



June 2007
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 Publication #40044132

**THAMES VALLEY REGIONAL SOIL & CROP
 IMPROVEMENT ASSOCIATION**

Oxford

Middlesex

Elgin

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JUNE 2007

21 - Ontario Pork Congress Weekend Warrior BBQ Competition, Stratford Fairgrounds Coliseum. To register or for more details contact Deb Campbell, 519-235-1609.

26 Soil Management Workshop London Area, 9 am - 3:45
 See insert for details.

26 Oxford Summer Meeting see page 2

AUGUST

6 - 8, 2007 International Farm Succession Conference, Ottawa, Ontario. www.farmcentre.com

SEPTEMBER

11 - 13 Canada's Outdoor Farm Show, Woodstock
<http://www.outdoorfarmshow.com/enter.html>

18 - 22 International Plowing Match and Country Festival, Leeds-Grenville County visit <http://www.ipm2007.ca/>

NOVEMBER

2 - 11 - Royal Agricultural Winter Fair. Complete details available by clicking on <http://www.royalfair.org/>

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Pioneer Hibred

The Clean Water Project

Ontario Soil & Crop Improvement Association

OMAFRA Resource Staff - Woodstock

Your local Soil & Crop Association

OMAFRA Field Staff

OXFORD SCIA SPRING MEETING

Tues, June 26, 7:30 pm

Veldale Farms Ltd

714617 Middletown Line (Oxford Center)

Featured Speakers:

Glen MacDonald, Agronomist Pioneer Hi-Bred
Forage inoculants and other goodies

Chris Brown, OMAFRA:
Manure on Forages – Oxford Major Project Grant trials

Third Speaker not yet confirmed

New Members welcome ~ Refreshments Provided ~ Bring a friend!!

Presidents Message: Generally the crops are off to a good start again. In Oxford we seem to be able to say that most years. Something to be thankful for. My wish to the farming community is to have a great summer and harvest season. Take time to appreciate some of the finer things in life: growing crops, family, friends, vacations and the meetings that our Soil and Crop Association organizes. If you are doing **any** side by side trials please share your experiences so we can learn from each other. Al Bruce is in charge of the field crop trials and would love to hear from you. May the sun shine on your hay while your neighbours' corn receives a gentle rain. ~ Albert Renkema

Oxford SCIA has purchased signs to promote some of our field trials, watch for them along the roads to monitor progress in our corn plots and other demos and test strips. Thanks to Dekalb Seeds for providing additional materials to post the signs, and to OSCIA for the Project Grant which helped to fund these signs.

OXFORD'S ANNUAL SUMMER TRIP: The PRINCE EDWARD ISLAND trip is now full. We are looking forward to a great time, and I'll take plenty of pictures!

OXFORDRAINFALL

<u>NAME</u>	<u>RR</u>	<u>ADDRESS</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>May-Sept Total'07</u>	<u>To May 2006</u>
David Arthur	4	St Mary's		63						63	106
George Beard	1	Brownsville		30						30	67
Jeff Dibble	2	Drumbo		86							102
Gord Haley	1	Otterville		25						25	97
John Landsell	2	Thamesford								0	103
RM Matheson	3	Embro		89						89	116
Bill Orth	2	Burgessville		45						45	83
Roger Orth	1	Burgessville		35						35	73
Barry Smith		Burgessville	36	34						34	62
Henry Van Dorp	1	Woodstock	132	67						67	88
Ross Wilson	1	Salford	84							0	93
HEAT UNITS											
				393						393	483
				378						378	418
				352						352	395

MIDDLESEX TWILIGHT TOUR

Planning is in the works for the next twilight tour. Tuesday August 21, starting at 4:00 pm, is the date with dinner being served between 5:00 pm and 7:00 pm at cost. The host this year is Greg Walls, 13326 Fourteen Mile Road (Middlesex Centre) near Denfield. (NW corner of Hyde Park Road and Fourteen Mile Road.) The Tour will include various fungicide plots on wheat, corn, and edible beans. There will be tillage demonstrations, as well as solid manure applications. Cover crops will be displayed along with data from plots. Greg Stewart and Peter Johnson will be speaking at different sites throughout the evening as well as the drive shed theatre at the end of the evening. More details will follow in next newsletter. Contact Greg at gregwalls@isp.ca

MIDDLESEX SCIA CROP PROJECTS:

Fusarium product plots – Stratego and Proline
Sulfur on Corn assessment at Strathmere Lodge

THAMES VALLEY NEWS

The Thames Valley regional partner project continues this year. Assessing peas as a cover crop (seeded in 2006) before the 2007 corn crop is the focus of this project, and the collecting of nitrogen values of each plot is now in the works.

We will have a report for you as soon as we can

Watch your mail for the NEW OSCIA membership cards – you'll need these to get your admission discounts at local events.

High-precision testing system compliments plots on Ontario and Québec Farms

Shawn Winter – Research Agronomist - Maizex Seeds Inc.

The Genetic Environment Tape Trial (GETT) system developed by Maizex Seeds takes a new approach to on farm testing. The inspiration behind this system is to increase the understanding of hybrid performance under various crop management practices (environments). Precisely identifying specific practices which highlight the maximum potential of a hybrid allows producers to better position their seed investment.

The system incorporates a robot, modified seed tube, commercial corn planter and single row harvester. GETT is arranged in a similar format to replicated yield trials. It includes a set number of hybrids, check plots and a predetermined plot size. Plot size is the main difference between the two systems. The GETT system evaluates corn hybrids using a single row plot consisting of 8 plants per hybrid. In comparison, traditional replicated trials use a plot size of 2 rows 17 feet long.

