Breaking Ground
(in Northeastern Ontario) SUMMER 09

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

Agricultural Organizations are Strong Supporters of the IPM 2009

Temisakaming Ferdation of Agriculture is proud to be a "Friends of the Match" sponsor. They have committed $5,000 to assist with feeding the volunteers at the IPM 2009. In doing so, they issued a challenge to other agricultural commodity orgainzations across the north to assist them. To date, more than 15 other groups have joined the TFA in their quest to ensure the volunteers at the IPM 2009 will be well taken care of.

Pictured above from left to right; Charles Regele, John Vanthof, Cliff Fielder, Kim Overholt, Kevin Pratt, Steve Williamson, Allan Aitchison, Harold Leaton, Carol Ann Regele, Yves Gauthier

Absent when photo was taken is Norm Koch and Brian Brownlee.

It is important to recognize that TFA is not just providing financial support but a strong volunteer base as well. John Vanthof & Norm Koch are Board Members, Charles and Carol Anne Regele are co chairs of the Tractor Park committee, Yves Gauthier is the chair of the Traffic Committee, Cilff Fielder is on the tractor Park committee, Brian Brownlee on the sponsorship committee, Kevin Pratt is in charge of tractors procurement for the wagon tours and Harold Leaton sits on the RV Park committee. Thank You TFA!

Continued on page 2

Original CSCIA Members Recognized

Three members of the Cochrane Soil and Crop Improvement Association were recently presented with plaques marking their continued service and dedication to the Association.

CAPTiON

Hedley Blackburn, David Hackett, and Andy Dodds, long time residents of Cochrane, were three of the original members of the Cochrane Crop Improvement Association formed in 1939. All three have been with the organization for 70 years but David was chosen as the "Official" lon-

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.

Send articles to:
Graham Gambles
Box 586, Temiskaming Shores, ON P0J 1K0
Tel: (705) 672-3105
Fax: (705) 672-5959
E-Mail:
gamblesgraham@yahoo.ca

Agricultural Organizations are Strong Supporters of the IPM 2009

Continued from page 1

The Temiskaming International Plowing Match will open its gates in just three short months and it is being held right here in Northern Ontario. The tented city design is finalized, the RV Park is 60% booked, the entertainment and attractions are programmed and volunteers are signing on to help make the event is a rip roaring success. Part of the overall mandate of the project was to ensure that the 1200 volunteers who take on this project will be fed, watered and appreciated in true northern style. In early 2008 the IPM sponsorship committee approached the Temiskaming Federation with the idea of the TFA assisting with the costs of taking care of our volunteers. This would include lunches and snacks, rest areas and of course coffee..... lots of coffee. The Federation was quick to support the idea and made a $5,000 contribution to the "Feed the Volunteers" Initiative. In late November of 2008 the sponsorship committee made a wise decision to reach out to the rest of the agricultural community in Temiskaming and across Northeastern Ontario to see if they would be interested in joining the TFA in support of the volunteers.

A letter of request was sent to over 30 commodity organizations, agricultural societies and federations across the North. The response was both swift and sweet. Between November 2008 and May 2009 15 organizations have offered support to the volunteers. Many of the cheques that arrived contained notes or a letter stating support for the IPM and that the farmers in their area were planning to attend. Each cheque and every note confirmed and encouraged our commitment to stage the IPM in Northeastern Ontario. Listed below are the organizations that have supported the IPM to date, but envelopes are still arriving on a weekly basis.

Algoma Feeder Co-operative Ltd.

Algoma Milk Producers, Cochrane South Veterinary Services Committee, Concours de Labour du Temiskaming Plowing Match, East Nipissing Parry Sound Federation of Agriculture, Manitoulin Farmers Market

Continued on page 14

North Eastern Summer Tour 2009

North Eastern Ontario Soil and Crop Improvement Association members are joining the Ontario Canola Growers Association Summer Tour and the Temiskaming Soil and Crop Improvement Association Summer Tour for an information packed day.

When: Thursday, July 23, 2009

NEOSCIA Directors Meeting: 9 a.m. "Grand Boulevard" Restaurant , Earlton

Tour Start Location: Farm of Dave Schill near Earlton. Hwy 11 north from Earlton to second farm on right – Fire # 332325. Watch for signs.

NEOSCIA members will join the Ontario Canola Growers Crop Tour for the afternoon session and the Temiskaming Soil and Crop Tour in the evening.

12:00 noon Lunch at the Schill's Farm

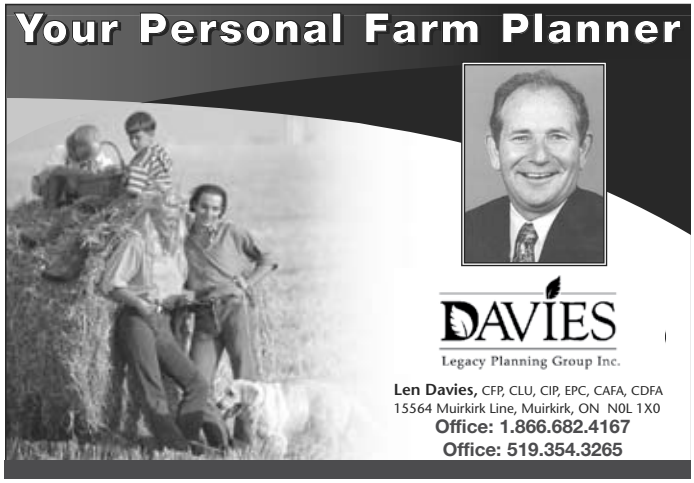
1:00 p.m. Ontario Canola Growers Association Crop Tour focusing on growing systems, analysis and value comparison of each system. Also Invigor, Dekalb, and Pioneer varieties will be showcased. The afternoon will feature speakers and demonstrations.

5:00 p.m. barbeque dinner

6:00 p.m. Temiskaming Soil and Crop Improvement Association Bus Tour. Participants will board buses for a tour of Temiskamings Soil and Crop projects on speed of seeding, BMPs, and the nitrogen sources trial.

9:00 p.m. Return to cars.

Join us on July 23... Everyone Welcome



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 Provincial Events:

1. Farm$mart Exposition, July 2nd-3rd

Elora Research Station.

Watch for details at http://www.uoguelph.ca/farmsmart/expo/

2. Ontario Maple Syrup Producer's Association Annual Summer Tour, Conference, Trade Show and Annual Meeting, July 16th-18th

Hosted by the Lanark and District Maple Syrup Producers' Association

For further information or to register today, contact Don Dodds, Summer Tour Chair, 613-256-4045 or by e-mail: springdale@storm.ca

Web Site: www.ontariomaple.com and follow the links

3. Eastern Ontario Crop Diagnostic Day, July 21st

Winchester Research Station

Contact: Scott Banks, Emerging Crop Specialist, OMAFRA scott.banks@ontario.ca

4. 2009 Outdoor Farm Show, September 15th-17th

Visit: http://www.outdoorfarmshow.com

5. International Plowing Match and Rural Expo, September 22nd-26th

District of Temiskaming Visit: www.ipm2009.net

E-Newsletters

OMAFRA Environmental Management Newsletter: http://www.omafra.gov.on.ca/english/nm/newsletter/emn.htm

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/crops/organic/news/news-organic.html

OMAFRA Horse News and Views: www.omafra.gov.on.ca/english/livestock/horses/news.html

OMAFRA Financial Resources and Support Services for Families: Call: 1-800-461-6132 or pick up at NORO, Verner

The Cropline: 1-888-449-0937: A province-wide, toll-free phone service on crop management tips, herbicide recommendations and pest alerts. In addition to receiving information on current issues, callers are provided the opportunity to leave a question for OMAFRA's field crop specialists to address on the next update.

New Business

1. A note from Parry Sound-East Nipissing Soil and Crop Improvement Association: Is the high cost of fertilizer too much this year? Have you thought about the value of limestone instead for you fields? Parry Sound - East Nipissing Soil and Crop Improvement Association has a lime spreader that is available for rental to spread that limestone. Call John MacLachlan at 705-384-7142 to enquire about its availability.

2. Food Safety and Traceability Initiative: Following the April 1st, 2009 announcement of Growing Forward, we are pleased to launch the Food Safety and Traceability Initiative (FSTI), part of the Best Practice Suite. As you are aware, Growing Forward supports the development and implementation of best practices in four key areas:

- environment and climate change
- food safety and traceability
- business development
- biosecurity.

Participants are encouraged to develop strategies across all these areas to meet their business goals through a variety of information sessions and workshops, as well as one-on-one training and technical assistance. In addition, an Innovation and Science Suite encourages and supports ongoing research and the commercializ tion of research.

The Food Safety and Traceability Initiative is a cost-share funding program, developed to assist agriculture and agri-food facilities improve food safety practices and traceability systems in their operations. Improvements to food safety and traceability will strengthen Ontario 's ability to provide safe, high quality food and provide economic advantages to our farmers and food processors.

