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Ministry of Rural Affairs



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Breaking Ground

(in Northeastern Ontario)

Fall 2014

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

Defining Limits of Food Production

By Graham Gambles, Regional Communication Coordinator, NEOSCIA

Just how far north can we expect to grow food in north-eastern Ontario? For about a century now, it is commonly thought to be along the old CNR line running through Cochrane, Kap, and Hearst. All well within the "Plant Hardiness Zone 2" region. Perhaps it is time to reconsider.



Cree Village Eco Lodge, Moose Factory, Cochrane District

First, a bit of history. The Hudson's Bay Company made Moose Factory Island its prime administrative community in 1673. Although they were greatly dependent on food production from the wild, they did grow a selection of hardy vegetables and raised livestock to supplement naturally harvested food – well aware of what could happen if the annual supply ship did not arrive each fall. Moose Factory was not only the first European settlement in what became Ontario, it was the first "farm" in the Province.

HBC is long gone, but about 2500 residents still call the Island home. Nearby Moosonee, on the mainland, is home to 3500 more people. With no highway access, the people of this area are dependent on the Ontario Northland Railway (and the North West Company) to bring in supplies, all priced as high as one would expect in an isolated community with a lack of business competition. A few people still survive on "country" food (goose, moose, fish, etc.), and the odd homeowner provides his own potatoes and fresh summer garden produce. No starvation like in the days of old, but diabetes runs rampant.

Can we do better? These communities are on the border of the Zone 1 and Zone 2 hardiness region. True, there is more acidic, wet organic soils than there are typical farm mineral soils, but nobody is pretending that this will ever become

Canada's breadbasket. Horticulture is the logical option. Just for fun, Google "Inuvik Greenhouse" and you will find that viable greenhouse production in the far, far north has been underway since 1998. In fact, the Federal government has been encouraging greenhouse across the high Arctic for many years. No such program in Ontario though.

A meeting at the Cree Village Eco Lodge

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Grassroots Innovation Since 1939

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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for Current and Historical Weather Data

NORTHERN ONTARIO AGRICULTURE ROUND TABLE

WHEN

October 28-October 29, 2014

WHERE

Holiday Inn, Sudbury

TO DEVELOP A COLLABORATIVE
FRAMEWORK FOR AGRICULTURAL
RESEARCH IN NORTHERN ONTARIO

RSVP BY OCTOBER 1, 2014

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**Thunder Bay Agricultural
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**Ministry of Agriculture,
Food and Rural Affairs**

**Ministry of Northern
Development and Mines**

**Various Northern Ontario
Commodity Groups,
Funding Agencies and Ag
Research Organizations**

Participants will be required to cover
the cost of mileage/accommodation.
NOFIA will provide meals.

Please see the attached invitee list if
you wish to coordinate delegates from
each region.

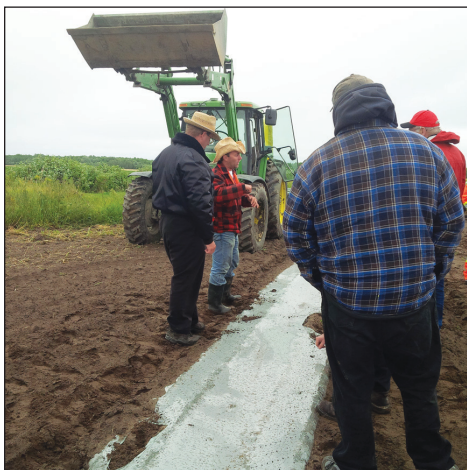
Meeting will take place in the
afternoon/evening of the 28 and the
morning of the 29.

Agenda will follow.

West Nipissing East Sudbury Soil & Crop Improvement Association Crop Tour 2014

by Pierrette Desochers, OMAF, Verner

Roughly 50 people participated in the crop tour this year. The cold rainy weather did not stop our producers and friends from Nipissing University from participating. Protected by umbrellas, rain suit, kiwi and splash pants, young and old met at Leisure farms where we started our day.



Mitch Deschatelets, our host for the tour provided plenty of good information to us all. The horticulture crops are seeded/planted with different equipment than the cash crop sector but necessitate Best Management Practices all the same. Mitch explained the importance of crop rotation in reducing disease, weed pressure, nutrient uptake and nutrient scavenging. "Leisure Farms produces fresh strawberries, raspberries, corn and pumpkins. Meticulous care has been taken to ensure that the produce that is grown and cultivated on the farm meets the highest of quality, freshness and taste. Our family farm is not only a place to pick and buy fresh local produce but also a place for everyone to meet and take part in various family activities such as enjoying a picnic, a wagon ride and/or roast marsh mellows on the bonfire. Leisure Farms also offers daily, fresh baked pastries such as homemade fruit pies, breads and award winning jams and jellies. Our family farm gives the opportunity for everyone to enjoy fresh air, view beautiful fields full of sweet red berries and the chance to connect with local or newcomers alike." They produce strawberries, Summer and Fall raspberries, haskap, pumpkins,

sweet corn, a variety of garden vegetables too along with some oats, soybeans and wheat. The secret to this farm's continuous availability of produce is in the multiple planting dates and using a mix of various cultivars (for northern climates).

Haskap:

- 3X more antioxidants than blueberries
- Winter hardy, can stand up to -45 C
- native throughout the cool temperate Northern Hemisphere. (Russia, Asia, etc)
- Started in region about 5 years ago

Raspberries (Summer and Fall):

- 1000 lbs per acre (very good year) but production is very volatile
- 20 acres of Summer Raspberries this year (fruit is produced on 2 year old canes (old wood))
- 10 acres of Fall Raspberries this year (fruit is produced on new canes)
- Having two varieties offer fruit availability from mid-July to late August



Strawberries:

- Approximately 12 immigrant workers "training runners" (moving runners into the rows to have nice straight rows the following year)
- Most of work is manual. Very labour intensive. All cut by hand with scissors.
- First year, no strawberry production

to let plant establish themselves, then plants will produce for 3 years.

- They replant after 4 years. They have a 4-6 year rotation before strawberries come back to the same field (to help reduce disease pressure)
- Have approximately 6355 plants/acre, 6000 lbs/acre of strawberries
- May 1 planting: allows enough growth for plant to overwinter
- 70 acres of strawberries over property (40 acres in production in 2014, 30 acres for 2015)
- Moved to drip irrigation, efficient use of fertilizer, direct uptake of nutrients by plants (no broadcast application)
- All fields get covered with straw in November. Need 9 frosts before covering, Otherwise the plants choke. Straw is removed early in the spring before plants grow.
- When rotating fields after strawberries, they plant pumpkins which scavenge the leftover nutrients in the soil. Produces large pumpkins. Not competing with grocery store (small uniform ones).



Pumpkins:

- Large pumpkins are sought after for Fall/Halloween decorations, etc
- Small pumpkins preferred for baking and school tours
- Have 25 acres

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CROP TALK

OMAFRA Field Crop Specialists – Your Crop Info Source

Ministry of Agriculture and Food, Ministry of 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

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Sulphur On Alfalfa

Joel Bagg, Forage Specialist & Bonnie Ball,
Soil Fertility Specialist OMAFRA



Sulphur (S) received from atmospheric sulphur dioxide emissions (acid rain) in Ontario has steadily declined by over 50% during the last 25 years. We are beginning to see yield responses in more situations when applying S to

alfalfa. Sometimes the response is dramatic, while in other situations there is no response. Tissue sampling of alfalfa is a useful diagnostic tool in predicting whether there will be an economic response to applying S. S availability varies from site-to-site and from year-to-year according to temperature and rainfall. Soil organic matter plays an important role in providing available S to plants. Sulphate is very mobile in soils, similar to nitrate, and can be leached into the subsoil and become unavailable to plants (but not as easily as nitrate). S deficiencies have also increased due to some reductions in organic matter, and higher crop and protein yields. There is considerable S in manure. S deficiencies are more likely to occur on low organic matter soils, and soils that have not had a manure application within a couple of years. Within fields, sulphur deficiency symptoms may show up first on eroded knolls and other low organic matter areas.

What Does S Deficiency In Alfalfa Look Like?

Alfalfa has the highest S requirements of any of the field crops. A 4 ton/acre crop of alfalfa removes about 20 lbs/ac of S. S deficient alfalfa plants will be spindly and uniformly light green or yellowish (as opposed to a yellow top and green bottom, etc), with weak growth. (Figure 1)



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Sulphur On Alfalfa

Continued from page 4



Figure 1 – S Deficiency Symptoms In Alfalfa. Left – normal alfalfa stems with tissue test 0.34% S Right – S deficient with tissue test 0.18% S, light green and spindly.

How Do I Know If Have A Deficiency?

There currently is not a reliable soil test for S in Ontario. Sulphate levels are quite variable, and may be leached from the soil between soil sampling and plant growth. Tissue testing of alfalfa (at mid-bud to early-flower stage) is considered a suitable diagnostic approach for determining S deficiencies. Sample the top 6 inches of 35 stems and send them to a laboratory for tissue analysis. The critical level below which alfalfa is considered S deficient and may benefit from applying sulphur is 0.25%. If a check is desired, take a similar sample from an area with no visual S-deficiency symptoms.

A 2012 field survey of Ontario alfalfa stands indicated that 21% of fields had S-tissue analysis below this level. Put another way, 79% of these fields would have been unlikely to have an economic response to applying sulphur. It is also noteworthy that 37% of these fields tested below the critical K value of 1.7%, almost twice as many than were S deficient. Neglecting K fertility, while attempting to improve S fertility is not an effective strategy.

What Form of S?

What is the most economical source of S to use with alfalfa? The sulphur must be in the sulphate form to be taken up by the plant. Sulphate fertilizers include:

- ammonium sulphate (21 – 0 – 0 – 24)
- potassium sulphate (0 – 0 – 50 – 18)
- sulphate of potash magnesia (Sul-Po-Mag or K-Mag) (0 – 0 – 22 – 20)
- calcium sulphate (gypsum) (0 – 0 – 0 – 17)

All are equally effective as sources of sulphate. Depending on what assumptions you make, current prices make S in the sulphate form worth about \$0.90 or more per lb S. To determine the most economical source of sulphate, get some local price quotes and do the math.

Ammonium sulphate provides nitrogen

which should not be needed by the alfalfa. K-mag and potassium sulphate also provide potassium which is usually also required in alfalfa, but potassium sulphate is difficult to source and more expensive in some areas. Gypsum can be a good source of sulphate, but has no advantage in improving soil pH. Thiosulphate liquid forms, ammonium thiosulphate (12-0-0-26) and potassium thiosulphate (0-0-25-17), are readily available, but liquids are less convenient for fertilizing alfalfa and generally more costly per unit of S than dry forms.