A robotic arm loads individual seeds from each hybrid into a water soluble tape which is rolled onto a spool. The seed box and seed tube are removed from a single

planting unit, a modified seed tube is then inserted and the spool containing the tape is mounted. The producer plants the tape and the remaining units on the planter in a similar manner as his commercial crop. Once the tape has been planted, the modified seed tube is removed; the original tube and box are replaced and planting resumes. Plots are harvested by Maizex staff with a unique single row corn harvester.

The GETT system allows producers to evaluate over 20 hybrids within one 125' row in less than 30 minutes. In addition, some producers are planting GETT plots on several different farms with varying soil types and crop rotations to identify hybrids with stable performance.

This season, corn producers will plant over 150 GETT locations from Québec City to Amherstburg. These plots will allow producers, local dealers and Maizex staff to evaluate corn hybrids over several management practices. Maizex staff will use information collected from the GETT system to compliment traditional research plots.



OTHER LOCAL NEWS

Courtesy of: Kim DeKlein, OMAFRA Regional Information Coordinator, Woodstock Resource Centre Phone 537-8078 Fax 539-5351
kim.deklein@ontario.ca

UPCOMING 4-H EVENTS

Youth Adventure Camp: is being planned for August 14 - 16, University of Guelph, *Ridgetown Campus*. Opportunity for 4-H members ages 13-14. Deadline July 13, to 4-H Ontario Office, Guelph, \$60.00 per person.

WANTED: 4-H Ontario is looking for host families for the LABO exchange. Host families would have a Japanese boy or girl, 12-14 years of age, from July 22 - August 19. You do not have to be able to speak Japanese. Contact Barb Burgess for more details: burvilla.farms@sympatico.ca or Kathryn Lambert, Regional Specialist, Region 6, PO Box 888 Glencoe, ON N0L 1M0, P: 519-287-5332 F: 519-287-2665 Email: klambert@4-hontario.ca

NUTRIENT MANAGEMENT UPDATE

Nutrient Management Application Technician License Requirement

As of Dec 31, 2006, individuals who apply nutrients to a phased in farm operations under the Nutrient Management Regulation and who have a requirement for a Nutrient Management Plan where the individual is not the owner, operator or employee must do so with a valid Nutrient Management Application Technician License. Training for this license can be provided by the Business Owner if this person has a valid Prescribed Materials Application Business License or by attending OMAFRA courses. For more information on this license requirement or on training opportunities check out the OMAFRA website at <http://www.omafra.gov.on.ca/english/nm/cert.html>

EFP Workshop Equivalency for Fundamentals of Nutrient Management Extended

The Nutrient Management Education and Training Program has accepted the Environmental Farm Plan (EFP) Workshop, a passing grade on a quiz (70%) and a copy of the deemed appropriate EFP Action Plan letter as equivalency for Fundamentals of Nutrient Management Course for farmers or their employees who want to obtain certification to complete their own Nutrient Management Strategy or Plan. This option has now been extended to **October 1, 2007**. In addition to this option, farmers or their employees must take the Regulations and Protocols Course to obtain their Agricultural Operations Planning Certificate. Information on this certificate and others is available on the OMAFRA website at <http://www.omafra.gov.on.ca/english/nm/cert.html>

Canada-Ontario Environmental Farm Plan (EFP) Workshops (Third Edition) Now Available

Producers are invited to attend free EFP (Third Edition) Workshops to gain knowledge on best management practices, develop an action plan for their farm and learn about government cost-share programs that are available.

COUNTY/DISTRICT - OXFORD

TOWN - Woodstock

Day 1 - Tuesday, July 24, 2007

Day 2 - Tuesday, July 31, 2007

Time - 9:30 am to 3:00 pm

Program Representative

Cathy Dibble 519-463-9737

Email: cathy.dibble@ontariosoilcrop.org

COUNTY/DISTRICT - MIDDLESEX

TOWN - Coldstream

Day 1 - Tuesday, July 3, 2007

Day 2 - Tuesday, July 10, 2007

Time - 10:00 am to 3:00 pm

Program Representative

Margaret May 519-287-5334

Email: margaret.may@ontariosoilcrop.org

Call today to register!

Canada



Ontario

www.ontariosoilcrop.org

The Agricultural Policy Framework (APF) - A FEDERAL - PROVINCIAL - TERRITORIAL INITIATIVE

Never Argue with a Woman !!!!

One morning the husband returns after several hours of fishing and decides to take a nap. Although not familiar with the lake, the wife decides to take the boat out. She motors out a short distance, anchors, and reads her book.

Along comes a Game Warden in his boat. He pulls up alongside the woman and says, "Good morning, Ma'am. What are you doing?" "Reading a book," she replies, (thinking, "Isn't that obvious?") "You're in a Restricted Fishing Area," he informs her. "I'm sorry, officer, but I'm not fishing. I'm reading." "Yes, but you have all the equipment. For all I know you could start at any moment. I'll have to take you in and write you up."

"If you do that, I'll have to charge you with sexual assault," says the woman. "But I haven't even touched you," says the game warden. "That's true, but you have all the equipment. For all I know you could start at any moment." "Have a nice day ma'am," and he left.

MORAL: Never argue with a woman who reads. It's likely she can also think.



PIONEER®
A DUPONT COMPANY

Pioneer Hi-Bred Limited is currently recruiting for a Pioneer sales representative for Woodstock North area

Responsibilities:

- Call directly on area growers to promote, sell and provide superior service for line-up of top quality Pioneer® brand products.
- Warehouse, invoice and deliver products.
- Conduct on-farm yield trials.

Qualifications:

- Excellent knowledge of local area.
- Agricultural background.
- An attitude of continual self-improvement.
- Computer skills are an asset.
- Candidate must live in the area.

Remuneration:

- This is a fully commissioned sales position.

Please send cover letter & resume to:

Don Weaver
Pioneer Account Manager
Fax: 519-633-8904
don.weaver@pioneer.com

Application deadline is July 3, 2007.



