



ORCHARD NETWORK

For Commercial Apple Producers

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In this issue...

Orchard Management

- Thoughts on Pruning Efficiency
- Soil Health—Putting it to the Test in Ontario
- Update on Herbicide Resistant Canada Fleabane
- Urea: managed apple scab or unmanaged nitrogen

Postharvest

- Delayed Cooling Affects the Sensory Quality of "Honeycrisp" Apples
- Strategies to Minimize the Presence of Patulin in Apple Cider and Juice

Crop Protection

- Apple Growers! Save the Date to Learn More about New Tools
- Fungicide Spray Coverage
- Double Whammy—Mating Disruption for Codling Moth and Oriental Fruit Moth
- Please Assist Us in Helping You!
- 2010-11 Edition of Publication 360, Fruit Production Recommendations

Announcements

- Funding Opportunities
- Don't gamble with your water supply!
- International Fruit Tree Association Convention
- Ontario Fruit and Vegetable Convention 2010
- Apple Program: Ontario Fruit & Vegetable Convention 2010

Orchard Management

Thoughts on Pruning Efficiency

by Leslie Huffman, Apple Specialist, OMAFRA, Harrow

Last year at this time, I shared some thoughts about pruning apple trees. I talked about pruning trees to utilize sunlight – shaping the tree for maximum sun exposure, capturing the benefits of strong buds for quality fruit. I talked about keeping trees in balance, achieving moderate growth and renewal. I talked about the local response to pruning, and how each pruning cut dwarfs the tree. And I talked about minimizing pruning on young trees to encourage early cropping.

All of these principles remain true, and your pruning strategy needs to reflect these principles. But another factor has become increasingly important for Ontario growers. With labour contributing at least 40% of production costs, with pruning almost half of it, and with wage increases in March, we need to monitor pruning costs closely.

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Ministry of Agriculture,
Food and Rural Affairs

 Ontario

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This issue of the **Orchard Network Newsletter** was compiled by Client Service Representative, Maggie Winn, OMAFRA, Lindsay

So what's a grower to do? Each pruning cut needs to be made for a reason, to achieve the goal of maximum sunlight capture. Here are some ways to do this:

- Decide on a **time limit** or **wood removal limit** on each tree. When this is reached, move on.
- Concentrate on **upper areas** of the tree. Sunlight must be able to penetrate to each apple bud, and only upper branch removals will accomplish this.
- Make one cut instead of many. Although it may seem drastic to **remove entire limbs**, the long-term benefits will outweigh the loss in yield this year.
- Divide your pruning costs between winter and summer. Concentrate your winter pruning on **heavy strategic cuts**.
- Plan your **summer pruning now** eg. Target areas above the shoulder area to remove part of this year's growth.
- Note where **Apogee** may be useful to reduce future pruning. Many growers have reduced pruning costs and re-balanced trees using Apogee over the past few years, but this too must be strategic to control costs.
- Prune some trees in each block as **reference** for your crews. Return to these frequently to discuss if the pruning is achieving goals – and efficiency.

These methods are every-day, common sense approaches to efficient pruning, but having your pruning crew focus on these decision tools each day can help reduce costs.

Soil Health – Putting it to the Test in Ontario

by Anne Verhallen, Soil Management Specialist (Hort Crops), OMAFRA, Ridgetown

Orchard management, with the sod cover and long term plantings, has the potential to greatly improve soil health. The absence of tillage with its potential damage to soil, suggests that beneficial soil fungi populations should thrive and contribute to improving soil structure.

Adam Hayes and I have been working with Dave Hooker and Bill Deen of the University of Guelph to examine the Cornell Soil Health Assessment, to test and adapt it for use in Ontario. During 2009, we sampled the long term crop rotation and tillage trials at Ridgetown and Elora. Over the next 2 years we are committed to using the Cornell test to assess soil health on a wide variety of grower fields across Ontario as part of this trial. Our Soils Team is interested in collecting samples from a number of different orchards under different management approaches and of varying ages to include in this project.

If you are interested in including your orchard in our study; please contact me at: Anne Verhallen, Soil Management Specialist (Hort.) 519-674-1614 or through email anne.verhallen@ontario.ca. I can't guarantee that every orchard offered is included due to time constraints and travel. If you are interested in learning more about the Cornell Soil Health Assessment see their website at www.hort.cornell.edu/soilhealth/extension/manual.htm

Update on Herbicide Resistant Canada Fleabane

by Kristen Callow, Weed Management Program Lead (Hort Crops), OMAFRA, Ridgetown

Canada fleabane (*Conyza Canadensis*) or horseweed, is a common weed in orchards. This weed thrives across Ontario, in pastures, roadsides, and no-till fields and perennial crops like orchards, vineyards, berries, nursery and asparagus.

