more about this event, go to *www.thecanadianenergyexpo.com*

Solar Photovoltaic Energy Farms

Here is one for those of you who have an entreprenurial drive! Switch your farm to producing energy rather than food production! Although a pilot project is now open in southern Ontario, there may be more opportunities in the northern part of the Province.

The Ontario staff of ARNTJEN SOLAR NA (www.arntjen.com) outlined both the potential and limitations of producing solar power in Ontario. This German company has recently taken up residence in Ontario, and is looking for partners. It is all based on the 2006 anouncement by the Ontario Power Authority (OPA) that a "Standard Offer Program" (SOP) will purchase renewable solar energy at a rate of $0.42 /kWh delivered to the grid under a 20 year contract. This was designed for smaller and community based projects, but many individuals and companies have seen the potential and the system has been deluged with entrepreneurs.

The basics of what you need to enter this guarenteed market are simple enough. Cheap land values and close access to a major power supply line with room in its wire to add a few more jolts of energy! There is the sticking point. Although almost 200 proposals have come in to Hydro One, only a single contract has been awarded. It seems that the wires in southern Ontario just can't take any more power! The line from Sudbury to the south is similarly clogged. As such, Hydro One has put the SOP on hold until fall 2008, to figure out the direction that should be taken.

Let us assume that the program will be back in the fall, and perhaps even more beneficial to the energy producer. The rest of northern Ontario beyond Sudbury seems available for expansion. What do you have to do to evaluate your property for solar electrical production?

1. Find out from Hydro One if there is still feed-in capacity at your location.
2. Start an Initial Feasibility Study with a local power company. This will take 6 months.
3. Complete the agreements with the local power company.
4. File the appropriate contract applications.
5. Get municiple and official plan approvals
6. Select an experienced "solar-integrator".
7. Get financing in place. ArntjenSolar has developed their "SunSaver1" pilot project at Innerkip, just north of Woodstock. It is a 113kWp solar farm consisting of 54 active solar trackers consisting of 12 "Mono-Si solar modules" with a peak capacity of 2.1kWp each". Annual energy production will be about 196,000 kWh with a revenue of about $467,000 per year on a small acreage. However, equipment is expensive and the payback period is expected to be 11 years.

Still interested? Call the company at 866-Arntjen.

Geothermal Energy

Most of us consider geothermal energy as a resource that we in Ontario cannot tap into. Traditionally, it was only possible to use this option where hot springs were available (Banff) or if you are sitting on top of a volcano (Iceland). Seems we were wrong!

Today, with the development of "Geothermal Exchange" energy systems, it appears that all of the developed part of Ontario is in a zone that can make use of the technology. Only a few feet below the soil surface (just below the frost line), the ground temperature remains consistantly above freezing. In southern Ontario, this level averages about 7 degrees C. In the north, it will be a couple of degrees cooler, but still adequate for the new technology.

In fact, the Canadian and Ontario governments are so excited about this energy opportunity that they are willing to subsidize the installment of the systems in a duet amounting to $7000 in value. This opportunity is found as part of the Home Energy Audit program. It is also an opportunity that seems to be designed specifically for the farm home.

Here is the catch. Although the systems can provide about 70% of your annual heat requirements, they do require a fairly extensive area to install the "underground earth loop". This is a piping system that requires about one acre of land to be dug up to a depth of 5 or 6 feet so that adequate energy can be collected from the ground. This could work in pre-development stages of subdivisions, but it is not likely to be to be used in traditional urban residential areas, especially when landscaping is already in place.

However, as farmers, one of the things that we usually have plenty of is cleared land close to the house. No problem digging out a trench here to install the underground piping. In fact, many of us already have the equipment to do the job! Following is a little more background information from Chad Brezynski of GEOSMART (www..geosmartenergy.com) that might encourage you to consider this option.

In winter, the flexible underground loops of "piping" collect heat from the ground and delivers it to the heat pump, located inside the building. The heat pump compresses the heat and transfers it into a standard forced air heating system. Each Kw of power used to operate the system draws more than 4 Kw of "free" energy from the ground, so the system produces more energy than it uses. It averages 400 to 500% efficiency over the season. This translates to 80 % of your heating energy coming from the earth, and the rest being supplied by electricity to run the system. The massive savings in home heating oil or propane are very apparent, and its simpicity and ease of operation is an advanatge over wood furnaces.

The underground loops are filled with a 75%water, 25% ethanol mix and carry a 55 year warrenty. the heat exchanger has a 20 to 25 year life expectancy, similar to a standard furnace. Payback is in the 5 to 7 year range for a standard size home. There are 33,000 units currently installed in Canada, about 1/3 of them in Ontario. The largest system in the north is at Elliot Lake, where a retirement centre is heated by this technology.

Once installed, geothermal energy can do more than heat a building. It can also provide summer air conditioning and attachments can be added to supply your hot water needs.

Two other systems beyond the horizontal land based loop are possible. If you have a moderatly deep pond (that does not freeze solid) close to the house, the system could be installed in it, absorbing water heat to run the operation. Similarly, an abandoned deep well could be used to vertically install the piping. (Note that if dry, the well would be backfilled with bentonite to give the piping superior contact with the surrounding ground, thereby promoting the exchange of heat.) Here in the North, some farms even have abandoned, water filled mine shafts on the property, and these could be used as a heat sink to run the system.

Each homeowner is cautioned that the building itself should be as energy efficient as possible. Plug the holes and add insulation first! The geothermal system is proven to work, but greater economic benefits may be achieved in improving the energy worthiness of the structure involved.

Energy Education

Do you have a high school graduate on the farm who is looking for cutting-edge education? Consider the Alternative Energy Engineering Technology course at Lambton College in Sarnia. The three year program has this spring produced its first graduates. These people "will deal with the integration of current energy sources, newly developing alternative green energy sources, and distribution systems". Contact Maike Luiken, PhD, at Lambton at 519-542-7751 x3229, or read more on the course at www.lambton.on.ca.