OSCIA News...

June 2007

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

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**Ontario Soil and Crop Improvement
Association**

1 Stone Road West, Guelph ON N1G 4Y2

Phone: (519) 826-4214 or 1-800-265-9751

Fax: (519) 826-4224

E-mail: oscia@ontariosoilcrop.org

Web site: <http://www.ontariosoilcrop.org>

OSCIA 2008 ANNUAL MEETING

Date: February 5 & 6, 2008

Place: Sheraton Fallsview
Niagara Falls

Message from the President

As I am writing this report, it is a very dark and rainy day. Some early cut hay that was either wrapped wet or silaged went in as very good quality feed. Each day the grasses do mature, but it is very difficult to make dry hay with the weather we are experiencing now. Corn and small grains look great here in the East Central area of Ontario. Soybeans are advancing well too, with some concern about the talk of a drop in temperature tonight (June 5) to very close to freezing, I hope the forecasts are wrong!



Frank Hoftyzer

From the program updates, there are some that will have been completed with final reports being worked on. Others are ongoing, like the "Green Seeker" project to measure actual variability of N requirements in a field. Measurements will be done 4 or 5 times this year. Evaluating cover crops for N holding ability is another project that could prove beneficial to our farming practices. A number of new projects are under way at this time also.

Membership in OSCIA is always on our agenda, and we are eager to hear how county Soil and Crop Associations are meeting the challenge to increase membership. The new member's card that will be distributed shortly will add professionalism to our organization, and we hope that you will use them proudly, and talk to non-members about them.

The EFP program is very successful. As of May 15/07, 10,529 new and returning participants have taken the workshop over the past two years. Thank you to all the field staff for your commitment to the program.

The Ontario Forage Masters program is again being strongly supported. This year, 244 participants, many 4-Hers, have registered from 27 counties. Great! We appreciate the sponsorship of Pickseed Canada Inc. and Agri-Food Laboratories. Thank you to the participants and sponsors for their support of the 20th year of this successful program.

I would like to thank the office staff, those who have been with OSCIA for some time, and others who have just joined us, for your commitment and energy in support of OSCIA.

I wish the best and safety to all who work to provide food and resources to all. ♦

OSCIA Membership Cards

At the recent annual meeting of the OSCIA, the Board of Directors approved a new version of the OSCIA membership cards. The cards have a unique number and a location for the current year's sticker, along with a place for the member's name.

A supply of these cards are being sent to the secretary of each local association to complete and distribute to their paid-up members.

The OSCIA membership card may be used at select events/locations to provide registration fee discounts or any additional creative use provided by the local associations. Meetings are currently taking place with various event organizers to develop this partnership.

The Board trusts that you will find the membership card valuable, and that the members will carry them proudly to local Soil and Crop events. ♦

Ontario Forage Masters Program enters 20th Year!

2007 marks the 20th anniversary of the Ontario Forage Masters program, and is off to a fantastic start. A record 244 participants from 27 counties/districts have registered for the program.

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



Farm Safety - Operation of Augers

The following is reprinted from the Canadian Agricultural Safety Week 2007 - a supplement to the Elmira Independent, Fergus-Elora News Express, and Arthur Enterprise News.

Some tips to operate your auger safely:

- Always leave shields in place.
- Keep children away from operating grain augers.
- Start grain augers safely.
- Empty the auger before stopping it.
- Be careful when moving augers.

- Adjust grain auger height carefully.
- Don't try to grab the crank.
- Set up carefully and block the wheels.
- Limit the number of people around the auger when in use. ♦

OSCIA Membership Display

OSCIA has revamped and revitalized the OSCIA membership display which is available to local associations for meetings and events.

Please contact Evelyn Howse at the Provincial Office (1-800-265-9751) if you wish to borrow the display. ♦

Peas as a Cover Crop

The Thames Valley Regional Soil and Crop Improvement Association is conducting trials under the Partner Grant program. Following is the interim report on their activities:

Background: Investigations into the opportunities for various cover crops after winter wheat harvest have been ongoing since 2004. From these trials, peas have shown great promise to either replace red clover as a cover crop, or be used to fill in gaps in a clover stand. Of note, trials in 2006 at one location near Lucan showed peas far outperforming either oat or oilseed radish when biomass production was significant, and fall tillage (fall 2005) was difficult due to the volume of cover crop production. Corn yields following peas were significantly higher in this situation than following any other treatment.

However, it is not well established if corn yields significantly improve following peas planted as a cover crop, as initial results have been extremely variable. To further investigate this potential, the Thames Valley Regional Soil and Crop Improvement Association (TVRSCIA) initiated a three year project in the summer of 2006. Strips of peas were planted in fields following winter wheat harvest throughout the region. Corn will be planted in these fields in 2007, along with two replicate tests of nitrogen rates on both the pea strips and the check strips (no peas planted). These plots will be repeated in 2007/2008.

2006 Plots: 23 plots were established across south western Ontario, with wide geographic distribution (from the Niagara peninsula to Lake Huron to Kent county). Pea seed was sourced from either western Canada (dry pea seed), or from by-pass fields that canners in Ontario had been unable to utilize (processing peas). Pea planting dates varied widely, from late July to early September. While most co-operators drilled the pea seed in, several growers broadcast the pea seed and disced it in, to attempt to reduce seeding costs. In one location disced pea seed was compared to drilled seed to determine relative establishment.

2006 Results:

1. Establishment: Pea stand establishment was much less than expected. Seeding rates were targeted at 75 pounds/acre, but stands were thin at most locations. Even growers that bumped seeding rates to 100 pounds/acre had disappointing stands. It is unknown as to the reason for poor establishment. Seed source did not appear to have an impact, nor did baling straw vs spreading straw. There is some suggestion that slugs may have been feeding on and killing pea seed seedlings, but there is no proof of this hypothesis.