Elemental sulphur (0-0-0-90) consists of finely ground sulphur that has been pelletized, and must be converted by oxidation to sulphate by soil bacteria before plants can utilize it. The rate of availability depends on particle size, method of application and moisture. Incorporating it into the soil before establishment makes it more readily available. In some circumstances, 50% of the sulphur maybe available in the year of application, while the remainder is more slowly available. Elemental sulphur is currently worth about \$0.35 per lb S. Applying a single application of elemental sulphur rather than sulphate, supplies a cheaper S source over a longer period of time and reduces the need for annual applications. An application of 50 lbs/ac of S should last the life of a productive 3 year alfalfa stand.

When Should I Apply It?

Sulphate-S should ideally be applied in the spring at green-up to improve plant utilization, minimize losses due to leaching, and receive a first-cut yield boost (Figure 2). Elemental sulphur can be applied by:

1. incorporating it into the soil with other fertilizer at establishment (Figure 3) , or
2. blending it with P and K (and possibly boron) and broadcasting it after a cut.

How Much S Should I Apply?

A general thumb rule for S application on alfalfa is 5 lb/ac per ton of dry matter yield. Some S is still available in reduced amounts from atmospheric deposition and organic matter. The University of Wisconsin recommends 15 – 25 lbs/ac of S in the sulphate form broadcast on established stands annually, or 25 – 50 lbs/ac of elemental S incorporated at seeding. Research is required to verify these numbers in Ontario.

Ontario Research

Sulphur deficiencies in alfalfa have been more common in the mid-western US and

north-western Ontario, because they are located upwind of much of the sulphur producing industrial pollution that has been cleaned up. Ontario research on sulphur rates, source, and timing for alfalfa has been more limited. Results from recent research trials applying sulphate to alfalfa have been mixed. Some sites have shown no response to applying sulphur. However, the most responsive site showed a dramatic yield increase in an alfalfa-grass mix of 1.55 ton/ac, a crude protein increase of 4 percentage points, and a percentage of alfalfa in the harvested forage improved from 33 to 56%.

To confirm that an actual yield response has occurred, farmers may want to leave a test strip where no S is applied. (Figure 4)



Figure 2 – Response of alfalfa to spring sulphate of potash (40 lbs S/ac) application, (left of stake)



Figure 3 – Response of alfalfa to elemental-S (100 lbs S/ac) broadcast in the fall previous to spring establishment (right of stake).



Figure 4 – Response from potassium sulphate applied to alfalfa following 1st cut.

Bottom Line

Tissue test alfalfa fields showing potential deficiency symptoms to determine if S should be applied, especially fields with low organic matter soils and those that do not receive manure. Applying elemental-S bulk blended with other fertilizer is the most cost effective method of providing S. Spring applications of sulphate can provide a more immediate yield response.

Cold Temperatures Hamper Soybean Nodulation

Horst Bobner, Soybean Specialist, OMAFRA

The 2014 growing season was the worst year in recent memory for poor root nodulation and nitrogen (N) fixation in soybeans. Cool, wet conditions cause numerous problems, including slow growth, low pod set, increased diseases, and lower yields. One significant problem that may be overlooked is that cool soil temperatures will delay or even inhibit nitrogen fixation.

Soybeans are a subtropical species. For optimal symbiotic activity the soil temperature should be between 25 - 30°C. There were numerous first time fields where inoculant was applied, but nodulation did not occur. In other cases, nodulation did occur but not until early-August. Problems with poor nodulation happened across a wide geography and occurred with several different inoculant products, so it was not a product failure. In a few cases, even second time soybean fields failed to nodulate properly. Biological nitrogen fixation is essential for both first time fields and fields with a history of soybeans, because it converts gaseous nitrogen in the air (N₂) to a form of nitrogen the plant can use.

How Does Nodulation Occur?

Soybean plants secrete chemical signals (flavonoids) into the soil from the roots when the plant needs nitrogen. These signals are picked up by the rhizobia, which in return send a chemical signal back to the root. The signals sent back are called Nod factors and elicit nodulation in the plant. Within 10 - 14 days of colonization, a nodule will become visible. The return signal prepares the root for infection by the bacterium. Infection can only occur where root hairs are present. The Nod factor causes root hairs to curl and pick up rhizobia and allows them to invade the root. As the bacterial cells divide, they form a small tumor like structure called a nodule.

Why Was Nodulation

Poor This Year?

There are a number of factors that influence nodulation, nodular growth,

and nitrogen fixation. These factors include too much or too little moisture, soil nitrate levels, soil pH, diseases, organic matter, soil temperature, and rhizobial quality.

This year, cool temperatures are to blame for poor nodulation. In some cases, soil conditions also turned dry immediately after seeding causing the bacteria to dry out and die before they could invade the roots.

Experiments conducted at McGill University by Zhang, Lynch, and Smith ⁽¹⁾ showed that between 17 - 25°C the onset of N₂ fixation was delayed by 2.5 days for each degree decrease in temperature. Below 17°C each degree delayed the onset of N₂ fixation by 7.5 days. A root zone temperature of approximately 15-17°C seems to be the critical temperature for soybean nodulation and N fixation. By 49 days after inoculation plants at temperatures between 17 - 25°C were fixing some nitrogen, but plants at 15°C were not fixing any nitrogen. They also observed that a decrease of only 2°C from 21°C to 19°C made an important difference in the time to onset of N₂ fixation, total N accumulation within the plant and overall growth.

Matthews and Hayes ⁽²⁾ showed that nodulation can cease when temperatures fall to 10°C. Lynch and Smith ⁽³⁾ showed that a root zone temperature of 15°C restricted both infection and nodule development and delayed the onset of N₂ fixation by 4-6 weeks. Plants with a root zone temperature of 15°C had only fixed 9% of the nitrogen fixed by plants at 25°C 6 weeks after inoculation.

This helps us understand why in some cases soybeans did not nodulate until late-July or early-August this year. No-till fields, especially those with large amounts of crop residue, also suffered more from a lack of nodulation because these soils are generally cooler by a few degrees C.

Soil Nitrate and N Fixation

High nitrate levels also caused some problems. Nodule formation is inhibited

by the presence of high nitrate levels in the soil. If the soybean plant picks up too much nitrogen early in the season, it will delay or prevent nodulation. The reduction of atmospheric N₂ to ammonia is energetically expensive, and costs more photosynthate than simply taking up nitrate, so the plant will naturally consume nitrates before attempting to nodulate. This fundamental inability to develop and sustain N₂ fixation in the presence of soil nitrates at greater than very small "starter" fertilizer rates is one of the reasons why nitrogen fertilization does not pay in soybeans. Applying nitrogen fertilizer simply reduces the amount of N₂ fixed from the air.

What about Next Year?

Temperatures in Ontario in June and July are generally sufficient for proper nodulation, so under average conditions this problem will not be significant. In first time soybean fields, use two inoculant products such as a peat and a liquid at the high rate with good coverage. Some first time fields that used only one product or a pre-inoculant had complete nodulation failures in 2014. Using two products will help to increase the number of live bacteria available for nodulation. It is also essential to consider the bacterial viability with pesticide seed treatments. The only remedy to a nodulation failure is to apply N fertilizer at first flower or early pod set.

- 1) Zhang F, Lynch D. H, and Smith D.L. (1995) Impact of low root temperatures in soybean on nodulation and nitrogen fixation. *Env. And Exp. Botany*, Vol 35, no3 pp. 279-285.
- 2) Matthews D.J. and Hayes P. (1982) Effect of root zone temperature on early growth, nodulation and nitrogen fixation in soya beans. *F. Agric. Sci* 98, 371-376.
- 3) Lynch D.H. and Smith D. L. (1993) Soybean nodulation and N₂ fixation as affected by period of exposure to a low root zone temperature. *Physiol. Plant.* 88, 212-220.

I Have My Soil Test Results – Now How Much Fertilizer Should I Apply?

Bonnie Ball, Soil Fertility Specialist & Joel Bagg, Forage Specialist, OMAFRA

Why is it that you sometimes receive different fertilizer recommendations from the same soil test results?

Agronomists and farmers may use different assumptions and objectives when determining how much fertilizer and manure to apply. The main approaches for determining fertilizer application rates from a soil test result include:

1. sufficiency; and
2. build-up (or draw-down) and maintenance.

Sufficiency Approach

The sufficiency approach rate is the most economic during the year of application. The value of the yield response is expected to pay for the cost of the fertilizer within that year.

The sufficiency approach is designed to minimize the cost of fertilizer relative to yield within a given year. It requires frequent soil testing and annual fertilization, unless the soil test is high. It is most suitable for short-term decisions, including annual land rental agreements or limited cash flow. It is associated with a low risk of over-fertilization. Recommendations in OMAFRA Publication 75, Agronomy Guide, use the sufficiency approach.

Build-up & Maintenance

Sometimes also known as “target and maintenance” it is a longer-term approach that targets an ideal soil test value to meet the crop needs. Then over time, “builds-up” or “draws-down” the soil test to this level and then maintains it.

1. For build-up of a low testing soil to target level, the rate is calculated by determining and adding:

- the crop removal amount estimated from the expected yield, and
- the additional fertilizer needed to increase the soil test to the target level over time.

2. Once in the target range, the soil test level is maintained by applying the amount removed by the crop.

3. Above the target level, no fertilizer is applied, allowing soil level to draw down to the target range.

Suggested target soil tests levels are 15 ppm P and 125 ppm K. Within ranges (12 - 18 ppm P, 100 - 150 ppm K) the recommended fertilizer rate for maintenance would be the same as crop removal. For suggested crop removal rates, refer to Table 9-14, Publication 811, Agronomy Guide <http://www.omafra.gov.on.ca/english/crops/pub811/9manure.htm#table9-14>

Above the target soil test ranges, no fertilizer would be applied until the levels are drawn-down into the ranges. Below the target soil test ranges, fertilizer amounts would be made by adding the removal rate amounts and an amount that will build-up the soil test level over time to the target level.

Although the required build-up and draw-down amounts will vary from soil type to soil type, it is generally assumed for these calculations that to move a soil test (up or down) by 1 ppm, it is equivalent to:

- 35 lb/acre P_2O_5
- 20 lbs/acre K_2O .

