Breaking Ground
(in Northeastern Ontario)

FALL 2007

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

West Nipissing Soil and Crop members, Norm Delorme, Janet Parsons and Gilles Renaud were among thousands of Soil and Crop members taking advantage of their free entry passes to the Outdoor Farm Show and complimentary brunch tickets, a $25 value. This is just one benefit of belonging to your local Soil and Crop Improvement Association. A partnership of OSCIA with Bayer Crop Science and the Outdoor Farm Show makes this possible.

Northern Farmers to Attend Circumpolar Conference

Congratulations!

Northern Ontario Agri-Food Education & Marketing Inc. is pleased to announce its delegates to the Circumpolar Agricultural Association Conference in Happy Valley - Goose Bay Labrador, October 1st to 3rd, 2007. Applications were received from across Northern Ontario. Partial funding for the project was received from the Agriculture Adaptation Council and Agriculture and Agri-Food Canada through CanAdvance. This project is developed in partnership with the Northern Ontario Federations of Agriculture.

Northern Ontario Agri-Food Education & Marketing Inc. wishes to thank all who applied for this unique opportunity. The committee needs to be recognized for its efforts in securing funding, marketing the opportunity, and ensuring a fair and transparent selection process. The delegates selected will represent the Northern Ontario agriculture community at this conference.

Matthew (Matt) Duke, District of Temiskaming. Matt and his wife Carol own and operate Terza Farms, which consists of a 420 sow farrow-

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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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COMING EVENTS

Nutrient Management Training Courses

Regulation and Protocols – December 5th-6th, New Liskeard;

Check the OMAFRA web site http://www.omafra.gov.on.ca/english/nm/cert/training.htm for NM course details.

The following Nutrient Management courses have been booked for the September to December period. Sessions are held in Manitoulin – West Sudbury, Algoma and Temiskaming:

Manitoulin – West Sudbury: How to Prepare a Nutrient Management Strategy/ Plan using NMAN **– *November 30th (5 pm-10 pm) & December 1st (9 am-1 pm), Little Current***

Algoma: Fundamentals of Nutrient Management **– *November 14th-15th, Desbarats;***

Regulations and Protocols **– *December 12th-13th, Desbarats***

Temiskaming: Temiskaming Crops Coalition Annual Meeting **– *November 23rd (9:30 am) Joe's Steakhouse, New Liskeard.***

Risk Management for Non-Profit Organizations

November 2nd. 9 am-12 pm, North Bay.

For more information and registration, visit: http://www.imaginecanada.ca or Contact: Colin Thacker (705) 474-1200 ext. 7818 or CThacker@nemhc.on.ca.

Bus trip to the Royal Agricultural Winter Fair

November 3rd.

Sudbury District Cattlemen's Association Beef Producer Education Day.

Seat and Admission = $60.00

For seat reservations and location for bus pick-up, contact Jimmy Barrett at: (705) 671-9137 before October 27th.

Commodity Marketing Management Course

February 5th-6th.

9 am-5 pm, Joe's Steakhouse, New Liskeard. For more information and registration, visit: http://www.fcc-fac.ca/en/LearningCentre/workshops_on_e.asp

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 in this newsletter (that goes out to over 1000 farmers across the North). Subsequent ads will cost $10.00 per issue.

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

HAY FOR SALE

(4x6 round bale stored inside-horse quality)

Call Yves Laurin, Elk Lake:
705-678-2419

EQUIPMENT FOR SALE

2wd JD4030 cab 92 HP,
JD 820096 180HP, MFWD,
JD4420 combine+213 header,
Salford 28' cutivator+ roll bskt,
Salford 6 fur pl,
Case 5500 30' dbl fold seed drill.

Call Yves (Cache Bay)
705-753-3867 - 7pm

Environmental Farm Plan Representatives

Algoma:
Jonathan Stewart
705 **842-2182**

Muskoka:
Katya Riley
705 **764-1695**

Manitoulin:
Mary Scott
705 **377-4928**

Cochrane, Nipissing, Parry Sound, Sudbury and Temiskaming:
Clare Venne
705 **594-9194**

RESOURCES • E-Bulletin

Parry Sound - Nipissing - Sudbury
East Ontario Ministry of Agriculture, Food and Rural Affairs

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: pierrette.desrochers@ontario.ca.

Upcoming provincial events:

1. Farm Tax & Business Seminar 2007, October 2007.

Seminars are delivered across the province and also available through Webinars. For more information, visit: http://www.omafra.gov.on.ca/english/busdev/conference/2007ftbs.htm

2. 3rd Annual Agri-Food Innovation Forum, October 29th-30th.

Ottawa Congress Centre, Ottawa Register now for the Early Bird rate. Visit: www.agrifoodforum.com

3. 2007 Royal Agriculture Winter Fair, November 2nd-11th.

The Direct Energy Centre, Exhibition Place, Toronto http://www.royalfair.org/

New Business

1. Hydro One's Electricity Retrofit Incentive Program

The program provides business, farm and institutional customers of Hydro One Networks Inc. with an opportunity to realize their energy efficiency potential, and to receive attractive incentives to reduce the capital cost of energy efficient technologies. The objective of the program is to initiate energy conservation and load management projects within the Commercial, Industrial, Agricultural and Institutional sectors by offering financial incentives. For more information, visit: http://www.hydroonenetworks.com/en/efficiency/electricity_retrofit_incentive_program/default.asp

2. Fencing off watercourses

This fall take time to examine fences along pastures and watercourses. The following factsheets provide information on fencing, fencing types and alternative watering devises for livestock. Keep animals away from watercourses.

http://www.omafra.gov.on.ca/english/engineer/facts/00-049.htm

http://www.omafra.gov.on.ca/english/engineer/facts/99-057.htm

http://www.omafra.gov.on.ca/english/environment/bmp/afirstlook/fragile.htm

http://www.omafra.gov.on.ca/english/engineer/facts/04-027.htm

3. Hay in Cow Wintering Ration can be Replaced by Grain

The following factsheet can be found at: http://www.omafra.gov.on.ca/english/livestock/beef/facts/grainforhay.htm

4. Harvesting Corn Silage at the Right Moisture

The following factsheet can be found at: www.omafra.gov.on.ca/english/crops/facts/harvesting_corn.htm.

5. New Program Turns Greenhouse Gases from Farms into Clean Energy

The $9 million Ontario Biogas Systems Financial Assistance Program will help farmers and rural businesses carry out feasibility studies for the installation of biogas systems as well as cover a proportion of construction and implementation costs. Applicants can receive up to $400,000 in funding. The province is also streamlining the process that farmers follow to build bio-digesters and is providing clear standards and guidance on designing and operating these facilities. Biogas systems are fuelled by renewable materials like manure, crops and crop residues and food processing by-products. They can produce electricity and heat or replace conventional fuels like natural gas.

6. 2008 Call for Letters of Intent – New Directions Research Program

Through investment in innovative and high quality agricultural research, the Ontario Ministry of Agriculture, Food and Rural Affairs program contributes to the Ontario government's priorities of "Better Health" and "Strong People, Strong Economy". The deadline for receipt of Letters of Intent is Friday, September 28, 2007 at 4:00 p.m. The Call for Letters of Intent document and program information can be accessed at the OMAFRA web site: http://www.omafra.gov.on.ca/english/research/new_directions/index.html. You may also email research@ontario.ca to request an electronic copy.

7. Canadian Young Speakers for Agriculture Competition (CYSA)

If you are between the ages of 11 and 24, don't miss this great opportunity to participate in the 23rd annual competition, November 3rd. Call or write to request an application, or visit http://www.cysa-joca.ca/ for more details. Inquires should be directed to Ted Young, President, at 519-824-9253 or tedyoung@cysa-joca.ca. Applications can be made on-line, or forwarded to CYSA Inc., P.O. Box 25015, Stone Road Mall Postal Outlet, 370 Stone Road West, Unit 17, Guelph, Ontario N1G 2X0. The deadline for applications is September 28, 2007.

