Many growers have been planting new orchards this spring, which is optimistic for our industry. But buying and planting the trees is just the first step. The investment in a new orchard will approach $10,000 per acre to bring the planting into full production. So here’s a checklist to ensure that this investment pays off:

- Make a **map**. Include number of trees, cultivars, rootstock, source of trees and planting date. This information may be useful later for tree census, and if problems arise.
- Install the **support** system now. Research has shown that support (trellis, stakes, whatever) encourages the tree to direct energy to fruit buds rather than structural wood.
- Control **weeds** now. Research has shown that **any** weed growth in the first three months will reduce tree growth, and that yields from weedy trees will be reduced two years later. Concentrate your efforts (and money) from planting until July.
- Use **irrigation** or **mulch** to prevent water stress. Water stress can happen very early in the season, sometimes during May. This is especially important on sandier soils, but in most years and on most soils, additional water will be needed.
- Maintain good and balanced **fertility** levels. Use information from many sources, including preplant soil tests, leaf analysis, and evaluation of terminal growth.
- Manage **insects** and **diseases** to maximize growth. Weekly scouting is very important and can be done quickly. Refer to “Guidelines to Protect Non-Bearing Apple Plantings” on p. 64 of Publication 360.
- If **nematode** levels are high (as indicated by a test of moist, cool soils), see recommendations on p. 19 of Publication 360.
- **Avoid pruning** cuts where possible. Lateral branch removal is only recommended if one (or two) strong shoots are present. It is preferable to tie strong laterals below the horizontal to slow growth and encourage fruiting.
- If fruiting is expected in high density orchards, use a foliar **calcium** spray program to reduce bitter pit.

The biggest challenge is finding the time to do these tasks on a timely basis in the planting year, but doing it right will pay dividends for years to come.
Glyphosate Resistant Giant Ragweed Suspected in Ontario
Mike Cowbrough, Weed Management Field Crops Program Lead, OMAFRA

A giant ragweed population in Essex County, is the first suspected Canadian case of resistance to the popular herbicide glyphosate.

Preliminary testing at the University of Guelph has shown that the population is able to survive glyphosate rates that completely kill normal susceptible plants. These results represent a major problem for growers, as glyphosate has become a tool of choice for the control of this extremely competitive weed. The appearance of glyphosate resistant populations complicates management of this species.

Resistance evolves after a weed population has been subjected to intense selection pressure in the form of repeated use of a single herbicide. Where this population has been identified, glyphosate has been the main herbicide for over a decade. The herbicide controls all the susceptible weeds leaving only those that have a resistant gene to reproduce. Over time the uncontrolled weeds come to dominate the population. There are eight different weed species resistant to glyphosate in the United States and 15 species worldwide.

Control strategies for glyphosate resistant giant ragweed
Non-glyphosate products that have provided good control of giant ragweed in soybean and corn are shown in table 1. Dr. Francois Tardif and Dr. Peter Sikkema will be examining management options for glyphosate resistant giant ragweed.

If you suspect that you have a population of glyphosate resistant weeds notify our public weed researchers by going to http://www.ontarioweeds.com/weedID/add.php or phone 1-877-424-1300.

Table 1: Non-glyphosate herbicide options and their visual control of giant ragweed in soybean and corn based on field trials conducted by the University of Guelph (Ridgetown Campus) in 2007 and 2008.

<table>
<thead>
<tr>
<th>Soybean Herbicides</th>
<th>Control (%)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Rate (POST)</td>
<td>96</td>
<td>Resistant Populations Exist</td>
</tr>
<tr>
<td>First Rate (PRE)</td>
<td>94</td>
<td>Resistant Populations Exist</td>
</tr>
<tr>
<td>Broadstrike Dual Magnum (PRE)</td>
<td>85</td>
<td>Resistant Populations Exist</td>
</tr>
<tr>
<td>Reflex + Turbocharge (POST)</td>
<td>76</td>
<td></td>
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<tr>
<td>Cleansweep (POST)</td>
<td>76</td>
<td>Resistant Populations Exist</td>
</tr>
<tr>
<td>Pursuit (168 ml/ac – PRE)</td>
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<td>Resistant Populations Exist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corn Herbicides</th>
<th>Control (%)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marksman (1.8 L/ac, POST)</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>PeakPlus (POST)</td>
<td>81</td>
<td>Resistant Populations Exist</td>
</tr>
<tr>
<td>Aatrex 480 (1.25 L/ac, POST)</td>
<td>77</td>
<td>Variable control (i.e. 60-90%)</td>
</tr>
<tr>
<td>Distinct (POST)</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Callisto + Atrazine (POST)</td>
<td>76</td>
<td></td>
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</tbody>
</table>
Minor use label expansion granted for Kocide 2000 fungicide for suppression of seed-borne bacterial diseases on dry and succulent beans