The target and maintain approach is more suitable for owned land and long term leases. It provides long term returns from the investment in building soil test nutrient values into the optimum range. It is associated with some risk of over-fertilization. Regular soil testing is required to verify that crop removal and soil test response estimates are reasonably accurate. The length of the build-up time (eg. 1 - 8 years) will determine how the cost will be amortized. Also, this approach provides some financial flexibility by:

- deferring fertilizer purchases to when cost is lower relative to crop revenue
- more application during years with crops more responsive to freshly applied fertilizers or when efficient fertilizer application is more feasible (such as use of equipment capable of sub-surface placement).

Example Calculations Using the Build-up Approach

Assume a soil test of 10 ppm P and 90 ppm K.

Target soil test

- 15 ppm P
- 125 ppm K

Build-up amounts:

- Assuming a 5 year build-up period
- Crop removal rates (maintenance) of 40 bu/ac soybeans
- 40 bu/ac X 0.84 lb P_2O_5 /bu = **34 lb/ac P_2O_5**
- 40 bu/ac X 1.4 lb K_2O /bu = **56 lb/ac K_2O**

Desired change in soil test (ppm)		Total nutrients to build-up to target (lb/ac)	Annual nutrient rate for build over 5 yr (lb/ac/yr)
	[target – actual]	[soil test ppm change X nutrient addition per change in ppm]	[total nutrient ÷ # years]
P	15 – 10 = 5 ppm	5 ppm X 35 lb P_2O_5 /ppm = 175 P_2O_5	175 lb P_2O_5 /ac ÷ 5 yr = 35 P_2O_5
K	125 – 90 ppm = 35 ppm	35 ppm X 20 lb K_2O /ppm = 700 K_2O	700 lb K_2O /ac ÷ 5 yr = 140 K_2O

Fertilizer Application Rates (during the soybean year)

- total of maintenance + build-up amounts
- P_2O_5 34 lb/ac + 35 lb/ac = **69 lb/ac**
- K_2O 56 lb/ac + 140 lb/ac = **196 lb/ac**

Can I Do Anything To Get Rid of Vetch Before Seeding Soybeans?

Mike Cowbrough, Weed Specialist, OMAFRA

Tufted vetch (*Vicia cracca*) is a weedy perennial legume that is difficult to manage in cropping systems that use reduced tillage, and particularly when annual legume crops are grown, such as soybeans.

Tufted vetch also exhibits high tolerance to many herbicides, most notably glyphosate. A rate response study was conducted by the University of Guelph over a decade ago and it took 3 times of the normal rate of glyphosate to provide over 80% visual control. Observations made by growers and agronomists are consistent with the public research. Glyphosate applied at rates typically used for pre-plant burndown applications in soybean do not control tufted vetch. (Table 1)

Table 1. Visual control of tufted vetch when applied with different rates of glyphosate

Herbicide and Rate	Visual Control (%)
Glyphosate (540 g/L) at 0.67 L/ac	57
Glyphosate (540 g/L) at 1.34 L/ac	72
Glyphosate (540 g/L) at 2 L/ac	85
Glyphosate (540 g/L) at 2.68 L/ac	98

If tufted vetch is not adequately controlled before planting, there aren't any effective herbicides to manage it once the soybeans have been planted. A summary of the most effective herbicide programs used in non-GMO soybeans over three years is shown in Table 2.

Table 2. Visual control of tufted vetch after applications of herbicide programs used in non-GMO soybeans.

Treatment (application timing)	Visual Control (%)
Boundary (PRE) followed by Reflex + Pinnacle + Non-Ionic Surfactant (POST)	74
Broadstrike RC + Boundary (PRE)	67
Dual II Magnum + Sencor + Lorox (PRE)	62
Pursuit + Valtera (PRE)	59
Conquest + Valtera (PRE)	52

Cause for optimism in 2014 research trials?

A number of pre-plant burndown treatments that targeted some perennial weeds, including tufted vetch, were evaluated in 2014. At 2-4 weeks after application there were a couple of very impressive treatments, specifically when either flumioxazin (found in Valtera, Step-Up, Fierce and Guardian Plus) or saflufenacil (found in Eragon, Integrity and Optill) were mixed with glyphosate and the adjuvant, Merge. Although these treatments provided impressive burn of any emerged vetch at 4 weeks after application, the vetch did grow back at 8 weeks after application. However, there was an unexpected silver lining in this trial. The addition of 2,4-D ester 700 in burndown treatments, although unimpressive at first, provided better control of vetch than any other treatment at 8 weeks after application. Bottom line - 2,4-D ester 700 applied pre-plant in soybean looks like a promising tool for the control of vetch in soybeans provided the vetch has emerged at the time of application. More trial work will be needed to verify the consistency of these results, but if you struggle with this species on your farm this might be a treatment worth experimenting with.



Figure 1 - Vetch pressure in a plot where the burndown treatment was ineffective at controlling vetch.



Figure 2 - Vetch control at 8 weeks after a pre-plant application of glyphosate + 2,4-D Ester 700. Glyphosate was applied prior to soybean flowering to remove any late emerging weeds.



Figure 3 - A look at the level of vetch control under the crop canopy when 2,4-D ester was used in the pre-plant burndown.

An Important Point

I'm choosing to show you the results of one trial with optimistic results so far. I'm doing so because this is a species that more growers struggle with and there aren't currently many options. It is important to keep in mind that for a weed to be listed as controlled on a herbicide label, a minimum of 10 replicated trials conducted over 2 growing seasons must be provided. This provides a level of assurance that the herbicide will perform on the labeled species.



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Sélectionner la meilleure génétique du blé?

Peter Johnson, spécialiste de la culture des céréales, MAAARO

Les résultats des essais de variétés de blé parus sur www.gocereals.ca (en anglais seulement), représentent la meilleure source d'information à ce sujet. Porter une attention particulière au chapitre intitulé « Managed Performance Trials », tableaux 1a, 2a, etc. Ces essais démontrent l'effet des fongicides sur les variétés de blé. Il est donc possible de choisir le matériel génétique qui convient le mieux en fonction du type de lutte antiparasitaire que vous utilisez. Mais il y a toujours d'autres questions qui restent en suspens.

Quelle variété de blé d'automne possède le meilleur taux de survie?

Cela n'a aucune importance. En 30 ans de carrière, l'hiver 2014 a été le premier où les risques de destruction hivernale ont été élevés. La probabilité que ces conditions se répètent en 2015 est très mince.

Les données sur la variété 25R46 sont manquantes dans la région 2.

Les semences n'ont pas été offertes à temps pour les semis dans les sites de la région 2. Les semences doivent être disponibles au moment des semis. On ne doit pas reporter les semis sous prétexte qu'on attend des semences.

Quelle variété donne le plus de paille?

Les données sur les rendements en paille sont très difficiles à obtenir. La région 5 est la seule qui recueille des données sur les rendements en paille. Ce ne sont pas toutes les variétés qui sont cultivées dans cette région.

Il y a TELLEMENT d'information!

Essayez d'utiliser l'onglet « Head to Head » sur le site Web. Vous pouvez sélectionner vos trois ou quatre variétés les plus importantes et observer leur rendement selon les années et les régions.

Est-ce que j'utilise la région 1, la région 2 ou les régions 1/2 ensemble?

Lorsqu'on ventile les données, seule la région 3 est vraiment différente et, en 2014, elle ne l'était même pas. L'utilisation des données combinées des régions 1/2 offre le meilleur portrait de la stabilité des variétés.

Les données de 2014 indiquent-elles de grandes différences avec les données à long terme ?

Les données à long terme offrent TOUJOURS la meilleure information permettant de choisir une variété gagnante. Utilisez le plus de données possibles pour toute variété.

À cette époque où l'on est surchargé d'information, l'utilisation de ce genre de données représente la meilleure piste pour cultiver le blé qui convient le mieux ou pour évaluer si les primes offertes sur tout type de blé sont suffisamment élevées pour que sa culture en vaille la peine. Prenez le temps de consulter rapidement le site Web. Cela pourrait vous permettre d'avoir de quoi vous vanter auprès de vos confrères en juillet prochain!

Ministère de l'Agriculture et
de l'Alimentation

Ministère des Affaires rurales



Autres possibilités pour les pâturages

Jack Kyle, spécialiste des animaux de pâturage, MAAARO

Les stocks de vaches de boucherie en Ontario, au Canada et dans le monde sont actuellement très à la baisse et rien ne semble annoncer une remontée pour le moment. Cette situation a entraîné des prix records pour les veaux d'embouche et les bouvillons. Les veaux qui se vendent à 3,00 \$/lb apportent un revenu brut de 1200 à 1500 \$ par vache. Il s'agit du double de la moyenne des dernières années.

Avoir des pâturages se résume en fait à cultiver de l'herbe. Plus on produit de plantes fourragères sur une parcelle de terrain, plus on peut avoir de bétail nourri par cette superficie.

La gestion d'un pâturage consiste d'une certaine manière à laisser suffisamment reposer les parcelles pour leur donner le temps de se régénérer. Si les animaux ont accès à toute la superficie en pâturage, ils choisissent les plantes les plus goûteuses au détriment de celles qui sont moins appétissantes et plus matures. Ainsi, les plantes qui ont meilleur goût sont trop broutées et celles dont le goût est moins agréable ne le sont pas assez. Le goût des plantes fourragères est lié à leur maturité et à leur espèce.

Morcellement et rotation des pâturages

La rotation des pâturages est déterminante pour obtenir une consommation uniforme des plantes fourragères dans les parcelles. Les animaux ne devraient pas rester dans une parcelle ou un enclos pendant plus de 5 jours. Pour une production optimale des pâturages, le bétail devrait brouter une parcelle durant 1 ou 2 jours et cette dernière devrait être laissée libre de 25 à 45 jours pour permettre sa régénération et la repousse.

Au cours de mes nombreuses années de carrière en tant que spécialiste provincial des animaux de pâturage, j'ai observé d'importantes améliorations dans la productivité des pâturages, uniquement en subdivisant ces derniers. Dans la plupart des cas, on peut facilement hausser la productivité de 25 à 35 %. Dans les cas extrêmes, on a même déjà constaté une hausse de 500 %.