For more details about the FSTI, please contact us by:

- phone: 1-888-479-3931
- website: http://www.omafra.gov.on.ca/english/infores/foodsafe/fsinitiative.htm
- e-mail: FSTI.omafra@ontario.ca

3. Growing Forward: If you would like more information on Growing Forward, the Best Practice Suite and/or the Innovation and Science Suite, please contact us by:

Continued on page 6

Ontario Cattlemen's Age Verification Program

Just a note to let everyone know that the Ontario Cattlemen's Age Verification Program is drawing to a close.

As everyone should be aware of, the Program is scheduled to end by December 31, 2009 BUT "is subject to funding availablity".

We are pleased to see the large influx of calves being age verified, and because of this, expect the termination of the Program within the next few months. No new applications will be excepted after June 1, 2009.

Producers enrolled in the Program will continue to be paid the $5 per qualified, age verified 2008 and 2009 calf until the funding has expired. So please get your data in to Deb Garner A.S.A.P.

Application forms and data entry forms are available at: www.cattle.guelph.on.ca/age-verification/index.asp or by calling Deb Garner (705) 563-2761

Original CSCIA Members Recognized

Continued from page 1

gest serving member of the OSCIA, and honoured at the organizations annual meeting in Niagara Falls in February. At the event, it was noted that only these three members, out of all the current members in the Province, have been consistent members since the initiation of the organization in 1939.

David Hackett joined at the age of 14. In the early days, he had a strong affiliation with seed production, which included seed potatoes. David has been referred to as the last of the "Potato Kings", as he was known for growing world-class Elite seed potatos. He received many awards including championship prizes at the Royal Agricultural Winter Fair and was recognized by numerous Ministers of Agriculture, including Dennis Timbrell who visited the Hackett farm on August 16, 1982 and provided personally signed "Pre-Elite" potato contracts.

Andy Dodds is one of the early pioneers in the Cochrane area. He was born in 1921 and married Lillian Farquhar in 1948. He has always been part of the farming industry, raising chicken, hogs, and dairy cattle on the farm in Clute, with his father R.A. Dodds.

Andy joined the Association in 1939 at the age of 18. He has also been involved with the Clute and Cochrane Agricultural Societies, the Cochrane Cattlemen's Association, and the Cochrane Coop.

For ages, Andy entered potatoes, grains, and forages in fall fairs. Like many, he grew his own seed potatoes for 15 years. His grains were exceptional in the 60's and a half bushel was cleaned and entered in the Royal where it placed 18th out of 30 that were good enough to make it to the public show table. The Dodds farm was self sufficient in grains over the years, striving for excellent yields. Growing test plots at times for the CSCIA, they tested different grains for yield, hardiness and lodging.

Hefley Blackburn moved to Hunta with his parents when he was 12 in 1928. His father worked on the railroad at a time when the authorities were promoting farming in the region by giving land to those who wished to venture North. They came to Hunta and Hedley soon called Northern Ontario home.

They raised pigs, had 100-200 chickens, and sold eggs in town. At one time they had 500 capons which they would sell. They had Jerseys for milk and cream, beef cows, and a garden with potatoes that they sold.

Hedley joined CSCIA at the age of 23. He has continued to attend the meetings and be an active member as have his follow recipients, over the past 70 years. That is a Provincial record!

Twin Row Corn

by Greg Stewart, Corn Specialist, OMAFRA

Some ideas are just so appealing that it is hard to leave them alone, even when they have proven in the past to not work out as well as expected. The narrowing of corn rows seems to fit into this category.

Row Width Research

An extensive amount of research over the last two decades has investigated the yield improvements that could be gained by narrowing corn rows to something less than 30 inches. By the mid-1990's, research conducted across the northern Corn Belt and southern Ontario indicated significant yield advantages by narrowing corn rows from the traditional 30 - 38 inches (75-95 cm) down to 15 - 24 inches (38-60 cm). The research indicated that narrow row advantages would be greater in more northerly latitudes compared to the mid to southern portions of the Corn Belt.

Ontario producers who converted to narrow row production systems at this time did so mostly by converting to 20 inch (50 cm) rows. They anticipated paying for planter and corn header conversions with an expected yield boost of 3 to 8 per cent.

Continued on page 15

Nipissing University establishing collaborative research partnership with NEOSCIA

Faculty and students from Nipissing University's Department of Geography are excited to begin examining potential research collaborations with various representatives from NOSCIA. Our initiative is to examine the changing agricultural environment, but more importantly, the adaptive strategies that farmers make to ensure sustainable and competitive agricultural practices in Northeastern Ontario. Specifically, we are interested in how farmers contend with changes to climate, government policy, and global market conditions. Being from North Bay we are optimistic that long lasting collaborative ventures will enable students, faculty, and the farming community to benefit from this mutual partnership.

As an initial step in studying environmental conditions affecting farming practices, the Department of Geography is establishing a series of weather stations in conjunction with Kevin Runnels web cam initiative. With the assistance of Gerald Beaudry, the first station was set up on May 15th in Verner, with past and present weather data now accessible at the following web site (https://www.hobolink.com/p/d90d9501cd8e9df-55be47c3f00c9c126). In the near future we hope to initiate a brief software training session for interested members of NOSCIA who could use this information. For example sessions could include calculating other pertinent data such as growing degree days and mixing (humidity) ratios from this weather station information.

In the following months we would like continue to meet with members of the farming community and support agencies to refine potential topics of investigation. This feedback would allow us to investigate specific ideas that target Northeastern Ontario farming points of interest. For more information please feel free to contact Graham Gambles or Drs. Kovacs, O'Hagan or Walters at 705-474-3461.

The first collaborative NOSCIA-Nipissing University weather station placed in Verner. From left to right Dr. Dan Walters, Gerald Beaudry, Dr. John Kovacs, Dr. Sean O'Hagan and Nipissing Geography students Autumn and Kelly.

RESOURCES • E-Bulletin

Continued from page 6

- phone: 1-888-479-3931
- website: http://www.omafra.gov.on.ca/english/about/growingforward/index.htm
- email: growingforward@ontario.ca

4. ***Northern Ontario Entrepreneur Program:*** Are you an ambitious northerner with a new entrepreneurial idea and the drive to develop your own business? The NOHFC is proud to support northern entrepreneurs, with up to $125,000 funding per project.

Who is Eligible? Residents of Northern Ontario who plan to start their own for-profit business in the North, The new venture cannot be an expansion of a similar business owned by the entrepreneur and/or relatives. The proposed new business must operate full-time and result in job creation in Northern Ontario . What is Eligible? Costs that may qualify for funding include but are not limited to leasehold improvements and capital costs related to starting a new business such as office furniture, fixtures and equipment, Marketing costs totaling up to 20 per cent of eligible project costs. Funding and Guidelines: The NOHFC may provide a conditional grant generally up to 50 per cent of eligible costs and not to exceed $125,000 per project. The entrepreneur must make a cash investment in the business of no less than 10 per cent of the NOHFC's conditional grant. NOHFC funding, when combined with other provincial and/or federal government funding will generally not exceed 75 per cent of eligible costs.

More details and application forms can be found at the link below:

http://www.mndm.gov.on.ca/nohfc/program_northern_entrepreneur_e.asp

The Enterprises North Job creation program has also been modified to include the possibility of a conditional contribution of up to 50%.

Details and forms at this link: http://www.mndm.gov.on.ca/nohfc/program_enjc p_e.asp

The Private Sector Emerging Technology program has undergone similar changes. Details at: http://www.mndm.gov.on.ca/nohfc/program_etp_e.asp

5. ***Keeping your Birds Healthy:*** The "Keeping Your Birds Healthy – Biosecurity Basics for Small Flocks" initiative was developed by the University of Guelph , the Poultry Industry Council and the Ontario Ministry of Agriculture, Food and Rural Affairs to target non-regulated feather industries. The mission is to develop a network with the non-regulated feather industries to enhance technology transfer of information that will improve bird health and welfare and on-farm biosecurity. A resource kit has been developed for use by producers in this target group. Topics discussed include: Introduction to Biosecurity, Seven Principles of Biosecurity, Feed and Water Management, Cleaning and Disinfection, Introduction to Disinfectants, Disposal of Bird Mortalities, introduction to Disease, Foreign Animal Disease, I Think my Birds are Sick, Integrated Pest Management, Understanding Antibiotics. To obtain your FREE* Resource Kit, call the OMAFRA Northern Regional office at 1-800-461-6132 to have one mailed directly to you.

6. ***Age Verification program:*** The Ontario Cattlemen's Age Verification Program is drawing to a close. The Program is scheduled to end by December 31, 2009, but "is subject to funding availability". No new applications will be accepted after June 1, 2009. Producers enrolled in the Program will continue to be paid the $5 per qualified, age verified 2008 and 2009 calf until the funding has expired.

Application and data entry forms are available at: www.cattle.guelph.on.ca/age-verification/index.asp, or by calling Deb Garner at 705-563-2761.