The Pest Management Regulatory Agency (PMRA) recently announced the approval of a minor use label expansion for KOCIDE 2000 FUNGICIDE for suppression of seed-borne bacterial diseases including common blight, halo blight and brown spot on dry and succulent beans in Canada. KOCIDE 2000 FUNGICIDE was already labeled for management of several diseases of vegetables in Canada.

This will provide dry and succulent bean growers with a much needed disease management tool to help manage several of their most challenging disease problems. Seed-borne bacterial diseases have been a minor use priority for bean producers for many years in Canada. In 2004 this minor use project was initiated by the Agriculture and Agri-Food Canada, Pest Management Centre (AAFC-PMC) minor use program as a result of minor use priorities put forward by producers, Pulse Canada, processors, researchers and extension personnel.

The following is provided as a general outline only. Users should consult the complete label before using Kocide 2000 Fungicide.

Kocide 2000 Fungicide can be applied as a seed treatment prior to planting for suppression of seed-borne bacterial diseases of dry and succulent beans at a rate of 113 g product per 100 kg of seeds in 200 mL of warm water. Allow treated seed to dry before planting. Note that Kocide 2000 used as a seed treatment may cause some delay in seed germination.

Kocide 2000 fungicide should be used in an integrated pest management program and in rotation with other management strategies. Follow all other precautions and directions for use on the Kocide 2000 fungicide label.

This minor use label expansion was sponsored by AAFC-PMC in response to minor use priorities established by dry and succulent bean producers, processors, researchers and extension personnel in Canada.

Furthermore, we also wish to thank the personnel of E. I. du Pont Canada Co. for their support of this registration and the personnel of the Pest Management Regulatory Agency for evaluating and approving this important pest management tool.

For copies of the new minor use label contact Jim Chaput, OMAFRA, Guelph (519) 826-3539, Elaine Roddy, OMAFRA, Ridgetown (519) 674-1616, Brian Hall, OMAFRA, Stratford (519) 271-0083 or visit http://www2.dupont.com/Crop_Protection/en_CA/

Minor use label expansions granted for Dual Magnum and Dual II Magnum herbicides for control of weeds on red (garden) beets

The Pest Management Regulatory Agency (PMRA) recently announced the approval of minor use label expansions for DUAL MAGNUM and DUAL II MAGNUM herbicides (s-metolachlor) for control of weeds on red (garden) beets in Canada. Dual Magnum and Dual II Magnum herbicides were already labeled for use on a wide range of major and minor specialty crops in Canada and have a proven record of providing producers with effective weed management.

This minor use project sponsored by Minor Use office of OMAFRA was submitted in the December 2007 in response to minor use priorities identified by producers and extension personnel.

Weed management on red beets has been a high priority item for a number of years and the registration of Dual Magnum and Dual II Magnum herbicides will provide red beet producers with an effective and useful weed management tool.

ONE application per year of either Dual Magnum or Dual II Magnum herbicide can be applied pre-emergent to weeds and crop at 1.25 L product per ha. Apply using ground application equipment only in a minimum water volume of 150 L per ha. Do not use Dual Magnum or Dual II Magnum if the planting operation creates a furrow or trough over the seed row into which rain or irrigation water will collect and thus concentrate herbicide over the row. Consult the full minor use label for precautions and detailed use directions.
Dual Magnum and Dual II Magnum herbicides should be used in an integrated weed management program and in rotation with other management strategies. Follow all other precautions and directions for use on the Dual Magnum herbicide labels.

This minor use submission was sponsored by OMAFRA as a result of priorities established in consultation with producers. We also wish to thank the personnel of Syngenta Crop Protection Canada Inc. for their support of this registration and the personnel of the Pest Management Regulatory Agency for evaluating and approving this important pest management tool.