Étant donné que les champs utilisés pour les pâturages sont déjà clôturés, leur morcellement pour augmenter la productivité est très simple à réaliser. On peut installer un fil électrique (2 au plus) avec des piquets mobiles à l'intérieur de la parcelle pour la subdiviser. Les animaux appren-

nent rapidement que l'herbe fraîche qui est mise à leur disposition lorsqu'on les déplace est bien meilleure que celle qui est piétinée et souillée par le fumier et l'urine. Voir la vidéo sur la rotation des pâturages en Ontario : <http://www.youtube.com/watch?v=lvE3syIXd0E> (en anglais seulement).

L'eau doit également être facilement accessible dans toutes les parcelles de pâturage, mais puisque la source d'approvisionnement en eau peut être la même pour plusieurs enclos, cela ne devrait pas être trop compliqué à faire. Il est assez facile d'apporter de l'eau à l'endroit requis en la pompant dans un tuyau de plastique laissé sur le sol.

Cultures de couverture utilisées pour le pâturage

Les cultures de couverture peuvent aussi être utilisées comme pâturage. Ces plantes cultivées pour protéger le sol peuvent en effet avoir double emploi comme plantes fourragères dans un pâturage. En plus de consommer les plantes, le bétail permettra de convertir les éléments nutritifs de ces cultures sous une forme plus assimilable pour la culture annuelle subséquente. Cet apport additionnel de nourriture pour les animaux permet aux pâturages permanents de se renouveler et de donner des plants plus vigoureux à la prochaine saison de pâturage.

Examinez bien vos champs et ceux de voisinage pour voir s'il n'y aurait pas des superficies en cultures qui seraient mieux adaptées aux plantes fourragères vivaces, ou qui en produisent déjà, mais qui pourraient être plus productives. Je pense que vous serez en mesure de trouver des occasions d'accroître la productivité de votre bétail ainsi que celle des pâturages. Vous trouverez diverses possibilités à explorer dans le document intitulé *Rotational Grazing In Extensive Pastures* à <http://bit.ly/M7M1kE> (en anglais seulement).

Il existe plusieurs manières d'augmenter la productivité des pâturages existants et de diversifier les espèces fourragères dans les pâturages. Ces méthodes permettent d'offrir des aliments au bétail à moindre coût et offrent au producteur la possibilité d'améliorer la rentabilité de son entreprise agricole.

Le problème du phosphore!

Bonnie Ball, spécialiste de la fertilité du sol et Ian McDonald, coordonnateur de la recherche appliquée, MAAARO

Tous ceux qui travaillent en agriculture savent que le phosphore (P) est important pour la croissance des plantes et des animaux et en fait l'un des macroéléments essentiels à cette dernière. Le P des plantes fait partie de la structure complexe de l'acide nucléique (ADN, ARN, etc.) qui joue un rôle dans la synthèse des protéines, la division cellulaire et la production de nouveaux tissus. Il fait aussi partie des nombreuses transformations énergétiques complexes qui se produisent dans les plantes. Rappelez-vous l'ATP de vos cours de biologie au secondaire! En effet, la photosynthèse et la croissance des plantes ne peuvent se produire sans des quantités adéquates de P.

La quantité de P (ou de tout élément nutritif) appliquée en agriculture est relativement faible comparativement à la quantité totale de sol. La concentration totale de P dans les cultures se situe habituellement entre 0,1 et 0,5 % de matière sèche. La surutilisation globale de cet élément nous empêche de nous rendre compte de l'exactitude des chiffres. On parle en terme de « ppm » d'éléments nutritifs sans accorder trop d'attention au fait qu'il s'agit d'infimes quantités. Pour illustrer ce fait, rappelons qu'on ajoute normalement de 50 à 100 livres de P₂O₅ à un acre de sol (22 à 44 lb/acre de P réel). Un acre de sol de 15 cm (6 po) de profondeur (la profondeur à laquelle on prélève des échantillons pour les analyses d'éléments nutritifs en laboratoire) contient 2 000 000 de livres de sol. Nous ajoutons donc 0,005 % du poids du sol.

Prolifération d'algues

Ainsi le P appliqué au sol est indispensable à la croissance des plantes et ne représente qu'une très petite quantité par rapport à la quantité totale de sol. Alors c'est quoi le problème? Voilà, c'est que même si le P est très important pour les plantes en petites quantités, il est très actif même à des quantités inférieures avec certaines espèces comme les algues. Lorsque le P est abondant dans une étendue d'eau, les populations d'algues explosent et entraînent souvent une prolifération d'algues toxiques (figure 1).

Continued on page 13

Établir le prix du maïs à ensilage en 2014

Joel Bagg, spécialiste de la culture des fourrages, MAAARO

« Quelle est la valeur du maïs à ensilage cette année? » La croissance du maïs est retardée pour une partie importante de la récolte et pourrait donc être vulnérable au gel. Il est donc possible que les producteurs tentent de sauver des plants qui en raison de dommages par le gel ne peuvent atteindre la pleine maturité procurant un rendement maximal ainsi qu'une humidité ou une qualité optimales. Ils tenteront donc de récolter ou de vendre certains de ces champs à des fins d'ensilage. Pour l'entreposage, les piles d'ensilage et les sacs d'ensilage offrent une certaine souplesse. L'approvisionnement local et la demande ainsi que la négociation entre acheteur et vendeur déterminent ultimement le prix. Il est important de tenir compte de la situation et de calculer ses propres coûts afin d'estimer le prix que l'on considère raisonnable. Ensuite, il reste à négocier du mieux qu'on peut.

Qualité fourragère du maïs à ensilage immature endommagé par le gel

Les acheteurs doivent tenir compte de la valeur nutritive du maïs à ensilage endommagé par le gel. Dans ce type de maïs, la proportion de grain par rapport aux tiges est moindre. Faire effectuer une analyse chimique par voie humide en laboratoire, et recourir à de nouvelles techniques (incluant l'analyse de la teneur en protéine brute, en NDF, de la digestibilité des fibres, des teneurs en amidon, cendres et lipides) en vue d'évaluer avec plus d'exactitude l'énergie digestible du maïs à ensilage.

Du maïs qui n'est pas encore tout à fait parvenu à maturité et qui est endommagé par le gel après le stade de l'apparition de la dent peut faire du bon maïs à ensilage.

Habituellement, ce type de maïs a des teneurs en fibres et en protéines brutes légèrement plus grandes et des teneurs en énergie un peu plus faibles que le maïs à ensilage normal. Il se peut que la qualité ne soit pas optimale pour les vaches laitières très productives et il est parfois conseillé d'envisager de récolter les meilleurs champs de maïs pour l'ensilage. Du maïs très peu avancé, au stade laiteux ou au début du stade pâteux, donnera un ensilage renfermant une plus faible proportion de grains et des teneurs en fibres plus élevées. Ce type d'ensilage peut être servi aux animaux ayant des besoins nutritifs faibles à modérés, comme les vaches de boucherie et les veaux semi-finis. Il est

plus facile d'ajouter des grains dans les rations de bovins d'engraissement pour en accroître la valeur énergétique.

Récolte du maïs à ensilage endommagé par le gel

Il est indispensable de récolter le maïs à une teneur en eau adéquate pour obtenir du maïs à ensilage de qualité. Il faut absolument éviter de récolter le maïs à ensilage endommagé par le gel lorsqu'il est trop humide. À une teneur en eau supérieure à 70 %, des fermentations causées par *Clostridia* provoquent la formation d'acide butyrique, ce qui entraîne d'importantes pertes dues à la fermentation, une réduction de la consommation, de l'acé-tonémie et réduit le rendement des vaches. Consulter le document « Frost Damaged Corn Silage » <http://fieldcropnews.com/?p=8004> (en anglais seulement) et la fiche technique 13-052 du MAAARO intitulée « Récolte du maïs à ensilage à la bonne teneur en eau » <http://www.omafr.gov.on.ca/french/crops/facts/13-052.htm>.

Exemples de calculs

L'une des méthodes pour déterminer le prix de l'ensilage de maïs consiste à en faire la comparaison avec la valeur du maïs-grain pour déterminer un prix minimum. Comme vendeur, vous n'êtes pas prêt à céder votre maïs sous forme d'ensilage à un prix inférieur à celui que vous en retireriez si vous en vendiez le grain. Les acheteurs qui donnent de l'ensilage de maïs à leur bétail peuvent être prêts à déboursier plus pour s'en procurer, en fonction de la disponibilité des autres types de fourrage. Comme élément nutritif, l'ensilage de maïs peut valoir davantage dans la ration que la valeur qui lui est accordée sur le marché.

Ces valeurs calculées de l'ensilage de maïs ne correspondent pas forcément au coût de production ni aux valeurs nutritionnelles, mais elles reflètent la valeur sur le marché des autres options de récolte (c.-à-d. le maïs récolté comme maïs-grain). Des différences marquées dans le rendement et la qualité peuvent être constatées d'un champ à l'autre. Un rendement plus élevé réduit les coûts de récolte à la tonne. Dans les champs de maïs à haut rendement, la proportion du grain par rapport aux tiges est plus élevée, ce qui augmente généralement le taux d'énergie digestible. En règle générale, un volume de 7,7 boisseaux par tonne métrique (7 boisseaux/t) d'ensilage à

65 % d'humidité représente une bonne récolte. Par exemple, au tableau 1, Exemples de calculs du prix du maïs à ensilage, le champ 1 offre un bon rendement, alors que le champ 2 offre un rendement qui en représente environ les deux tiers.

Pour obtenir la valeur de la récolte sur pied, il faut déduire de la valeur en maïs-grain escomptée les coûts à forfait de moissonnage, de séchage et de camionnage. La valeur des éléments nutritifs (P et K) du sol supplémentaires prélevés dans la partie de la plante autre que le grain (tige) est importante, soit environ 3,50 \$ par tonne d'ensilage récoltée (à un taux d'humidité de 65 %). Le calcul du coût par lb ou par tonne de la matière organique peut aider à déterminer la fourchette de prix que le marché est prêt à payer pour du fourrage. Si le vendeur doit remplir le silo chez l'acheteur, les frais de mise en silo doivent être ajoutés. Les coûts de stockage, les pertes à la fermentation ou au gaspillage ne sont pas inclus. Voir :

- Guide des travaux agricoles à forfait et de la location à court terme de matériel <http://www.omafr.gov.on.ca/french/busdev/facts/13-040.pdf>
- 2014 Budgets des grandes cultures <http://www.omafr.gov.on.ca/french/busdev/facts/pub60.htm>.

La teneur en eau influe grandement sur le prix; il est donc important de prélever des échantillons pour obtenir des chiffres précis à cet égard. Personne ne veut payer pour de l'eau en croyant acheter des fourrages. Une erreur de seulement 5 % dans la teneur en eau (c.-à-d. évaluer le pourcentage en eau à 65 % alors que c'est en réalité 70 %) correspond à presque 4 \$ la tonne.