In 1993, 5 orchards in Essex County were diagnosed with Canada fleabane resistant to Group 22 herbicides (bipyridiliums), specifically Gramoxone (paraquat). Approximately 5 acres were infested. Over time, the infested area has declined significantly with no new cases, due to use of glyphosate to control the resistant populations.

Canada fleabane has been documented worldwide with resistance to these herbicides:

- Group 9 (glycines) - glyphosate
- Group 2 (ALS inhibitors) - Classic, First Rate
- Group 5 (photosystem II inhibitors) - Gesagard, Sinbar
- Group 7 (ureas and amides) - Betamix, Karmex
- Group 22 (bipyridiliums) - Gramoxone

Several cases of multiple herbicide resistance have occurred around the world, brought about by separate selection processes.

Glyphosate resistance is of particular concern to Ontario apple growers, due to the reliance on this herbicide. In Ontario, there are no known cases of glyphosate resistance, however glyphosate resistant fleabane has been diagnosed in these American States (source www.weedscience.org):

2000: Delaware

2001: Kentucky, Tennessee

2002: Indiana, Maryland, Missouri, New Jersey, Ohio

2003: Arkansas, Mississippi, North Carolina, Ohio, Pennsylvania

2005: California, Illinois, Kansas

2007: Michigan, Mississippi

As well, Ohio and Michigan has Canada fleabane resistant to Classic and FirstRate, and in Michigan, resistance has been found to Betamix and Karmex. No cases have been reported in Ontario.

Controlling Canada fleabane in the spring is usually not difficult. Applications of Roundup (any glyphosate product) are usually effective for the over-wintering rosettes. High rates will be required later in the season. Gramoxone or Ignite can also be effective, but Gramoxone should be used on cloudy days. All products are more effective if applied before the fleabane gets too big.

Rotating between herbicide groups is essential to prevent resistance development. Where plants are not controlled by herbicides, and resistance is suspected, please contact the Agriculture Information Contact Center: 1-877-424-1300. The University of Guelph "Weeds Lab" can test for resistance of suspected weed species.

References

Gunsolus, J.L., 2002. www.extension.umn.edu/distribution/cropsystems/DC6077.html#Definitions

Acknowledgements

Thank you to Peter Smith, Department of Plant Agriculture, University of Guelph for the use of his pictures.



Figure 1. Canada fleabane rosette – target herbicide application stage

Figure 2. Canada fleabane inflorescent

Urea: Managed Apple Scab or Unmanaged Nitrogen

by Christoph Kessel, Horticulture Crop Nutrition, Program lead, OMAFRA, Guelph

The November-December issue of *Orchard Network* featured an article by Kathryn Carter, OMAFRA Pome IPM Specialist, on *Dealing with Apple Scab in 2010*. In the article she discussed how 45 kg urea applied in 1000 L water/ha to the orchard floor can be an effective tool in an apple scab management program.

While helping to reduce next season's apple scab, the urea also supplies nitrogen (N) to the orchard. Managing N in the orchard is important. Applying more than is required can adversely affect tree growth, balance, fruit colour and susceptibility to some insects and diseases. All nitrogen applied to the orchard should be considered part of the total nitrogen budget. Whether or not the urea's nitrogen contribution will affect tree growth depends on the amount of nitrogen applied and other factors affecting urea conversion to nitrogen.

How much nitrogen is applied? To estimate this, we'll use an orchard planted at 2500 trees/ha. It has an established sod cover between the rows (60% sod cover, 40% tree rows). The urea application provides 20.7 kg N/ha (urea 46-0-0, $0.46 \times 45 \text{ kg} = 20.7 \text{ kg N}$). Urea applied to the sod will not affect the trees, so we will only consider the amount applied to the tree rows, $40\% \times 20.7 \text{ kg} = 8.28 \text{ kg}$.

Dividing 8.28 kg N applied over the rows by the number of trees means that each tree receives 3.3 g ($8.28 \text{ kg N} / 2500 \text{ trees} \times 1000 = 3.3 \text{ g}$). While this may not seem like much, it does provide 11% of the recommended rate for a 1 year old orchard. The OMAFRA nitrogen recommendation is

30 g/tree, $3.3\text{g}/30\text{g} \times 100 = 11\%$.