For copies of the new minor use labels contact Kristen Callow, OMAFRA, Ridgetown, Jim Chaput, OMAFRA, Guelph (519) 826-3539 or visit http://www.syngenta.ca

Minor Use Registration approved for SUDDEN OAK DEATH

The Pest Management Regulatory Agency (PMRA) recently announced the approval of a minor use registration for Subdue Maxx (metalaxyl-m) fungicide for suppression of Sudden Oak Death (Phytophthora ramorum) in Canada. This fungicide active ingredient was already registered in Canada for a range of other diseases on food and non-food crops. Subdue Maxx Fungicide was also the subject of an emergency use registration for Sudden Oak Death (SOD) in previous years.

Sudden Oak Death (SOD) poses a major threat to nursery crops and forests in Canada. If left uncontrolled, the industry and the environment could suffer severe losses. SOD has been identified in Europe, several western US states and British Columbia. Furthermore a wide host range has been identified and with the large scale movement of nursery stock across state and provincial borders, there is a need to have regulatory controls and disease management strategies in place if and when SOD is detected.

The following is provided as general information only. Users should consult the complete label before using SUBDUE MAXX fungicide.

SUBDUE MAXX fungicide can be used for suppression of sudden oak death as a foliar application on greenhouse container and field grown ornamental plants (including conifers) in nurseries and landscapes. For field grown ornamental plants mix 7.8 – 15.6 mL of product in 100 L of water and spray to runoff. For indoor and outdoor container grown ornamentals two use patterns are approved.

Drench at seeding: mix 24 mL with 1000 L of water and apply 5 L of solution per m².

Drench at transplanting: mix 40 mL with 1000 L of water and apply 5 L of solution per m².

Do not make more than 3 applications per year. Repeat if necessary at 2 – 3 month intervals, however Subdue Maxx should be used in a rotational program with other products labeled for SOD as a strategy for resistance management.

This fungicide is registered for suppression of sudden oak death caused by Phytophthora ramorum on those ornamentals deemed susceptible to this disease by the Canadian Food Inspection Agency (CFIA). For a complete list of the ornamental species, refer to the publication ‘List of Genera Regulated for Phytophthora ramorum (SOD), which is updated regularly. http://www.inspection.gc.ca/english/plaveg/protect/dir/sodspe.shtml

Follow all other precautions and directions for use on the SUBDUE MAXX fungicide label carefully.

SUBDUE MAXX fungicide should be used in an IPM program and in rotation with other management strategies to adequately manage resistance.

We wish to thank the British Columbia Ministry of Agriculture and Lands (BCMAL) for sponsoring this minor use label expansion. We also wish to thank Michael Celetti and Jennifer Llewellyn of OMAFRA as well as personnel of CFIA for their continued assistance in dealing with this new threat to our ornamentals industries. We also wish to thank Syngenta Crop Protection Canada Inc. for their support of this registration and the personnel of the Pest Management Regulatory Agency for evaluating and approving this important pest management tool.

For copies of the new minor use label contact Michael Celetti, OMAFRA Horticultural Plant Pathology Lead at Guelph (519) 824-4120 ext. 58910, Jennifer Llewellyn, OMAFRA Nursery Crops Specialist, Guelph, (519) 824-4120 ext. 52671 or visit Syngenta Crop Protection Canada’s website at www.syngenta.ca
Apples will be blooming shortly, and beekeepers will be delivering rental hives to orchards to complete this critical task. As you plan for pollination, here are some facts to consider:

- Larger apples result when pollen is sourced from more than 1 apple cultivar.
- A bloom requires 8 - 24 visits by pollinators.
- A well-designed orchard reduces the number of bee visits required.
- In higher density orchards, pollinators do not generally move more than 3 – 4 rows across the orchard.
- Pollen tends to travel only a few trees down the row.

Here are some tips for using honeybees effectively:

- Request that your beekeeper provide strong, healthy colonies. Weak colonies are of little value if cool temperatures prevail.
- 2 to 3 colonies of honeybees per hectare generally provide satisfactory pollination.
- Protect beehives from cold spring winds. Place the colonies in larger groupings in sunny, shelter locations. If a natural windbreak is not available, erect a temporary one eg. A wall of straw bales or orchard bins.
- Situate the colonies so that the morning sun warms the entrance.
- Provide fresh water especially if the bloom season is dry. Floating sticks in a shallow tub will allow bees to land without drowning.
- Watch for open water that is contaminated eg. puddles near your sprayer loading area.