Autres points à examiner

Le prix dépendra de l'offre et de la demande d'ensilage de maïs et des autres fourrages dans la région. Il faut aussi tenir compte des capacités disponibles pour entreposer l'ensilage et des paramètres économiques de l'alimentation animale. Les vendeurs qui ont une assurance récolte devraient s'adresser à Agricorp (1 888 247-4999) avant de récolter, pour déterminer dans quelle mesure le fait de vendre leur maïs sous forme d'ensilage pourrait influencer sur une demande d'indemnité. Il est important d'effectuer des estimations correctes des rendements et de la qualité, qui tiennent compte des poids et du pourcentage d'humidité réels. Le retrait de la matière organique des tiges doit aussi être pris en compte.

Tableau 1 - Exemples de calculs pour établir le prix de l'ensilage de maïs

	Exemple 1 « maïs normal »	Exemple 2 « maïs endommagé par le gel »
Hypothèses		
Rendement en grain estimé tonnes / acre boisseaux / acre	4,190 165	3,175 125
boisseaux de grain (15,5% d'humidité) par tonne d'ensilage (65 % d'humidité)	7,7	6,4
rendement en ensilage de maïs (65 % d'humidité) tonne / acre	21,43	19,53
prix du grain (livraison en automne, locale) grade 2 grade 5	155,50 \$/tonne (3,95 \$/boisseau)	143,00 \$ (3,63 \$/boisseau)
Calculs		
valeur brute du grain /acre (rendement en grain X prix)	651,54	454,03
- séchage 27 % d'humidité @ 25,60 \$ / tonne 30 % d'humidité @ 31,20 \$ / tonne	-100,64	-97,50
- moissonnage-battage	-40,00	-40,00
- camionnage (@ 9,00 \$ / tonne)	-37,71	-28,58
= valeur brute du grain / acre moins les coûts de récolte du grain	473,19 287,95	
+ extra P et K prélevés dans les parties autres que le grain (~3,50 \$/tonne de maïs à ensilage @ 65 % d'humidité)	+75,01	+68,36
Valeur sur pied		
à l'acre	548,20	356,31
par tonne d'ensilage (65 % d'humidi-té)	25,58	18,24
\$ / tonne de matière sèche	73,09	52,13
¢ / lb de matière sèche	3,3	2,4
+ mise en silo 240 \$/heure, 2,5 acres/ heure 240 \$/heure, 3,0 acres/heure	+96,00	+80,00
Valeur en silo		
à l'acre	644,20	436,31
par tonne d'ensilage (65 % d'humidité) (avant les pertes en silo, la fermentation et les coûts d'entreposage)	30,06	22,34

Le problème du phosphore

Continued from page 10



Figure 1 - Des proliférations d'algues sont visibles dans cette vue par satellite du Lac Érié.

L'analyse de sol : indispensable à la gestion du P

Une perte de P des champs vers les eaux de surface d'uniquement 1 lb/acre (2,3 lb de P₂O₅) peut perturber l'écosystème aquatique. Les proliférations d'algues font partie de la réalité. L'agriculture constitue la plus importante source diffuse de P entraînant ces proliférations. Même si on dit que les ventes de phosphore sont stagnantes, que les analyses de sol démontrent des teneurs inférieures en P et que le nombre de têtes de bétail diminue, on a observé une hausse de la croissance des algues dans les lacs Simcoe et Érié ainsi que dans le golfe du Mexique. Bien que les teneurs en P dans le sol diminuent constamment de manière générale, il existe encore un nombre important de champs riches en P où l'on continue d'appliquer plus d'engrais phosphaté que nécessaire. La seule manière de vérifier cette situation avec exactitude et de prendre des décisions judicieuses quant aux doses à appliquer est de faire analyser le sol. L'analyse de sol est une composante essentielle de toute gestion des cultures.

Pratiques culturales contribuant aux pertes de P

Voici un exemple de pratiques culturales qui contribuent aux pertes de P dans les sols : travail du sol intensif, applications automnales d'engrais en pleine surface souvent sans incorporation, grandes superficies favorisant le ruissellement et l'érosion et diminution des superficies consacrées à la culture des plantes fourragères et des céréales. Les fluctuations dans les régimes climatiques, y compris le nombre plus élevé des cycles de gel/dégel, les précipitations moins fréquentes mais plus intenses ainsi que la hausse des températures contribuent aussi à l'augmentation des pertes de sol d'origine agricoles.

Le P s'échappe des terres agricoles par l'une des trois voies suivantes :

1. l'érosion éolienne, où le P est lié aux particules de sol qui se déplacent sous la poussée du vent;
2. le ruissellement, où le P fixé aux particules de sol se déplace avec l'eau;
3. le ruissellement et l'eau de drainage souterrain sous forme de P dissous.

La majorité des pertes de P se produisent hors de la saison de croissance (figure 2). Par conséquent, les pratiques agricoles qui font en sorte que le sol est laissé sans protection durant cette partie de l'année représentent la principale cause des pertes de P.

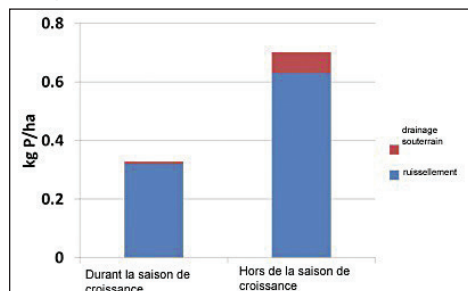


Figure 2 – 70 % du déplacement annuel total de P s'est produit en de-hors de la saison de croissance (Ball Coelho, Murray, Lapen, Topp, Bruin. 2012. *Agricultural Water Management* 104:51).

Quelle est l'importance du P dissous?

Dans certains systèmes, comme ceux dans lesquels les engrais phosphatés ou les fumiers sont épandus en pleine surface, une grande partie du P qui est transporté jusqu'aux eaux de surface est sous une forme dissoute « hautement assimilable ». Toutefois, quand l'engrais ou le fumier est épandu en bandes sous la surface, la contribution du P dissous est moins importante. Une étude réalisée près de London, Ontario, a montré que 18 % du déplacement total du P dans les tuyaux de drainage ainsi que dans les eaux de ruissellement se faisait sous la forme dissoute du P (figure 3).

Les pertes de P sont associées à des pertes de sol

Les producteurs devraient également vérifier les pertes de P, car ces dernières sont également associées à des pertes du sol des champs cultivés. Bien que des pertes de P de 1 lb/acre puissent sembler non significatives, les pertes de sol qui y sont associées ne le sont pas. En présumant que le P total (toutes les formes de P) dans un sol est de 500 ppm (moyenne pour les sols

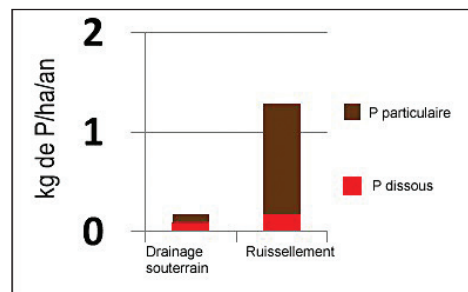


Figure 3— Répartition du P dissous et du P particulaire dans les tuyaux de drainage et les eaux de ruissellement (Ag. *Water Management* 104:51).

en climat tempéré), alors 1 lb/acre de P équivaut à 1 tonne/acre de sol. On perd ainsi d'importantes quantités de sol, ce qui réduit la capacité à long terme de maintenir une production culturale viable. À court terme, les pertes de sol ont aussi des répercussions financières en raison des pertes d'éléments nutritifs (et pas seulement du P) qui doivent être remplacés et en raison aussi des pertes de rendement. Après un certain temps, les pertes de sol vont limiter les possibilités de rendement apportées par les gains de nature génétique. Les sols fragilisés n'auront pas non plus les capacités adéquates en ce qui a trait à la rétention d'eau et aux éléments nutritifs.

Les pratiques suivantes peuvent contribuer à réduire les pertes de sols, à accroître la santé de ces derniers et à obtenir de meilleurs rendements et des profits plus élevés : travail réduit du sol, recours occasionnel à des méthodes d'épandage ciblé ou direct des éléments nutritifs, utilisation de cultures de couverture pour la saison hivernale (vivantes, de préférence, mais également fauchées et laissées sur place), ajout de cultures aux rotations, quantités adéquates de culture de couverture ou de résidus retournés dans le sol, installation de structures de retenue des eaux (voies d'eau gazonnées, bandes tampons, bermes permanentes, etc.). Ces pratiques permettront en outre de réduire les proliférations d'algues dans nos lacs.

Référence

Ball Coelho, B., Murray, R., Lapen, D., Topp, E., Bruin, A. 2012. Phosphorus and sediment loading to surface waters from liquid swine manure application under different drainage and tillage practices, dans *Agricultural Water Management* 104: 51-61.

Centre d'information agricole:

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Courriel : ag.info.omafr@ontario.ca

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West Nipissing East Sudbury Soil & Crop Improvement Association Crop Tour 2014

Continued from page 3

- To limit vegetative growth, they thin out the plants
- It is hard to predict yields due to heavy leaf cover; yield is known after first frost
- Because we are in Northern Ontario, pumpkins can't be left in the fields after the frosts, so all brought into sheds
- Doing less "wholesale" and more retail. Any leftovers brought back to field (compost) OR sold to deer hunters.



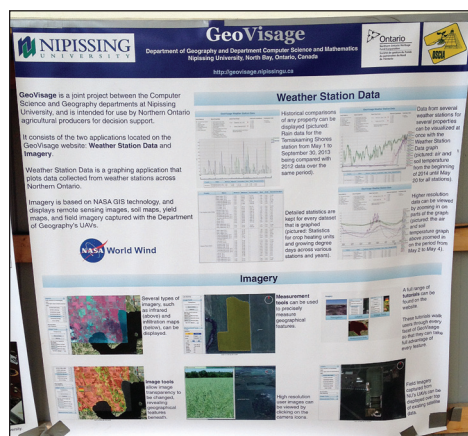
Corn:

- Gun bangers are used to protect seeded corn, and sweet corn cobs (crows, ravens, blackbirds, etc)

Two types of Row covers are used:

- AgriBand Row Covers -Cloth (reuse for 3 years) so covers need to be removed by hand at right time not to hinder the growth process;
- SAMCO (one time use, biodegradable plastic) plastic is rolled out over the seeds as they are being seeded; Acts like a mini greenhouse. Plastic warms up the soil quickly and also traps moisture and heat to create a fast growing environment. Plastic is \$150/acre
- Both row covers work really well, crops germinates and grows at same speed; yet AgriBand row covers require a lot of manual labour (installing, removing, storing,...)
- They stagger the planting dates to be able to harvest corn over a longer period of time.
- Always 2 cobs per plant, but only harvest 1.