Perhaps you have children in the lower grades of school? Are they receiving an education that includes an awareness of energy options? Since 1980, Solera, a group of sustainable energy companies, has been working with school boards to install a learning space within the school that is powered and supported entirely by sustainable and renewable technologies. Children learn about future energy options by interacting with the new technology on a daily basis.

Depending on individual classroom needs, it could contain a combination of some of the following; Solar PV panels, Solar hot water panels, Green roof, Rain barrel and Solar water pump, Wind power, White roof, Education package, In-class or web-based monitoring systems, and environmentally aware public speakers.

Find out more about Solara classrooms by visiting the web at www.soleraenergies.com or call 416-466-3500.

Retro-Fitting Yard Lights

Is your traditional yard light still sucking energy? Whether it be incandescent, mercury or sodium, you can be sure that it is because it gives off heat into the environment. You no longer need to heat the great outdoors by switching to L.E.D. lighting. O.D.D.S. Enterprises Inc. of Tillsonburg (www.oddsenterprisesinc.com) have the Canadian distribution rights to an all new high powered LED light bulb. Over the past year they have been working with the cities of North Bay and Tillsonburg to test these lights as Street Light retrofits. The idea is to keep the old light fixture and just replace the lamp.

A 45 watt LED replaces a 150 watt HPS unit. You save on power as LED operates in the cold state. LED bulbs also last about 50,000 hours. These units could also be used in areas where light is required but operational heat is unwanted, such as a cold storage.

ODDS also carries a line of Compact Fluorescent Lamps that replace HID lighting. They can be used in commercial and industrial settings. They save energy up to 60% and bulbs last 10,000 hours, giving off little or no heat.

Both types of lighting could possibly be eligible under future EFP programs. They might possibly be used in all barns, garages, greenhouses and virtually any farm facility.

Solatube

Do you have a poorly lit room on your upper floor? U.L.Lovett Inc.of London (ask for Darryl at 519-451-2759) has the answer www.solatubelondon.ca . The device is installed on the roof and transmits over 99% of the sunlight down a highly reflective tube into the room below. depending on the size of the room to be lit, the tube diameter varies from 10 inches (200 sq.ft. room) to 14 inches (300 sq.ft. room). Although easiest to install on an upper story, the tube can add light to a basement as well, as it can be extended as much as 30 feet.

Lovett also handles a Solar powered attic fan. After installation, it is free to operate and moves up to 800CFM. As for all attic ventilators, the device removes excess heat and moisture from the structure. The advantage with this unit is that it does not require an electrical thermostat or a humidistat. It works daily, as soon as the sun comes up, providing continual aeration.

Both the attic fan and the solartube are said to work well in the winter, even under minor levels of snow build-up.

Solar Hot Water Heaters

John Rood of ZOLARAYZ (www.zolarayz.com) spoke on the use of Apricus solar collectors for people and businesses that require lots of hot water. This Chinese made evacuated glass tube system has recently shown a significant decrease in purchase costs. All interior pipes are copper to allow for the high heat of the glycol solution that passes through the collector in daily conditions.

The collectors are easily installed on roofs (or walls), usually at an angle of 60 degrees to reduce snow build-up and maximize winter energy potential. This angle also reduces energy collection in summer, a time when the units collect too much energy for normal needs. It is common to bleed off extra hot water to swimming pools and even into ground water at this time, due to the efficiency of the system. (Note that there are also solar pool heaters designed specifically for this one use.)

The units are affected by humidity. It is possible that more radiation may be received in the clear sky of January than in the hazy skies of a humid July. The main difference however is the length of daylight in winter. Therefore hot water must be collected in winter in an energy storage tank that should be located within 150 feet of the unit.

Apricus is just one of a number of solar hot water collectors, but it is one of the most efficient. For further research, go to Google and search for the solar ratings of various collectors, then compare production to costs.

Besides providing up to 75% of hot water supply (depending on the season), the collector can be used for supplying radiant heat energy to any building. Temperature of the water under ideal conditions can reach 120 degrees C. The design is maintenance free and will even withstand hailstorms. They are currently in use around the world.

Combining The Systems

All the alternate energy promoters at Woodstock agreed on a few points. First among them is that the start-up costs for each alternative is not cheap. They also agree that your best return on the loonie is to develop a program of energy conservation first. (Plug the holes in your house!) For every $1.00 spent on conserving, you save up to $5.00 in generating equipment costs.

Each new alternative has its strength and weaknesses. After reading about all the opportunities, it may make more sense to combine two or more technologies to produce a superior package for your individual needs. HYBRID ECOWATTS (call Ralph or Bob at 519-461-1315/1915) focus on packaging renewable energies together. They can combine systems that include wind generation, geothermal, or solar systems to meet the individual needs. They do a full range of site location, planning, engineering, construction, implementation, and technical advice. They can get your system grid inter-connected, enable you to exist totally off-grid, or assist in your development of a Standard Offer Contract.

Green technology now provides many opportunities for the landowner. Using the sun, wind, and heat of the earth is viable and economically beneficial in the long run. It is up to each of us to determine how these options can be best used in our lives.

Hydrogen Combustion Enhancement

Contact INNOVATIVE HYDROGEN SOLUTIONS INC. of Winnipeg (204-786-6392) or www.IHSresearch.com for details on this development that has just come out of the gate! If you are a farmer who is also involved in trucking, or perhaps uses tractors and combines, etc, extensivly, you have a new option for reducing monthly fuel bills. Here is the gist of it:

We have all heard of the (Ballard) fuel cell technology that uses hydrogen to create electricity. It is not ready for market yet, but here is an alternative use for hydrogen in the short term. Apparently applying some hydrogen into an engines internal combution chamber provides cleaner burning of the fuel, lower fuel consumption (by 10 to 20%) and 8% more horsepower and torque along with longer engine life and lower maintenance costs.