7. ***Beefed up research at New Liskeard station:*** A newly renovated facility has added capacity to the beef research program, addressing issues of meat tenderness and feed efficiency through genomics. Funding for these newest renovations was provided by the Agricultural Research Institute of Ontario. Research projects underway at the facility reflect the long-term partnership in beef research between OMAFRA, the University of

Guelph and the Ontario Cattlemen's Association – a partnership that's been around since 1994. The association owns a 150-cow herd at the facility, which is housed in three barns on 500 acres of land. New Liskeard is also home to the Superior Plant Upgrading and Distribution (SPUD) Unit and an agronomy research program. The SPUD unit produces first generation seed potatoes, and strawberry and raspberry plants for Ontario and has recently expanded to include garlic and asparagus. The agronomy research program has diversified from the traditional spring cereal, oilseeds and forage crops grown in the north to include hybrid poplar trees and perennial grasses for biofuel.

8. ***Farm Equipment on the Highway:*** This farm guide has been developed to provide general information and clarification for the laws that apply to farm equipment and select provisions that apply to farm trucks. Representatives from the Ontario Federation of Agriculture and its partners have provided input into the development of the guide to ensure that questions from the farming community have been addressed. This guide is intended to help the farming community better understand their legal obligations under the law. Enforcement officers may also use this guide as a reference. Visit the following link to review the farm guide: http://www.mto.gov.on.ca/english/pubs/farm-guide/part2g.shtml

Farm Safety Association's web site has good reminders and resources available to keep us safe during this busy season. Visit: http://www.farmsafety.ca/

Resources

1. New & revised publications – Available through Northern Ontario Regional Office @ 1-800-461-6132

a) Publications: Publication 812: Field Crop Protection Guide 2009-2010

b) Factsheets: Agdex 720/450; 09-017: Windrow Composting of Poultry Carcasses, Agdex 729/400; 09-019: Nutrient Management Act 2002, Incineration of Dead Farm Animals, Agdex 729/400; 09-023: Nutrient Management Act 2002, Emergency Disposal of On-Farm Deadstock

c) Web-Only Factsheets: Agdex 258/13: 09-011w: Garlic Production

http://www.omafra.gov.on.ca/english/crops/facts/09-011w.htm

Agdex 292/631: 09-013w: Downy Mildew in Greenhouse Cucumber http://www.omafra.gov.on.ca/english/crops/facts/09-013w.htm

d) Additional E-Resources:

i) The Centre for Rural Leadership: http://www.ruralleadership.ca/

ii) Growing Your Farm Profits Workshop Dates

iii) EFP Workshop Dates

iv) Grower Pesticide Courses: http://www.opep.ca/growertraining/Courses.cfm

OSCIA News...

June 2009

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

Table of Contents

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

OSCIA 2010
ANNUAL MEETING

Date: February 2 & 3, 2010
Place: Sheraton Fallsview
Niagara Falls

Message from the President

Murray Cochrane

The weather this spring has been, needless to say, challenging. Some areas have experienced above average rainfall which has meant corn being planted later than normal and soybeans in some areas still in the bag. With the wetter-than-usual fall of 2008, there were cases this spring of fields of corn being combined, and right beside them, corn being planted.

This spring, we signed a new three-year agreement with OMAFRA to partner in on-farm demonstrations and applied research. I would like to commend the local and regional associations for their enthusiasm in getting these projects up and going. It takes considerable time and effort for the co-operating farms, local associations with the assistance of OMAFRA staff, to design the proposal, implement the project, and tabulate the results. These efforts benefit the entire farming community with credible data.

We are anticipating that the next suite of programs under "Growing Forward" will be announced soon, and we believe there will be a strong uptake under the EFP program.

Since the inception of the EFP, over 35,000 farming operations in Ontario have participated. The farming community needs to be commended for their proactive approach to improving the environment. We look forward to working with OMAFRA on this continued successful program.

Once again, this year OSCIA participated in the Premier's Summit held at Queen's Park. The theme encompassed partnering, whether it be with research, agribusiness, retail, etc., to make your business stronger and more cost effective.

A new research outreach initiative called Knowledge Translation and Transfer (KTT) is designed to assist

researchers from OAC/U of G to extend research results to all sectors of the food chain. We look forward to providing input to OAC and OMAFRA staff to encourgae more projects on the farm for demonstration and research purposes. There is potential for KTT to benefit members of OSCIA directly.

I encourage all members to take in the many field days and information sessions being held throughout the province this summer, and to bring along a friend or neighbour. I look forward to attending upcoming events throughout the summer and fall, and meeting with many of you. I wish all members a safe and successful summer.♦

2009 Ontario Forage Masters Program

Two hundred and eight participants from 22 local associations entered the Ontario Forage Masters program this year. They are from Brant, Carleton, Dundas, Frontenac, Glengarry, Grey, Halton, Lanark, Leeds, Northumberland, Oxford, Peel, Perth, Peterborough, Renfrew, Russell, Simcoe North, Simcoe South, Stormont, Thunder Bay, Victoria, and Wellington.

Of the 208 participants, 24 are 4-H members who are part of a family that holds a membership in their local SCIA.

The sponsors - Pickseed Canada, Agri-Food Laboratories - are again offering valuable prizes to the top three winners from each local association.

A final provincial competition will take place this fall in conjunction with the third sponsor, the Royal Agricultural Winter Fair, to select an overall Ontario winner. This winner - the **2009 Ontario Forage Master** - will represent Ontario at the Forage Spokesperson Competition held as part of the American Forage and Grasslands Council conference to be held in Springfield, Missouri in 2010. A date for this has yet to be established.

Results from local activities will be forwarded to the contact persons for each local association as soon as they are available, usually in July and August.♦

PICKSEED

AGRI-FOOD LABORATORIES

Visit the OSCIA website
www.ontariosoilcrop.org
new look coming soon!!

OSCIA Annual Meeting

A number of excellent speakers were featured at the 2009 Annual Meeting, whose presentations will be summarized in each issue of OSCIA News in 2009 by members of the OSCIA Regional Communication Coordinator team. Following is the second article.

"RESEARCHERS WORKING WITH FARMERS - The New Vision"

John Shepherd, RCC, Golden Horseshoe Region

Dr. Robert Gordon, new Dean of the Ontario Agricultural College, addressed the OSCIA delegates at the annual meeting held in Niagara Falls in February 2009. In his presentation, Dr. Gordon stressed that not only would he bring back the relationship that OAC researchers have traditionally had with farmers in Ontario, but under his watch, those relationships would be enhanced. "We want to enhance our ability to inform the farm community," he said.

Dr. Gordon said that connecting and reconnecting with the Ontario farm community is a priority for the OAC. Noting the college's longstanding relationship with OSCIA, he said "We want to build on those traditional partnerships and relationships and we want them to evolve." At the same time, he said, "We are anxious to establish new opportunities and new innovations. Our goal is to support Ontario agriculture and the Ontario agri-food sector."

"With the Ontario Agricultural College in year one of a new 5-year agreement with OMAFRA", he said, "we must leverage that money as many times as possible." He said we intend to establish new research clusters at the OAC and will employ a new approach when making faculty appointments. An example of this new approach is the merging of the departments of Land Resource Science and Environmental Biology to form the OAC School for the Environment. Lamenting the fact that in his opinion the linkage between OAC and agriculture in Ontario has been lost, he said his vision includes a greater extension role for faculty members and enhanced service to the industry. "Ours is a commitment to knowledge transfer," he said.

Citing an example of farmers working with researchers, Dr. Gordon drew on his experience as Department Head and Dean of Research at the Nova Scotia Agricultural College. Working with the dairy farmers of Nova Scotia a

goal was established to have all dairy farms in the province in compliance with Canadian milk quality standards by 2006. The project started with an assessment study which determined that fully 40% of farms had detectable bacteria levels. From there, they set about correcting the problem on the 139 problem farms. Students undertook 139 individual case studies and developed specific recommendations for each farm. A summary of results revealed that 62% of problems were corrected using water treatment systems, 20% developed alternative water supplies, and 18% drilled new wells.

Dr. Gordon told delegates at the meeting that even though the University of Guelph is currently ranked 14th in Canada in research intensity, (money ÷ number of faculty members), 12th in the world by citations in agricultural science, and 14th in the world by impact in agricultural science, the weak link in the process is often the transfer of research to producers. "Production agriculture is still key to OAC agriculture research", he said, "but mine is a commitment to knowledge transfer".

Noting that there are many, many, exciting possibilities in the agri-food sector, Dr. Gordon said everything possible is being done via recruiting programs to make students realize the opportunities. "It is however, very expensive to maintain four campuses in the province," he said. (i.e. Guelph, Kemptville, Ridgetown & Alfred College) "To be successful, a staff of excellent, highly-connected faculty will be crucial."

Dr. Gordon, who took over as OAC Dean on August 01, 2008, earned a bachelor's degree in agricultural engineering and a masters degree in agricultural physics from McGill University. In addition he obtained a PHD in land resource science from the University of Guelph and holds an engineering diploma from the Nova Scotia Agricultural College (NSAC). He spent nine years at NSAC as a professor, department head and dean of research. He has served as the provincial climatologist for Nova Scotia and holds the Canada Research Chair in Agricultural Resource Management. He is also an adjunct professor of plant and soil science at the University of Vermont and Dalhousie University. He is an honourary research associate at the University of New Brunswick.♦

...and the third article.