- Field is plowed with corn standing.
- There is a difference of 3 weeks difference between corn planted under row covers and corn directly seeded without cover.
- Row covers allow for a more advanced crop and earlier availability of the produce in the season.
- A new 2 row SAMCO machine can cost up to \$20K, used for \$13.5K



Nipissing University was onsite for the Environmental Monitoring Network project. This is a joint project between Dept of Geography and Dept of Computer Science and Mathematics and the Northeastern Ontario Soil and Crop Improvement Association (NEOSCIA). Project sponsored by NOHFC and OSCIA. Currently in the 3rd of 5- year project. Purpose of project is to provide agricultural data to researchers and local farmers to aid in efficient decision making. They are doing so by using probes to collect soil water content from various depths.

Hubert & Maurice Beaudry:

- Visited farm in Cache Bay to look at new grain storage.
- Proceeded to get own bins because he is going into specialty crop (which require crop segregation) (Flax, IP Soy beans, etc)
- If it weren't for specialty crop, would not make financial sense to have own bins. He looked at the storage bins as part of the big picture (after good drainage, good soil management, good fertility program and good harvesting techniques, storage is the next step).


- One is a fan & dryer with stirator bin; allows storage of wetter grain and ability to dry the crop, the stirator mixes the grain throughout the bin and allows heat to move through it faster, bringing the moisture down to proper level. (approx. \$50K) This bin operates on propane. His drying cost work out to be same as the local elevator costs.
- The other bin is cooler bin with auger at bottom and an even flow grain distributor at top. (Approx. \$35K)
- Visited Prograin soybean plots



Steven Roberge:

- Visited C&M seeds Hard Red Spring Wheat plots: all destined for Pool "C"
- 3 varieties: Wilkin, Sable and 9004
- 9004 variety will be on the market for next spring's seeding
- Fertilizer program: the whole field and all the test plots were treated the same:
 - 450 lbs/acre 24.7-14.
 - 2-12.2 S2.2 (Broadcast)
 - 5.2 gallons/acre of 6-24-6 Zinc (in-furrow at seeding)
- Herbicide/Fungicide treatment:
 - 4-6 leaf stage: Refine M with Stratego: flowering: Presaro

The day was very much appreciated by everyone. Crop tours always provide excellent education and networking opportunities especially when local producers can share their own successes.

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— Aristotle

"The greatest pleasure in life is doing what people say you cannot do."

— Walter Bagehot

"You always pass failure on the way to success."

— Mickey Rooney

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West Nipissing Soil & Crop Improvement Association

"Excellence is not a singular act, but a habit. You are what you repeatedly do."

— Shaquille O'Neal

"If I have a thousand ideas and only one turns out to be good, I am satisfied."

— Alfred Nobel

"It is not that I'm afraid to die, I just don't want to be there when it happens."

— Woody Allen

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OSCIA NEWS



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

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Message from the President - Allan Mol



Where has the summer gone? When I wrote the spring report, we were still fighting to get the crops planted. The last seeds were planted a few days into June and now we're hoping for a real nice September so everything will mature and ripen. It seems that this season, the whole province has experienced a lot of rain, cooler evenings, sometimes cold nights and not many hot days. Nothing we can do but drive on!

Over the last few months there has, no doubt, been a great deal of activity out in the countryside. Our members have been invited to many local and regional events such as crop tours and field demonstrations with a great deal more to attend as we look ahead to the fall.

The 6th World Congress on Conservation Agriculture was held in North America for the first time this past June. Winnipeg was the host city and a few of us from OSCIA were among the attendees for presentations, panel discussions, workshops and keynote speakers on conservation agriculture from around the world. Howard Buffett, a farmer and the son of one of the wealthiest people in the world, made a special effort to attend as a luncheon keynote speaker. All attendees were invited to supper at the Kelburn Farm owned by the Richardson Family. Tours to other farms in Manitoba and the U.S. were also offered.

This year's 2014 OSCIA Summer Directors' Meeting took place in Cornwall in August and hosted by our 1st vice president, Alan Kruszel. As true ambassadors, Alan and his wife, Lorraine, put together an excellent supper at their farm consisting of local fare from Eastern Valley region. Our Regional Communications

Coordinators were also invited this year. They joined us on the bus tour, which took us around the region. The Moose Creek Tire Recycling Facility showed us how they convert about 2.5M tires into Animat cow mats that are sold around the world. A day trip to Montreal was an option offered to the directors and past presidents following the summer meeting. Those that took part were treated to stops at MacDonald College, Mount Royal Park, the Notre Dame Basilica and the Bio Dome. We were able to sample some of the good food in Montreal with some world famous smoked meat for lunch, and supper at a great restaurant in Old Montreal.

As we get into the fall season, I'm getting the feeling that this year, as President, has really sped by! Canada's Outdoor Farm Show has already happened (and was a great success) and the International Ploughing Match is approaching in mid-September. This 75th year of OSCIA has been a great time for me to see different parts of this big province and to meet many of our members. Our strength has always been our members. We're a diverse bunch and we can really say that altogether as an organization, we are more than "the sum of our parts!"

Looking forward to the fall harvest!



Allan Mol
President, OSCIA



OSCIA and Social Media

As you may know, OSCIA is made up of over 50 local associations in 11 regions with over 5,000 members across the province. That makes for a great opportunity to connect with our OSCIA community through various social media outlets.

In June, OSCIA revamped their News & Views email alert service to make receiving crop reports, upcoming events, workshops, program notices and other OSCIA-related news more efficient. With the new Canadian Anti-Spam Legislation in effect, OSCIA has opted for an easier way of signing up to receive News & Views for our readers.

If you would like to sign up to receive OSCIA's News & Views, please visit oscia.wildapricot.org. You can opt-out at any time.

Additionally, OSCIA also has a Twitter page where we tweet little tidbits of information for our readers.

You can follow us by visiting www.twitter.com/OntarioSoilCrop.

And finally, OSCIA has a Facebook page (<https://www.facebook.com/pages/Ontario-Soil-and-Crop-Improvement-Association/1402088183337872>) and we would encourage you to LIKE us, or connect with us using your local or regional association Facebook page. Our intent is to strengthen the Association by connecting with our dedicated members and associations.

Connecting with you through our various social media outlets will encourage sharing users' posts and strengthen partnerships.

Cobi Sharpe
Administrative Assistant, OSCIA



Ontario Pesticide Survey Extended to Include 2014 Growing Season

A confidential, anonymous survey asking Ontario field crop, fruit, vegetable, and specialty crop growers to record their crop protection use has been extended to include the 2014 growing season, and farm groups are encouraging their members to participate.

Results from the Ontario Pesticide Survey will be used to demonstrate responsible use and support education efforts regarding future crop protection policy decisions. This includes minor use registrations, the Grower Requested Own Use (GROU) program, and product re-evaluations.

Outcomes also help farm organizations push for new product and minor use registrations. The survey has been conducted every five years in Ontario since 1973.

The 2014 survey template is available in an easy to use online format at www.ontariopesticidesurvey.ca. Farm & Food Care will also accept mail-in, fax or email returns of the survey - contact Bruce Kelly (bruce@farmfoodcare.org) for more details on these options.

Craig Hunter
Expert Advisor, Pesticide, Minor use, Food Safety & On-Farm Issues
Ontario Fruit and Vegetable Growers' Association



Looking Back and Moving Forward - Moving to an Online Membership

OSCIA is looking to gain insight on how we can better improve your membership experience by moving to an online membership management system.

Information will be gathered through an anonymous survey. Aggregated results will be shared with local and regional associations who are interested in gaining insight from their members.

We want to hear from you! The survey will take approximately 10 minutes or less to complete and there are no right or wrong answers. To participate, please follow the link: <https://www.surveymonkey.com/s/S5R6WB9>

Alternatively, you can print and mail the completed survey to OSCIA, 1 Stone Road West, Guelph ON, N1G 4Y2. **Deadline to complete the survey is September 30, 2014.**

By completing the survey you *could be one of three winners*. Each prize will consist of an OSCIA green vest, OSCIA farm gate sign and OSCIA baseball cap.

For more information, contact Cobi Sharpe at cobi.sharpe@ontariosoilcrop.org or 519-826-3152



Your Farm Data at Your Fingertips

How much nutrient is removed from your fields during the span of one crop rotation? You may be surprised! With or without manure or biosolids, there are often more nutrients removed from your field than what is added through manure and/or fertilizer. Are you curious?

The “quick” version of the NMAN3 software field plan is for people that do not need a nutrient management plan, but are interested in knowing what their manure is providing or how their soil test compares to their crop removal, or how much commercial fertilizer is required to supplement applied manure or biosolids. There are many useful features in the tool, including Ontario-specific information (township average crop yields, N-P-K recommendations), instant imperial to metric, and an economic tool and much more.

A step-by-step guide will lead you through the “field” version of the NMAN3 software. It can be used online (or downloaded) <http://apps.omafra.gov.on.ca/NMAN/NMAN3.html>

Christine Brown
Nutrient Management Field Crops Program Lead
OMAFRA



Nominate a Deserving Champion! - Soil Champion Award

To be eligible for the annual Soil Champion Award, an individual must be a resident of Ontario *or* have contributed to soil management in a way that directly influences improved soil health and crop production sustainability in Ontario.

Sustainable soil management practices may be defined as those that:

- Make the most efficient use of nutrients;
- Support systems with no net loss of organic matter and soil aggregate stability;
- Builds the population and diversity of soil organisms;
- Effectively manages surface water to support reduced tillage systems.

How to make a nomination

The nomination form may be downloaded from www.ontariosoilcrop.org/en/resources/sca.htm or requested from OSCIA. Deadline for all nominations and supporting documents is **November 30, 2014**. The winner will be announced at next year’s annual meeting.