This company has developed a small hydrogen generator that produces hydrogen on demand. It is an on-board module that is an easy retrofit for any internal combustion engine. The unit uses the process of electrolysis to seperate water into hydrogen and oxygen by applying an electric current. The only modification to the engine is a small hole in the air intake manifold that allows the delivery of the hydrogen. The system is safe as hydrogen is only available on demand when the engine is running, therefore there is no need for on-board storage tanks.

It is a design targeted for the railway, marine, mining, and transportation industry, but it could certainly be used on the farm as well. Is this a place where OSCIA could do some environmental studies on the value of this new technology in the farm community?

The Energy Controller

Here is an interesting idea that you will definatly have to research further on your own! Go to www.kvarenergysolutions.ca for the background.

The identified problem is that "up to 25% of the billable electricity consumed in homes and businesses is non-productive and unusable. Most AC motors operate at 80% efficiency, and that efficiency drops dramatically at lower loads. This non-productive energy wastes money and also shortens the life of inductive equipment such as motorsm HVAC equipment, pumps and major appliences."

The proposed solution is to install an "energy controller" to the top breaker on a 100, 200, or 400 amp single or three phase electrical service panel. The unit "fine tunes electrical systems to reduce non-productive and wasted electricity, giving you cost-effective energy".

Note that qualified electricians only should perform all installation work.

Home Energy Audits

The federal government is currently offering an incentive of up to $5000 for upgrading a home for energy efficiency. The Ontario government is willing to match this grant dollar for dollar, plus pay 50% of your initial energy audit, up to $150. The key to the program is the Home Energy Audit that is done by a certified professional. You are provided with a personalized

Energy Efficiency Evaluation Report and a plan that will lower your home energy costs. This plan will show how energy efficient your house can be with energy saving retrofits.

Samples of the rebates include insulating your attic ($1200), Install a solar domestic hot water system ($1000) install ENERGY STAR qualified windows ($60/unit) insulate basement ($2000) install low flush toilets ($100) install electronic thermostats ($60) install a certified ground or water-source heat pump ($7000). More rebates are available.

To find a Government of Canada certified Home Energy Auditor, consult your "Yellow Pages" or search the web under <HomeEnergyOntario.ca> to find a list of certified auditors.

OSCIA News…

June 2008

A NEWSLETTER TO UPDATE OSCIA MEMBERS, PRESIDENTS, SECRETARIES, TREASURERS, DIRECTORS, AND OMAF CROP TECHNOLOGY CONTACTS —

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OSCIA 2009
ANNUAL MEETING

Date: February 3 & 4, 2009
Place: Sheraton Fallsview
Niagara Falls

Message from the President

Pat Lee

As I write this report the sun is shining brightly outside for the third day -- a bit of a novelty this year for May. The crops are mostly in the ground with the earlier planted crops suffering from the cool weather, but with some rainfall and heat units, I'm sure that growth will be fine. As we all know, commodity prices have increased but so have the negative basis, input costs and the price of land.

The spring of 2008 has been exceptionally busy for OSCIA. We are beginning the final year of our three-year agreement with OMAFRA to partner in applied on-farm research. To date, six Regional Partner Grants totaling $30,000 and 11 Regional Communication Grants totaling $66,000 have been approved for this year. Also, ten Seed Fair Grants for a total of $3,000 and 17 Major Grants totaling $66,780 have received approval. We commend the enthusiasm of the membership in participating all across the province with these research plots.

On March 31, the environmental programs associated with the Agricultural Policy Framework came to an end. The new interim Federal Environment Program for one year commenced on April 1. This is the start of the five-year Growing Forward Program introduced by the federal government. For the first year, very little has changed on the project eligibility guidelines, so if you have a potential project, contact your local OSCIA Program Representative to apply.

This year, OSCIA participated in the Premier's Summit held at Queen's Park. The focus was linking consumers with locally-grown food. There was a lively discussion by the participants (reps from farm organizations, restaurants, grocery chains, food companies and the media, to name a few) exchanging ideas for promoting and implementing new ideas for future markets for Ontario-grown produce. The Premier's Awards for Agri-Food Innovation Excellence were presented.



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

Cropline 1-888-449-0937

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

Brought to You by the Following OMAFRA Crop Specialists

Mike Cowbrough
Weed Management Program Lead

Hugh Martin
Organic Crop Production Program Lead

Horst Bohner
Soybean Specialist

Ian McDonald
Applied Research Co-ordinator

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Editor: Joel Bagg, *Forage Specialist*

Compiled by: Marian Desjardine, *OMAFRA, London*

More than Scouting from the Windshield

by Gilles Quesnel, Field Crop Integrated Pest Management Specialist, OMAFRA, Kemptville

To assess crop establishment, plant growth and/or pest pressure, a simple windshield observation or drive-by will not do. While you want to keep field scouting as simple as possible, each field needs to be walked through individually.

Basic tools for field scouting includes: a clipboard for recording information, a pocket knife to dig or slice specimens, plastic bags to collect specimens, a hand lens, a measuring tape, and a hula-hoop for population counts. When scouting, look for things that will affect yields, such as plant population, emergence, soil compaction, crusting, diseases, insects, weed escapes, herbicide injury etc.

Your field scouting pattern must be representative of the entire area. When scouting, take into account changes in variety or hybrid, soil type, past cropping history, fertilizer/ manure application and any other factors that can affect plant growth.

To calculate plant population in row crops, count the number of plants in 1/1000 of an acre and then multiply the count by 1000 to obtain the number of plants per acre. Table 1 below lists the row length equal to 1/1000 of an acre at various row widths.

Table 1

What's 1/1000 of an acre	
Row Width In Centimetre (inches)	Length of Row Equal to 1/1000 Acre
38.0 cm (15")	10.62 m (34 ft., 10 in.)
50.8 cm (20")	7.97 m (26 ft., 2 in.)
76.2 cm (30")	5.33 m (17 ft., 5 in.)
81.3 cm (32")	4.98 m (16 ft., 3 in)
91.4 cm (36")	4.42 m (14 ft., 6 in.)