"2008 CROP REPORT & EMERGING TRENDS FOR 2009"

Cathy Dibble, RCC, Thames Valley Region

OMAFRA's Ian McDonald and Keith Reid were the starting session of an excellent group of speakers at the 2009 OSCIA Annual Meeting in Niagara Falls in February. Ian and Keith summarized the 2008 growing season as very level…the majority of the province started with a cool month in May, but the rest of the season was very level. There was no lack of heat across Ontario, but we experienced no real spikes in temperature either. Precipitation was also fairly steady, with more daily rains all season long than average, which mostly affected forage crops.

Trends in the forage industry indicate more producers are leaning towards large bales rather than small, are using more proprionic acid preservatives, and are relying more than ever on baleage – possibly because of last year's wet weather. More cash crop producers are trying to grow hay for the horse industry, while livestock producers are expanding rotational grazing practices.

Corn production in the province in 2008 saw an increase in the average yield, with an amazing 168 bushels/acre. The ten-year average for production is 135 bu/acre, and the average yield has increased 1.9 bu/year since 1980. The new standard for counting heat units is to starting May 1 of the growing season. With increased input costs, cost-cutting measures are being used more frequently. Available tools on the www.gocorn.net website include the nitrogen calculator and the manure nutrient calculator. The true cost of fertilizer is not the price per tonne, but rather how many pounds of grain or forage it takes to buy a pound of fertilizer (what we call the Price Ratio).

Keith Reid, OMAFRA

Trials indicate early weed treatment applications (3 leaf vs. 7 leaf stage) are affecting yield, and the critical weed-free period is at the 3-8-leaf stage. A new pest has caused significant damage in the western counties of Ontario in 2008. Western bean cutworm, seen in Michigan and Ohio over the last few years, has migrated to our province in 2008. This pest enters the plant at the side of the ear, and feed extensively on the kernels.

In cereal crops, the provincial wheat average yield has increased 1.1 bushels/acre/year, with the 2008 yield coming in at 81.5 bushels. Nitrogen trials are trying to determine optimal rates, and fungicide applications appear to increase optimal nitrogen rates.

Soybeans across Ontario averaged 43 bushels/acre in 2008. Since 1942, the average increase per year was .3

bu/acre, but the 20-year average increase is only .1 bu/ac. Breeding and agronomics research in the soybean industry are lagging behind since the majority of research dollars are focused on corn crops, although there are many trials assessing weed control in IP soybean crops.

All in all, 2008 turned out to be a very interesting crop year, with 2009 bringing new challenges and opportunities.♦

continued from page 3

Safety - trips and falls

This issue of OSCIA News is providing some common causes of slips, trips and falls.

They include:

- messy, cluttered work areas
- tools, materials, cords, and other items lying on the floor or places where people walk
- poor visibility caused by inadequate lighting or burned-out bulbs
- not watching where you're going, or carrying something you cannot see over
- running or walking too fast
- spills and wet floors
- open drawers
- uneven, defective flooring, worn stairs
- failure to use handrails when using stairs
- not enough caution on ladders
- wearing shoes that are not appropriate for the work space or the job.

Staying on top of, and aware of, the above hazards will improve chances of avoiding injury.

Work safe - stay safe.♦

SouthWest Crop Diagnostic Day

The 15th Annual Diagnostic Day is an event that highlights current topics of interest. The goal of the day is to provide quality, state-of-the-art training in all aspects of crop production and management.

The event is being held July 8 and 9 at the Ridgetown Campus of the University of Guelph.

The Diagnostic Day is designed specifically to improve the problem-solving skills of seed, fertilizer and chemical industry personnel and agricultural consultants.

Individuals will have the opportunity to customize their Diagnostic Day experience.

Go to www.diagnosticdays.ca for full program agenda, fees, and registration.

OMAFRA is presenting the event in co-operation with the University of Guelph Ridgetown Campus, with support from Soil and Crop Improvement Associations in southwestern Ontario. ♦

Prescott SCIA holds Seed/Feed Fair

The Prescott SCIA held their Seed Fair on March 11 at the Alfred Community Hall. There were 50 entries in total, with 10 exhibitors.

Pictured in the photo at the event are Cecil Cass, Yves Bergevin, Nicholas Seguin, Luc Alarle, Rosaire Dupont, and Andre Pommainville (judge).

FREE BRUNCH
'Where Crop Farmers Meet'

OSCIA is very pleased to partner with Bayer CropScience and Canada's Outdoor Farm Show to co-host a free brunch for OSCIA members and their buddies. Special features at the Show for 2009 include: Genuity(TM) Technology Expo; Celebrating Healthy Living; Canadian Energy Expo; Grober Young Animal Development Centre, and; Cover-All Dairy Innovation Centre.

Be sure to watch for Show Brochure along with VIP passes and brunch vouchers, which will be mailed to OSCIA members later this summer. ♦

CANADA'S Outdoor FARM SHOW
SEPT. 15,16,17,2009
CANADA'S OUTDOOR PARK
WOODSTOCK, ONTARIO
CanadasOutdoorPark.com

Bayer CropScience

OSCIA

Soil Fact

Soil is made from the weathering of rocks. It may take 100-1000 years to form one centimeter of soil.



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

Photo 1 - Aphanomyces Appearance In An Established Stand (courtesy Of Dr Dan Undersander, University of Wisconsin)

Photo 2 - Aphanomyces Infected Plants (Bottom) Compared To Normal Plants (Top) (courtesy Of Dr Dan Undersander, University of Wisconsin)

Aphanomyces in Alfalfa Survey

- Request for Soil Samples!

by Albert Tenuta, Field Crop Plant Pathologist & Joel Bagg, Forage Specialist, OMAFRA

Aphanomyces root rot is considered a major alfalfa disease. There are many alfalfa fields in Ontario that show visual symptoms similar to aphanomyces, although this has not been confirmed by laboratory analysis. Aphanomyces can be managed by the use of available Race 1 and Race 2 resistant alfalfa varieties.

Aphanomyces distribution and its impact in Ontario is not well understood. A limited 1992 survey in southwestern Ontario indicated infection in 6 (in 5 different counties.) of 83 alfalfa fields surveyed (7%). Based on the rapid spread of Aphanomyces in neighbouring States in the past decade or so, it seems very possible that has also become a significant alfalfa disease in Ontario. For this reason, OMAFRA, supported by the Ontario Forage Council, is conducting a new survey to update the geographic and race distribution of Aphanomyces in the province.

We Need Your Help!

If you have or know of any fields with potential problems, contact us so that we can sample these fields.

What To Look For?

New Seedings

Seedlings appear stunted, yellow and have a under developed root system with very few lateral roots. The roots often are grey and watersoaked, and turn brown as the disease develops. The cotyledons and first true leaves can be yellow in colour.

Established Stands

General symptoms include poor root development with the absence of the fine, fibrous roots and root hairs, along with reduced nodulation. Affected plants appear short, stunted and yellow in characteristic oval-shaped patches. There appears to be a definite separation between affected patches and normal plants. Because of the stunted root system, infected alfalfa stands do very poorly during extended dry weather, when these patches are particularly noticeable. Plants are slow to break winter dormancy, slower to develop in the spring, lack vigour and regrowth following harvest is delayed. (Photos 1 & 2.)

How to Sample

Soil samples are to be collected from the upper 6 inches of soil and from 25 locations. Take a shovel or cup of soil from these locations throughout the field. Since a bio-assay is needed to test for Aphanomyces a large volume of soil is necessary to grow the plants. Therefore, 4 to 8 liters of soil (1-2 gallons) is required. The collected soils must be kept in the cold or frozen if possible until delievered.

Who to Contact

Joel Bagg 705-324-5856
joel.bagg@ontario.ca

Albert Tenuta 519-674-1617
albert.tenuta@ontario.ca

Will Fusarium Be A Problem In The 2009 Spring Wheat Crop?

by Scott Banks, Emerging Crops Specialist, OMAFRA, Kemptville

That's a several $ million question! What weather is in store for June? Fusarium infection in wheat is very much dependant on the weather that occurs around the time that the wheat heads and begins to pollinate.

Critical Infection Period

For fusarium infection to occur in the wheat head, the weather conditions 7 days prior to the wheat heading and for 5 to 10 days after the wheat heads have emerged are critical. Temperatures between 10° and 30° C and wet weather are conducive to fusarium infection. If the temperatures are above 32°C and it is hot and dry, the risk of fusarium infection is very low. In 2009, a lot of spring wheat was planted 1 to 2 weeks earlier than most years. The crop will also be heading earlier than normal, depending on the planting date and the temperatures in June. In most parts of the province, spring wheat normally heads the last week of June or the first week of July. Start monitoring earlier planted fields for the risk of fusarium infection in mid-June.

Site-Specific DONcast

Deoxynivalenol (DON) is the toxin produced by the fusarium mould. To help predict the risk potential of fusarium and DON (in ppm), maps are available at www.weatherinnovations.com/DONcast.cfm. Site- Specific DONcast is a much more precise tool than the regional maps previously available. It is very important to monitor your own fields to identify the time of head emergence (Zadoks 59) in order to accurately run the Site-Specific DONcast calculator.