For an older orchard (> 2 years) and at this tree density, leaf analysis is used to manage nitrogen. The urea application should still be considered as part of the orchard's nitrogen budget. But it will probably contribute less to the tree's total nitrogen requirement.

What else needs to be considered? To reduce future apple scab, the urea is applied on the orchard floor. It must contact the infected fallen leaves on the sod and within the tree row. It is not intentionally incorporated into the soil. This makes it susceptible to nitrogen losses, in particular ammonia volatilization (nitrogen lost to the air as ammonia gas). How much nitrogen is lost depends on temperature, soil pH and rainfall.

- There is less volatilization at lower temperatures. The late November and early spring applications means that potentially more of the nitrogen applied may become available for the crop.
- Volatilization increases as soil pH increases above 7.5.
- Incorporating the urea either by rainfall, irrigation or mechanically into the soil significantly reduces nitrogen losses. But to be more effective in reducing apple scab, ideally the urea should be applied during good drying conditions. These conditions would probably increase ammonia volatilization.

Potential impact on tree growth? The urea application can contribute to the orchard's nitrogen budget. How much it contributes depends on: orchard age and tree density, per cent sod cover, the weather conditions (temperature, rainfall) during the urea application and soil pH. Its contribution should be considered as part of the total orchard nitrogen budget especially in younger orchards (less than 3 years old). As the orchard matures and roots explore more soil volume, the surface applied urea contribution to the tree's overall nitrogen budget will probably be minimal.

Postharvest

Delayed Cooling Affects the Sensory Quality of 'Honeycrisp' Apples

by Dr. Jennifer DeEll, Fresh Market Quality Program Lead, OMAFRA, Simcoe

and

Dr. Isabelle Lesschaeve, Research Director - Consumer Insights & Product Innovation, Vineland Research and Innovation Centre, Vineland Station

'Honeycrisp' has outstanding flavor characteristics and can remain crisp for several months in storage however,

'Honeycrisp' is also extremely susceptible to the storage disorders soft scald and soggy breakdown.

Soft scald, also known as ribbon scald or deep scald, is a low temperature disorder that is characterized by sharply defined, irregularly shaped, brown lesions on the apple skin. Damage can extend beneath the skin into the flesh and the lesions are often invaded by secondary infections. The disorder is induced by storing apples below 3°C. Other factors implicated in the occurrence of soft scald include advanced fruit maturity at the time of harvest, growing location and climate (dull, cool, wet summers), light crops, large fruit, vigorous trees on heavy soils, and fruit mineral content.

Soggy breakdown is an internal disorder, which is rarely mentioned in the literature. The apple flesh develops moist soft brown spongy tissue, which can form as complete rings in severe cases. To reduce the incidence of soft scald and soggy breakdown it is recommended that 'Honeycrisp' be stored at 3-5°C and undergo a cooling delay for up to 7 days at 10-25°C prior to storage.

The objective of this study was to evaluate the effects of delayed cooling on the fruit sensory quality after storage.

'Honeycrisp' apples were harvested twice within the commercial harvest window. Fruit were then either placed immediately into cold storage at 3°C or held for 5 days at 10°C or 2 days at room temperature (21-25°C) prior to storage at 3°C for 5 weeks.

A sensory methodology was developed to enable comparison of the apple sensory profiles imparted by the different treatments. A list of 18 descriptors (12 flavors and 6 textures) was generated and defined by qualitative references to calibrate the use of the scale measuring the perceived intensity of these descriptors when assessing an apple sample. A group of eight panelists selected for their sensory abilities and trained to utilize the developed methodology participated in this project.

Effects of delayed cooling on 'Honeycrisp' sensory quality were noticeable after 5 weeks of storage, as the perceived sweetness, juiciness, and crispiness were reduced. Apples from the delayed cooling regime of 2 days at room temperature also exhibited lower perceived astringency, bitterness, and skin thickness, compared to the apples with no delay in cooling or those held for 5 days at 10°C. Further work is underway to examine the effects of delayed cooling, SmartFresh™ (1-MCP) treatment, and controlled atmosphere on the sensory quality of 'Honeycrisp' after storage, as well as the evolution of 'Honeycrisp' sensory profile.

Strategies to Minimize the Presence of Patulin in Apple Cider and Juice

by Loree Saunders, Compliance Programs Coordinator, and John Henderson, Risk Management Specialist, Food Inspection Branch, OMAFRA

Patulin is a mycotoxin produced by fungi (or molds) commonly found on apples. Patulin can be harmful to humans and continues to be an issue in Ontario apple cider, with positive samples being found each year by the Ontario Ministry of Agriculture, Food and Rural Affairs under its Foods of Plant Origin Monitoring Program.