8. Start Your Succession Plan Early- Julie Poirier Mensinga, Agricultural Business Management Specialist

This was one of the many advises given at the 2007 International Farm Succession Conference August 6 to 8. Succession planning is a process occurring over time during which a family plans for the transfer of knowledge, skills, labour, management, control and ownership of the farm business between the founder generation and the successor generation. The preliminary step to succession planning is to open the lines of communication between the two generations. For more information visit: http://www.omafra.gov.on.ca/english/busdev/succession.html and http://www.farmcentre.com/EventsAnnouncements/Events/FarmSuccession/2007 . The Specialized Business Planning Services provide funding to off-set the cost of

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Northeastern Ontario Loses Two Board Members in OSCIA Restructuring Proposal

By Janet Parsons, NEOSCIA, President

For a number of years the provincial board of OSCIA has discussed the need to restructure the representation on the provincial board. The proposal that was accepted at the August board meeting for presentation to the membership at the annual meeting proposes one board member per region. This reduces the number of board members from northeastern Ontario from three to one and the provincial board from 19 to 11. While the objective is to reduce overlap of board member duties and regional Co-ordinator territories, this is not an issue in the northeast. However, for fair representation for provincial governance issues, one director from the northeast is proposed.

The unique problem in the northeast is distance between farming communities. NEOSCIA directors discussed the one board member proposal and supported the idea with conditions. A business case is being prepared for more funding to make it possible for NEOSCIA directors to meet and carry out the business of the organization in an effective manner.

NEOSCIA is always looking for innovative ways of serving its diverse and scattered membership. Breaking Ground is the number one communication tool and new ideas are constantly being introduced. Comments and suggestions and always welcome.

The vote on the proposed restructuring will take place at the provincial annual meeting in Niagara Falls in February. Make sure your local delegate is ready to vote. If you have comments or questions please contact your board member: Murray Cochrane, Bill Muggler, or Janet Parsons.

MARKET ACCESS PROGRAM (MAP)

1 "Canada's beef industry is export dependent. We became very aware of this in 2003, when Canada's first case of BSE was reported, and various trade restrictions were put in place. It is in our best interest to set a higher standard for product quality and safety, to ensure market access.

The Ontario Cattlemen's Association has initiated the **Market Access Program(MAP)** to encourage age verification and increase demand for Ontario cattle.

Deb Garner is available to age verify your calves for FREE, and can provide you with application forms if you decide to join the Market Access Program.

Dairy farmers that are on DHI can have their data transferred to the MAP by simply filling out a Data Release Form. Thus saving a lot of time with paperwork. Bull calves, not on DHI, can be entered by Deb.

NOTE: Program Deadline has been moved ahead to November 1, 2007"

2 "AGE VERIFICATION REQUIRED BY BUYERS THIS FALL

With Cargill recently increasing the discounts for cattle that are over 30 months (OTM) of age, cattle buyers will be sure to be buying youthful cattle this fall. In part because of new regulations with SRMs (Specified Risk Material), Cargill has increased the discount by 60% such that OTM cattle will be discounted about $320 per head. Consequently buyers will be looking for cattle that are age verified, as documented with a birth certificate. This is certain to apply to yearlings coming off grass but will likely have some effect on calves as well. Cargill also continues to pay a premium for cattle that qualify for the Japanese market. To qualify, cattle must be less then 627 days of age and grade AA or AAA. Eliminating OTMs and increasing the amount of beef going to Japan would have a positive impact on the beef price and improve the profitability of all beef producers in Ontario

OCA/BIO have a number of representatives throughout the province to assist with age verifying your animals. The representative will either enter the birth dates of your calves for you, or show you simple ways that you can do it yourself. In addition, they will explain how to get a birth certificate that you can send to the sales barn or buyer with your cattle. Your local representative, Debra Garner, can be reached at (705) 563-2761"

Temiskaming Cattlemen's Association

Ruth Snider
(705) 647-5937

ATTENTION BEEF & DAIRY PRODUCERS

Market Access Program

You could qualify for $3.00 for each of your 2006/07 bull calves that is Age Verified

3 Easy Steps

1. Age verify your calves
2. Take the QSH/ VBP course
3. Have a vaccination program

For an application or more information contact:

Deb Garner, 563-2761

dgarner@biobeef.com

Northern Farmers to Attend Circumpolar Conference

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ing unit, processing piglets for the feeder industry and an on-farm flour milling business. They crop over 240 acres with product being directed to both livestock feed requirements and their flour mill.

Birgit Martin, District of Manitoulin Birgit and her husband Jim own and operate a beef cow-calf, feedlot and cash crop operation on Manitoulin Island. They own 75 Shorthorn, Angus and commercial cows, selling purebred stock, stockers and finished cattle. In addition, they board 30 cows on a permanent basis, producing a pre-conditioned calf for the owners. In 2007, they are cropping, share-cropping and custom harvesting approximately 750 acres of hay, barley, winter wheat and corn.

Christina Mol, District of Thunder Bay Born and raised on a dairy and field crop farm, Christina is the Research and Extension Intern with the Thunder Bay Agricultural Research Association (TBARA). She is involved in the stone-ground wheat mill pilot project in Thunder Bay and is acting as a liaison with grain producers in the region. Beginning this fall, Christina will be pursuing a Masters degree in biology with a focus on agricultural soils in Northern Ontario through Lakehead University.

Janet Parsons, District of Nipissing Janet and her husband John, under Roche Court Farms, operate a 500 acre cash crop business, growing winter and spring hard red wheat, canola, oats, barley, soybeans and clover for forage, seed and green manure. In addition, Janet is certified Financial Planner and works as an executive assistant in an agricultural accounting business.

Robert (Bob) Wall, District of Kenora With over 50 years experience in agriculture, Bob is well-known for his innovation and leadership to the development and diversification of the agricultural industry in the District of Kenora. From crop production to agriculture infrastructure development, Bob has experimented extensively with new commodities; production practices; technology utilization; and marketing systems and has a wealth of knowledge that he willing shares with others.

A founding member of the Kenora District Federation of Agriculture, Bob continues to provide leadership to this organization as well as the Kenora District Soil and Crop Improvement Association, the Dryden Agricultural Society and the Environmental Farm Plan Peer Review Committee. He is active in crop research and hosts demonstration plots on his farm.

NLARS Expanding Its Strawberry Research

Becky Hughes, NLARS

The New Liskeard Agricultural Research Station (NLARS) is expanding its research in dayneutral strawberries as part of a project to develop extended season strawberries in eastern North America. The University of Guelph has received funding from the Agricultural Adaptation Council's CanAdvance Program and the Ontario Berry Growers Association for this three-year project. Research will be conducted at three University of Guelph research stations, Cedar Springs, New Liskeard and Simcoe, and at the University of Florida's Gulf Coast Research and Education Center in Balm, Florida.

Dayneutral strawberries offer Ontario producers a chance to produce fresh local strawberries six months of the year. There are currently several limitations to dayneutral production in Ontario and this project focuses on a number of these. In the short term, producers will have to modify their production practices with existing varieties to extend the harvest season. In the long term, Canadian-adapted varieties and propagation systems are required for this industry to develop.

NLARS will be involved in all phases of this project. NLARS and Ridgetown's Cedar Springs research station will investigate improved production systems for the dayneutral cultivar 'Seascape'. Seed-propagated dayneutrals will be evaluated for their local and broad adaptability at all three University of Guelph sites, grower locations in Ontario, Manitoba and Florida, and at the Florida Gulf Coast Research and Education Center. Research to develop plug production systems for the different growing areas will be conducted at New Liskeard, Simcoe and Balm, FL.

With increasing consumer interest in buying local, producers across Ontario are showing more interest in producing dayneutral strawberries. This research aims to help this industry develop both in the short and long term.

Winter Wheat Test at New Liskeard Agricultural Research Station

John Rowsell and John Kobler

We invited sponsors, distributors and breeders to enter up to 3 lines each into a winter wheat comparison test at New Liskeard. We seeded 19 winter wheats and 1 spring wheat on September 16, 2006 (more on the rationale for including a spring wheat will follow). Some of the entries have not yet been registered and are not for sale. These were placed in the test so that their potential under our climatic conditions could be assessed. No herbicide was used on this test since the wheat had very good ground cover before the spring annual weeds could get established. We fertilized with 70kgN/ha very early in the spring.