Fungicide Application

Proline(r) and Folicur(r) fungicides are currently the only products registered for fusarium suppression in spring wheat. To get the greatest suppression of fusarium, these products must be applied:

1. at the correct growth stage of the wheat,
2. With the correct nozzles to get proper wheat head coverage.

Growth Stage

The product should be applied when at least 75% of the wheat heads on the main stem are fully emerged (Zadok 59) to when 50% of the heads on the main stem are in the flower stage. Refer to Figure 1 - Representative Zadok Stages and Figure 2 - Flowering Stage.

Figure 1 – Representative Zadok Stages

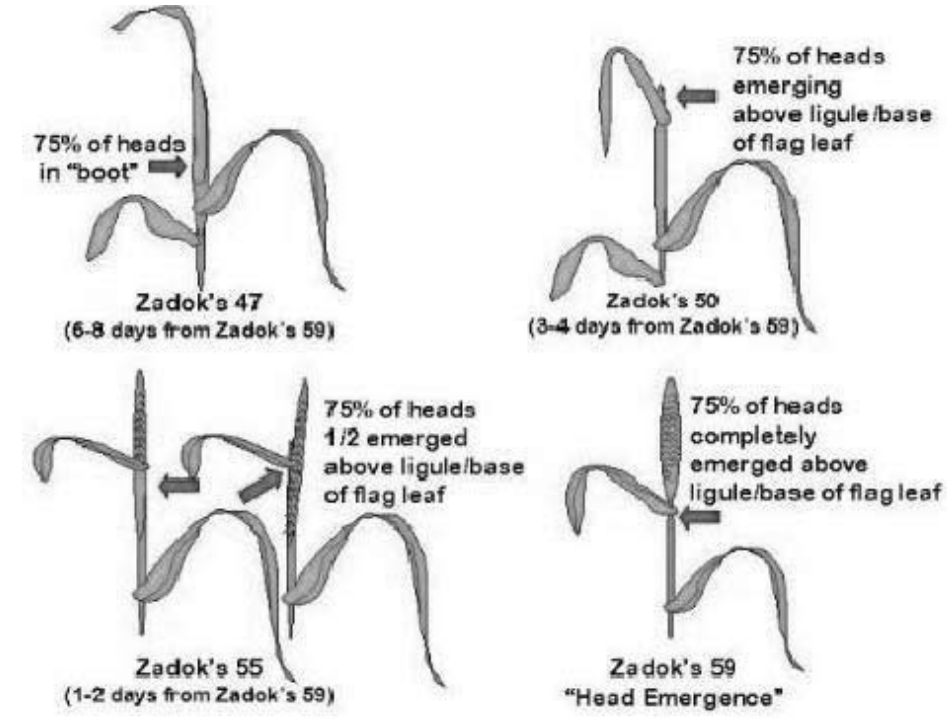


Figure 2 – Flowering Stage

Nozzles

Research conducted by Helmut Spiecer and Dr. Dave Hooker at the Ridgetown Campus - University of Guelph concluded that the best nozzles to spray the wheat heads horizontally from the front and the back were the Alternating Turbo FloodJet nozzles (Photo 1). The nozzles should be 30 cm (12 in) above canopy and 15 degrees from horizontal (Photo 1).

The Twin Jet nozzles (Photo 2) give less coverage of fungicide product on the wheat head than the Turbo FloodJet, therefore significantly reducing the effectiveness of the product.

Travel Speed

All nozzle configurations were tested at 10 and 20 km/h (6 and 12 mph). Results

Continued on page 13

Will Fusarium Be A Problem In The 2009 Spring Wheat Crop?

showed that travel speed was not as limiting a factor as had once been thought. Nozzles that performed well at low spraying speeds also performed well at high spraying speeds. Nozzles or nozzle configurations that gave good head coverage were consistent across both spraying speeds.

Photo 1 – Alternating Turbo Flood Jet nozzles

Photo 2 – Twin Jet nozzle

Yield

On-farm trials with Folicur in spring wheat have shown an average of about 2.5 bushel per acre yield increase. A limited number of on-farm trials with Proline over the past two years have shown an average yield increase of 6 bushels per acre. Yield response will vary depending on the disease pressure at application time.

Sprayer trampling when applying a fungicide is equivalent to about 1 - 1.5 bushel per acre.

Bottom Line

Proline(r) and Folicur(r) fungicides are applied at the correct growth stage of the wheat and with the correct nozzles to get proper wheat head coverage and greatest product suppression of fusarium. Anything less will dramatically reduce the amount of suppression of fusarium in spring wheat.

Johne's Disease Is An Increasing Problem - Should Manure Be Applied To Forages?

by Christine Brown, Nutrient Management Lead, OMAFRA, Woodstock

Application of manure from animals infected with pathogens is a potential method for spreading infection. Johne's (yo-nees) Disease is a persistent and debilitating bacterial disease that affects the intestines of ruminant animals, including cattle, goats and sheep. The disease is especially problematic in dairy herds, where many cattle can be infected, but only a small percentage of animals (<5%) show the clinical signs of chronic diarrhea and extreme weight loss. These cows also experience decreased milk production. Infected cattle, even those not showing sickness, may shed the bacteria in the manure. Johne's is most often introduced onto farms by the purchase of infected animals.

Animal Susceptibility To Infection

Johne's Disease is caused by Mycobacterium avium paratuberculosis (MAP). Calves, especially those under 6 months of age, are most susceptible to infection. Animals under stress are also more susceptible than healthy cattle. The common routes of infection are via ingestion of colostrum or milk contaminated by infected cows. For this reason, Johne's prevention strategies revolve around calf management and herd testing. (Refer to Healthy Cows for a Healthy Industry" at www.johnes.org.) Infection can also occur when feed contaminated with manure containing the MAP pathogen is eaten, particularly by youngstock. . For this reason, manure application to forages is a potential source of infection.

Survival of the Disease Bacteria In the Environment

MAP can survive in manure and water for up to one year and on pastures and hay fields for up to six months. Exposure to sunlight, drying, high pH, liming, and low iron, as well as the processes of fermentation and composting appear to reduce the survival of MAP. Factors that reduce the survival of the bacteria can also help in better managing manure applied to forages to prevent spread of MAP.

Management Strategies

The following Management Strategies are suggested for manure management in herds where Johne's Disease has been identified:

- Manure should not be applied to forages in calf or heifer pastures during the grazing season.
- Topdress the liquid manure as soon as possible following harvest. This allows the sunlight and desiccation to kill the MAP bacteria.
- Apply manure to fields that will be ensiled or harvested for haylage. Proper fermentation appears to kill the bacteria. Use good ensiling techniques, including proper dry matter content, use of silage inoculant if required, rapid filling, adequate packing, and covering as soon as the storage is filled.
- Avoid application of manure to fields that will be harvested for dry hay, especially calf and heifer hay. Where manure is applied, it should be done before any re-growth occurs. A 30 day interval between manure application and harvest should reduce MAP bacteria numbers. However year-to-year variations in environmental conditions (weather) cannot guarantee complete elimination.
- When choosing a field for manure application, those with a high pH or those that have recently had lime applied are preferred. Management strategies that help to control Johne's Disease will also help to control other common pathogens such as Salmonella, E.coli, Cryptosporidum and several other viral diseases that affect young calves and cattle.

Field Situation	Animal Class	Should Manure be Applied?
Pastures	Calves and young heifers	No
Pastures	Cows	Avoid
Dry hay	Calves and youngn heifers	Avoid
Legume and grass silage	All	OK
Summer annual silage	All	
Summer annual greenchop	All	

E. D. Thomas - William H. Miner Ag Research Institute

Agricultural Organizations are Strong Supporters of the IPM 2009

Continued from page 2

Federation of Agriculture, New Liskeard Agricultural Society, Northern Cattle Sales Network, Porquis Agricultural Society, Sudbury West Nipissing Cattlemen's Association, Sudbury Soil & Crop Improvement Association, Temiskaming Cattlemen's Association, Temiskaming Crops Coalition, Temiskaming Federation of Agriculture, West Nipissing Soil and Crop Association

Some of the agriculturally based support has opted to sponsor a tractor, a wagon or are providing equipment and required items, but the majority has agreed to feed the volunteers.

All of our supporters are listed in the local paper - The Temiskaming Speaker and we receive many positive comments on our agricultural support base from across the North.

As we move closer to the Match, the entertainment line up is being refined and the programming of attractions has been set. The music and stage entertainment will be posted on the website by June 10, 2009 and you can check it out at www.ipm2009.net .

Some of our major attractions include:

Renfrew County Square Dancing Tractor Troupe - Join us to watch as 8 antique tractors driven by 4 ladies and 4 men provide a high octane and very entertaining square dancing show from Thursday to Saturday in the Antique and Historical section.

Carson Farms & Auctions 6 Horse Hitch - Stabled on site and hitched and harnessed each day for visitors to watch and enjoy, this amazing team will be center stage each day in the show ring corral and will participate in the parades on Tuesday and Saturday.