In the 2008 season, 34 percent of samples tested had detectable levels (levels greater than 10 ppb) of patulin present. The detectable level is the level of patulin that the lab test can detect in the cider sample using their specific methodology. This number of positive results indicates that it is important for producers to monitor their fruit quality very carefully and to develop programs to reduce the chance of patulin occurring in their product.

Year	Total Number of Samples Tested	Number of samples with Patulin >50 ppb*	Percent of samples with Patulin >50 ppb*
2008	80	6	8
2007	80	8	10
2006	58	0	0
2004	17	2	12
2003	185	15	8

*ppb = Parts Per Billion

The following table shows the number of samples of Ontario cider since 2003 that have had patulin levels detected above Health Canada guideline of 50 parts per billion (ppb). When sample results are above 50 ppb producer information is forwarded to the Canadian Food Inspection Agency (CFIA) for follow up. Depending on the patulin level and volume of product in the market place a product recall may occur.

The potential for high levels of patulin to occur depends on several factors. The following is a list of control strategies provided in the U.S. Juice HACCP Guidance document to help producers minimize these levels:

- **Avoid using fallen fruit** — Apple juice made from apples that include fallen fruit is more likely to contain high levels of patulin.
- **Ensure apples are in good condition at the time of harvest** — Juice made from apples with visible

damage (for example damage from birds or insects, mold or rot) is more likely to contain high levels of patulin. Proper agricultural control practices (including insect control, anti-fungal applications when needed, etc.) can assist in minimizing mold growth and rot on apples.

- **Ensure apples are handled properly** — Patulin production can occur during the storage of apples, particularly in apples that are bruised in handling prior to and during storage.
- **Ensure apples are stored in right conditions** — Apples stored without proper temperature and atmospheric control of the storage environment are more likely to contain high levels of patulin than apples stored under controlled conditions.
- **Monitor for core rot during storage** — Patulin production in stored apples can be caused by core rot that is not visible by observation of the exterior of the apple. Apples that develop core rot may be identified by cutting and cross-sectional examination. Eliminating apples with high levels of core rot from the juice production stream will reduce patulin levels in the juice.
- **Cull or trim apples prior to juice production** — Growth of patulin producing molds is evidenced frequently by the appearance of visible mycelia (fungi filaments) or rot on the apple. Culling or trimming apples just prior to juice production to eliminate damaged, bruised, moldy, and rotting apples will reduce patulin levels in the juice.

Not all apples are equally affected by these factors. Research indicates that different apple cultivars may vary in how patulin levels are affected by these factors.

There are many good reference articles that explain how to implement an apple management program to reduce the likelihood of patulin in cider or juice. Several articles have been presented in past editions of the Orchard Network News. For additional information on material presented in this article, please contact the Food Inspection Branch, Ontario Ministry of Agriculture, Food and Rural Affairs or refer to:

Patulin - A Chemical Concern for Apple Producers and Processors

www.omafra.gov.on.ca/english/crops/facts/04-043.htm

U.S. Juice HACCP Guidance Document

www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/Juice/ucm072557.htm

Code of practice for the prevention and reduction of Patulin contamination in apple juice and apple juice ingredients in other beverages

www.codexalimentarius.net/download/standards/405/CXC_050e.pdf

Crop Protection

Apple Growers! Save the Date to Learn More about New Tools

by Margaret Appleby, IPM Systems Specialist,
OMAFRA, Brighton

Ontario apple growers will have some new tools to help make sound decisions for their orchard operation. These aren't the next snazzy pruning saw or a silver bullet to control pests, but this interactive software will be very useful in the 2010 season and beyond.

With funding from the Ontario Apple Growers and the Farm Innovation Program, the OMAFRA Apple Team has been working with consultants to develop two software programs - Ontario AppleIPM and Fruit Tracker. **Ontario AppleIPM** will provide important information on scouting and identifying pests in apple orchards, while **Fruit Tracker** will allow you to track pesticide use for each orchard block and for each buyer.