2. Seeding Date: Seeding date had a huge impact on the amount of growth achieved by the pea crop. Peas seeded in late July showed excellent growth, with plants flowering and setting seed before freeze-up. In the best fields, peas could have been harvested as fresh table peas just prior to killing frost. However, peas seeded in early September had minimal growth, and in many cases were only 4 inches (10 cm) high when killing frost occurred. This wide differential in growth is partly due to the extremely cool, wet fall conditions experienced, but also indicates that early planting will be essential if peas are to be successful.

3. Seeding method: Broadcast peas followed by discing showed significantly poorer establishment than drilled peas. In fields that were packed following the disc, establishment did improve but still did not equal that of drilled peas. Alternate, cheaper methods of pea establishment still need to be developed, in an effort to make this a more economical endeavour.

4. Grower feedback: Despite disappointing stand establishment, most growers were encouraged by what they saw. In many cases, green pea strips stood in stark contrast to unplanted strips, and the potential for increased corn yields and decreased nitrogen requirements have co-operators intrigued as to the outcome next corn harvest.

2007 Plans: Two replications of nitrogen rates will be imposed on the corn planted into these fields in 2007. Nitrogen rates will include both a zero N treatment, along with a "full rate" nitrogen treatment, and most economical rate of nitrogen (MER-N) will be calculated using the delta yield concept, for both the corn following peas as well as the corn following no cover crop. In fields that allow, 4 nitrogen rates will be replicated (0, 50, 100, 150), and MER-N will be calculated using the quadratic plateau method.

Sites will again be planted to peas following wheat in the summer of 2007. Good co-operators are always welcomed. Anyone interested in this project should contact their local Soil and Crop director, or Peter Johnson (519 271 8180, peter.johnson@ontario.ca).

OSCIA Resolutions

A number of resolutions were passed at the OSCIA Annual Meeting held in February.

These resolutions have been mailed to relevant organizations, and as replies are received, they are posted to the OSCIA website.

Be sure to follow your local association's resolution by looking on the website under Members/Associations.

ONTARIO FORAGE EXPO

The Peterborough County Hay Day and Ontario Forage Expo is being held in Peterborough County on **Wednesday, July 25.**

Demonstrations of the latest forage equipment.

Forage industry trade show exhibits.

Everyone welcome! No admission fee.

Lunch will be available.

Keynote forage speakers:

Jim Glenn - "Marketing Hay"

Joel Bagg - "Baleage Tips"

Sponsored by the Peterborough SCIA and the Ontario Forage Council

For more information, contact:

Ontario Forage Council 1-877-892-8663

ATTENTION SEED GROWERS

Growers' Update - Thursday, June 28

Petrolia

Mandatory for Select Growers on probation

This year an RSVP will be required

Watch for notices arriving soon!

OSCIA WEBSITE
VISIT US AT
www.ontariosoilcrop.org

CROP TALK



OMAFRA Field Crop Specialists — Your Crop Info Source

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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, Soil Fertility Specialist
Jack Kyle, Grazier Specialist
Brian Hall, Alternative Production Systems Specialist
Peter Johnson, Cereals Specialist
Scott Banks, Emerging Crops Specialist
Gilles Quesnel, Field Crops, IPM Program Lead
Christine Brown, Nutrient Management Program Lead
Adam Hayes, Soil Management Specialist - Field Crops
Greg Stewart, Corn Industry Program Lead
Tracey Baute, Entomology, Field Crops Program Lead

Editor: Joel Bagg, Forage Specialist

Compiled by: Marian Desjardine, OMAFRA, London

No-till Corn Planting Following Early Hay Harvests

by Greg Stewart, Corn Specialist, OMAFRA

Corn producers looking for an opportunity to replace a declining hay field may consider planting corn following a first-cut harvest of hay or haylage. This late-planted corn crop is traditionally aimed at silage production. This may allow for earlier planted corn, that had originally been intended for silage, to be shifted to grain corn production. In some areas of the province, with proper hybrid selection, the late-planted crop may be targeted for grain corn production.

With time and heat unit accumulation being the limiting factors, this corn crop needs to be planted as quickly as possible following hay harvest. This makes the option of no-tilling the corn crop into the hay stubble very attractive. Many of the soil structural and erosion control benefits fostered by the previous forage crop will be enhanced and/or prolonged by using a no-till system.

Research Indicates Soil Moisture Is Key

The University of Guelph examined corn silage yields from several different cropping systems in a study conducted near Woodstock in 1988 and 1989. A five-year-old sod (75% alfalfa) was converted to corn production using both conventional tillage and no-till systems following the removal of a haylage crop in early June.



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

Conventional and no-till silage yields were equivalent in 1989 but no-till yielded dramatically less than conventional tillage in 1988. Rainfall was 7% of normal during June of 1988, which resulted in no-till planting conditions that caused low plant stands and poor early growth. Success of the no-till corn planting following hay harvest in 1989 was attributed to adequate soil moisture.

Similar studies were conducted by the University of Wisconsin (M. Smith, P. Carter and A. Imholte) during 1985 to 1987, with similar results. No-till corn grain yields following an early season hay harvest were comparable to yields obtained by plowing in only one out of the three years. The successful no-tilling occurred in the year that had June rainfall that was above average. In the other two years of the experiment, no-till corn yields averaged 46 bu/acre less than those obtained with conventional tillage.

Low June Rainfall

If you are determined to plant corn following a hay harvest in early June and rain has been limiting, the lower risk alternative is some tillage prior to planting. This tillage does nothing to conserve moisture or soil structure. However, in these relatively hard, dry soils, it may be essential for good seed-to-soil contact and early corn root exploration. This is a common phenomenon in Ontario. Higher soil moisture can be measured in no-till compared to plowed soils, but if dry weather comes early the corn plants cannot establish a root system that allows for exploration of the soil profile. In these cases, no-till performs poorer than plowed ground. Even though your no-till ground has conserved more moisture the roots cannot get at it.