All of the entries except one winter wheat and the spring wheat (AC Taho) had survival in excess of 50%. Of these 18 remaining varieties, yield was not correlated with winter survival scores based on visual ratings (0-100%; r^2=0.13, P>F=0.14) or spring vigor ratings (1-9, 1 being lowest vigor; r^2=0.05, P>F=0.38).

Yields were respectable with an average of 6147kg/ha (2.5t/ac) and the coefficient of variability (c.v.) of the test was very good (7.75%). It is a measure of how much variability there is in yields that is not caused by the varieties. Varieties must differ in this test by at least 676 kg/ha to be truly different at the 5% error level(LSD 0.05%). The test weights were also good, averaging 78.6 kg/hl (61.6lb/bu).

We included one spring wheat in the test to see if it would survive the winter. There has been some speculation that it might, and this is the subject the graduate work of one University of Guelph Ph.D. candidate.

Winter wheat yields are normally greater that those of spring wheat. This is not surprising since the winter wheat varieties in this test matured 316 days on average after planting whereas spring

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Variety	Yield (kg/ha)	1000 Seed Weight (g)	Test Wt. (kg/hl)	Lodging (1-9)	Height (cm)	Heading Date	Mature Date	Yield Index	% Survival	Vigor (1-9)
25R47	7006	40.6	78.1	2.0	63	8-Jun-07	27-Jul-07	114	88	8
Harvard	6773	45.9	77.8	1.3	73	12-Jun-07	29-Jul-07	110	75	8
AC Zorro	6559	50.6	79.5	2.0	93	15-Jun-07	29-Jul-07	107	80	7
Warthhog	6474	43.1	79.3	1.0	75	12-Jun-07	26-Jul-07	105	75	7
CDC Raptor	6360	36.8	79.7	1.3	72	14-Jun-07	28-Jul-07	103	70	5
IL0113,830	6345	40.4	80.6	2.0	75	16-Jun-07	29-Jul-07	103	73	7
CM708	6275	40.8	76.2	1.0	69	23-Jun-07	30-Jul-07	102	60	4
VA03W409	6204	40.8	75.2	1.5	57	13-Jun-07	29-Jul-07	101	38	3
CDC Falcon	6191	37.3	79.6	2.0	59	12-Jun-07	27-Jul-07	101	63	4
Emmit	6145	42.5	79.0	2.0	69	14-Jun-07	27-Jul-07	100	73	7
IL001665	6145	40.7	78.9	2.0	60	12-Jun-07	26-Jul-07	100	68	6
IL972422	6128	37.7	77.6	2.0	68	14-Jun-07	31-Jul-07	100	65	6
Platinum	6022	46.9	79.7	2.0	86	14-Jun-07	30-Jul-07	98	75	7
95-056-187	5977	47.7	77.8	1.8	86	13-Jun-07	28-Jul-07	97	83	8
CDC Buteo	5827	39.6	80.5	2.8	80	16-Jun-07	1-Aug-07	95	78	7
95-094-197	5690	42.9	78.5	2.0	85	14-Jun-07	31-Jul-07	93	73	8
FT Wonder	5348	44.5	78.8	2.0	71	12-Jun-07	29-Jul-07	87	65	7
Huntley	5170	43.8	78.6	2.5	69	12-Jun-07	26-Jul-07	84	58	4
Average	6147	42.4	78.6	1.8	73	14-Jun-07	28-Jul-07			
LSD (0.05)	676.1									
C.V.	7.75%									

Verner Research Test Site Features Fertilizer BMP Trials

John Rowsell of the NLARS described the various research projects at the Verner site to more than 60 participants during the Northeastern Ontario Summer Tour in West Nipissing. Two of the major projects are part of the OSCIA fertilizer BMP trials. One deals with sulphur requirements for canola.

There has been speculation that decreasing atmospheric deposition of sulphur, due to pollution mitigation, has led to a need to apply S fertilizer to canola. This project will test this thesis with controlled replicated samples. The other project deals with the maximum safe rates of N placed with the seed of canola. Currently most of the nitrogen is surface applied. The thesis is that if the N can be placed in close proximity to the seed it will maximize N use and reduce losses through volatilization of ammonia and surface run off. Other research involves flax and cereal crops.

John Rowsell describes the Verner Test Site plots (located south of Verner on Hwy 64) during the NEOSCIA summer tour.

The tour also visited the farm of Steven Roberge to look at white beans and winter wheat. This is the second year that Steven has grown white beans and he is pleased with the results. Jean Guy Seguin is the West Nipissing participant in the 'canola production system trials' (see article elsewhere in Breaking Ground). Jean Guy showed the group the plots and outlined his costs. The final stop on the tour was at the farm of Gerald Beaudry where Bill Hagborg of the Lake Nipissing Stewardship Council talked about river bank stabilization and the proposed tree planting program for West Nipissing. Bill pointed out the difference from the one side of the river to the other. The one had been grazed right to the river while the other side was not. Natural groundcover and brush protected the riverbank on the one side while the other was barren.... a stark contrast. Gerald Beaudry, a Seed Grower, showed the group his field of red clover which he is harvesting for seed. A local dairy farmer took off the first cut and the second cut is being left to set seed for harvest in October.

Bill Hagborg of the Lake Nipissing Stewardship Council discusses how to control erosion of riverbanks.

Winter Wheat Test at New Liskeard Agricultural Research Station

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wheat normally matures in less than 120 days from planting.

There was very little disease in the test. The conditions at anthesis were near optimal for the onset of fusarium; however, only a few infected heads were noted in each plot.

For more information on winter wheat varieties, including the names of the distributors of these varities, please visit the new web site for the Ontario Cereal Crops Committee www.gocereals.ca (John Rowsell is the secretary of OCCC).

Manitoulin Report

By Birgit Martin, CCA

On August 23rd, I had the pleasure of meeting with Algoma's Soil and Crop members at a corn roast and a tour of a corn silage plot at Brason Farms on St. Joseph's Island. Brasons, with the assistance of Dave Trivers, the local ag rep, had put together a plot of Roundup Ready corn hybrids ranging in maturity from 2175 to 2650 corn heat units. On tour night, Dave reviewed the season's rainfall; the plant population; and demonstrated how to determine fresh weight yield by cutting and weighing the plants in a specific length of row, as outlined in OMAFRA's Field Pocket Guide page 90.

I spoke to the group about corn crop management to maximize energy yield per acre. This is a summary of the main points of that discussion:

Maximizing energy yield with corn silage is a function of maximizing both yield and quality. You can impact yield and quality by covering well the basics like seed bed preparation, fertility, planting accuracy and weed control; and then fine tuning the details like hybrid selection, planting date and harvest timing.

Firstly, choose a hybrid appropriate for silage in your area. That means using a hybrid that has a rating of 100-200 CHU more than what your area is rated for. This is because hybrids are rated for their CHU requirement to reach physiological maturity (black layer) for grain corn production. Obviously, silage corn is not meant to reach maturity, so a 'later' corn can be planted. As a rule, 'later' hybrids are higher yielding than shorter season varieties. Targeting your CHU rating accurately also affects quality. A too low CHU hybrid will be too mature at harvest with more lignin (higher NDF) in its stalk and hence lower digestibility. It will also be drier than optimum which causes poor ensiling. (Optimum moisture is 65-70% moisture for bunk silos and silo bags and 60-70% for upright silos.) A too high CHU hybrid will still be too immature at harvest and have lower grain corn content and hence less energy. It will also be wetter than ideal which again hinders ensiling. Beyond heat unit rating, choose a hybrid that will produce excellent grain yield since grain means starch which translates into energy. Silage specific hybrids are also available which are bred to be more digestible (lower lignin and NDF). This lower lignin content may compromise stalk strength and consequently stand ability if the crop has a corn borer infestation; if harvest is delayed; or if strong winds are an issue, but it may be a worthwhile compromise if these conditions won't be an issue.