Plans are being made to introduce these tools to growers through a series of half-day workshops across the province. Save these dates to attend an apple workshop being offered near you. Participants will receive free CD copies of both software programs, as well as the new 2010-2011 Publication 360, Fruit Production Recommendations. Don't miss out - attend one of the following workshops:

March 25	Mettawas Restaurant, Kingsville
April 1	OMAFRA office, Simcoe
April 7	OAG boardroom, Vineland
April 8	Keeler Centre, Newcastle
April 13	Marsh Street Community Centre, Clarksburg

The Ontario Apple Growers will be sending out meeting notices and registration details closer to the dates. Look for the notice in the mail.

Fungicide Spray Coverage

by Dr. Jason S.T. Deveau, Application Technology Specialist, OMAFRA, Simcoe

Coverage gets mentioned a lot when talking about good spraying practices, but what is it exactly?

Target coverage is the percentage of a target's surface with spray deposits, but it also reflects the size and distribution of droplets. Consider a leaf with three large droplets and another leaf with 80 small droplets. Both can have the same volume of pesticide and the same percent-area coverage, but the leaf with more droplets is better protected. Consider further, two leaves with 80 droplets each: now they have the same "coverage", but

one was sprayed using more water than the other and therefore has less active ingredient per droplet.

Fungicides have different formulations and should be applied according to their mode of action. Systemic products have limited movement within the plant, often as little as a few millimetres and rarely throughout a leaf or into growing tissue. Contact products have to physically touch the pathogen, so there's very little margin for error. Good coverage generally equals good efficacy and the best results are achieved when susceptible surfaces have about 80 to 90 droplets per square centimetre, sprayed with fine-to-medium droplets, with a concentration no less than label rate (see Figure 1).

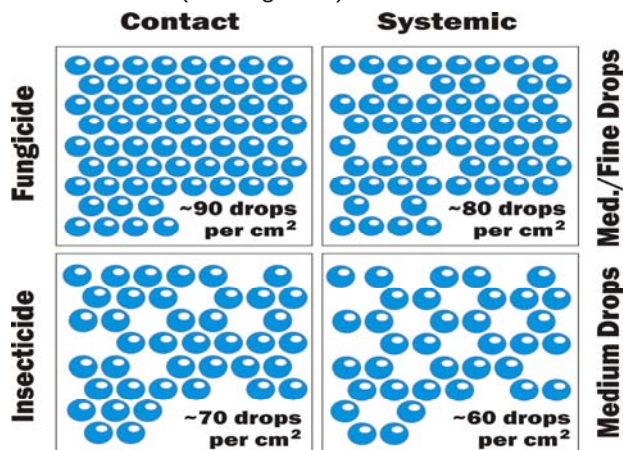


Figure 1 – There will always be exceptions, but generally these are ideal relative droplet sizes and deposit densities for fungicides and insecticides.

Coverage can sometimes be improved through the use of adjuvants (e.g. spreaders, stickers, etc.) but be aware that many products include adjuvants in the formulation; don't add any unless indicated on the label.

To get a better sense of what adequate fungicide coverage really looks like, consider Figure 2. These are water-sensitive papers used for evaluating relative spray coverage and canopy penetration. The paper is yellow and is stained blue by exposure to aqueous spray droplets. It is perhaps surprising that Paper #2 represents the ideal: just over 80 discrete droplets per square centimetre, with droplets between fine and medium (200-300 micron diameter).

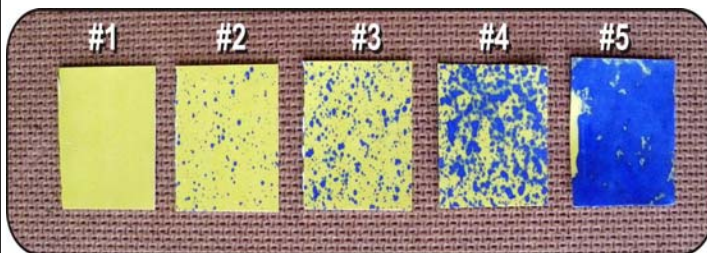


Figure 2 – Spray coverage of water-sensitive paper from least to greatest.

Water sensitive paper is relatively cheap and can be obtained from any nozzle supplier; it provides immediate feedback as to the quality of the application and you should always have a packet (and a few clothespins) handy for a quick evaluation.