Adequate Soil Moisture

In years where soil moisture is adequate, no-till corn can do well in these sod fields providing we can get it established and off to a good start. Some suggestions are:

- Above average planter unit down pressure and overall planter mass will be required. No "light-weights" recommended.
- Some tight sods, especially those with a lot of grass in them, cannot be suitably worked with a three-coulter system common to many no-till planters. The resulting strip is clumpy, air filled and not conducive to germination or early plant growth. Try a single coulter along with trash

removing wheels for a firmer, cleaner seedbed.

- Chemical control of the sod and other weeds is critical. Apply a recommended pre-harvest treatment to the hay crop and/or herbicides during pre-emerge or post-emerge windows of the corn crop.
- Select a hybrid with a heat unit rating suitable for the delayed planting date and intended use (silage or grain). Late-planted corn may be at greater risk to corn borer damage, so a Bt hybrid is recommended.
- Use a seed applied insecticide to prevent insect feeding.

Foliar Fungicides on Soybeans

by Horst Bohner, Soybean Specialist, OMAFRA, Stratford

Many North American soybean trials have shown a yield boost with the use of a foliar fungicide, even in the absence of significant foliar diseases. This yield boost may be a function of controlling bean diseases that have previously been ignored. Or it may result from "plant health" benefits from the application of the fungicide.

"Plant Health" Benefits

These "plant health" benefits are usually associated with the strobilurin fungicides (Headline and Quadris). Several effects have been observed, including a reduction in the amount of ethylene in plants late in the season, delaying plant senescence. Fungicides may also improve carbon assimilation, improving plant growth efficiency and increasing tolerance to stress during flowering and pod fill. Although, all the effects on the plant are not fully understood, it is clear that foliar fungicides impact the plant enough to affect yield.

Ontario Strip Trials

Are these yield benefits large enough to warrant spraying in the absence of major disease outbreaks? In both 2005 and 2006, large scale replicated field trials were conducted to assess the possible yield benefits of strobilurins fungicides on soybeans. On-farm strip trials were set up by OMAFRA, local Soil and Crop Improvement Associations, Ontario Soybean Growers and various agri-businesses across a wide variety of soil types, environmental conditions and geographic locations. Data was collected from 19

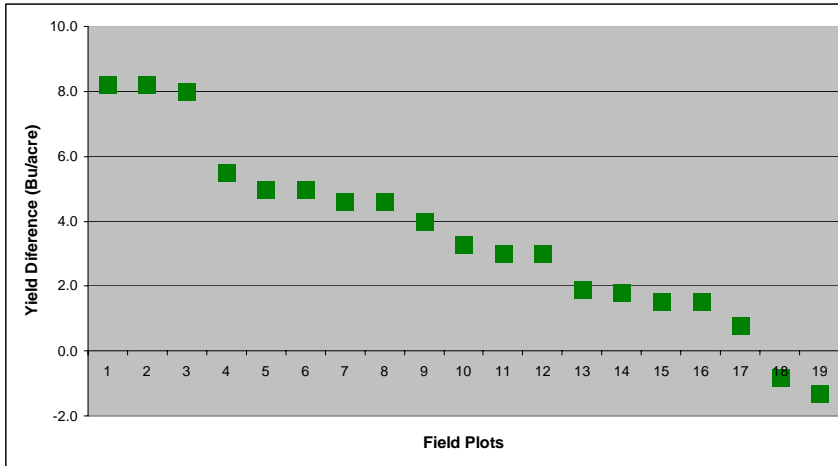
sites in 2005, and 31 sites in 2006. The majority of trials were sprayed with the fungicide at the R2 soybean plant growth stage (full bloom), as promoted in plant health literature.

Economics

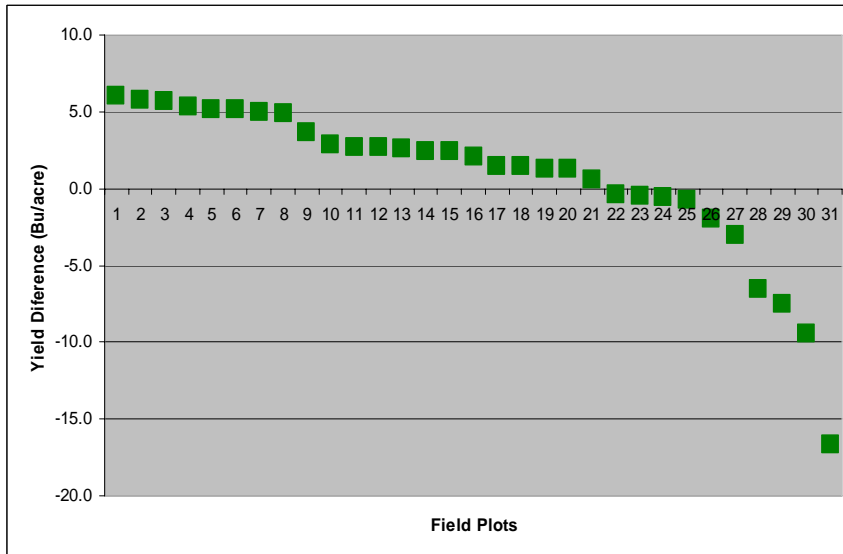
The results from these trials showed some yield benefit to soybeans when applying these products on a large percentage of the plots. In 2005, the average yield gain was 3.6 bu/ac, with 17 of the 19 trials (89%) showing some yield increase. In 2006, the average yield gain was only 0.8 bu/ac, with 21 of the 31 trials (68%) showing a yield gain.