Changes at OSCIA Strengthen Link to Research

A new era has been initiated at the Ontario Soil and Crop Improvement Association (OSCIA). Andrew Graham will be taking over as Executive Director, while Harold Rudy will move into a new position as Executive Officer, Research and Business Development. Rudy’s new position is designed to increase collaboration with the research community, starting with the University of Guelph. At the core of

Rudy's position is to develop, maintain and identify new partnerships with closer linkages to establish and leverage research funds for applied, on-farm research within the mandate of OSCIA.

"The Executive Committee of the OSCIA Board has been in discussions for over a year about ways that our Association can better collaborate with the large investment in research. Producers understand and support good science but if it doesn't have practical application on our farms, these efforts may miss the mark or there may be lost opportunities," says Allan Mol, President of OSCIA. "Rudy's position will build on the excellent working relationship OSCIA has had for many years with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) extension staff, as well as a number of researchers at the University of Guelph, where there has been excellent collaboration for on-farm applied research. These new efforts should strengthen the OSCIA/OMAFRA partnership."

"Our goal," says Rudy, "is to delve deeper into the scientific community to not only leverage their resources and expertise, but also to help key scientists leverage resources that may be available to OSCIA, one of which may be access to on-farm collaboration. I am excited about these new challenges, but also very pleased and confident that Andy will be taking on the role of Executive Director. Andy has exceptional administrative qualities and experience so this will be a smooth transition for OSCIA."

"Harold Rudy is a graduate of the Ontario Agricultural College (OAC) and the University of Guelph, and is a true leader in our industry. He is focused on proactive and effective farm-level solutions for soil and crop challenges," shares Dr. Robert Gordon, Dean of the Ontario Agricultural College at the University of Guelph. "I look forward, through Rudy's leadership, to an enhanced relationship between OSCIA, the University and the research that we conduct throughout all of Ontario."

Graham has worked for the Association for more than 23 years, engaged in all phases of project development, delivery and management, with an emphasis over that time on environmental programs. In the new role of Executive Director, he says "the responsibilities have been refocused to accommodate a broader suite of management activities that include day-to-day operations in the Guelph office, and working effectively with the Regional Directors, Executive Board and staff to keep OSCIA moving forward as a pivotal farm organization with clear vision and purpose."

Rudy will continue his role as Secretary Manager with the Ontario Seed Growers' Association and will be working out of offices at both the University of Guelph and at OSCIA's facility at 1 Stone Rd., in Guelph.



Oat and Barley Representation

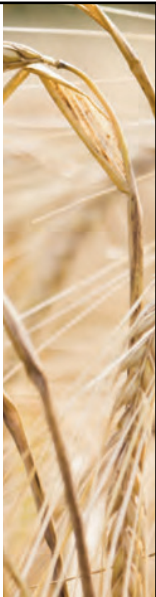
What you need to know if you are a farmer who produces oat and/or barley in Ontario

- You will have the opportunity to vote on a proposal for oat and barley to be represented by Grain Farmers of Ontario.
- The Ontario Farm Products Marketing Commission is expected to conduct a producer expression of opinion vote in November 2014.

How to ensure that you receive a ballot

- In order to vote, you will need to be listed in the database of oat and barley growers. You can be sure that your farm is included by going to www.oatandbarley.ca and clicking on the box in the lower right, "Are You Eligible to Vote?," where you can provide your name and address or you can call Julie Ross at (905) 945-3242 during business hours.

How to be informed

- Go to the website, www.oatandbarley.ca, and read about the proposal there – ask any questions you may have.
 - If you wish to receive a copy of the proposal by first class mail, please call Julie Ross at (905)945-3242 and provide your full mailing address. •
- 

www.oatandbarley.ca

Defining Limits of Food Production

Continued from page 1

at Moose Factory in late August was attended by a number of local promoters of community "Food Sovereignty", a representative from the Ministry of Northern Development & Mines, as well as a horticultural technician from New Liskeard and myself, as a rep from NEOSCIA. The Eco Lodge had participated in the regional NEOSCIA Haskap berry trial, and this trip was ostensibly directed toward evaluating the hardiness of the plant. (Excellent survival with fruit in mid summer.)

However, the location is a microclimate, being adjacent to the Moose river, and quite comparable in native vegetation to the southern portion of the Cochrane District. Island soils appear to be suitable for garden production, based on the solid stands of potatoes seen in back yards. Those attending could visualize the new opportunity that awaits, when shown production from modern NLARS horticultural research facilities in Temiskaming. Taste testing of the new "Day Neutral strawberries" (that could be grown here) was a hit!

Unfortunately, the skills required for successful greenhouse/garden production are lacking. Older members of the community are not fond of their memories of enforced child labor in the gardens of the residential school. Food production skills have not been handed down to youth, for at least two generations. However, Laurentian University of Sudbury has sent a team to the region to evaluate the potential for greenhouse production. University of Guelph, known for greenhouse production development (even a greenhouse for Mars) has so far not shown an interest, but has the potential to dedicate a portion of its new "Better Planet" project to this region, deprived as it is of fresh, healthy food.

The people involved in this meeting fully intend to go to Sudbury in late October, to attend the NOFIA agricultural conference. They intend to put northern "food sovereignty" forward as an issue not only for themselves, but for the dozens of isolated communities across northern Ontario, beyond the highway system. It is an issue large enough for all universities, government agencies, and NGO's to become involved with as a co-operative team.

Read more about this NOFIA promotion on page 2 of this newsletter!

Solar Energy, Simplified!

BY ANGELA HUNTER, Green Timiskaming board member



Green Timsikaming, a community owned renewable energy co-operative, has a way you can benefit from producing solar electricity without the high cost of installing your own panels. Over the next two years the Earlton Arena roof top and 9 sections of unused farm land in the Timiskaming Region will become solar gardens. These gardens will harvest the sun's rays, making local renewable energy for Northern communities. You are invited to share the revenues of these gardens through investing in Community Bonds. Earlton and local farmers are benefiting

from leasing their unused land to the co-operative. Everyone can benefit from the attractive interest rates paid to local investors. Join the co-operative and invest in community bonds. Much like being part of a traditional farm co-operative, you will get a fair return on your investment, you'll be supporting Northern farmers, and you'll be helping the North to establish our own supply of renewable energy. We all win by joining together to invest in renewable energy! For more information visit www.greentimiskaming.ca or phone 705-650-2782.

NLCAT Reunion a Huge Success

By Graham Gambles, RCC, NEOSCIA

All the months of planning paid off in mid-August when over 130 former students, staff, and spouses reunited in New Liskeard. People attending came from every corner of Ontario, as well as parts of Quebec. Two days of reminiscing was capped off with an evening of celebration that went into the wee hours of Sunday morning.

New Liskeard College of Agricultural Technology may have had a relatively short run (1966-1994), but the 800 plus graduates have left their mark on the agricultural industry in Ontario. Many are currently running large agricultural enterprises while other have enjoyed leading roles in Agri-business and agricultural research.

Today, NLCAT teaching facilities have been converted to a new role in education, as the Temiskaming campus for College Boreal. The supporting agricultural fields and lands are home to the New Liskeard Agricultural Research Station, where research into horticultural and field crops, as well as beef research, are the primary activities of this institution. Currently, the Northern Ontario Farm Innovation Alliance (NOFIA) is working with the University of Guelph, the Province, and private entities to develop a plan to provide a sustainable facility that will help promote northern agriculture far into the future.

Sheep at Earlton Farm Show Information Session, April 2014

By C. Keith, NLARS Horticultural Technician

Randy Niels from Bayer presented information on the prescription product Baycox for lambs at risk of infection by Coccidiosis. He said that it is a rare event to have a product approved for a minor species since the cost to do so is sizable. However, the Ontario Veterinary College, the Ontario sheep Marketing agency, veterinarians, and producers collaborated to make this happen. (Often, registration of a product occurs 6 to 7 years earlier in the USA than in Canada. Some products are never registered in Canada.)

The Protozoa, a single cell parasite infects at least 60 % of flocks, resulting in poor growth of lambs between 4 weeks and 5 months. Lambs ingest the oocysts of the parasite resulting in a 1 to 10,000 fold increase in their numbers in the faeces. As the oocyst burrow into the lining of the intestine, the parasite numbers swell from 1 to 50 million. As the cells of the intestinal lining are destroyed, acute symptoms include bloody diarrhea, prolapsed rectum, dehydration, fever, depression, and death. Chronic symptoms include a big head, soft stool, dirty rear ends, poor weight gain and thin body.

Sanitation is critical in controlling the outbreaks. Pens need to be cleaned and pastures rotated... FREQUENTLY! Access to infected feed sources should be restricted. The oocyst survive from -40C to +30C. Fortunately, the sun's ultraviolet rays eventually kill the oocysts.

Adult sheep are often resistant to the parasite. Between 2 and 8 weeks of age, lambs are most susceptible to the pest. The long term damage to the intestinal lining will affect the animal for its total lifetime. Neils said that putting Baycox in the feed is not a recommended practice since a young lamb that is not totally weaned may not consume sufficient medication if it added to solid food. A single dose oral suspension of 3 to 5 mls is administered through a veterinarian's prescription. The Baycox kills the eggs of the parasite in the intestine of the lamb.

The kill occurs in the intracellular stage of the parasite's life cycle. This can prevent the clinical signs of the infection. Hence there is a 48 day withdrawal time before lambs may be brought to market. This product may not be used for animals used for milk production.



Of the 11 species of oocysts, the two species that this drug targets both have a 15 day life cycle. Treatment should ideally occur 7 days before the time when you generally see symptoms. (Symptoms are often noticed between day 21 and day 28). Choose a time between day 14 and day 21 to administer a single dose of 1ml Baycox per 2.5 kg body weight of animal. This assures that there is some exposure of the animal to the parasite in order to initiate development of the lamb's natural immunity. It is assuring to note that testing was done on 3 X the dosage over 2 consecutive days without any negative effects. The product has a 36 month shelf life. If the flock is on pasture you may have a narrow, 25 day window to dose 90% of the flock. Consider waiting until the youngest lamb is 2 weeks old. If you medicate 90% of the herd, it was suggested that the stragglers would be partially protected by the reduction in the population of the parasite.

Although product pricing was never discussed, members of the crowd attending this event suggested that it was a \$2 cost per lamb at 3 weeks of age.

"Note that this and any medication should only be used according to label directions, and after discussions with your veterinarian."



Tax Credit for Farmers

The Local Food Act, 2013, introduced a new non-refundable income tax credit for farmers who donate agricultural products to community food programs, including food banks. The credit is worth 25 per cent of the fair market value of the agricultural products donated and will be able to be claimed for donations made beginning January 1, 2014.