Next, planting date. Corn is a warm season crop, so to maximize yields we need to plant as early as possible to capture the full season. Corn will not germinate until the soil temperature reaches 10°C but it is quite resilient in its early stages, so plant as soon as the ground is fit. A corn plant's growing point remains below the soil surface until about the 6 leaf stage and so is 'protected' from frost. Even if the top were to freeze off, the plant would regrow from that growing point. Although this would delay the crop, the crop is still further ahead than if had just been planted then. Also, use a starter fer-

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hiring a consultant to assist eligible producer with succession planning. Eligible producers can receive up to 50% refund, to a maximum of $8,000. For more information visit: http://www.agr.gc.ca/ren/index_e.cfm?s1=cfbas-sceac&s2=sbps-sspe&page=intro

9. Ontario Small Waterworks Assistance Program (OSWAP)

The government announces a new $40 million five year funding program to provide capital and operating assistance to municipalities and Local Services Boards (LSBs) with public drinking water systems serving small populations. There are two distinct initiatives within this program. First, the $8 million Ontario Small Waterworks Assistance Program (OSWAP) will make available operating grants to municipalities and LSBs with public drinking water systems serving 1,000 or fewer residents. OSWAP is an entitlement grant initiative. The remaining $32 million will be provided through a merit-based capital and operating initiative for municipalities and LSBs that provide water services to small populations. This initiative will start in the municipal fiscal year 2009. Program details will be developed in discussion with municipalities before the program is launched. Further details will be provided at a later date. Expressions of interest for OSWAP funding will be accepted until 5 pm Eastern Standard Time on October 31, 2007. Visit: http://www.pir.gov.on.ca/english/infrastructure/oswap.htm

10. Environmental Farm Plan - Deadline Fast Approaching

Are you one of the 17,600 producers who completed an Environmental Farm Plan (EFP) and had it deemed appropriate from 1993 to 2004? If so, we urge you to act now to take advantage of project cost-share opportunities. EFPs that were deemed appropriate through peer review during this period may satisfy the eligibility requirements under the current federal environmental cost-share programs. Projects initiated in 2004 and 2005 may be eligible. Older EFP action plans will only be honoured until MARCH 31, 2006. After that, all applications to the cost-share programs will require a Third Edition EFP deemed appropriate. The deadline for completion of approved projects is November 30, 2007.

Call your local OSCIA Program Representative, Claire Venne at 705 594-9194.

11. Renewable Energy

Visit our Web site for more information on Renewable Energy at: http://www.omafra.gov.on.ca/english/engineer/index.html

Visit the Ontario Federation of Agriculture website for suggestions to consumers on Wind Energy at: http://www.ofa.on.ca/site/home.asp. Click on "Policy & Issues" – "Factsheets"

Manitoulin Report

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tilizer. Even if manure has been applied or if your soil is 'high' in phosphorus, corn tends to respond to planter applications of phosphorus, which gives it that quick emergence or 'pop-up' effect.

Finally, harvest timing. Corn silage should be harvested when the milk line has progressed about 1/2 to 2/3 of its way from the base of the kernel to the tip (cob end). At this point, the whole plant moisture is usually between 62 % and 70% - ideal for both upright and horizontal silos. 1/2 to 2/3 milk line also coincides with grain content in the whole plant approaching 40% which makes silage of better feeding value and of higher tonnage than that from corn that is not as mature.

By covering the basics and then fine tuning your corn management, you can maximize yield while optimizing starch levels and fibre digestibility to produce a crop that offers high energy yields per acre. Corn silage can produce yields like no other crop can, with yields easily being double even the best managed alfalfa. Furthermore, corn silage complements alfalfa well nutritionally, with your alfalfa acting as a protein source and the corn silage as an energy source.

FIELD RESEARCH IN ALGOMA

Canola Production System Trials - Which system nets more money?

by Terry Phillips CCA, Temiskaming Ag-Center

The objective of this demonstration project is to compare the cost of three advanced production systems for canola: non GNO canola using a Pursuit program for weed control, Liberty tolerant canola using Liberty as the herbicide, and Round-up ready canola, using Round-up for weed control. This project is being run in Algoma, Nipissing and Temiskaming; however, they are not replicated at each site.

Paul Oikari of Thessalon is the co-operator from Algoma and his results are complete. His plots ranged in size from 6 to 9 acres in a field with good fertility (organic matter 5.5, P 17M, K171H, ph5.9). In 2005 the field was a poor stand of red clover/ timothy and was ploughed down. In 2006, the field was in barley yielding about 1 tonne per acre. For the canola crop in 2007, 96 lbs per acre of 18-18-18 and 96 lbs per acre of 46-0-0 was applied. The canola was planted on May 5, swathed on August 16, and combined on September 1st.

The chart below summarizes the cost of seed and herbicide for each system, yields and comparative net return considering herbicide and seed only. The Liberty plot required a second herbicide treatment to control wild oats. If wild oats had not been a problem the liberty herbicide program cost would have been reduced by $10.90.The price of canola used in the calculation is $377 ($422-$45 basis). Thanks go out to the following for making this project possible: Paul Oikari, Sean Cochrane (Monsanta), Marieke Van Dorp (Bayer Crop Science), and Ian Page (BASF). Watch for more results in future issues of Breaking Ground.

Canola\Production System Trial - Algoma

Seed type	Seed Cost 5lbs/acre	Herbicide used	Herbicide Cost	Yields	Net Return
Clearfield Dekalb 70-20	$36/acre	Pursuit Ag Surf Uan (28-0-0)	$32.47/acre	1.165mt/ac	$370.74
Liberty Invigor 50-30	$35.90/ acre	Liberty Second tmt due to wild oats Poast Ultra Merge	$28.42/acre	1.124mt/ac	$370.33
Round-up Dekalb 71-45	$41/acre	Round-up Weathermax TUA	$19.94/acre	1.194mt/ac	$389.20

OSCIA News...

September 2007

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

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Ontario Soil and Crop Improvement Association
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OSCIA 2008 ANNUAL MEETING

Date: February 5 & 6, 2008
Place: Sheraton Fallsview Niagara Falls

Message from the President

Frank Hoftyzer

Our OSCIA Summer Directors' Meeting was hosted by Pat and Margaret Lee. A big thank you for their hospitality and introduction to Oxford County. The Directors' meeting included updates on the various programs and project activities as well as a review of the strategic planning priorities that were identified at a previous meeting.

Priorities include: continuation and expansion of research partnerships; participation in a farm business management pilot project; realignment of provincial Director boundaries with regional boundaries; strengthening of membership, and; continuation and expansion of environmental programs including more focus on the bio-economy.

Important Information on Director Boundary Realignment -

At the August 27, 2007, meeting of the OSCIA Board of Directors, recommendations were put forth to realign the provincial Director boundaries with the existing regional association boundaries. In the past, there has been considerable overlap, duplication and confusion between the boundaries for provincial Directors and the regional associations. The new scenario will improve the communication abilities considerably – from the local associations, through to their regional association and their provincial Director who sits on the provincial board.

The realignment will result in eleven provincial board members who will work closely with their Regional Communications Coordinator. The local associations will benefit greatly from this streamlined approach. One of the strengths of OSCIA is its grassroots connection and the provincial Directors wish to put in place a more effective infrastructure to better service and strengthen the local associations.

Provincial Directors are currently elected by their local association delegates; however, the new procedure would require an election by the regional associations.

At the February 2008 OSCIA Annual Meeting, delegates will be asked to support constitutional changes necessary to implement this new infrastructure. The realignment would come into effect by the February 2009 annual meeting. As part of the process change, provincial Directors will be elected by their regions to come into effect for the 2009 annual meeting. It will be business as usual for delegates to elect their provincial Directors for the 2008 annual meeting.

Provincial Directors will be communicating the proposed boundary realignment to the membership in their areas over the next weeks and months.