Inconsistent Yield Gains

Graph #1: Soybean Yield Response to Foliar Fungicides in Ontario (2005)
Average Yield Gain of 3.6 bu/ac



Graph #2: Soybean Yield Response to Foliar Fungicides in Ontario (2006)
Average Yield Gain of 0.8 bu/ac



The problem is that yield gains are both inconsistent and usually not high enough to be economical. The cost for strobilurins (Headline and Quadris) is approximately \$16.00 per acre, excluding application costs. Assuming an application cost of \$8.00 per acre, a tramping loss of 1.0 bu/ac and \$7.00 soybeans, a 4.4 bu/ac yield increase would be required to break even. (\$16.00 product + \$8.00 application + \$7.00 tramping loss).

In 2005, only 42% of the trials (8 of the 19) had a yield benefit of over 4.4 bu/ac. In 2006, only 38% of the trials (8 of the 21) had yield gains high enough for a positive economic return. In other words, 58% and 76% of the trials respectively had an economic loss.

The inconsistency of yield gain found in Ontario is similar to foliar fungicide trials conducted across many US States. Considerable research is now underway to understand when and where positive economic returns can be found with the use of foliar fungicides. Yield response may be associated with the amount of stress a plant is under, but even this theory has yet to be proven. Economic yield results have been too inconsistent when applying foliar fungicides to warrant their application in the absence of significant disease pressure.

Recording Pasture Events

by Jack Kyle, Provincial Grazier Specialist,
OMAFRA

What pasture records are you keeping for the 2007 grazing season? Was your pasture more or less productive than last year? Do you have records to show the results of each of the past years performance for both the pasture and the livestock? These records will enable you to make comparisons that will provide valuable management information. Over time record keeping can give you an informative picture of your grazing management, and provide the tools to make more profitable grazing decisions.

A good set of pasture records provides details of what has happened and will allow for accurate comparison from one year to the next. A pocket notebook and three-ring binder can form the basis for a good system. It can be expanded to a complex computer spreadsheet if you are so inclined.

The records can be as simple or as complicated as you wish, but can include:

- weather data - rainfall amounts, frost dates, extreme summer temperatures
- forage or sward - pasture species mix, fertilizer application, forage growth at different times during the grazing season
- livestock - size, type and number of animals, frequency of moves to new paddocks, beginning and ending dates of grazing season, amount of residual forage, supplemental feed required.

Each year is different in the grazing business, but with records you will be able to analyze the differences. Did a lack of rain or too much rain affect production? One of the things that can happen is that lots of rain makes for green grass, yet cattle gains often are not as impressive as the grass growth. In a dry year, it often appears like the gains will be very low, and yet at weigh-off the gains can be better than might have been expected. Height and density are the two important components in sward evaluation. There are a number of tools to assist in measuring the amount of forage present, including a grazing stick or pasture plate.

With a good set of notes and records you will be able to manage your pasture for maximum returns.

Field Scouting Tips

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

When it comes to assessing crop establishment, early plant development and pest management needs, a simple windshield observation or drive-by will not do. While field scouting has to be kept simple, each field needs to be walked individually.

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

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

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

Table 1

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

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

Table 2

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

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

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

- Crop problems that are consistent with the topography or the soil type of the field are more likely to be soil related than caused by pests or field operations.
- Problems which are worse on one side or edge of the field are likely to be related to spray drift or to the movement of insects into the field from one side.
- Problems, which occur on isolated plants throughout a field, may relate to diseases such as root rots.
- Problem areas within a field, which have sharply defined boundaries or appear in strips, are often related to field operations. Nematodes, however, are immobile enough that the edge of a nematode-infested spot may also be very distinct.
- Problems that are concentrated in one row but do not appear in an adjacent row are usually equipment or starter fertilizer related. The distance between affected rows will provide some insight into the width of the piece of equipment involved. At times, crop patterns may also relate to old field boundaries which could be up to ten years old or more.

Straw For Sale - What Is It Worth?

by Christine Brown, Nutrient Management Lead, Peter Johnson, Cereals Specialist, & Greg Stewart, Corn Lead, OMAFRA

Straw value is determined mostly by supply and demand. At what price is the straw better left in the

field? Soil nutrient value of straw is at least 1.0 ¢/lb. This price should be at least 2.0 ¢/lb if nitrogen, organic matter and soil structure are a high priority for the field.

The sale of straw should at least recover the fertilizer replacement value. Fertilizer replacement value depends on the straw yield and cost of fertilizer, but there are also other factors to consider. Some of the reasons for removing straw may include:

- potential yield reductions caused from difficulties of no-till planting into straw residue,
- existing soil fertility levels are high and/or manure or red clover are returned to the field on a regular basis,
- additional trips or field operations are required to uniformly spread or incorporate straw and chaff, and
- low supply of straw resulting in higher demand and higher return.

Determining Wheat Straw Yield

With current wheat varieties there is a tremendous range of straw yield. The traditional rule of thumb was that one bushel of wheat grain produced one small square bale (35 lbs). That would translate into about 1.25 tonnes/ac straw for an 80 bushel crop. Realistic straw yields range between 1 to 1.75 tons/ac and are closely tied to wheat variety and grain yield. A straw yield of 2 tonnes/ac would be very optimistic, but not impossible. Table 1 shows the relationship between grain and straw yield based on variety.