Protect your bees from poisoning. It is an offence under the Bees Act to apply insecticides while fruit trees are in bloom.

Here are some other things to protect bees:

- Advise local beekeepers if insecticides will be applied (fields within 1 km of hives). Generally they will require a day’s notice to remove hives from danger.
- Do not spray insecticides on any flowering crop where bees are foraging.
- If sprays are needed in neighbouring fields, avoid daytime applications. Bees return to their hives in early evening, so spraying after 7 pm is the safest. Early morning would be the next choice, but should be completed by 7 am.
- Bees do not forage at temperatures below 13°C.
- Wet bags in the hive entrance will disrupt bee flights for up to 12 hours to provide time for the spray to dry. Leave a 1 inch space on each side of the hive for bees to exit to cool the hive.

- Be aware of cover crops in bloom or with blooming weeds– this is the most common source of bee poisonings when insecticides are applied.
- Avoid insecticide spray drift by avoiding windy days.
- Remove bees ASAP at the end of bloom before petal fall sprays are applied.
- Choose insecticides that are less toxic to bees. See Table 9-4, Relative Toxicity of Pesticides to Honey Bees on page 193, Publication 360. Fruit Production Recommendations. Here are the products most toxic to bees: Actara, Admire, Agri-Mek, Alias, Cygon, Decis, Diazinon, Entrust, Furadan, GF-120, Guthion, Imidan, Lagon, Lannate, Lorsban, Malathion, Matador, Nexter, Orthene, Pounce, Pyramite, Ripcord, Sevin, Success, Sniper, and Vydate.
Crop nutrition is never simple, but sometimes it gets cloudier still when the topic of micronutrients comes up. What should you know about micronutrients before you talk to the salespeople?

**Zinc**
- Availability is reduced at high soil pH levels, as zinc forms insoluble compounds in these conditions.
- Other areas likely to have zinc deficiency are sandy soils, eroded knolls where subsoil is exposed, organic (muck) soils.
- Unlikely to have zinc deficiency in fields that receive manure applications.
- Deficiency symptoms appear on new growth; include stunting, shortened internodes, discolouration of new leaves.
- There is an OMAFRA-accredited soil test for zinc, but when sampling, galvanized metal sampling equipment or pails must not be used. Plant analysis is also useful.
- Zinc deficiency is likely to be patchy, so sample problem areas and healthy areas separately and compare the results to help pinpoint the problem.
- OMAFRA-accredited zinc soil tests report a zinc index. This index considers soil available zinc and soil pH to make a more accurate determination of potential crop need for zinc.
- Corn, onions, spinach, and edible beans are the vegetable crops most likely to respond to zinc applications if analysis shows a need.
- Zinc fertilizer can be applied to the soil or the foliage.

**Manganese**
- Availability is reduced at high soil pH levels or high organic matter levels. Problems may also be seen in wet seasons.
- Deficiency symptoms generally begin on new leaves; include interveinal chlorosis. Eventually symptoms can extend to the rest of the plant.
- There is an OMAFRA-accredited soil test for manganese. Deficiency is likely to be patchy, so sample problem areas and healthy areas separately and compare the results to help pinpoint the problem.
- OMAFRA-accredited manganese soil tests report a manganese index. This index considers soil available manganese and soil pH to make a more accurate determination of potential crop need for manganese.
- Edible beans, cucumbers, lettuce, onions, peas, potatoes, radishes, red beets, spinach, sugar beets, and corn are the crops most likely to respond to manganese applications if analysis shows a need.
- Manganese fertilizer is most effective if applied foliarly. Apply as a foliar spray of manganese sulphate or chelate. Use a spreader sticker with manganese sulphate.
- Manganese toxicity can also occur, especially in waterlogged or poorly aerated conditions, or on sensitive crops such as cabbage or Delicious apples, if the soil pH is 5.0 or less.

**Boron**
- Boron deficiencies are more likely with sensitive crops, in dry conditions, high (over 7) or low (under 5) pH soils, low organic matter soils, areas where subsoil is exposed.
- Reliable soil tests have not been developed for boron. Tissue analysis comparing problem areas to healthy areas may help diagnose the problem.
- Many crops will experience boron toxicity if boron was applied in excess to other crops in the rotation. Avoid banding boron.
- Broccoli, cauliflower, celery, and red beets are the vegetable crops most likely to respond to boron applications.
- Boron can be applied to the soil or the foliage.