The proposed Director regions appear on the following chart:

Region	Associations	Current Directors	Assumed Feb '08 – Feb '09	Feb '09 onward
St. Clair	Lambton, Kent, Essex	Williams, Denotter	Williams, Denotter	One Elected by Region
Thames Valley	Middlesex, Elgin, Oxford	Williams, Lee	Williams (Lee – Pres '08)	One Elected by Region
Heartland	Huron, Perth, Waterloo, Wellington	McKinlay, to be named	New to be named	One Elected by Region
Georgian Central	Bruce, Grey, Dufferin, Simcoe N & S	McKinlay, Pridham	McKinlay, Pridham	One Elected by Region
Golden Horseshoe	Niagara N & S, Haldimand, Wentworth, Halton, Peel, Brant, Norfolk	Davis, Brooks, Hill	Davis, Brooks, Hill (Hill – Pres '10)	One Elected by Region
East Central	York, Durham, Peterborough, Victoria, Haliburton	Kinghorn, Brooks, Hoftyzer	Brooks	One Elected by Region
Quinte	Pr Edward, L & A, Hastings, Northumberland	Kaiser, Hoftyzer	Kaiser	One Elected by Region
Eastern Valley	Prescott, Russell, Glengarry, Stormont, Dundas	Haerle, Kruszel	Haerle, Kruszel	One Elected by Region
Ottawa Rideau	Grenville, Leeds, Lanark, Renfrew, Carleton, Frontenac	Kruszel, Kaiser, Cotnam	Kruszel, Kaiser, Cotnam	One Elected by Region
NE Ontario	Parry Sound, Muskoka, Algoma, Cochrane, Manitoulin, Sudbury, Temiskaming, Nipissing	Parsons, Cochrane, Muggler	Parsons, Cochrane, Muggler (Cochrane – Pres '09)	One Elected by Region
NW Ontario	Rainy River, Thunder Bay, Kenora	Mol	Mol	One Elected by Region

OSCIA WEBSITE
VISIT US AT
www.ontariosoilcrop.org

Ontario Forage Masters Program - Provincial Competition Added

OSCIA is pleased to announce a final provincial competition this fall to select the person to be named the ***2007 Ontario Forage Master***.

First place winners from each local association will be invited to apply to the provincial competition with a short list invited to participate at the Royal Agricultural Winter Fair in November 2007.

This winner will go on to represent Ontario at the Forage Spokesperson Competition held as part of the American Forage and Grasslands Council conference in January in Kentucky.

Details for entry have been mailed to all provincial Directors, local associations, OFM contact persons, and to all known winners to date.

Any entrant who has not heard the results in their own county are encouraged to get in touch with the organizer for their local association. The deadline for entering the competition is October 1, and is strictly voluntary.

Prizes announced in the spring will be awarded to the local winners as previously outlined in the guidelines.

This year's sponsors include Agri-Food Laboratories and Pickseed Canada, in cooperation with the Ontario Soil and Crop Improvement Association.♦

AGRI-FOOD LABORATORIES

PICKSEED® good things growing...

Promotional Material Available to Local and Regional Associations

NEW! Promotional material is available to local associations on a cost-recovery basis by contacting the provincial office. Durable double-sided fleece vests with the OSCIA name and logo embroidered, and embroidered OSCIA hats have been purchased.

Local and regional association secretaries can order these items for their association to use at upcoming winter meetings as gifts for a special member or speaker, or as fundraising items at upcoming local annual meetings.

Please visit the OSCIA website at www.ontariosoilcrop.org and look under Tools on the Members page for pricing and ordering information.♦

OSCIA Membership Committee

The Membership Committee's purpose is to identify opportunities for OSCIA to strengthen its membership base, and add value for our members.

OSCIA Contact List

A master list providing the phone numbers of all local presidents and secretaries across Ontario has been prepared and will be mailed to each local secretary and president in order for you to pass on contact information as requested at your local associations.

OSCIA Membership base remains strong!

The Membership Committee has been reviewing membership numbers from the past five years. We have had an increase in membership to a high of over 3,800 reported members in 2006. This is an 8% increase in memberships since 2005, and keeps our membership numbers similar to the 4,000 members from 2002-2003! The 2007 membership numbers will be tabulated shortly.

The increase in membership numbers are due to your locals' strong organization, and events which continue to attract producers across Ontario. Thank you for being a part of our goal of increasing membership across the province. Your hard work continues to make this Association active and vibrant for upcoming generations.

Summary of OSCIA Membership Committee Survey

During recent OSCIA Annual Meetings and Provincial Directors' Meetings, the issue of OSCIA membership was a top priority. Below are the results of a survey sent to local OSCIA secretaries in June 2007. (20/55 counties responded)

The majority of respondents felt that:

- there should not be different classes of membership
- there should not be one set membership fee across the province
- memberships should be renewed annually
- like to have the Regional Communication Coordinators attending local events to sell memberships. ♦

Information Packages Available for Local Events

If your local association is planning a special tour or event, and would like to distribute timely technical information sheets, please contact Deanna Deaville at the provincial office. Please ensure any request is made at least three weeks in advance to accommodate sending out folders for your event. (cont'd)

Information that could be included if available are:

OMAFRA/OSCIA Crop Advances: Field Crop Reports - 2007-09-04
OSCIA Brochure
OMAFRA Infosheets
- Biodiesel Use On-Farm?
- Considerations and Opportunities for Building a Farm- Based Anaerobic Digester System in Ontario
- Energy Audits
- Energy Yields from a Farm Based Anaerobic Digestion System
- Introduction to Energy Crops

Being *Energywise* for the *Future* (Farm Profiles)
- **Swine Farming** – *Improving Creep Heat Conditions and Reducing Energy Use*
- **Tie Stall Dairy Farming** – *Improving Barn Environment and Reducing Energy Costs*
- **Free Stall Dairy Farming** – *Improving Barn Environment and Reducing Energy Costs*
- **Poultry Farming** – *Improving Poultry Environment and Reducing Energy Dependency*♦

EFP Celebrates Milestone

On June 26, 2007, Agriculture and Agri-Food Canada announced that 7500 EFPs have been completed in Ontario with Agricultural Policy Framework funding.

Keith Black, 2006 OSCIA President, presents a farm gate sign to Kristen Ego of Ego's Farm Market and Greenhouses (Coldwater), who was the 7500th producer to complete an EFP under the current program.

"EFP is spurring positive environmental change on the agricultural landscape," said Frank Hoftyzer, President of the OSCIA. "Having 7,500 producers through the program with peer reviewed and deemed appropriate action plans is a significant milestone that signals a clear commitment by Ontario producers to incorporate environmental beneficial management practices into their farm production plans." ♦

OSCIA Summer Directors' Meeting

The OSCIA Directors' Summer Meeting was hosted this past August by Pat and Marg Lee of Oxford County.

Thanks go out to the Lees and to the Oxford SCIA for their hospitality and introduction to Oxford County. While the Directors attended to business, their families, along with former presidents of OSCIA, enjoyed the sites and activities offered in the area.

Tuesday the whole group visited dairy, mink, ginseng, and fruit farms that are located in the county. ♦

Presentation at the ginseng farm of Les and Bertha Gehring.

EFP REMINDER!

Are you one of the many thousands of producers who want to take advantage of the cost share programs associated with the Environmental Farm Plan (EFP)? If so, you need to act now! The deadline for completion of approved projects is November 30, 2007.

- If your approved project is completed and the bills have been paid, call the OSCIA Program Representative immediately to get the claim process started.
- If you have final approval from OSCIA to proceed, get going on the projects if you have not already.
- There are still opportunities to apply for cost share, if you can meet the November 30, 2007 deadline.

Call your local OSCIA Program Representative for more information. ♦

EFP and the associated cost share programs are supported through the Agricultural Policy Framework (APF) a federal – provincial - territorial initiative.

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

Refer to the OMAFRA Website (see above) for the following topics of interest:

Fall Pasture Management Following A Dry Summer

Soil Erosion Still a Threat to Our Soils

Potash Deficiency in Soybeans

2008 Corn-On-Corn Checklist

Research Profile: Grassy Weed Control in Grain Sorghum

2007 Ontario Winter Wheat Performance Trials

FRENCH? All information in english from OMAFRA is also available in french at: 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
Albert Tenuta
Field Crop Pathologist
Keith Reid
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Jack Kyle
Grazier Specialist
Brian Hall
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Editor: Joel Bagg, *Forage Specialist*
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How Many Soil Sample Do I Need?

by Keith Reid, Soil Fertility Specialist, OMAFRA

A perfect soil testing program would tell you exactly what nutrients you need to add to each part of your fields for optimum crop yields. This would account for all the variability in soil fertility that was naturally present in the soil as well as what we have imposed by our management. The reality is that we need to balance the cost of increasing precision against the value we can gain from this precision.

What does Nutrient Management require?