Canadian Cow Girls - Watch as this precision drill team perform many routines for your entertainment. Dressed in dazzling outfits of red and white, this group will provide daily shows in the show ring corral and will do walk-a-bouts for the enjoyment of everyone.

Music, Music and More Music - Come enjoy five stages of entertainment, operating from 9:30 a.m. to 5:00 p.m. each day. Enjoy local and regional talent from across the north, over 80 groups, troupes and single entertainers have signed on to entertain our visitors.

Country Living - Enter the country living section and enjoy all the comforts of home. Visit the horticulture tent where Northern horticultural societies will be offering daily presentations and then take in the Quilt Tent to view the contest winners from the Quilt show plus the winning entries from the Quilt Block Challenge. Next you can tour the Artisan Tent where more than 50 Northern Artisans will be selling their wares. Have a seat in the theatre tent and enjoy the hourly demonstrations on subjects ranging from healthy eating to line dancing. Treat yourself to a little rest, relaxation, some refreshments and a homemade dessert in the tea tent - appropriately named the "Sit and Sip".

Antiques Anyone? - Spend some time in the antique and historical tents where you will get a chance to learn about our northern history and more than 30 museums have been invited to help us provide the opportunity. Outside you will be invited to walk through the exhibits of antique farming, mining and forestry equipment. Enjoy the antique tractor pulls which start on Thursday of Match week.

With all this and much more scheduled to happen in the tented city during the IPM week of September 22-26, 2009, please join us - "A Warm Welcome Awaits".

Harvesting the Cereal Nurse Crop Early

by Gilles Quesnel, Field Crop IPM Program Lead, OMAFRA, Kemptville

Alfalfa winterkill this spring was worse than anticipated across the province, forcing many to reseed significant acreage. Where a cereal nurse crop is used to establish a new alfalfa seeding, the nurse crop will provide some early season weed control and additional forage when harvested as silage. However, the nurse crop has the potential to provide severe competition to the underseeded alfalfa crop resulting in reduced establishment. A nurse crop can also reduce the feed quality of the first-cut if harvested late.

Harvest As Silage Or Grain?

Whether the nurse crop is harvested as silage at the lateboot to early-heading stages, or as grain in August will largely be determined by the relative need for feed or straw. Given the high soil moisture levels this spring, lush cereal growth is likely to provide intense competition to the new seedings. If forage feed is needed, removing the nurse crop early as silage may be the best option.

Removing the cereal competition early in the summer will also allow the alfalfa to establish quickly, giving the opportunity of a second-cut by summer's end.

Harvest Early For Forage Quality

From a feed nutrient value stand point when harvesting the crop as silage, best results are obtained when the cereal crop is harvested early. The ideal time to cut the cereal nurse crop is at the boot (just before heading) to early-heading stage. This is usually about 50 days after planting. It is often tempting to delay the harvest of the nurse crop, given that dry matter yield of the cereal increases by about 50% from the boot stage to the milk stage. However, New Liskeard Campus, University of Guelph research demonstrates that as cereal maturity progresses from the boot stage to the milk stage, the invitro digestibility drops from approximately 80% to 60%, crude protein drops from above 17% to 10%, while Acid Detergent Fibre (ADF) increases by about 20 percentage points. Once the cereal crop reaches the milk stage and beyond, it becomes high in fibre and low in digestibility, dropping significantly in feed value. Additionally, a cereal nurse crop at the late-milk stage or dough stage is difficult to ensile, since the plant moisture content drops too low for proper fermentation.

Cereal grains mature rapidly around the heading stage. Therefore, harvest of a cereal nurse crop as silage should begin slightly ahead of the harvest maturity stage desired.

Twin Row Corn

Continued from page 4

Twin Row Research

Starting in 1995, twin row configurations were introduced into research projects. Twin rows are two rows usually 7 or 7.5 inches (17.5-19 cm) apart but still centered on 30 inches (75 cm). A summary of the results from University of Guelph plots, Soil and Crop Improvement Projects, independent producers and OMAFRA research over last two decades is presented in Table 1.

Table 1. Influence of row width configuration and plant population on grain corn yields

Location	Years	Plant Population (plants per acre)			
		28,000 - 32,000		35,000 - 36,000	
		Twin Rows	Single 30 inch rows	Twin Rows	Single 30 inch rows
Ridgetown	2	171	157	174	163
Duraham Region	3	143	142	153	146
Woodstock	3	-	-	154	154
Highgate	2	153	150	-	-
Tavistock	1	163	150	-	-
Weighted Average		155	149	159	153

Net Profitability?

In general, the yield advantages to twin row corn have been inconsistent across the various years and locations were trials have been conducted. On average, twin rows represent about a 3% increase in yield. One of the main advantages to twin row corn has been the cost savings from not having to make any modifications to the corn header or tractor tire spacing. Some of these savings are perhaps offset by additional wear on the corn header (as it is continually required to "pull" corn stalks) and by lower harvest speeds.

Header losses have not been documented, but some producers have experienced corn cobs that get flung into the header and then bounce out.

When considering twin row corn, it appears that corn yield increases over traditional 30 inch rows may not always be adequate to justify equipment and management changes. Those operators most likely to enhance net profitability will be those who can combine the changes in corn planter configuration to mesh with soybean or edible bean planting systems and make one

piece of equipment due for all crops.

There is also discussion about maximizing light interception with twin row corn. A few studies have looked at this carefully. In a good stand of corn at 30,000 plants per acre. 95-99 percent of all the light is intercepted from tassel emergence forward and there is no impact of row spacing. The twin row spacing might improve light interception in the few weeks leading up to full canopy

cover, when the twin rows can show some advantage over the single rows. This usually calculates out to be a fairly minor impact and not far off what the average yield advantages have tended to be for twin rows.

If planting at high densities (35,000 to 40,000 plants/ac) is the key to yield improvements, then some have suggested that twin rows will contribute significantly to this yield boost when tested at these high densities. Once again, it is an appealing

concept, but so far not well proven. I am certainly interested in the developments around plant populations, hybrids and planter equipment that easily accommodates twin row planting. However, as one who jumped on the Twin Row Band Wagon once, you will forgive me if I don't sprain an ankle trying to get back on.



BULLETIN
GRANDES CULTURES

MAAARO – des spécialistes en grandes cultures

Info Culture
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

Résidus de culture – Une manne à récolter?

Ian McDonald, Coordonnateur de la recherche appliquée, grandes cultures, MAAARO

On entend beaucoup parler des nouveaux débouchés offerts par la biomasse, du remplacement des combustibles fossiles, « d'économie verte ». Il faut se demander d'où proviendrait la biomasse nécessaire pour répondre aux divers besoins.

Des industries d'envergure se préparent à utiliser différentes formes de biomasse comme source d'énergie pour réduire les coûts, assurer leur approvisionnement, augmenter leur efficacité et réduire leur empreinte écologique. LaFarge de Bath, en Ontario, fait des essais avec la biomasse comme source d'énergie dans la production de ciment. L'Ontario Power Generation (OPG) explore les façons d'utiliser la biomasse en remplacement du charbon pour générer de l'électricité. L'OPG a lancé un appel d'offres pour deux millions de tonnes de biomasse par année. Greenfield Ethanol tente de surmonter les difficultés techniques posées par la fabrication d'éthanol à partir de matières cellulosiques. Des intervenants de l'industrie automobile explorent avec l'Université de Guelph les possibilités

Continued on page 17

Liste de vérification pour être agriculteur biologique

Hugh Martin, Chargé de programme, production de cultures biologiques , MAAARO

Voici quelques-unes des exigences de base pour les exploitations de type biologique :

- n'utiliser que des intrants de la « Liste des substances permises » par les normes canadiennes dans les champs les derniers 36 mois avant la récolte de la culture biologique;
- ne pas avoir recours à des intrants génétiquement modifiés (semences, inoculants, etc.);
- se doter d'un plan agro-environnemental qui décrit en détails les intrants et les pratiques de gestion pour chaque champ et chaque groupe d'animaux d'élevage;
- maintenir quotidiennement d'excellents dossiers et journaux afin d'assurer la traçabilité des produits et des pratiques agricoles;
- ne pas produire la même culture biologique et non biologique, à moins qu'elles ne soient visuellement faciles à distinguer;
- établir un système d'identification qui permet de bien distinguer les cultures, les cheptels et les produits biologiques et non biologiques aux diverses étapes de production, de transformation, de manutention et d'entreposage;
- maintenir la fertilité et l'activité des divers agents biologiques du sol en effectuant la rotation des cultures, en les enrichissant de matières végétales ou animales (cultures de couverture) et d'engrais de ferme suivant le plan agro-environnemental;
- minimiser la dégradation des sols et de l'eau grâce à de bonnes pratiques de gestion du fumier;
- maîtriser les ennemis des cultures au moyen de méthodes préventives pour une meilleure croissance des cultures, tout en combinant aussi des techniques culturales et mécaniques et des méthodes biologiques et botaniques au besoin;
- implanter et maintenir des mesures de soins de santé préventives;
- gérer le cheptel de façon responsable, avec soin et respect, afin de minimiser le stress dans toutes les manœuvres;
- élaborer et maintenir des conditions de vie qui favorisent la santé et le comportement naturel de tous les animaux d'élevage biologique;
- nourrir le cheptel biologique d'aliments pour animaux biologiques et lui donner accès à l'extérieur quand les conditions climatiques le permettent; les herbivores doivent avoir accès aux pâturages en saison (qui doit représenter au moins 30 % de l'apport total en fourrages);
- maintenir un système de gestion biologique qui assure la conservation des qualités biologiques du produit de la production, la préparation, l'entreposage, la manutention et l'étiquetage jusqu'au point de vente;
- assurer des méthodes de transformation mécaniques, physiques ou biologiques (p. ex. fermentation et fumage) qui minimisent l'utilisation d'ingrédients, d'additifs alimentaires et d'adjuvants de fabrication non issus de l'agriculture biologique;
- s'assurer de présenter une demande à un organisme de certification accrédité au moins 15 mois avant la récolte des produits biologiques, lors de la transition à la certification biologique;
- protéger l'environnement, minimiser l'érosion et la dégradation des sols et préserver le plus possible la qualité de l'air et de l'eau;
- favoriser la biodiversité au sein du système agricole; enfin,
- procéder au recyclage des matières et avoir recours à des ressources renouvelables quand c'est possible.