Healthy Local Food Access

Electronic social communications is being used for just about everything, and now an APP is being developed to track down a healthy meal! Margaret Milczarek and "The SmartAPP Team" at Western University is trying to increase access to healthy local food (in S.W. Ontario) through the use of an APP and a website. Go to <www.smartappetite.ca> for information on the project. The aim is to support local food economies to benefit farmers, retailers, restaurants, and the public. Could this work in the north? Email Marg at <smartappetite@uwo.ca>

Happy Thanksgiving





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"Education is the most powerful weapon
which you can use to change the world."

— Nelson Mandela

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but what they grow up to be."

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you don't see the whole staircase."

— Martin Luther King, JR.

"A bank is a place that will lend you money
if you can prove that you don't need it."

— Bob Hope

"My idea of an agreeable person is
a person who agrees with me."

— Benjamin Disraeli

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Breaking Ground (in Northeastern Ontario)

Sustainable New Agricultural Products (SNAP) *DEADLINE EXTENDED: October 31, 2014*



In the spring, RAIN and its partners announced a new funding initiative for local food and agricultural producers in Northern Ontario. Launched in March, the Sustainable New Agri-Food Products (SNAP) Program provides small grants to businesses to purchase equipment to create a new product for their business. The program has already approved several applications from across northern Ontario, including funding a commercial stove for Leisure Farms in Sturgeon Falls.

The farm, which produces fresh strawberries, raspberries, corn and pumpkins, has been able to extend their season and add canned vegetables and preserves to their products offered with funding through the SNAP Program for a commercial stove.

"The commercial stove has allowed us to significantly increase sales by adding canned goods, jams and pies, and allowed us to access new markets that we were not able to sell into previously," explained Diane Deschatlets, owner of Leisure Farms.

The SNAP Program provides farmers or agri-food businesses up to \$5,000 toward the purchase of equipment to create new agriculture or food products. The \$290,000 in funding for the SNAP Program, provided by the Northern Ontario Development Program through FedNor and Industry Canada, is administered by a group of organizations from across the north. The Rural Agri-Innovation Network in Sault Ste. Marie, Eat Local Sudbury Cooperative in Sudbury, Northeast Community Network (NeCN) in Kapuskasing, and Clover Valley Farmers' Market in Fort Frances are regionally administering the program, fielding applications and encouraging local food and agricultural producers to apply for funding.

The SNAP Program will be accepting applications until October 31, 2014.

For full program details, including eligibility, deadlines, and application forms, please call 705-942-7927 Ext. 3024 or visit: www.rainalgoma.ca/SNAP

Sault and Area Food Summit November 21st and 22nd in Sault Ste. Marie



Building a Sustainable Food System

The first Food Summit for Sault Ste. Marie and Algoma District will kick-off on the evening of Friday, November 21st with a harvest dinner sourced from farms in Algoma. The dinner will be a fundraiser for the Soup Kitchen Community Centre's Good Food Box, that will be located at and catered by The Grand Gardens in downtown Sault Ste. Marie. This ticketed event will be an excellent networking opportunity for anyone interested in improving Sault Ste. Marie and Algoma District's food system, and kick off the two day Food Summit event.

On Saturday, November 22nd, the Food Summit continues with full-day panel and roundtable discussions on food production, distribution and access. Speakers from across the north will share their community experiences, lending to how Sault Ste. Marie and Algoma District can move forward at addressing barriers and leveraging opportunities to create a sustainable food system. For more information or tickets, please contact David Thompson, RAIN Research Project Coordinator, at dthompson@ssmic.com.



RAIN Regional Infrastructure Program

On April 22, 2014 the Northern Ontario Heritage Fund Corporation (NOHFC) and the Province of Ontario announced \$989,000 for RAIN to help fund a regional

tile drainage project for Algoma District agricultural producers in 2014-2015. The NOHFC program will subsidize 50% (to maximum of \$500 per acre) of the costs per acre associated with drainage installation.

Fall 2014 Update As of September 2014, Acton Contracting has completed tile installation on approximately 450 acres of the Algoma consortia, and is continuing to tile in Algoma District. Due to a late start and poor weather conditions, RAIN anticipates that 60-70% of properties will receive tile drainage this year, leaving about 30% to be completed in the Spring of 2015.

To keep the installation process moving smoothly, we kindly request that producers:

- Do not plant crops or till designated field areas that are scheduled to be tiled;
- Ensure that outlets are suitable for tile installation;
- Ensure crops are harvested before the scheduled tiling date;
- Ensure proposed land to be tiled is properly cleared.

In the fall of 2014 RAIN organized a consortia of producers interested in tiling or land clearing from Manitoulin Island, and has submitted an application to NOHFC for the 2015-2016 season. RAIN is currently organizing a second consortia of producers from Algoma District interested in tiling and land clearing for the 2015-2016 season. Interested individuals should send an expression of interest to Janette Wallace, Infrastructure Development Coordinator, at jwallace@ssmic.com or by contacting 705.942.7927 Ext. 3135.



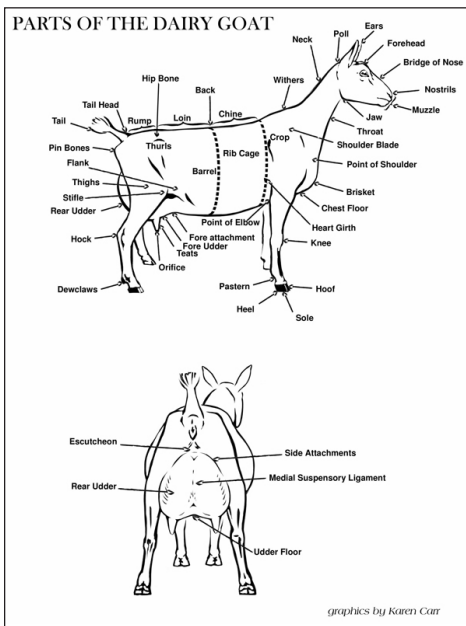
The Algoma Rural Agri-Innovation Network (RAIN) is a project of the Sault Ste. Marie Innovation Centre (SSMIC) and NORDIK Institute, with collaboration and support from local agriculture associations, producers, businesses, municipalities, and funding organizations. For more information on RAIN projects, please contact: info@rainalgoma.ca or visit www.rainalgoma.ca

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Goat Milk Back on the Table?

By Graham Gambles, RCC, NEOSCIA



A mid-July Temiskaming meeting hosted by MP Jay Aspin encouraged regional farmers to once again look at the potential for goat farming in the north. Past forays into this form of agriculture have had middling results, but upcoming international trade agreements may present opportunities not available in the past. The lead speaker on this issue was Barry Devolin, a fellow Conservative MP for the Haliburton area, just south of the NEOSCIA region. (Devolin also spoke to farmers in the Powassan area.)

Devolin was a member of the "Canada-Korea Interparliamentary Friendship Group", and was part of the Canadian delegation to South Korea when a new free trade agreement was signed. He was taken by surprise when the Korean delegates that he met primarily wanted to talk about trade in "Goat Milk Powder". Apparently, about 7% of the South Korean population is intolerant to the lactose in regular cow's milk, and the nation is looking for alternative supplies of this essential food source. Cheese, yogurt, powder, and especially infant formula would be the probable primary products.

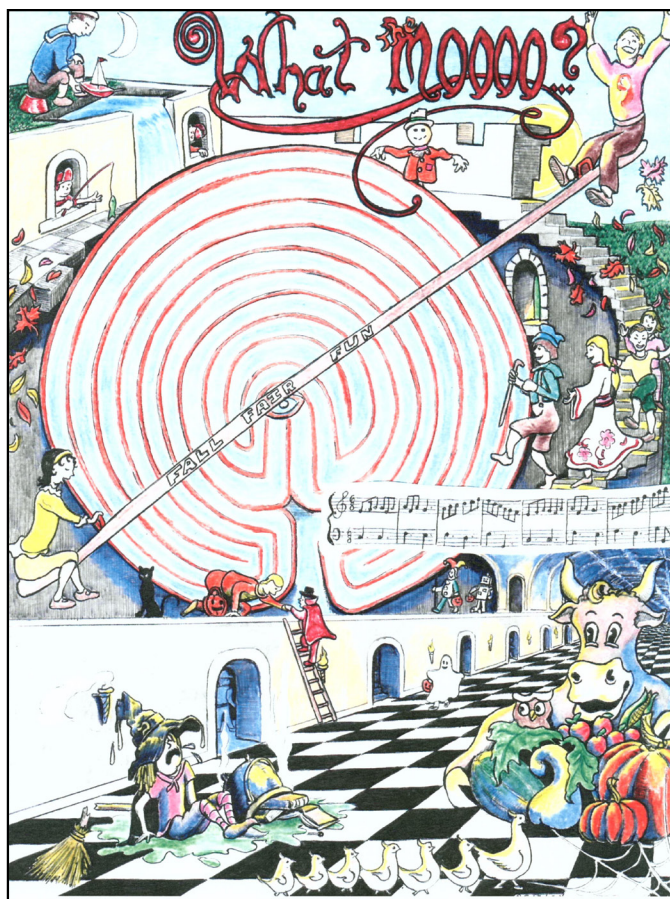
Not being a farmer himself, Devolin sought advice from contacts in the goat industry around Peterborough. It was quickly calculated that the potential Korean demand could call for an expansion of the Canadian

goat milk industry by as many as 100 farms. This demand could not be met by the land available in his home region, but his Ag contacts pointed out that north-eastern Ontario had suitable available land that would complement local production. As dairy goat farming is not subject to a quota system, Devolin believes that it may be an ideal starting point for a new generation of farmers, as well as older farmers who require an occupation with less physical effort than cattle management.

He ball-parked start-up costs for a viable dairy goat operation to be in the half-million dollar range. It was noted that private groups would have to research this project and develop a management model, as the federal Conservative government would want no more than a background role. His advisory people suggested that info developed from cattle genetic programs could be applied to the milk goat industry, as there are some production problems in the management of milk goats. Apparently, they need a radical expansion in yield per animal in order to be economical.

It was also suggested that the fledgling industry would need a private marketing specialist to help take advantage of developing opportunities. All of this activity would be a "reaction to the market", made available only when the free trade deal develops a timetable for the enactment of specific parts of the agreement. However, now is the time to plan for the upcoming changes in international trade.

Jay Aspin later commented that this would be an excellent research project for NOFIA to undertake at one of the northern Ag research stations.



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