The nutrient management regulations specify that a single soil sample can't represent more than 10 hectares (25 acres). This is in line with the original field boundaries on many farms, and should capture much of the variability from past management. There is an option for including a larger area in a single sample, but this is only where the field has already been shown to be uniform.

Where will it pay to sample more intensively?

The risk with sampling large fields is the loss ofincome from under-fertilizing responsive areas within the field, and over-fertilizing non-responsive areas. If there is going to be an advantage to intensive sampling, there has to a mix of responsive and non-responsive areas within the field, and they need to be arranged in such a way they can be measured, and managed. In low testing fields, the best investment is in fertilizer rather than in more precise testing. In high testing fields, the cost of intensive sampling to find

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BMR Corn Silage

by Joel Bagg, Forage Specialist, OMAFRA, Lindsay

Brown mid-rib (BMR) corn silage has unique genetics providing lower lignin content and higher fibre digestibility (NDFD). This enables higher forage intakes and increased milk production in dairy cows. However, this improved livestock performance comes at the cost of lower silage yields per acre. So, where does BMR fit to its best advantage?

BMR gets its name from the "brown mid-rib" characteristic that makes it visually distinct. Four naturally occurring BMR genetic mutations have been discovered since the 1930's. The characteristic is not GMO. The mutation causes incomplete lignin formation. Plant breeders have taken this gene and incorporated it into modern corn genetics to commercialize silage-only hybrids. BMR corn silage is marketed in Ontario by Mycogen Seeds. The BMR characteristic is also found in sorghums.

Higher Intakes & Milk Production

Fibre levels (NDF) of BMR corn silage are similar to normal levels, but lignin is typically 25 - 35% lower. The lower lignin results in much higher fibre digestibility (NDFD). NDFD levels are typically 8- 10 percentage units higher than normal corn silage.

Research has shown that a 1% unit increase in forage NDFD results in 0.37 lbs more dry matter intake, resulting in 0.55 lb/cow/day more milk. University studies have consistently shown increased intake levels with BMR corn silage of 3 - 5 lbs dm/day. Reviewed research results vary, but milk production is typically improved by 3.5 - 6 lbs/ day. The increased milk/day appears to be a result of increased dry matter intake, rather than higher energy content (NEL). Higher intakes should enable fresh cows to maintain weight better and get back in calf sooner. Higher fibre digestibility enables increasing the amount of corn silage in the ration and reducing the amount of grain corn without adverse effects.

Because of the higher fibre digestibility of BMR, it is more advantageous to target it to classes of livestock where intakes are limited by physical fill.

In large herds feeding TMR to groups these priorities would be close-up dry cows, fresh cows and first-calvers, and high producing dairy cows.

Lab Analysis

When sending BMR silage samples to a laboratory for analysis, use starch, NDF, and an in vitro NDFD to estimate energy, not the old method of estimating energy from ADF and NDF levels. The cheaper NIR analysis may require more calibration before we can accurately predict NDFD in BMR hybrids. BMR corn silage may have lower starch levels, offsetting the higher NDFD contributions to NEL (mcal/kg).

Ration Balancing

Work closely with your nutritionist in ration formulation when feeding BMR corn silage.

Because of its dramatically higher fibre digestibility, BMR silage behaves very differently in a ration. If you feed BMR silage the same way you would normal silage in a high grain ration, problems will result. Mycogen recommends feeding a minimum of 40 - 45 lbs/cow/day BMR silage (as fed). Higher fibre levels are required to maintain optimal rumen function and pH. Increase NDF and decrease grain levels in the ration to avoid acidosis. Provide adequate physically effective NDF. Do not include BMR in high grain diets. Mycogen also recommends a minimum forage to concentrate ratio of 55:45, and a minimum dietary NDF of 30%, or 32% where BMR is more than 50% of the forage dry matter.

Agronomics

In the past, we have typically seen a 10% yield drag with BMR corn. Lower yields (up to 20%) have been observed during seasons with more stress under marginal environmental conditions. However, there have been continued improvements in breeding. The fourth-generation hybrids now available are much improved over the original BMR hybrids commercialized over a dozen years ago, with better drought tolerance, disease resistance, and standability. Bt and RR traits are being incorporated. Mycogen claims they have narrowed the gap to a 5% yield drag. Ontario needs more independent silage yield data to evaluate these hybrids.

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How Many Soil Sample Do I Need?

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the parts of the field that might be responsive to fertilizer will be larger than the value of any increased yield.

Smart sampling: dividing field sections to get the most information

When you divide your fields, the data you need the most will help to guide how to draw the boundaries between sections. The following table will help to guide your decisions.

Table 1 - **Guide to Soil Sampling**

Parameter	Dominant Influence	Sampling pattern
Soil pH	Natural – pH drops faster on sandy soils; knolls where subsoil exposed tend to be alkaline	Sample knolls separately from hollows, and divide fields according to texture.
P & K	Management – most of the varia-tion is from past applications of manure and fertilizer	Divide fields according to previous field boundaries. If past fields not known, divide farm cross-wise rather than length-wise.
Organic Matter	Natural – finer textured soils tend to have more organic matter; ero sion decreases organic matter	Sample knolls separately from hollows, and divide fields according to texture.
Nitrate-N	Natural – will generally follow the same pattern as organic matter	As for organic matter.
Micronutrients	Mixed	Soil pH will have a dominant impact on availability, but past management may have added significant quantities in some fields.

Grazing Mentorship Program

by Jack Kyle, Grazier Specialist, OMAFRA

The Sustainable Grazing Mentorship Program is a consulting/mentoring program being delivered through Ontario Cattlemen's Association and funded by Greencover Canada. The Grazing Mentor program is open to beef producers in Ontario. The program helps connect experienced graziers (mentors) with novice producers to assist the less experienced in implementing Beneficial Management Practices in their grazing operation.

A Grazing Mentor is a respected producer peer with extensive grazing management experience and knowledge. The Mentor can suggest grazing management options to help you improve your profits, your forage productivity and your land and water resources.

A Grazing Mentor from your area will come to your farm to discuss your grazing resources, opportunities and challenges. The Mentor can make suggestions about fencing, watering systems, grazing systems, plant growth, forage species, winter grazing options, or just about anything your have questions about!

The cost to the novice grazier is $100. The Mentor comes to the farm and assists the novice grazier with creating grazing plans, developing systems, and performing economic analysis of their enterprises. The mentor puts in approximately 16 hours (2 days) with the novice producer.

To find out more, or to request a Mentor contact Paul Stiles, Ontario Cattlemen's Association 519-824-0334 or 1-866-370-2333.

BMR Corn Silage

Continued from page 15

Harvesting

BMR cell walls are more fragile, so it is more prone to seepage and packs tighter. Harvest BMR silage slightly drier (2%) than normal silage. A longer theoretical length of cut (TLC) is necessary to maintain physically effective fibre, especially if using a kernel processor. Without a processor, a TLC of 3⁄4 - 1 inch is recommended in a horizontal silo, and 5/8 - 3⁄4 inch in a tower silo. With a processor, the TLC should be 1 - 1.5 inch in a horizontal silo, and 3⁄4 to 1 inch in a tower silo.

Avoid storage of BMR silage in bottom unloading silos. Using the milk-line to estimate moisture at harvest is not accurate. Moistures are best estimated by chopping a sample and using a Koster Tester, microwave or laboratory analysis.

Economics

There are some increased costs associated with BMR in addition to substantially higher seed costs.

BMR corn silage produces more milk/ton, but not more milk/acre. Because of the lower yields and higher intakes, more corn silage acres will be required. This will partially be offset by fewer grain corn acres. What is the cost and availability of land rental in your area? BMR is most profitable when fed to close-up, fresh and high yield groups, and much less profitable if fed to the whole herd. What is the size of your dairy herd and can BMR be practically fed to specific groups?

Dairy producers should weigh the nutritional benefits against the agronomic costs associated with BMR hybrids to determine whether BMR has a place on their operations. Perhaps the most obvious situation where BMR may have an advantage would be in high corn silage diets. BMR is of interest to some milk producers in the Ottawa Valley, where there is a higher risk of alfalfa winterkill and more desire to increase the percentage of corn silage in the ration.