Ce qui précède n'est qu'un bref sommaire des 60 pages de normes qui existent sur les cultures et les pratiques agrobiologiques. Pour plus de détails, voir whttp://www.omafra.gov.on.ca/french/organic/organic.html

Résidus de culture – Une manne à récolter?

Continued from page 16

de fabriquer des pièces d'autos à partir de matières premières d'origine biologique. Une foule d'industries de taille moyenne étudient elles aussi diverses possibilités d'utiliser la biomasse.

À plus long terme, des matières premières agricoles pourraient probablement approvisionner ces marchés, dont les graminées vivaces comme le panic raide, le miscanthus chinois, le pâturin ample, l'alpiste roseau et la spartine pectinée. On pense aussi à des annuelles comme le chanvre, le millet à chandelle, le sorgho et autres. Dans un proche avenir, les résidus de culture serviront probablement aussi de matières premières comme la canne de maïs, la paille de soya et de céréales et les fourrages. De grandes superficies partout dans la province comportent déjà des approvisionnements tout prêts.

Volumes de résidus de culture

Quelles quantités de ces résidus de culture y a-t-il? Quelles quantités peut-on concrètement prélever? Quelles quantités peut-on prélever de manière durable? Le volume brut est relativement facile à calculer. Le tableau 1 donne les statistiques sur les rendements des récoltes en Ontario en 2008, les indices de moisson et les teneurs en humidité. En comptant toutes les superficies de maïs, de soya, de blé et de cultures fourragères de l'Ontario, on dispose chaque année d'environ 15 millions de tonnes de matières premières. On suppose ici que tous les résidus de culture sur le sol sont disponibles, à l'exception des feuilles de soya qui tombent avant la récolte. On présume aussi que les cultures fourragères seraient entièrement utilisées, ce qui est impossible à cause de l'élevage des ruminants en Ontario.

Quelles quantités peut-on concrètement prélever?

Il sera plus difficile de répondre à la question « quelle proportion de la biomasse disponible peut-on concrètement prélever (tableau 2) ? » Quand il s'agit de résidus de céréales, il existe un système de récolte bien établi. La moissonneuse-batteuse laisse les résidus de culture en un andain compact facile à ramasser avec une botteleuse mécanique ou une presse à fourrage. Il y a quelques pertes comme les barbes, les épis et d'autres parties des plants qui tombent de la moissonneuse-batteuse. Le cas du soya est similaire à celui des céréales, le plant entier (moins les feuilles) passe par la moissonneuse qui laisse la paille en andain à récolter plus tard. On étudie les modifications possibles à la moissonneuse-batteuse pour récolter directement les résidus de la machine (figure 1).

Tableau 1. Volumes bruts de résidus disponibles après la récolte des grandes cultures en Ontario (tonnes sèches)

Selon les données sur les récoltes 2008	Maïs	Soya	Blé	Fourrages
Superficie (en millions d'acres)	1,73	2,10	1,20	2,60
Rendement (*boisseaux/ acre ou **tm/acre)	156*	43*	80*	2,5**
Matière sèche (tm/acre)	3,96	1,17	2,18	2,50
Teneur en humidité (%)	15,5	14,0	14,5	15 - 18
Indice de moisson (%)	52	50	50	95
Rendement en résidus (0 % tm/acre)	3,10	1,01	1,86	1,98
Total de résidus (en millions de tm)	5,37	2,12	2,24	5,16

Tableau 2. Estimation des portions exploitables de résidus de grandes cultures

Selon les données sur les récoltes 2008	Maïs	Soya	Blé	Fourrages
Rendement en résidus (0 % tm/acre)	3,10	1,01	1,86	1,98
Total de résidus (en millions de tm)	5,37	2,12	2,24	5,16
Concrètement disponible (%)	50	40	66	5,10
Disponible de manière durable (tm)	?	?	?	?

Figure 1. Moissonneuse-batteuse modifiée pour récolter des résidus de culture

Département de recherche de l'Iowa State University

C'est plus difficile dans le cas du maïs parce que la plus grande partie des feuilles ne passe jamais dans la moissonneuse. Seuls les épis sont prélevés des plants et y pénètrent. Le reste des résidus passe au travers du bec cueilleur et est laissé au champ. La moissonneuse-batteuse et le chariot à grains passent dessus et la plus grande partie des résidus reste dans le sol. Dans ce cas il faudrait faucher et andainer avant la mise en balles ou la coupe de la canne de maïs, ce qui prend du temps et entraîne des coûts. Souvent le temps presse avant l'hiver et les conditions de séchage sont moins bonnes pour ramasser de la canne de maïs de haute qualité. On ne peut vraiment ralentir la récolte des céréales pour permettre aussi le ramassage de la canne de maïs. Toutefois, certaines des plus grandes presses à emballer carrées ou les hacheuses faucheuses présentent une capacité d'adaptation et pourraient remplir ce rôle. Il faut explorer toutes les possibilités.

L'entreposage de la biomasse à la ferme et les coûts qui y sont associés doivent aussi être envisagés. Les utilisateurs finals n'ont pas l'espace nécessaire pour recevoir tout ce qui serait récolté.

Quelle quantité peut-on récolter de manière durable?

Quelle quantité de résidus de culture peut-on récolter sans menacer la viabilité écologique? Généralement, la paille des céréales est ramassée alors que les résidus du maïs et du soya sont laissés au champ; ces résidus représentent

Continued on page 18

Résidus de culture – Une manne à récolter?

Continued from page 17

un apport en éléments nutritifs et font partie du cycle des cultures, ils rehaussent la teneur en matière organique du sol, permettent de lutter contre l'érosion et l'infiltration de l'eau, ils favorisent des sols sains et ils présentent une foule d'autres avantages. Les recherches nécessaires restent à faire pour déterminer les quantités de résidus de maïs et de soya il est possible de prélever tout en respectant la viabilité écologique, ou dans combien de temps des impacts se feraient sentir. Il faut aussi étudier quelles modifications apporter aux modes de production pour compenser les effets nuisibles du prélèvement des résidus. Par exemple, si les producteurs adoptent le semis direct dans les champs où la biomasse est prélevée, les propriétés du sol en seraient-elles stabilisées et la productivité sera-t-elle plus grande parce que la levée et la croissance des semis s'effectuent mieux dans un milieu de culture sans résidus? C'est l'une des questions fondamentales qui doit faire l'objet de recherches.

L'utilisation d'immenses quantités de résidus comme biomasse présente un potentiel certain. Il convient de bien en examiner les éléments concrets comme le bon moment pour ce faire, le remplacement des éléments nutritifs prélevés, la technologie adaptée à cette récolte, les effets potentiellement nuisibles sur les sols et bien d'autres questions qui sont en jeu. Il faut se mettre au travail.

Encore plus d'érosion des sols cette année

Ian McDonald, coordonnateur de la recherche appliquée et Adam Hayes, spécialiste de la gestion des sols, grandes cultures, MAAARO

Avez-vous remarqué ce printemps toute l'érosion du sol? C'est un phénomène assez préoccupant qui fait réfléchir aux leçons déjà apprises et peut-être oubliées. Peu importe le mode de gestion avec ou sans labour, on constate vraiment plus d'érosion ce printemps.

Que s'est-il passé?