**Copper**
- There is no reliable soil test for copper in Ontario conditions. If a problem is suspected, tissue analysis comparing poor and healthy areas of the field may assist in diagnosis.
- Copper deficiency is most likely to occur in organic (muck) soils or on very sandy soils. Copper is less available as soil pH increases.
- Vegetable crops most likely to respond to copper, if analysis shows a need, include lettuce, onions, red beets, spinach, and tomatoes.

**Molybdenum**
- There is no reliable soil test for molybdenum in Ontario conditions.
- As soil pH levels increase, molybdenum availability increases. Phosphorus enhances molybdenum absorption. Deficiencies are most likely when soils are dry.
- Broccoli, cauliflower, lettuce, onions, red beets, and spinach are the crops most likely to respond to molybdenum applications if tissue/foliar analysis shows a need.
- Keeping soil pH within crop-optimal levels should address any concerns with molybdenum.

**Iron**
- Iron deficiency may become a problem in high pH soils.
- Symptoms are interveinal chlorosis of new leaves.
- Currently there is no accredited soil test for iron in Ontario. Confirm a suspected deficiency with a foliar analysis.
- Iron chelates can be applied as foliar sprays. Generally, soil applications of inorganic iron sources are not effective in supplying iron to the crop.
General Considerations
Applying micronutrients in excess can cause more damage than from deficiencies. Starter fertilizers containing micronutrients will be more likely to cause toxic effects than the same fertilizers without micronutrients.

Micronutrients are often considered “cheap insurance” in case of “hidden hunger”, however the cost can be substantial. Find a way to do a test strip so you can see if you get a benefit (or injury). Remember, the fertilizer salesperson will always get a benefit from micronutrients, but will you?

For more information about micronutrients get your copy of OMAFRA Publication 611 Soil Fertility Handbook and Best Management Practices: Managing Crop Nutrients by visiting Service Ontario Publications at www.publications.serviceontario.ca or the OMAFRA office nearest you.

Management Tips for Black Rot Canker in Apples
Michael Celetti, Plant Pathologist, Horticulture Crops Program Lead

Black rot is probably widely spread and more common in Ontario apple orchards than growers think. The fungal pathogen Botryosphaera obtusa can infect limbs, trunks, leaves and fruit. Apple trees that were hit with hail last year should be carefully monitored for cankers this spring. Wounds caused by hail, winter injury, mechanical injury, insects or other diseases provide an entrance for the black rot fungus to infect and colonize. Depending upon when the hail or other injury occurred last season and how severe it was, growers may not have recognized the early symptoms of black rot cankers that may have entered wounded limbs or trunks.

Early symptoms of black rot cankers on limbs and trunks are subtle. They first appear as reddish or purplish, brown slightly sunken areas under the bark (Figure 1). Although the sunken areas often remain small and superficial, some can enlarge up to half a meter in length under the bark. Regardless, as the cankers age by the second year, the infected bark dies and peels away from the sunken area exposing black diseased wood underneath (Figure 2).

The severity of damage to the trees due to black rot cankers varies depending on the location of the canker in the tree. Cankers on limbs can cause the entire limb to die back or they can weaken limbs to the point of breaking under heavy fruit loads or during a wind storm. Infections on the main trunk (particularly on young trees), can eventually girdle the tree, resulting in premature death (Figure 3).
The black rot fungus can overwinter in cankers on both live and dead trees and in mummified fruit left in apple trees from the previous year. Mummified fruit left in trees should be removed whenever found in a tree but particularly during dormant season pruning when they can be seen more easily. Pruning out diseased and cankered limbs and dead wood during the dormant season is an important practice to reduce the inoculum sources. Cankers may also be surgically removed from trees if feasible and or practical. It is important to remove the infected prunings or wood from the orchard since the black rot fungus can survive on dead wood. Burning or chopping up the prunings on the orchard floor with a flail mower should reduce inoculum levels. It is not a good idea to stack wood in piles near orchards either since they can become colonized and act as a source of inoculum.