BULLETIN GRANDES CULTURES

MAAAROO – des spécialistes en grandes cultures – votre source d'information

Combien d'échantillons de sol faut-il prélever?

par Keith Reid, spécialiste de la fertilité du sol, MAAARO

Idéalement, un programme d'analyse du sol indiquerait exactement quels éléments nutritifs il faut ajouter à chaque partie des champs pour optimiser le rendement des cultures. Une telle analyse rendrait compte de toute la gamme des variations dans la fertilité naturelle actuelle du sol ainsi que des exigences de la gestion. Pour être réaliste, nous devons faire un juste équilibre entre une précision accrue de l'analyse et la valeur réelle que nous pouvons en tirer.

Quelles sont les exigences en matière de gestion des éléments nutritifs? Les règlements concernant la gestion des éléments nutritifs précisent qu'un même échantillon de sol ne peut représenter plus de 10 hectares (25 acres). Cela correspond aux limites originales des champs sur bien des exploitations agricoles et devrait rendre compte dans une large mesure de la variabilité attribuable à la gestion passée. Il existe une option permettant d'inclure une plus grande superficie pour un seul échantillon, mais uniquement s'il a été démontré que ce champ est uniforme.

Dans quel cas serait-il avantageux de faire un échantillonnage plus intensif? Si l'on échantillonne de grands champs, on risque une perte de revenu en sous-fertilisant des parties réactives du champ et en sur-fertilisant des parties non réactives. Pour que ce soit avantageux d'intensifier l'échantillonnage, il faut qu'il y ait une combinaison de parties réactives and non réactives à l'intérieur d'un champ, et que ces parties soient disposées de façon à pouvoir être mesurées et gérées. Dans les champs dont le sol est pauvre, il vaut mieux investir dans le fertilisant plutôt que dans des analyses plus précises. Dans les champs dont le sol est riche, le coût d'un échantillonnage intensif pour déterminer les parties pouvant bien réagir au fertilisant sera plus élevé que la valeur de l'accroissement de la récolte pouvant en découler.

Échantillonnage intelligent : diviser le champ en sections pour obtenir le maximum de données En divisant vos champs, les données dont vous avez le plus besoin vous serviront de guide pour établir les lignes de démarcation entre les sections. Le tableau qui suit vous aidera à éclairer vos décisions.

Tableau 1 - Guide de l'échantillonnage du sol

Paramètre	Influence dominante	Modèle d'échantillonnage
pH du sol	Nature – le pH baisse plus vite dans les sols sableux, des collines où le sous-sol exposé tend à être alcalin.	Prendre des échantillons séparés des collines et des dépressions du sol et diviser les champs selon la texture.
Phosphore et potassium	Gestion – la variation est attribuable dans un large mesure à l'épandage passé de fumier et de fertilisant.	Diviser les champs selon les anciennes limites. Si on ne connaît par la délimitation des anciens champs, diviser la terre en largeur plutôt qu'en longeur.
Matières organiques	Nature – les sols à texture fine tendent à contenir plus de matière organique; l'érosion réduit la teneur en matière organique.	Prendre des échantillons séparés des collines et des dépressions du sol et diviser les champs selon la texture.
Azote nitrique	Nature – se comporte généralement de la même manière que les matières organiques.	Comme pour les matières organiques.
Oligo-éléments	Combinaison	Le pH du sol a un effet dominant sur la disponibilité, mais les méthodes passées de gestion peuvent avoir ajouté d'importantes quantités dans certains champs.

Maïs d'ensilage à nervure brune (BMR)

par Joel Bagg, spécialiste en culture fourragère, MAAARO, Lindsay

Le maïs d'ensilage à nervure brune (ou maïs BMR selon son appellation anglaise brown mid rib) a des gènes uniques lui conférant une teneur plus faible en lignine et une plus grande digestibilité des fibres (dFDN). Ces caractères favorisent une plus grande ingestion de fourrage et une production de lait plus élevée chez les vaches laitières. Cependant, cette amélioration du rendement du bétail se fait au prix d'un rendement plutôt faible d'ensilage à l'acre. Alors dans quelle situation le maïs BMR présente-t-il le plus d'avantages?

Le maïs à nervure brune tire son nom de son apparence distinctive. Quatre mutations naturelles du maï¨s BMR ont été découvertes depuis les années 1930. Il ne s'agit pas cependant d'un OGM. La mutation cause une formation incomplète de la lignine. Les phytogénéticiens ont pris ce gène et l'ont incorporé dans les gènes du maïs moderne pour commercialiser des hybrides destinés exclusivement à l'ensilage. En Ontario, le maïs BMR est commercialisé par Mycogen Seeds. Les caractéristiques BMR se trouvent également dans des sorghos.

Plus grande consommation et meilleure production laitière La teneur en fibres (FDN) du maïs d'ensilage BMR est semblable à la teneur normale, mais la lignine est habituellement de 25 % à 35 % moins élevée. La plus faible teneur en lignine augmente considérablement la digestibilité des fibres (dFDN). Les taux de dFDN sont ordinairement de 8 à 10 unités de pourcentage plus élevés que pour le maïs d'ensilage normal.

La recherche a démontré qu'une augmentation de 1 % des unités dans la dFDN du fourrage donne une augmentation de l'ingestion de matière sèche de l'ordre de 0,37 livre, ce qui entraîne une augmentation quotidienne de la production de l'ordre de 0,55 lb de lait par vache. Les études universitaires ont constamment démontré une augmentation du niveau d'ingestion du maïs BMR de 3 à 5 livres par jour. Les résultats des études examinées varient, mais la production laitière augmente ordinairement de 3,5 à 6 lb par jour. L'augmentation de la production laitière quotidienne semble découler de l'ingestion accrue de matière sèche plutôt que d'un contenu énergétique plus élevé (ENL). La prise alimentaire accrue devrait permettre aux vaches fraîches de mieux maintenir leur poids et de passer plus rapidement au vêlage. La plus grande digestibilité des fibres permet d'augmenter la quantité de maïs d'ensilage dans la ration et de réduire la quantité de maïs-grain sans effets nocifs.

En raison de la plus grande digestibilité des fibres du maïs BMR, il est plus avantageux de viser des cate¨gories de bétail pour lesquelles la prise alimentaire est limitée par la satiété. Dans les grands troupeaux où l'on donne des rations totales mélangées (RTM) à des groupes, la priorité devrait être donnée aux vaches en préparation de vêlage, aux vaches fraîches et aux vaches ayant leur premier veau, ainsi que les vaches laitières très productrices.

Analyse de laboratoire

Lorsqu'on envoie des échantillons de maïs BMR pour obtenir des analyses de laboratoire, il faut utiliser les tests fondés sur l'amidon, sur la teneur en FDN et les tests in vitro de la dFDN pour en estimer la valeur énergétique, et non l'ancienne méthode qui consistait à estimer l'énergie à partir des niveaux de FDA et de FDN. Il existe une analyse moins coûteuse utilisant la technologie proche infrarouge,, mais il faudra en améliorer le calibrage avant qu'elle puisse prédire de manière exacte la dFDN dans les hybrides BMR. Le maïs BMR pourrait avoir une teneur plus faible en amidon, ce qui fait contrepoids aux effets de la plus grande digestibilité des fibres sur l'ENL (mcal/kg).

Ration équilibrée

Travaillez en étroite collaboration avec votre nutritionniste pour formuler une ration appropriée lorsque vous donnez du maïs d'ensilage BMR. En raison de la très grande digestibilité de ses fibres, l'ensilage BMR a une incidence différente sur la ration alimentaire. Si vous alimentez votre bétail de maïs BMR de la même façon que vous le feriez pour du maïs d'ensilage normal dans une ration à forte teneur en grain, vous aurez des problèmes. Mycogen recommande de donner un minimum de 40 à 45 lb d'ensilage BMR par vache par jour (à la distribution). Des niveaux plus élevés de fibres sont nécessaires pour maintenir le fonctionnement optimal et le pH du rumen. Augmentez la quantité de FDN et diminuez la proportion de grain dans la ration pour éviter l'acidose. Fournissez une quantité suffisante de FDN efficace. N'incorporez pas d'ensilage BMR aux régimes a haute teneur en grains. Mycogen recommande également un ratio minimal fourrage concentré de 55:45, et une proportion minimale de fibres alimentaires FDN de 30 %, ou de 32 % lorsque l'ensilage BMR constitue plus de 50 % des matières sèches du fourrage.