To determine plant population and pest infestation levels in narrow row crops, a sampling frame with a known area can be placed on the ground for the counts. This is done using a square frame (e.g. 50 cm x 50 cm equal 0.25 m2) or a circular frame (e.g. a Hula-hoop). The Hula-hoop method is displayed in Table 2. Using the Hula-hoop, determine the number of plants per acre by counting the number of plants found inside the hoop and multiplying that number by the predetermined factor for the diameter of your hoop, which is listed in Table 2

Table 2

Diameter of Hoop in Centimetres (inches)	Factor by Which to Multiply the Number of Plants Within the Hoop to Equal the Number of Plants per Acre
91 cm (36")	6,221
84 cm (33")	7,301
76 cm (30")	8,925
69 cm (27")	10,820
61 cm (24")	13,852

Regardless of the method used to determine plant population and pest infestation levels, at least 10 random counts should be taken in each field to determine an average.

The starting point for diagnosing problems is to look for patterns. Look for areas where the problem occurs and where it is absent.

- Crop problems that are consistent with the topography or the soil type of the field are more likely to be soil related than caused by pests or field operations.
- Problems which are worse on one side or edge of the field are likely to be related to spray drift or to the move-

Continued on page 20

More from the Land, Rather Than More Land!

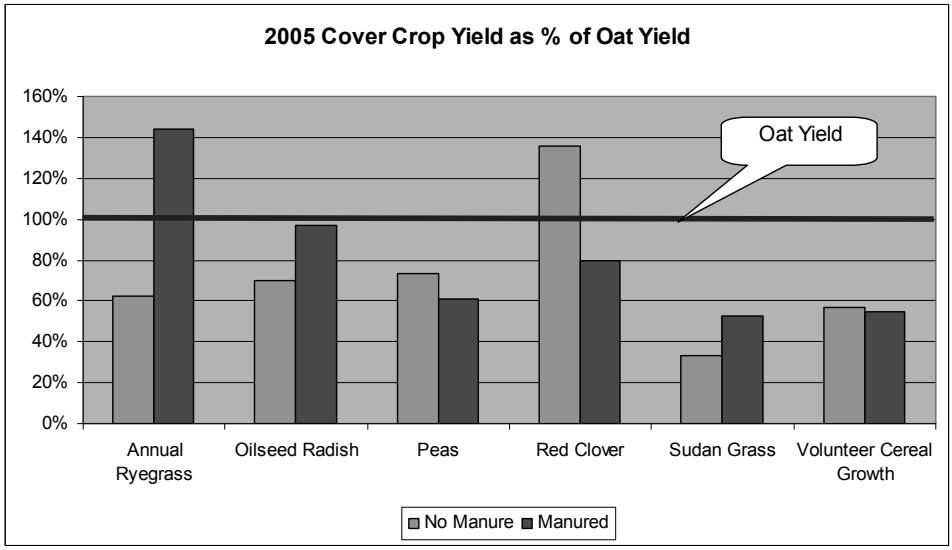
by Scott Banks, Emerging Crop Specialist and Nancy Noecker, Cow-Calf Specialist, OMAFRA

With the renewed optimism in corn, soybeans, wheat and other cash crops, there is more pressure on each acre of land to produce. The additional acres of corn, soybeans and wheat mean there is less hay and pasture ground. Double cropping after a cereal crop using a cover crop such as oats is an opportunity to grow additional forage for your livestock. Research has shown that oats seeded after winter wheat harvest can yield 1 to 3.5 tonne per acre where manure was applied. Even in fields without manure, oats can yield 0.5 to 1.5 tonne per acre for forage. At hay prices of $85.00 plus per tonne, cover crops can give a good return in addition to the cereal crop harvested.

Using Cover Crops As Forage

Farmers have used a variety of species, including barley, mixed grain, oats, rye and turnip-cereal mix, peas & triticale. Figure 1 summarizes the result of a study which compared oats, oilseed radish, peas, red clover, annual ryegrass and sudangrass as cover crops. Only red clover with no manure and annual ryegrass with manure produced more forage than oats. Volunteer winter cereals yield only 50 to 75% of the oat forage yield. In another study where cover crops followed spring wheat, the volunteer spring wheat yielded about the same as many of the cover crops. In this study, cover crop yields were 0.5 to 1 tonne per acre. In both studies, the highest forage yields where from annual ryegrass with an application of manure.

Figure 1: 2005 Cover Crop Study Which Compared Oats, Oilseed Radish, Peas, Red Clover, Annual Ryegrass And Sudan Grass



Establishing A Cover Crop

It may seem early to be talking about August seeding, but now is the time to start planning. Establishing a cover crop can be done using a no-till drill, or by broadcasting the seed followed by a light tillage pass (such as a cultivator or rotary harrow) to incorporate the seed. Ideally seed should be planted at 35 mm (1.5 inches) depth. Some tillage can reduce disease pressure from the preceding cereal crop. Under dry conditions, following with a packer will firm the seed to soil and help retain moisture for better emergence. Manure can be applied before planting. Incorporation will capture more of the readily available nitrogen in the manure.

Grazing

Harvesting the cover crop using strip grazing with cattle or sheep is more efficient than cutting and baling. Cereal crops are usually ready to begin grazing about 45 to 60 days after planting. They should be grazed before the head-stage of the cereals as forage quality will then begin to decline rapidly.

Does late fall/winter grazing compact the soil? Research from Nebraska with beef cattle showed that winter grazing crop residues had no significant effect on the following year grain crop yield and additional tillage was not required. However, spring grazing increased the bulk density of the soil, and decreased water infiltration rate. Therefore cattle should not graze crop residues after the soil has thawed in the spring.

Benefits

There are several benefits to using cover crops following a cereal crop:

- provides soil protection from wind and heavy rains in the fall months before freeze up,
- builds soil organic matter,
- the livestock improves nutrient cycling,
- with legumes such as red clover, nitrogen can be fixed for the following crop, and
- it provides the livestock farmer a place to spread manure in the late summer and reduces the nitrogen that could be lost to the environment.