So, when you take the sprayer out of the barn at the beginning of the season, don't just set it and forget it. Take the time to consider each spray application before you start filling the tank. Make adjustments with an eye to achieving good coverage every time. For more information, check out the Factsheet "Six Elements of Effective Spraying in Orchards and Vineyards": www.omafra.gov.on.ca/english/crops/facts/09-039.htm

Double Whammy – Mating Disruption for Codling Moth and Oriental Fruit Moth

by Hannah Fraser, Entomology Program Lead (Hort Crops), OMAFRA, Vineland

Apple growers now have a new mating disruption tool for managing codling moth (CM) and oriental fruit moth (OFM). Isomate-CM/OFM TT is a twist-tie type dispenser similar to those already available for effective management of OFM, but with the additional benefit of reducing mating of and subsequent damage caused by CM. The dispenser is designed to provide activity for the entire season for CM and up to 90 days for OFM.

Isomate-CM/OFM TT works most effectively where both the target populations and the risk of movement from unmanaged areas are low. Growers who have used mating disruption for OFM for several years have, in many cases, been able to rely on this tool as a stand alone pest management strategy. However, mating disruption for CM is a little trickier and when used alone will not provide adequate control in most commercial orchards.

When this technology is combined with existing IPM programs, pest populations and pesticide use can be reduced over a number of seasons. Depending on site pest pressure (determined by monitoring trap catch and damage levels), insecticides for one or both generations of CM are generally recommended to avoid unacceptable damage at harvest.

A few general tips to make mating disruption for CM work:

- Use large (> 10 ac or 4 ha) regularly shaped blocks. Area-wide management works best – talk to your neighbours.
- Orchards should have low to moderate pest pressure.
- Unsprayed hosts within 300 m of treated areas can be major sources of mated female moths, and border sprays may be required.

- During the first year of using mating disruption, follow a standard spray program for both generations and monitor extensively for this pest.
- For Year 2 and where populations are low, limit insecticides to the first generation.
- In subsequent years, use results from monitoring and damage assessments to determine if insecticide applications can be reduced further.
- Codling moth flight can be monitored in treated blocks using special "super lures" (10x lures, CM DA lures), and traps should be placed in the upper portion of the canopy in disrupted blocks. Numbers in traps help determine the need to apply supplemental insecticides.

For more information on mating disruption: Chapter 2 of the 2010-2011 version of Pub 360 (see www.omafra.gov.on.ca/english/crops/pub360/2ipm.htm#pest).

Mating Disruption for Management of Insect Pests, Order No. 03-079.

www.omafra.gov.on.ca/english/crops/facts/03-079.htm

Please Assist Us in Helping You!

by Kathryn Carter, Pome Fruit IPM Specialist, OMAFRA, Simcoe

In 2009, the OMAFRA Apple Team participated in a Pesticide Risk Reduction Project for apples, funded by the AAFC Pest Management Centre, and administered by the Ontario Apple Growers (OAG). The goal was to integrate the newer reduced risk insecticides into commercial orchard IPM programs.

This project included:

- Apple Grower IPM Workshops (Spring 2009)
- Publication 310, IPM for Apples free to OAG members
- Orchard Demonstration Trials
- Summer Twilight tours (June/July 2009).

OMAFRA has prepared a report summarizing the results of these province wide demonstration trials, included this mailing.

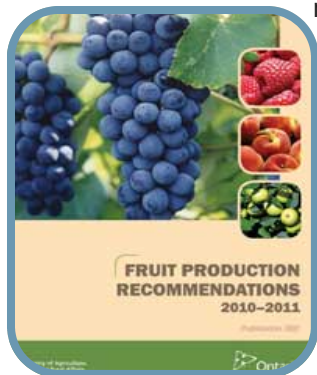
Was this project important to your IPM program? Now is your chance to provide feedback on this project. Was a free copy of the Apple IPM guide (regularly \$50) beneficial to you as an apple grower? Did you learn anything from the grower workshops or twilight tours you attended?

Provide your feedback electronically with a few clicks at the following link: www.surveymonkey.com/s/RCMKZ9Z.

For those who are less computer savvy, a hard copy of the survey will be available at both apple sessions at the Ontario Fruit and Vegetable Convention on February 24 and 25.

2010-11 Edition of Publication 360, Fruit Production Recommendations – Available March

For more than 75 years, Ontario fruit growers have relied on this publication for the latest information on pest management, crop nutrition, pesticide safety, resistance management and thinning tree fruits. New this year are more reference tables, information on beneficials, additional information on buffer zones and managing apple scab, new products including reduced risk pesticides and biopesticides, as well as sections on elderberries, sea buckthorn, and more information on tree nuts.



This publication will be available in March at a cost of \$20 + GST. Copies can be purchased at:

- ServiceOntario www.ServiceOntario.ca/publications
- ServiceOntario Contact Centre at 1-800-668-9938
- OMAFRA Regional Centres

The Ontario Apple Growers have obtained funding through the Farm Innovation Program to purchase a copy for their members. Attend one of the Spring Workshops to receive your copy (see article in this newsletter).