Table 1: Impact of Wheat Variety Height on Straw Yield (2006 data)

Variety	Grain Yield	Straw yield	Straw yield
Emmit	100 bu/ac	3525 lbs	1.6 tonne/ac
25R47	100 bu/ac	2200 lbs	1.0 tonne/ac

Determining Straw Value

If selling the straw off the field is the best option, then as a minimum the price should reflect the fertilizer replacement value of the straw. The values of straw types estimated in Table 2 are based on average nutrient removal and average fertilizer prices. These values do not include organic matter value or micro nutrients. Many growers feel that the organic matter value far

Table 2: Estimated Nutrient Value of Various Straw Types

Straw Type	Grain Yield	Straw N-P-K Removal (lbs/ac)	Straw Value/ac P & K only ¹	Straw Value P & K only ²	Straw Value/ac N, P & K ¹	Straw Value N, P & K ²
Wheat	75 bu/ac	60-10-95	\$32.5	1.1 ¢/lb	\$62.5	2.1 ¢/lb
Barley	75 bu/ac	30-10-70	\$ 25	0.8 ¢/lb	\$ 40	1.3 ¢/lb
Oats	75 bu/ac	25-10-85	\$29.5	1.0 ¢/lb	\$ 42	1.4 ¢/lb
Rye	50 bu/ac	25-15-70	\$ 27	0.9 ¢/lb	\$39.5	1.3 ¢/lb
Corn stover	150 bu/ac	80-33-143	\$56	1.4 ¢/lb	\$96	2.4¢/lb

Source: Potash and Phosphorus Institute – 1998

¹ Commercial Fertilizer Value: N= \$0.50 P₂O₅= \$0.40 K₂O= \$0.30

² Value based on 3000 lbs/ac straw yield; 4000 lbs corn stover yield

exceeds the nutrient replacement value. Organic matter value is significant, but will depend on many factors differing for each field and is definitely an individual decision.

Should Nitrogen Value be Considered in Straw Value?

The nitrogen contained in straw is not returned to the soil in the year following the wheat crop. For this reason some people only consider the phosphorus and potash value. Straw has a high carbon to nitrogen ratio, which means that soil nitrogen may actually decrease while the straw is broken down. The nitrogen in the straw is utilized by the microbial populations in the soil and becomes an important part of the soil organic matter. However, this process occurs over the longer term. This means that the nitrogen in straw will be more valuable from a soil quality perspective in a field that does not receive regular manure applications or does not have forages or red clover in the rotation.

Along the Road to Organic

by Hugh Martin, Organic Crops Lead, OMAFRA

Growers have heard about organic production and the potential for good financial returns. You also have probably heard of some horror stories. Every grower owes it to themselves to do some investigating to determine if there are opportunities for organic in their operation. Do some research. How do you grow it? Where do you sell it? There

may be some ideas that you would want to adopt. Don't be afraid to change.

Organic Farm Tours

There are often summer tours of organic farms where you can see what is being done. Some of these tours will be listed at www.efao.ca. You could also visit some organic farms on your own. Some farms may have weeds or other issues, but make sure you see the whole picture. Looks can be deceiving! I remember 20 years ago when no-till was becoming more popular. No-till did not look very good to most of the experienced farmers, just because it was different!

Organic Neighbours

If you have an organic farmer in your neighbourhood get to know them and their practices. Work with your organic neighbours on cropping practices. Don't allow pesticide spray to drift onto your neighbours. They will likely be "certified organic", which means that they applied for certification last spring. This included a very detailed application form on their production practices, and they will be inspected this summer.

The inspector will make sure that there is at least 8 metres of buffer zone between the organic crops and non-organic crops. There must be 18 metres between organic soybeans and Roundup Ready soybeans. The distance between GMO and organic corn is required to be 600 metres. The organic sector feels this dramatically larger buffer is necessary because of the large distance that corn pollen can potentially travel. This is similar for canola. The

organic manufacturing industry has very low tolerances for adventitious GMO content in organic products. GMO corn has a huge impact on the potential to grow organic corn.

Transition Crops

Most organic farms start with a good rotation. They need 36 months as a “transition period” before the harvest of the first organic crop. During that period, only permitted organic inputs can be used. A hay crop that has not had any pesticide or fertilizer can be a good transition crop. Winter wheat can be a good transition crop, but you may need nitrogen from a previous legume or from manure before planting. Spring cereals underseeded with red clover can also be good transition crops. The best crop rotation rules are:

- a crop should never be repeated, and
- keep the ground covered with cover crops as much as possible.

Manure Use

It is recommended manure be composted. Manure cannot be used within 120 days of harvest of a food crop, or 90 days if the edible plants parts do not touch the soil. Manure can be brought onto the farm from non-organic sources, with the approval of the certification body. Manure from caged layer operations or “landless” livestock operations are not allowed. Non-organic manure must be composted 6 months to reduce any residuals of non-organic feeds or other products in the manure.

Weeds, Insects & Disease

The issues and challenges of each crop are different. Weeds are a common problem, but good early management is key. Timely, shallow, mechanical weed control works in most crops. Early vigorous growth and healthy crops will help the crop to compete. Don't let the weeds get the upper hand.

Insects and diseases are not serious problems for most field crops. You cannot use treated seed or GMO traits, but good quality seed planted into warm soil conditions usually get the crop off to a good start. Good crop rotations break pest cycles that result from continuous crops. Crops yield more with crop rotation.

As you drive down the road and see an organic farm look at the opportunities and wonder “what if”!

Pricing Standing Hay

*by Joel Bagg, Forage Specialist, OMAFRA,
Lindsay*

What is standing hay worth and what is a fair price? The price of standing hay is what the market determines it is, not necessarily what we think it should be. From the seller's point of view, the price should cover the cost of production and provide a profit. However, there are limits to what buyers can and will pay that are related to the price of livestock, as well as the availability and price of other forages.

There is a tremendous range in standing hay prices. In recent years, we have seen prices from zero to over 3¢/lb of dry hay produced. The cost of production for a hay crop is typically at least 2¢/lb. However, the market does not always recover this. Some years, standing hay might trade from 1.5 to 2¢/lb for first-cut. Hay prices are often extremely volatile until after 1st cut, when there is a better idea of what the hay supply will be for the year. Similar to 2006 when there was a good hay crop, supply can exceed demand, reducing the price paid for second- and third-cuts.