The direct benefit to the livestock farmer is the extra feed produced as he gets more from the land, rather than using more land.

Expensive Fertilizer and The Cost of Making Hay

by Joel Bagg, Forage Specialist, OMAFRA, Lindsay

As the fertilizer bills are coming in, many of us are suffering from sticker shock. Not too long ago it would have been a stretch to imagine $650 urea, $1,200 MAP and $600 muriate of potash. Livestock producers producing their own forage and using manure to manage their fertility will be much less impacted than those cash cropping grain and hay. How will high commercial fertilizer costs and increased commodity and land prices affect forage production?

P and K Removal

Forage crops have high nutrient requirements. With a mixed alfalfa-grass stand, the value of the phosphorous and potassium removed is currently about 2.1¢ / lb (or $46 / tonne) of dry hay harvested. Grasses contain a little less P and K, so about 1.8¢ / lb ($40 / tonne) are removed. As an example, assuming a mixed stand with a modest yield of 3.2 tonnes (3.5 tons) per year, hay will remove about 57 lbs of P205 and 206 lbs of K2O, with a value of $147/acre (assuming P205 @ $1.05/lb and K20 @ $0.46/lb).

Without manure or commercial fertilizer, the soil test will drop quickly. Assuming that it takes about 35 lbs/ac of P205 and 20 lbs/ac of K20 to move the soil tests by 1 ppm on some soils, after only 4 years the P205 soil test could drop by 7 ppm and the K20 by 41 ppm. This is commonly referred to as "soil mining", and is not sustainable.

With the increase in fertilizer prices, you may question whether you can afford this expense, but the short and long term costs of poor fertility is much higher than the cost of the fertilizer.

Impacts On Pricing Standing Hay

Historically, standing hay has often been a good buy. With higher corn, soybean and wheat prices, we are seeing higher hay prices in the market. Land rental rates have increased, and there is competition for acreage from these other crops. If you consider an opportunity cost for land rental, P and K removal, and an amortized establishment cost, that historic 1 - 2¢ / lb of standing hay is way under the mark today.

For example, as a starting point for negotiations, what would be a possible value for a field of standing hay yielding 3.2 tonne/ac (3.5 ton/ac), that could rent as bare land for $175/ac? This pencils out to about 2.1¢ for P and K removal, plus 2.5 ¢ / lb land rental, plus about 0.7 ¢ / lb in amortized establishment costs, for a total of about 5.3¢ / lb. Even an old grassy field yielding only 2.5 tonnes/ac (2.75 tons/ac) grown on land that might rent for $50/ac, without any amortized establishment costs (because it is so old), might be worth about 2.7¢ / lb (1.8¢ P and K removal plus 0.9¢/lb land rental value).

Livestock still needs to be fed. Will, and more importantly, can the market pay these kinds of prices? I don't know, but if it doesn't there may be a lot of hay acres move to other crops.

N Value of Alfalfa Plowdown

When penciling the value of growing the various crops, don't forget to consider the nitrogen value when alfalfa is plowed down. A stand that is one-half or more legume contributes about 110 kg N/ha (100 lb/ac). At current nitrogen values, this is equivalent to about $63/ac. Stands that are only one-third to one-half legume get a N credit of about 55 kg/ha (49 lb/ac), for a value of $31. Research also shows that in addition to the nitrogen credit, there is a yield benefit of alfalfa plowdown to corn of about 10 - 15%.

Soil Sample

With higher fertilizer prices, you may want to target your fertilizer applications more strategically than in the past. Take soil samples after first-cut to guide fertilizer applications later in the summer. If the K soil test of the field is below 150 ppm, you can expect a response to adding potassium. In addition, low P and K fertility will reduce the longevity of the stand substantially. Consider topdressing fields with commercial fertilizer or manure following one of the cuts during the summer.

Manure Getting More Respect

As fertilizer prices keep going up, manure is getting more and more respect! Maintaining fertility is much easier and less expensive for forage producers when manure is available. The best option because of the highest economic return from the nitrogen is still to spring apply manure to corn crops in the rotation. However, there are some advantages to applying manure to forage, including potential yield benefits, spreading the workload, reducing manure storage requirements, preventing soil compaction, and reducing environmental risk.

Higher hay, land and input costs means we need to do the best we can in growing, harvesting and storing our forage crops to maximize yield and quality, and minimize losses. Refer to "Pricing Standing Hay" and "Manure Application To Forages - An Economical Alternative" on the OMAFRA Forage Website at

www.omafra.gov.on.ca/english/crops/field/ forages.html.

Diagnostic Days – Are You Prepared?

by Ian McDonald, Applied Research Coordinator, Field Crops, OMAFRA

With the rising price of inputs, are you prepared to make the best use of your resources? Can you quickly identify problems and fix them before they impact your farms productivity? That's what Diagnostic Days are all about! Brush up on how to diagnose production problems and mitigate their consequences before they cost you big time.

Explore interesting hands-on diagnostics with other producers and agribusiness people. Hone your trouble shooting skills. Know what problems to look for and when to look. These skills will help you deal more effectively with the inevitable problems that will arise in the future. OMAFRA and University staff have established demonstration plots for you to look at. The diagnostics and displays deal with all aspects of crop production, soil management, and new technologies. Share your experiences with others in small group sessions. Ask questions, generate discussion and learn from our experts.

FarmSmart Farming Systems Expo

Elora Research Station, Elora
Thursday, July 3rd,
Rural Youth/4H day, Friday July 4th

Southwest Diagnostic Days

Ridgetown College Wednesday, July 9th & Thursday, July 10th

Eastern Ontario Crop Diagnostic Day

Winchester Research Farm
Kemptville College, Tuesday, July 15th.
These Diagnostic Days at Ridgetown, Elora and Winchester in July are brought to you by OMAFRA, the University of Guelph, OSCIA and supporting agribusinesses.