Announcements

Funding Opportunities

Be sure to review the updated Factsheet on Programs and Services for Ontario Farmers, by Rob Gamble: www.omafra.gov.on.ca/english/busdev/facts/09-053.pdf.

Here are some programs that might be opportunities for your business: www.ontario.ca/growingforward

1. Business Development for Farm Businesses

To help producers improve their business planning. Some have used this program to:

- Get a succession plan written down
- Improve record-keeping to better understand their business
- Learn more about direct marketing
- Determine if the commodity they are selling is the most profitable in their area.

The Business Development for Farm Businesses program incorporates self-assessment and action plan development with cost-share advisory services and skills development opportunities to help producers reach their farm business goals

More information: www.omafra.gov.on.ca/english/about/growingforward/busdev.htm

2. The 2010 Food Safety and Traceability Initiative (FSTI)

This program provides 50% reimbursement of eligible expenses up to a maximum of \$25,000 to:

- Implement written food safety programs.
- Implement a working traceability system.
- Assist in the purchase and installation of equipment that improves food safety or traceability.
- Train staff to increase the adoption of food safety and traceability.

Attend a workshop (if not already done) – list of sessions online with more to come

www.omafra.gov.on.ca/english/food/foodsafety/grants/infosessions.htm. Complete and submit the 2010-11 application form by email, fax, mail or personal delivery starting at 9:00 a.m., March 1, 2010, to 1 Stone Rd, Guelph. or OMAFRA regional offices.

More information: www.omafra.gov.on.ca/english/food/foodsafety/grants/fsti.htm . 1-888-479-3931 or FSTI.omafra@ontario.ca or fax: (519) 826-3398

3. Orchard and Vineyard Transition Program (OVTP)

An additional \$2 million from the Province is available to help grape, apple, and tender fruit producers with \$1,618.74 per acre toward their orchard or vineyard removal and disposal costs. Applications are being processed through Agricorp on

a first come, first served basis. Final application deadline is March 31, 2010 and removals must be completed by November 30, 2010.
More information: www.agricorp.com/en-ca/programs/ovtp/

Don't gamble with your water supply!

Are you irrigating on your farm? You must have a "Permit To Take Water" (PTTW) issued by the Ministry of the Environment to withdraw more than 50,000 litres of water in a day, from any water source (well, stream, lake, pond on your property or even a drainage ditch).

Attend an OMAFRA PTTW application workshop or get an application directly from the Ministry of the Environment (your local office or 1-800-265-7672 or www.ene.gov.on.ca/envision/water/pttw.htm). The OMAFRA workshop will take you through the application forms for both new and renewing applicants. Workshops are being planned across the province and are listed at www.omafra.gov.on.ca/english/engineer/facts/pttw_course.htm. Next workshop is 18th Feb in Bradford, and more are planned for Essex, Chatham/Kent this spring, and Vineland and Simcoe this fall. Please register by calling 1-877-424-1300.

The Ontario Fruit and Vegetable Growers Association with the Ontario Federation of Agriculture have a Surface Water Specialist who can assist you. on a fee for service basis (519-763-6160 or water@ofvga.org). For a list of other consultants offering PTTW services see www.omafra.gov.on.ca/english/engineer/consultants.htm.

Don't gamble with your water supply. Apply for your PTTW. Renew your existing PTTW before it expires. Register for a PTTW application workshop today.

International Fruit Tree Association Convention, Feb. 28-Mar. 3, Michigan

Since 1958, this organization has brought together information about dwarf fruit trees and intensive orchard management. In 2010, IFTA is returning to its roots with an annual convention in Grand Rapids, Michigan at the Amway Grand Plaza Hotel.

This year's convention includes:

- Plant Growth Regulator (PGR) Symposium, honouring Art Mitchell
- Orchard tour Tuesday afternoon, SW Michigan
- Technical sessions: rootstocks, cultivars, mechanization, pruning systems
- Speakers from Chile, New Zealand, Italy, Germany as well as United States and Canada
- Pre-conference workshop (optional), Sat. Feb. 27 – Apple and Cherry High Density Workshop
- Pre-conference Sweet Cherry High Tunnel Tour, Sun. Feb. 28
- Post-conference tour (optional), March 4-6, Traverse City area

Details and registration forms available at www.ifruittree.org.