Supply & Demand!

When hay supplies are low during dry years or following winterkill, standing hay will be in demand and worth more. Poor pasture years, when hay is fed during the “summer slump”, also results in greater demand. The amount of spring inventory “carryover” from one year to the next can have a big impact. Lots of hay has been advertised for sale. There appears to be the potential for adequate hay in most parts of the province.

Higher Corn & Soybean Prices?

During years of higher corn and soybean prices, land shifts from hay to grain production, especially from some of the older, low yielding hay fields. Typically, hay prices will then increase in the longer term. A decade ago when we had some higher corn and soybean prices, we also saw a much stronger market for standing hay. Hay supplies became tighter, and some standing hay prices jumped up to as high as 3 or even 4¢/lb.

Factors That Affect Price

- **Cutting Date & Percent Alfalfa** - The earlier the date of cutting and the better the quality, the more the standing hay will be worth. Hay cut later will be worth less per pound, but there will be more pounds. Hay stands that contain more alfalfa are usually worth more.

- **Yield, Weeds & Age of Stand** - Higher yielding fields will be worth more per pound because the fixed harvesting costs per acre are spread over more lbs. Generally, newer stands are worth more, while hay fields that have been seeded down for a number of years will be weedier, lower yield, and worth less.
- **Location** - The location of the field relative to the buyer is important. A livestock producer may be willing to pay more if he doesn't have to haul long distances. A seller needs more than one interested buyer in order to bargain a higher price.

Considerations For The Seller

Sellers should start by determining their own cost of production per pound of standing hay. In an example budget, assume a \$40 per acre land rental value, a four year hay crop, using typical custom rates and input costs, and a 6,000 lb annual hay yield in a 2-cut system. The cost of production for the standing hay in this example works out to about 2 cents per pound of dry hay, or \$120 per acre per year.

Don't Forget P & K Removal

Forage has high fertility requirements and these costs are increasing. With a mixed stand, the value of phosphorous and potassium removal is close to 1 cent/lb. As an example, assuming a mixed stand with a modest yield of 3 tons per year, hay will remove about 36 lbs of P₂O₅ and 138 lbs of K₂O, with a value of \$56 (assuming P₂O₅ @ \$0.40, K₂O @ \$0.30). Without manure or commercial fertilizer, the soil test will drop quickly. Assuming that it takes about 35 lbs/ac of P₂O₅ and 20 lbs/ac of K₂O to move the soil tests by 1 ppm on some soils, after 5 years the P₂O₅ soil test could drop by 5 ppm and the K₂O by 35 ppm.

Occasionally, standing hay is given away to avoid the down-side of leaving it in the field. The fixed costs, such as establishment, have already been paid regardless of whether or not the crop is harvested. As a minimum, a producer may want to recover the variable costs, which include the nutrient removal.

Considerations For The Buyer

Buyers should consider what their costs will be after the hay is baled. In this same example budget, swathing and raking costs 0.7 cents/lb, while large round baling costs about 0.8 cents.

This means that the standing hay costing 2 cents per pound would result in a total cost of 3.5 cents, or \$28 per bale for an 800 pound bale in the field. This may or may not reflect the local market. Also consider that in a standing hay transaction, the buyer assumes the weather risk of that hay getting rained on.

To accurately determine the pounds of hay sold it is helpful to weigh some bales or wagon loads. Pounds of haylage can be converted to a dry hay equivalent by adjusting for percent moisture.

It is important that you make your own assumptions and calculate your own costs to determine what you feel is an acceptable price. Then negotiate the best you can. Crop budgets and custom rates are available on the Ontario Ministry of Agriculture, Food & Rural Affairs website at www.omafra.gov.on.ca/english/busdev/analysis.html.

Soil Management Workshop Tuesday, June 26, 2007, London area

Soil quality affects crop performance

Fine tune the skills and techniques needed for diagnosing soil quality and fertility problems in the field. Identify soil and nutrient management practices you can use to improve and maintain soil health and productivity.

Topics Covered

- soil texture
- structure and compaction
- role of soil organic matter & nutrient cycling
- tools for diagnosing soil problems
- water, drainage and crop production
- soil life
- implications of pipeline construction

The morning program will focus on soil water, texture and structure while the afternoon will cover nutrient cycling, soil life and the challenges of cropping after heavy construction. The workshop is a hands-on and in field exploration of soil management issues.

Registration \$60 for the day, \$40 for OSCIA members.

Contact the Woodstock OMAFRA Resource Centre (519)-537-6621

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MEMBERSHIPS

Memberships are \$20.00/yr or 3 for \$50.00; contact your local county secretary/treasurer

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CROPPEST <http://www.omafra.on.ca/croppest>

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THE FARM LINE Confidential support and referral services: 1-888-451-2903

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Cathy's comments....

Hello everyone! Hope your planting season went well! Our Oxford summer trip is now full, and we are happy to have a few Middlesex & Elgin members joining us on our trip to PEI. We are looking forward to a great time, and I'll be sure to take some pictures for another edition!

Watch your mail for a new Ontario Soil & Crop membership card. Each county will be distributing these soon. Remember to carry it in you wallet for many benefits the Guelph office is working on for you, including discounts to many agricultural events such as the Outdoor Farm Show, Southwest Ag Conference and Farm\$mart. We are also trying to obtain discounts and opportunities with agribusiness. Your card will also have your membership renewal date for easy reference.

Oxford is also excited to be hosting the 2007 OSCIA Provincial Directors meeting here in August. Our Provincial Director, Pat Lee will be stepping up to President of Ontario S&C in 2007.