For information contact the OMAFRA Agriculture Information Contact Centre at 1-877-424-1300, or check www.omafra.gov.on.ca/english/crops/conferences/.

Fertilizing Pastures

by Jack Kyle, Provincial Grazier Specialist, OMAFRA

As I write this, it is late-May. The temperature is having a hard time getting up to what is referred to as "seasonal". This backward type of weather makes for slow plant growth and very little pasture available for the grazing livestock. What options do you have to stimulate the grass to grow? Heat is the first requirement and that one you can't do anything about. The other consideration is fertilizer application.

Can You Manage More Grass?

With warm weather there will be rapid grass growth that will need to be managed. Do you have the number of livestock and the fencing that will allow you to manage this growth? If you can rotate livestock from pasture to pasture, then you have the main requirement for taking the best advantage of the grass growth and optimizing its use.

Legumes Provide Nitrogen

If the pasture has greater than 35% legume in it, there will likely be adequate nitrogen produced by the legumes to meet the requirements of the grasses. When estimating the amount of legume, keep in mind that there needs to be an even distribution of the legumes across the pastures. Legume plants are often more visible than the grass plants in the stand. As producers, we often overestimate the amount of legume present. Take a careful look and even harvest a small square sample. Separate the grasses and the legumes to see how much of each are actually present.

Nitrogen Application - Rate & Timing

Grass responds very well to nitrogen fertilization, provided there is a reasonable level of phosphorous and potassium available in the soil. You will see a response to nitrogen about 2 weeks after application, and this increased growth will carry on for about 5-6 weeks.

To get an economic response to nitrogen, a minimum of 40 lbs per acre of actual nitrogen should be applied. Because of the high solubility of nitrogen, a maximum application rate of 75 lbs per acre is suggested. If you have a very productive pasture that you want to put on more nitrogen, then increase the number of applications.

Timing of application will depend on a number of factors, but mid-June will generally give the optimum results. By mid-June, the lush spring growth will have slowed and the nitrogen will give the grass another boost. Once we are into July the risk of not getting enough rainfall to take the nitrogen into the root zone is a concern. The other consideration is that grass growth may slow in the heat of the summer, especially if there is a shortage of moisture.

The Transition to Grow Organically?

by Hugh Martin, Organic Crop Production Program Lead, OMAFRA, Guelph

Once you decide to seriously look at organic production, one of the challenges is what to do first. I suggest going slow and doing your research.

The first stage of transition to organic is to look closely at yourself and your abilities. Why do you want to do this? What do you need to learn? What crops or livestock would you want to grow? What would be the issues to produce them organically? In many cases, yields will drop during the transition and then increase for several years. Once fully organic, yields may still be lower but prices for certified organic products are higher. You will need to factor in slightly more labour and more tractor time. For most crops, the cost of production for organic is very similar to conventional production. However, this varies with the crop or livestock species.

Do Your Homework

Now is a good time to develop organic information. Attend field days in your area and talk to other organic farmers to observe their successes and challenges.

Most fertilizer and pest control inputs that are used in conventional production cannot be used in organic. In some cases there are alternative products for fertility and pest management. There must be a greater reliance on planning to avoid or minimize the problems by changing the production system of crop rotations, tillage, planting timing, resistant varieties, biological pest controls, etc. There must be a greater reliance on a multiple-pronged integrated approach to problem solving.

Investigate potential organic markets. Organic markets can operate much differently than their non-organic counterparts. In many cases, marketing organic products will take more time. Larger buyers require you to be certified organic. In the future, CFIA will require all organic food products sold out of the province or imported into the province to be certified according to the new Canada Organic Products regulations.

Organic Certification

The Canadian Organic Standards must be applied to the production area for 36 months prior to harvest of the organic crops. Only substances and inputs as specified by the Standards can be used during the transition and for certified organic production. Farms must apply for Organic Certification annually, beginning in the year prior to production of the certified organic products. In other words, you need to apply in 2008 (so they can inspect the 2008 crop while it is growing) for transitional status on land that you plan to certify for organic in 2009.

You can start with part of your farm and gradually transition the whole farm. Start with your best and most looked at field to manage and observe the transition. Cereals and forages are often the best crops to reduce costs and risk during the transition.

Resources

There are numerous resources available on the internet and from various associations. Ecological Farmers Association of Ontario – www.efao.ca

Canadian Organic Growers – www.cog.ca

OMAFRA -www.omafra.gov.on.ca/english/crops/organic/organic.html.

More than Scouting from the Windshield

Continued from page 16

ment of insects into the field from one side.

- Problems, which occur on isolated plants throughout a field, may be related to diseases such as root rots.
- Problem areas within a field, which have sharply defined boundaries or appear in strips, are often related to field operations. Nematodes, however, are relatively immobile so the edge of a nematode-infested spot may also be very distinct.
- Problems that are concentrated in one row but do not appear in an adjacent row are usually equipment or starter fertilizer related. The distance between affected rows will provide some insight into the width of the piece of equipment involved. At times, crop patterns may also relate to old field boundaries which could be up to ten years old or more.

ON Organic

by Hugh Martin, Organic Crops Production Program Lead, OMAFRA, Guelph

OMAFRA has a new newsletter – "ON Organic". As the title suggests it discusses Organic issues that are relevant to the Ontario organic sector. This includes production, processing, marketing, certification, etc. ON Organic will be available monthly by e-mail and also on the OMAFRA website.

You can find "ON Organic" at: www.omafra.gov.on.ca/english/crops/organic/news/news-organic.html.

You can subscribe to this newsletter by going to the webpage: www.omafra.gov.on.ca/english/subscribe/ index.html#organic

For example here is the Table of Contents from the May 2008 issue

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Cool Season Corn Production – *Lessons from Newfoundland*

By Birgit Martin

Last fall I had the privilege of being one of 5 Northern Ontario delegates sponsored by the Agricultural Adaptation Council to attend the 6th Circumpolar Agricultural Conference in Happy Valley- Goose Bay, Labrador. Researchers, farmers and community leaders from Norway, Sweden, Alaska, Yukon, Northwest Territories, Northern Ontario and Newfoundland & Labrador shared ideas on production agriculture and rural development. One presentation of potential interest to Northern Ontario producers was on cool season corn production in Newfoundland.