Ontario Fruit and Vegetable Convention 2010

Where: Brock University, St. Catharines

When: February 24 and 25, 2010

How to register: forms in Fruit and Vegetable Magazine, at local OMAFRA Resource Centres, or online at New this year: on-line registration by credit card.

What to see:

Apple information: Apple Session (Feb. 25), Apple Scab Workshop (Feb. 24)

Commodity sessions: grapes, tender fruit, berries, apples, winery, vegetables.

New sessions: Farming in the Future, Efficiency on the Farm, Nematodes, Farming with high tunnels, On-Farm Food Safety, Organic Vegetables.

Feature speakers: Lori Colborne, marketing consultant and Tim Hudak, MPP

Poster session: research, extension and student competition

Workshop: Managing apple scab

Demonstrations:

- Spray Patternator and Crop Adjusted Spraying
- Look-a-Like Weeds
- On-Farm Biogas Production via Anaerobic Digestion
- Constructed Wetland - to return recycled water
- Post-Harvest Water Sanitation Options
- Advantage i-GAP - to improve food safety

Programs: Farmers' Markets Ontario, Ontario Farm Fresh Marketing Association. Ontario Berry Growers Association (Feb. 23)

Trade Show: Largest fruit and vegetable trade show in Canada

Food: An all Ontario produce lunch, "new improved" Munch & Mingle Wine Event

Apple Program: Ontario Fruit & Vegetable Convention 2010

Thursday, February 25, 2010

- 9:30 a.m. **Our Experience with "New" & "Old" Cultivars (Honeycrisp, Sweet Tango, Spy)** Larry Lutz, Scotian Gold Co-operative, Nova Scotia
- 10:00 a.m. **Trends in the Apple World**
Welcome Sauer, AgroFresh, Washington State
- 10:45 a.m. **Panel: Innovation on Ontario Apple Farms**
Planting Intensive Orchards, Dave Hutchinson, Global Fruit
Developing a Hard Cidery, Twin Pines Orchards, Mark & Mike Vansteenkiste
Labour Efficient Platforms – Maurice & Ingrid VandenBorre

Lunch & Trade Show

- 2:00 p.m. **Why are They Smiling? Consumer Trends in Apples**
Welcome Sauer, AgroFresh Inc., Washington State
- 2:30 p.m. **The History and Future of the Apple Industry in Nova Scotia**
Larry Lutz, Scotian Gold Co-operative, Nova Scotia
- 3:00 p.m. **Alternate Row Spraying: The Dilemma**
Dr. Jason Deveau, Application Technology, OMAFRA, Simcoe
- 3:30 p.m. **Managing Apple Scab in 2010**
Dr. Bill MacHardy, Professor Emeritus, University of New Hampshire

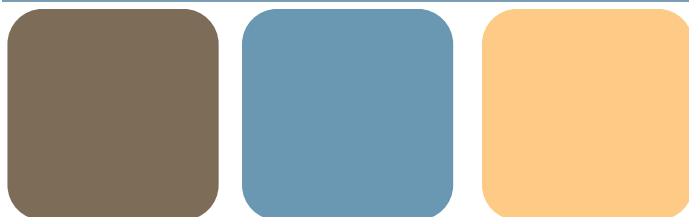
Apple Scab Workshop

Wednesday February 24, 2010

- 9:30 a.m. **Apple Scab: What happened in 2009**
Kathryn Carter and Margaret Appleby, OMAFRA
- 10:00 a.m. **Effective use of fungicides to manage apple scab**
Margaret Appleby and Kathryn Carter, OMAFRA
- 10:30 a.m. **Apple scab fungicide resistance in the northeastern United States: The situation across the border.**
Dr. Kerik Cox, Cornell University
- 11:15 a.m. **To spray or not to spray - Calculating infection periods**
Kathryn Carter, Margaret Appleby, Leslie Huffman, OMAFRA

Lunch break and Trade Show

- 2:00 p.m. **Reducing the inoculum in orchards: Sweeping the problem under the carpet: The ELIMINAE project**
Dr. Vincent Phillion, IRDA, QC
- 2:30 p.m. **Sanitation: a MUST program in high "scab-risk" orchards**
Dr. William MacHardy, Professor Emeritus University of New Hampshire
- 3:00 p.m. **National Apple Scab Strategy**
Shai Ben-Shalom, PMC
- 3:15 pm **Round table discussions: Managing scab in 2010 - where do we go from here?**
Moderator: Leslie Huffman, OMAFRA



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