Considérations agronomiques

Par le passé, on a habituellement constaté une baisse de 10 % du rendement avec le maïs d'ensilage BMR. On a observé une baisse du rendement (parfois jusqu'à 20 %) durant les saisons où les cultures ont subi un stress occasionné par des conditions environnementales inhabituelles. Cependant, l'amélioration génétique s'est poursuivie. Les hybrides de la quatrième génération actuellement disponibles sont fort améliorés si on les compare aux hybrides BMR commercialisés il y a une douzaine d'années : ils tolèrent mieux la sécheresse et résistent mieux aux maladies et à la verse. Les caractères Bt et RR y sont incorporés. Mycogen affirme que la société a réduit l'écart et que la baisse du rende-

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Programme de mentorat sur le pâturage

par Jack Kyle, spécialiste en pâturage, MAAARO

Le programme de mentorat pour la gestion durable des pâturages est un programme de consultation et de mentorat dispensé par l'intermédiaire de l'Ontario Cattlemen's Association et financé par le Programme de couverture végétale du Canada. Le programme de mentorat sur le pâturage est offert aux éleveurs de bovins de l'Ontario. Ce programme aide à mettre en contact des éleveurs chevronnés (les mentors) avec des éleveurs novices pour les aider à mettre en œuvre des pratiques de gestion optimales dans leur exploitation d'élevage. Les mentors sont des éleveurs respectés de leur milieu ayant des connaissances et une expérience étendues dans le domaine de l'élevage en pâturage. Le mentor peut suggérer des solutions de pâturage pour vous aider à améliorer vos profits, votre productivité fourragère et vos ressources en terres et en eau.

Un mentor en pâturage de votre région visitera votre exploitation agricole pour discuter de vos ressources, des possibilités et des difficultés relatives au pâturage. Le mentor peut faire des suggestions au sujet des clôtures, des méthodes pour abreuver le bétail, des systèmes de pâturage, de la culture des plantes, des espèces de fourrage, des possibilités de pâturage d'hiver, bref, sur toute question que vous pourriez avoir!

L'éleveur novice doit payer un droit de 100 $. Le mentor se rend à la ferme et aide l'éleveur novice à élaborer ses plans de pâturage, à implanter des systèmes et à procéder à l'évaluation de ses projets d'un point de vue économique. Le mentor passe environ 16 heures (2 jours) avec l'éleveur novice. Pour de plus amples renseignements ou pour demander à consulter un mentor, veuillez communiquer avec Paul Stiles, Ontario Cattlemen's Association, 519 824-0334 ou 1 866 370-2333.

Maïs d'ensilage à nervure brune (BMR)

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ment se situe maintenant à 5 %. L'Ontario a besoin d'obtenir davantage de données indépendantes sur le rendement d'ensilage pour pouvoir évaluer ces hybrides.

Récolte

Les parois cellulaires du maïs BMR étant plus fragiles, il est donc plus sensible aux infiltrations et se tasse plus. Récoltez l'ensilage BMR lorsqu'il est un peu plus sec (2 %) qu'un autre type d'ensilage. Une plus grande longueur de coupe théorique (LCT) est nécessaire pour conserver l'efficacité alimentaire des fibres, surtout si on utilise une machine de traitement du grain. S'il n'y a pas de machine à traiter le grain, une LCT de 3⁄4 à 1 pouce est recommandée pour un silo horizontal, et une coupe de 5/8 à 3⁄4 de pouce pour un silo vertical. S'il y a une machine à traiter le grain, la LTC devrait être de 1 à 1,5 pouce pour un silo horizontal, et de 3⁄4 à 1 pouce pour un silo vertical. Évitez d'entreposer l'ensilage BMR dans des silos qui se déchargent par le bas. Se servir de la ligne de maturité pour estimer la teneur en eau de l'ensilage au moment de la récolte n'est pas précis. Il vaut mieux estimer la teneur en eau en hachant un échantillon et en utilisant l'appareil de Koster, l'appareil à micro- ondes ou une analyse de laboratoire.

Considérations économiques

L'utilisation de l'ensilage BMR entraîne des frais plus élevés, en plus du coût considérablement plus élevé de la semence. Le maïs d'ensilage BMR entraîne une augmentation de la production de lait par tonne, mais non pas de la production de lait par acre. En raison du rendement plus faible et de la plus grande ingestion, il faudra consacrer plus d'acres à la culture du maïs d'ensilage. Cela sera compensé en partie par la réduction du nombre d'acres consacré au maïs-grain. Quel est le coût et la disponibilité de la location des terres dans votre région? Le maïs BMR apporte des avantages plus marqués lorsqu'on le donne à des vaches en préparation de vêlage, des vaches fraîches et des vaches très productrices, mais il est beaucoup moins profitable si on le donne à tout le troupeau. Quelle est la taille de votre troupeau laitier? Serait-il pratique de donner du maïs BMR à des groupes spécifiques?

Les producteurs laitiers devraient mesurer les avantages nutritionnels en tenant compte des coûts agronomiques associés à l'utilisation des hybrides BMR pour déterminer s'ils sont avantageux pour leur exploitation. La situation qui présente peut-être le plus d'avantages évidents est celle des régimes à haute teneur en maïs d'ensilage. Le maïs BMR intéresse certains producteurs laitiers de la vallée de l'Outaouais, où on constate un risque plus élevé de destruction de la luzerne par l'hiver et une plus grande volonté d'augmenter le pourcentage de maïs d'ensilage dans la ration alimentaire.

NEOSCIA Summer Tour Features Combine Clinic

The summer Tour is back and farmers from across the north made the trek to West Nipissing in July to participate in the daylong event.

The morning program, held at the farm of Janet and John Parsons, was acombine and header clinic led by Dwight Eby of Elmira Farm Service. He explained the importance of making sure the header settings are correct and how to make the adjustments. The same for the combine. Dwight also did a walk around of the head and the combine pointing out maintenance requirements and pinpointing crucial areas farmers too often neglect resulting in breakdowns.

One of the many questions dealt with was harvest losses. Dwight explained the three types of losses: preharvest loss (think of army worm), header loss and separation loss. Dwight provided a handout report by Gregg Carlson and David Clay which provided information on the issue. In order to estimate loss one can make a rough estimate by placing a 1ft. by 1ft. (inside dimensions) frame on the ground and counting the seeds found within the frame after the combine has passed over it. See table for conversion from number of seeds to bu/acre. It's important to check for the three types of losses. First on unharvested parts of the field, then by stopping the combine and backing up to check for header loss, then behind the combine - to the right , left, and directly behind. Three sampling locations should be used. Carlson and Clay state that there should be an expectation of losing less than 1 to 2 bu/acre.

Crop	*seed/ft^2 for 1 bushel loss per acre*
barley	**15**
corn	**2**
oats	**12 to 17**
soybean	**4 to 10**
wheat	**16 to 22**

Dwight said there is nothing you can do about preharvest losses when the combine is going into the field but you need to know what they are to determine the header and separation losses. If header loss is a significant part of the loss, check adjustments and perhaps consider a different head.

If the loss is from separation, check adjustments. Always try to eliminate unthreshed losses by decreasing the concave clearance before increasing cylinder speed. Excessive cylinder speed is the leading cause of grain damaged. Set the sieve to the widest and work back if required.

Watch the fan speed. Start with the highest and work down if required.

Elmira Farm Service provided two videos on combine and header operation for loan purposes. These are available from Janet Parsons.

2007 Premier's Award for Agri Food Innovation Excellence

To recognize innovation in the province's agriculture sector, the 2007 Premier's Award for Agri-Food Innovation Excellence as been launched. As many as 55 regional awards, valued at $5,000 each, will be presented. The recipients of the Premier's Award (up to $100,000) and the Minister's Award (up to $50,000) will be selected from the regional winners. Program applications must be received by 5 pm on October 31, 2007, and will be reviewed by two independent panels from across Ontario's agri-food industry. Additional information and application forms are available at www.ontario.ca/agri-foodinnovation