Since many hardwood tree species are potential hosts of the black rot fungus, attempts should be made to scout surrounding woodlots and identify hardwood trees infected with the disease. If possible and feasible, the infected trees should be removed to decrease potential disease pressure in the future.

There are no apple cultivars that are completely resistant to black rot; however some cultivars are less susceptible to limb cankers than others. Rootstocks can also impart a certain amount of tolerance to this disease, so selecting cultivars that are less susceptible to black rot cankers on tolerant rootstocks will help to reduce yield losses. If a new orchard is being planted near a woodlot, special care should be made to plant least susceptible cultivars on tolerant root stocks closest to the woodlot to reduce the impact of disease moving from the woodlot into the orchard. An application with a fungicide such as Captan or Maestro for summer disease control immediately after a traumatic event occurs in the orchard, such as hail, will help protect the wounds on limbs from being colonized by the black rot fungus and reduce cankers from developing.

SOIL & WATER MANAGEMENT WORKSHOP
June 23, 2009 - Niagara-on-the-Lake
June 24, 2009 - West Niagara
9:00 a.m. - 3:45 p.m.

Getting to the root of the problem!  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 water and texture
- soil moisture monitoring
- soil structure and compaction
- ponds and drainage
- soil management influences on root systems
- irrigation
- soil life and nutrient cycling

The morning program will focus on the above topics. The afternoon will look more closely at assessing soil quality and diagnosing problems in field. The workshop is a hands-on and in field exploration of soil management issues.

Cost: $60  (includes: lunch, refreshments, reference materials)

*A confirmation letter and a map to the fields will be sent by email/fax to all registrants.
*Dress appropriately – i.e.: work boots, hat, bug spray & sunscreen.
*Bring your own – knife or soil trowel

For more information: Contact the Vineland OMAFRA Resource Centre at 905-562-1631 or visit the OMAFRA website at: http://www.omafra.gov.on.ca/english/crops/conferences/20090623.htm for the registration information
Defining degrees of control on pesticide labels

Wendy McFadden-Smith, Tender Fruit and Grape IPM Specialist

Before a crop protection product company submits a product for registration, many trials must be conducted to determine human toxicity, environmental impact and potential injury to plants. In the U.S., crop protection products are submitted for registration without a review of efficacy data, whereas Canada requires data to support the level of control (efficacy) a product has against a specific pest on a specific host. The product is generally tested at the proposed label rate and twice, half and possibly one quarter the label rate to determine the lowest rate at which the product is effective. The amount of pest activity (insect feeding, disease development, weed survival) in these treatments is rated relative to untreated control plots. This information is then used to develop the label. A set of terms have been developed to describe the degree of control that a product provides:

Control
- A consistent level of pest management, as defined by commercial standards and expectations in the market, when compared to untreated control plots. In general, pest control ratings would range between 85% - 100%.

Suppression
- A consistent level of pest management that is less than full control, as defined by commercial standards and expectations in the market, when compared to untreated control plots. In general, pest control ratings would range between 65% - 85%.

Reduction in damage from /partial suppression
- A level of pest management that is less than suppression, as defined by the commercial standards and expectations in the market. This label claim will be considered for non-conventional pesticides. This claim may also be considered for conventional pesticides following discussions with PMRA on a case-by-case basis. In general, pest control ratings would range between 30% - 65%. This degree of control would be more of an incidental activity of the product against pests other than the main one(s) on the label.

Many of the newer, “softer” pest control products do not give the immediate “knock down” that older products did. You will notice the term “suppression” on some of the labels of these newer products. Under severe pest pressure, these products are not likely to give acceptable commercial control. However, under trace to moderate pressure, when used in rotation with more effective products, they may provide satisfactory control when used with other control methods in an IPM program.

NEW! Interactive online IPM training

OMAFRA has introduced a new training tool for growers and ag personnel working in vegetable and small fruit crops. Ontario CropIPM - Integrated Pest Management Training is available both online (www.ontario.ca/cropIPM) and on CD.

Ontario CropIPM includes modules for tomatoes and peppers, as well as brassicas, cucurbits, strawberries, and sweet corn. There is no charge to use the online version, at www.ontario.ca/cropIPM. A CD version is also available. The CD can be ordered online at www.serviceontario.ca/publications or by phone at 1-800-668-9938 ($10 + tax, order # AF141).