Les conditions météorologiques de la fin de l'hiver et du début du printemps ont créé un potentiel élevé d'érosion. Même les producteurs qui avaient mis en place des mesures de protection ont quand même constaté des niveaux d'érosion plus grands que depuis des années. Avec les dégels successifs de quelques centimètres supérieurs de sol qui ont été suivis d'importantes précipitations, le sol saturé d'eau a été emporté. À mi-printemps, deux violentes chutes de pluie ont fait tomber 37 mm (25 avril) et 28 mm (30 avril) dans la région de London. L'eau transportée dans les rivières était brune. Des rigoles et des ravines se sont créées partout dans les champs fraîchement travaillés et dans certains tout juste ensemencés. Des pluies aussi abondantes sont plus que ne peuvent accommoder des champs sans labour ou recouverts de résidus de culture; le ruissellement de surface devient trop important. De nombreux sols étaient trop gorgés d'eau ce printemps, augmentant le ruissellement de surface ce qui favorisait l'érosion. Dans tous les terrains en pente, trop d'eau s'accumulait, emportant le sol et formant des rigoles.

Sol sans labour avec chaumes de soya, mi-avril 2009

En tirer des leçons

Nous devons continuer de nous appliquer à une saine gestion de nos ressources en sols. Même si de semblables pluies diluviennes ne sont pas fréquentes, il n'en faut pas beaucoup pour causer d'importantes pertes des sols. Les chercheurs qui étudient le changement climatique prédisent plus de fortes averses et possiblement moins d'enneigement; ce scénario pourrait aussi se reproduire plus souvent. Les pertes de sols ne réduisent pas seulement la productivité, elles sont aussi nuisibles pour l'environnement. Les sources d'eau de surface peuvent être contaminées quand des champs qui ont été fertilisés, semés et pulvérisés comptent un grand nombre de rigoles et que le ruissellement de surface est massif. Ces phénomènes peuvent vite devenir des irritants publics et causer des problèmes.

Pour conserver le sol en place

Les propriétaires fonciers qui ont consacré temps et énergie à instaurer des mesures de conservation des sols doivent en assurer un suivi et un entretien adéquats. La largeur des voies d'eau gazonnées ne doit pas être réduite avec le temps. Il faut prendre des mesures supplémentaires face à de nouveaux problèmes. Par exemple, même les champs de blé d'automne qui ont été directement ensemencés sur des chaumes de soya ont souffert d'érosion cette année. Une culture de couverture protège contre l'érosion à cause du système racinaire actif pendant que le couvert végétal retient le sol en place et réduit l'effet nuisible des pluies très fortes. Cependant, des débits trop concentrés et excessifs ne peuvent être maîtrisés de cette façon et il faudra peut-être aussi dévier l'écoulement des eaux.

Érosion dans du blé d'automne en semis direct, début mai 2009

Les propriétaires fonciers qui n'ont pas adopté de programme de conservation des sols complet peuvent implanter des mesures pour réduire le potentiel d'érosion. Elles comprennent notamment

Encore plus d'érosion des sols cette année

les voies d'eau gazonnées, les bandes tampons, les bouches d'égout, le drainage, les bassins de retenue de l'eau et des sédiments, la rotation des cultures, le travail réduit du sol et les cultures de couverture. Les producteurs doivent évaluer la topographie de leurs champs. De nombreux champs devraient être dotés de voies d'eau gazonnées, de bassins de retenue de l'eau et des sédiments, mais ne sont que sols dénudés d'une clôture à l'autre. Les méthodes de travail du sol énergiques de l'automne dernier ont pu contribuer au problème. Très peu de champs ont des cultures de couverture. De nombreuses mesures de conservation des sols ne sont ni compliquées ni onéreuses. Des subventions sont offertes par le biais du programme des plans agro-environnementaux et des Offices de protection de la nature pour couvrir une partie des frais.

Les pertes de sols représentent un coût très concret auquel nous n'accordons pas assez d'importance. Nos ressources en sols sont primordiales à notre productivité et à notre richesse à long terme comme province et comme nation. Si nous nous en désintéressons, l'intérêt public croissant pour les questions environnementales pourrait générer trop l'attention ou créer des conditions contraignantes. Les producteurs doivent consacrer plus d'efforts à la sauvegarde de cette ressource précieuse dans leur propre intérêt et aussi dans celui du public.

Keith Reid – Soil Fertility Specialist

by Sharon Lane, Regional Correspondent to "Breaking Ground"

Keith Reid, soil fertility specialist, was the guest speaker at the Algoma Soil and Crop Improvement Association's spring twilight meeting June 10 at Paul and Penny Hillstom's farm near Bruce Mines.

Keith Reid comes with credentials from the University of Guelph in crop and soil science and experience in mixed farming from the Chesley area in Bruce County. According to Keith, nutrient testing allows farmers to put their money where it is most needed. If the fertility of the soil is low, then nutrients need to be replaced and fertilizer needs to be applied. If fertility is okay, then applying fertilizers is a waste of money and may cause soil erosion. Testing can reduce our "environmental footprint" because over-applying fertilizer causes pollution when nitrogen and phosphates get into streams, lakes and rivers.

Keith mentioned that some of the new tools and techniques have improved nutrient placement. In banding manure or fertilizer, farmers put it under the soil with a cultivator near the seed row. This prevents run-off and the phosphate binds with other minerals. The Global Position System (GPS) auto-steering mechanism allows for 10% more accuracy because there is no overlapping or misses in applying fertilizer or manure. These techniques are initially more expensive, but they pay-off in the long-run and are environmentally friendly.

Crop rotation can replace most nutrients and is cost effective according to Keith. Nitrogen can be replaced by growing any legume such as alfalfa, trefoil or clover; however, phosphates can only be replaced with commercial fertilizer or manure.

When asked about organic farming, Reid said that commercial fertilizers can be avoided in organic farming, but it is a challenge. Nutrients can be replaced by recycling nutrients by composting manure and planting legumes. Organic farming needs to be sustainable but not closed. If organic farming is removing nutrients and not replacing them, then it is not sustainable.

Keith Reid is touring Northeastern Ontario meeting with various Soil and Crop Associations to discuss soil fertility issues.

ASCIA Spring Twilight Farm Tour - June 10

by Sharon Lane, Regional Correspondent to "Breaking Ground"

Continued on page 20

The spring meeting for Algoma Soil and Crop Improvement Association (ASCIA) was a tour at Les and Penny Hillstrom's farm near Bruce Mines in the evening on June 10.

The editor of Breaking Ground, Graham Gambles, introduced Keith Reid, soil fertility specialist from OMAFRA at Stratford. Reid asked Les and Paul Hillstrom questions about their farm and explained the significance of the various techniques they use. They use both liquid and solid manure. There is a lag for solid manure when applied in the fall or spring until the ground warms up so there is a slow release of nutrients. If liquid manure is applied, then some of the ammonia and nitrogen is lost into the air. If the liquid manure is worked into the soil within one or two days or if it rains after application, then it is not lost. Injection reduces the odour, and there are fewer complaints from the neighbours. Ploughed ground allows nitrogen to get into the ground

ASCIA Spring Twilight Farm Tour - June 10

and bind with the soil particles.

The Hillstroms also use crop rotation: corn for two years; three years of seeding, the first year barley and then alfalfa; and then silage corn. Their fertilizing program besides using manure is 110 lbs. of 17-26-17 commercial fertilizer. The soil test for the Hillstrom farm was 6.5

Reid explained the value of the soil test. If the test shows that the nutrient level is high, then there is no need to fertilize, but if the level is low, then there is a need and the farmer gets paid back in crop production.

He then explained the benefit of banding versus applying. Corn, wheat and barley need phosphorus early as a starter-effect; therefore, the fertilizer needs to be close to the seed and this can be achieved with banding. Banding potash gives a better yield if this nutrient is low, but if too high, the seed can be burnt.

He discussed the effect of compaction of the soil when applying fertilizer. The

Photo: Les Hillstrom and Keith Reid

amount of compaction will depend on the type of tire and the air pressure used. If fertilizer is applied to frozen soil, there is no compaction, but the fertilizer will often run-off into creeks or lakes if it rains while the ground is still frozen. It is best to work the nutrients into the ground by ploughing the field.

In discussing the high cost of fertilizer this spring, Reid said that the fertilizer was bought last fall because it has to be shipped up the St. Lawrence Seaway before freeze-up and at that time the price was high. It has since dropped, but this will not be reflected until next spring. The potash companies are cutting production not price. He mentioned that 60% of what is fed to animals returns as manure; however, it is a false economy to buy feed to put manure on fields. According to Reid, China sets the price of urea, and Canada imports 2/3 of its supply mainly from North Africa, Russia and Egypt and about 97% of potash is produced in Canada, mainly Saskatchewan.

The evening meeting then continued. Graham Gambles mentioned that test plots are needed for methods to control Smooth Bedstraw, which came with trefoil seed about 20 years ago. Gambles told the gathering that Nipissing University has set up weather stations at Verner and Temiskaming and that this information is downloaded on to the Internet every 30 minutes. Laurentian University is doing a study in the Sudbury area on the effect of calcium chloride on milk fever.

Jonathon Stewart reported no news on the Environmental Farm Plan while Dave Trivers, OMAFRA, mentioned that he had copies of the Algoma E-Bulletin for those who wanted a paper copy and an information sheet on accessing the Northern Ontario Heritage Fund.

Those attending enjoyed pop and donuts, provided through Terry Philips from the Verner Co-op, and coffee and desserts from the Hillstroms at the end of the twilight meeting.

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