Newfoundland farmers face a short season with typically only about 1800-2150 Corn Heat Units (CHUs). This makes growing respectable tonnages of corn silage difficult. Furthermore, the cost of shipping feed by barge from the mainland makes 'imported' feed extremely expensive. The solution is growing corn under plastic. Newfoundland corn producers have adopted a technology developed in Limerick, Ireland that plants corn under strips of biodegradable plastic. This plastic acts as a greenhouse, increasing soil temperatures by roughly 10°C. It accelerates early corn development by about 20 days and effectively adds 300 CHUs to the season – all at the start. These extra 300 CHUs allow higher yielding, later season hybrids to be grown.

At an added cost of $321 per hectare, it seems expensive, but the results are impressive. Between 2001 and 2006, average corn silage yields were increased by 5.2 t dry matter/ha, cob yield was increased by 3.4 t/ha and starch yield was increased by 9.8%. So clearly, not only is outright tonnage increased but because the cob and starch yields are improved, the energy content of the silage is better. The bottom line is that although the plastic adds $321 in costs per hectare, based on the value of the additional yield, the net benefit of the plastic is $1681 per hectare. Feed imports have been reduced from 70% to 28% of total requirements on Newfoundland dairy farms.

Is this technology relevant to Northern Ontario? We can probably assume that the increase in costs would be similar to that in Newfoundland ($321 per hectare = $130 per acre) but the yield advantage may be different here. In Newfoundland the yield advantage was 5.2 t DM/ha (2.1 t DM/acre). If Northern Ontario were to see similar increases, corn silage would have to be worth $62 per tonne dry matter or $21.70 per tonne at 65% moisture to make this worthwhile. At today's corn prices, corn silage is worth over $35 per tonne at 65% moisture. So the numbers would suggest a substantial benefit – the only variable is if our yields respond to the plastic mulch like they did in Newfoundland. It's worth thinking about!!

One market where it might be a forgone conclusion that it would work may be the sweet corn market. Adding all that time at the start of the season could move the sweet corn crop forward into a more lucrative market.

For more information on the Newfoundland experience with silage corn contact Ag Canada's researcher Dr. Allan Kwabiah (kwabiaha@agr.gc.ca) or Newfoundland Agriculture's Field Officer Sabrina Brock (sabrinabrock@gov.nl.ca).

Nipissing/Parry Sound/Muskoka SCIA News

by Janet Parsons

Parry Sound East Nipissing SCIA held an information day at the farm of Blair Grove, focusing on forage management and the benefits of tile drainage. Blair told the group that, prior to tile draining his fields and moving to an alfalfa-based forage program, his feed costs were well above district averages reported in the Farm Management Analysis Project. Now, he is pleased to report they are below the average. "Since tile draining, we get twice the crop and the protein analysis has gone up with the alfalfa. I really believe in tile drainage." said Blair. "It's an excellent investment." Blair also credits his improved feed costs to his Ag Bag silage system and the use of a TMR.

Blair counts the trifoliates on an alfalfa sprout during a discussion on timing of herbicide application.

Blair's heifer barn is open front with drop down panels on the back for added summer ventilation.

West Nipissing District News

The West Nipissing Hay Association members toured both the active and reclamation tailing sites at the INCO mine site near Sudbury. The Association provides hay and straw that is used to keep the tailings from blowing into the adjacent residential areas of Copper Cliff. The tailings are very fine sand/dust. Straw or hay is chopped and spread on the site and then a straight disk is run over it. This keeps the dust down.

The sequence of events is something like this: Once an area is at current capacity, bulldozers are used to build up the berm, the straw is chopped on and disced. Then when it's needed again (after the other areas are filled) the tailings are pumped onto this area again. When it's filled, the pipes are moved and the berm is lifted again and the process starts over. Essentially it's in layers. When the area is totally full, reclamation starts. The land is fertilized and planted to grasses and trees. Native vegetation also blows in and starts to grow. The group saw areas with trees 15 feet tall on the reclaimed sections.

Spreading straw on the tailing site.

Continued on page 24

TOTAL FORAGE PERFORMANCE

QUALITY in the FEED

STELLAR FG Alfalfa

Bred for unbeatable re-growth, tremendous yield, quality and persistence.

SATELLITE Alfalfa NEW!

High Quality Mulitleaf alfalfa
No. 1 Yielding alfalfa in OFCC trials
120% Yield Index

QUALITY in the Field

TOWER ST Alfalfa

Bred for unbeatable standability, high yield, quality and persistence.

DIVIDEND VL Orchardgrass NEW!

Latest maturing Orchardgrass
First signs of heads in the 1st week of June
Very Slow maturity progression

Quality Seeds

Quality Seeds Ltd.

8400 Huntington Road
RR #1 Woodbridge Ontario L4L 1A5
905-856-7333, 1-877-856-7333
support@qualityseeds.ca, www.qualityseeds.ca

Please Contact:

DARREN GRAY
New Liskeard, Ontario
705-676-6710

Nipissing/Parry Sound/Muskoka SCIA News

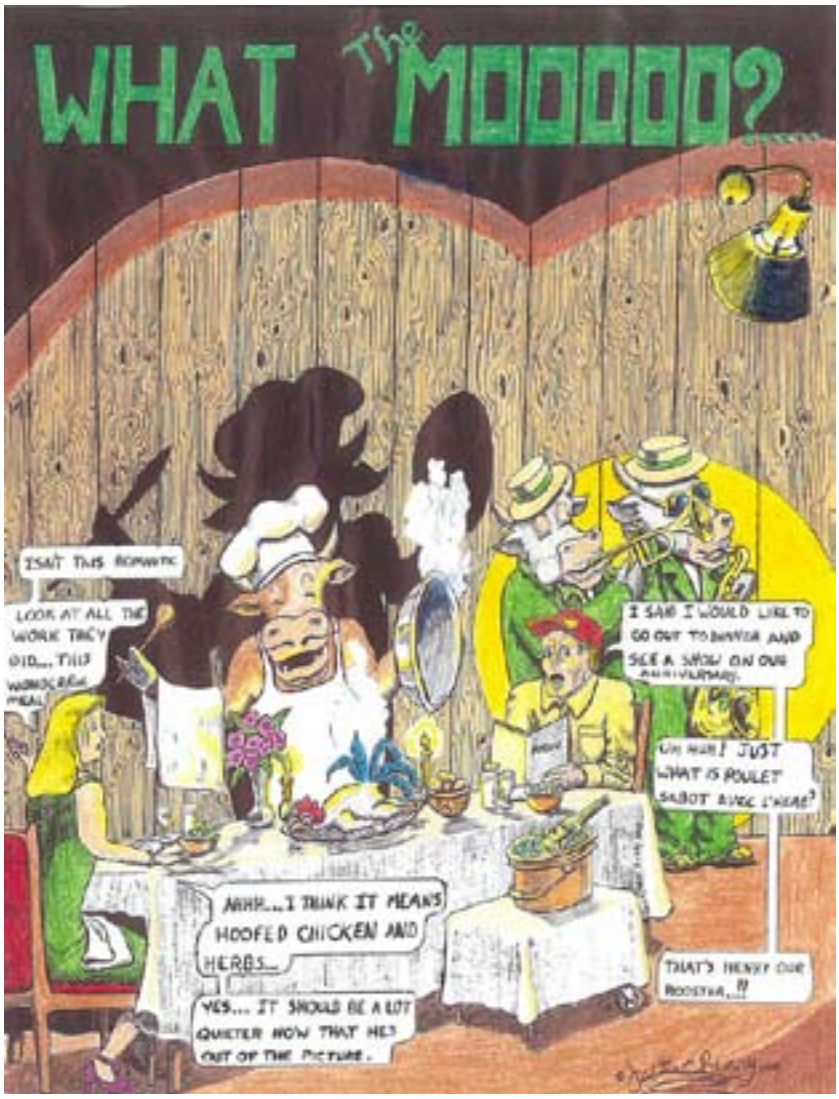
Continued from page 22

Reclamation underway.

The West Nipissing Hay Association members with Mike Peters of INCO

Tree Planting Project

More than 11,000 white spruce trees were planted along the banks of Cache River as part of the Greater Nipissing Stewardship Council/West Nipissing SCIA tree planting program. Pictured above are Shawn and Nadia of Outland Reforestation with Kyle Parsons. Initial site visits have been carried out on 8 properties and they hope to be able to arrange for planting some or all of these later in August. They plan to visit the balance of the properties on the current list before the end of August, followed by planting next Spring.



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

SOILS AND CROP

NORTH EASTERN ONTARIO SOILS AND CROP SUMMER MEETING

AND

ALGOMA SOILS AND CROP SUMMER TOUR

AUGUST 6TH

BREAKFAST AT BOBBERS ----------7AM

MEETING AT THE BRUCE MINES LIBRARY--------- 8AM

TOUR STARTS

PLEASE MEET AT LES HILLSTROM'S HOME TO CATCH THE BUS

420 DEPLONTY RD----------9:45 AM

FIRST STOP ---VIC FREMLIN'S FARM----------10:00AM

We will see corn trials

SECOND STOP----------PAUL OIKARI'S

We will see wheat

THIRD STOP----HILLSTROM'S FOR LUNCH (PROVIDED)

WANT TO REDUCE FUEL AND INPUT COSTS

YOU WON'T WANT TO MISS THE AFTERNOON
INFORMATION SESSION AND DEMONSTRATION BY
JORDAN WALLACE (ONTARIO GPS)

ROOM RESERVATIONS CALL BAVARIAN INN
AT 705 785 3447

FOR MORE INFO CALL

MURRAY COCHRANE 705 842 5622

LES HILLSTROM 705 782 6744

Age Verification Program

ATTENTION BEEF PRODUCERS

Avoid Over Thirty Month Discounts

***PLUS* qualify for $3.00 for each of your 2007 calves (not previously enrolled) and $5.00 for each of your 2008 calves!**

3 EASY STEPS

1 **Age Verify Your Calves**

2 **Have a vaccination program**

3 **Take the QSH - VBP course**

For an application and to have your age verification done FREE contact:

Deb Garner 563-2761
dgarner@ontera.net

The Ontario Cattlemen's Association has continued the Age Verification (AV) Program for the 2007 and 2008 calf crops. The AV Program was initiated to encourage age verification and increase demand for Ontario cattle. It is open to all beef producers in Ontario(calves sold for dairy purposes are ineligible in this program). As an incentive there is a credit of $3.00/calf for each 2007 calf (not previously enrolled in MAP) that is age verified and $5.00/calf for each 2008 calf.

The steps for the new Program are just as easy:

1. Producers Age Verify their calves – themselves, or by returning the Age Verification Data Form to Deb Garner (still a FREE service!)

2. Have taken the QSH/VBP workshop

3. Have a Vet approved vaccination program

Age verification is already showing an advantage:

· to qualify for "Age Verified Sales"

· to qualify for some "Branded Beef" Programs

· to avoid the "Over Thirty Month" discount (dentition has a large margin of error)

· to receive a premium for under 21 month animals marketed to Japan

As market restrictions and consumer demand for quality assurance increases, the Age Verification Program is in place to send a message that this industry is moving forward and doing things that shift the marketplace preference to Ontario Beef.

Thank you for your support of the Age Verification Program.

For further information contact:
Debra Garner, Age Verification Technician for N.Ont. (705) 563-2761, dgarner@ontera.net