

# O R G A N I C G A R D E N I N G T I P S

- ✦ **Make raised beds to improve your soils drainage, and to help the soil to defrost faster in the spring.**
- ✦ **Add harvested plants and compost in the fall to add nutrients, improve soil texture and retain water.**
- ✦ **Pests will be deterred by companion plants such as marigolds and by planting a variety of plants - this method confuses**
- ✦ **Get the most sunshine by planting rows running north and south.**
- ✦ **Adding mulch on top of your soil will reduce weeds and assist to retain water for the roots.**
- ✦ **Watch out for plant stress, such as wilting - and remember to remove the three D's: Dead, Diseased, and Damaged plants.**
- ✦ **Try natural bug control instead of pesticides.  
Bug juice- mix 1 tsp of baking soda, 1 cup of oil, and 1 cup of water. Mix the soap and oil together first, and then mix that together into the water. Spray plants to reduce a variety of insects.**
- ✦ **Harvest your garden in the fall and cut back perennial plants. and get your garden ready for the following spring by cutting back stocks. Compost the remains. Don't forget to can, freeze and**
- ✦ **Take pictures of your garden and keep a journal of the most successful varieties that you plant. Save seeds for the next year!**



The Foodshed Project  
c/o Social Planning Council  
30 Ste. Anne Road, Unit 119  
Sudbury, ON P3C 5E1  
Phone: (705) 675-3894  
Fax: (705) 675-3253

# IPM Integrated Pest Management

Integrated pest management (IPM) is a systematic "toolbox" approach to reducing insect populations to an acceptable level. IPM first applies prevention principles such as genetic, biological, and cultural controls. Chemical controls are applied only as a last resort. Always use pesticides - herbicides, fungicides, insecticides - with caution. Follow the dilution instructions on the label. Dispose of unused quantities and empty containers at the HHW depot.

Vigilant lawn and garden cultural practices will prevent most problems...

- Prevention first
- ✓ Avoid watering in late evening - this can contribute to fungi growth
  - ✓ Ensure proper air circulation around plants
  - ✓ Do not plant in the drip zone of nearby trees
  - ✓ Avoid monoculture - biodiversify your garden - add a variety and mix of plants
  - ✓ Keep your lawn thick (overseed in spring) to outcompete weed
  - ✓ Plant a mix of hardy varieties designed for your growing seasons
  - ✓ Encourage healthy soil - add compost to increase organic matter and to encourage earthworms (which breakdown thatch)
  - ✓ Recycle grass clippings - leave grass 3 inches high - don't cut more than 1/3 of the grass height in one cutting
  - ✓ Encourage deep roots by watering deeply once per week (1 inch / week)

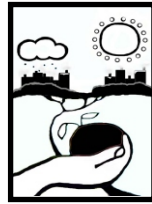
Prevention and monitoring go hand in hand...

- Monitoring
- ✓ Watch for plant stress caused by inadequate moisture, sunlight, and nutrients
  - ✓ Identify problems early - spot treat with natural products (insecticidal soaps) first
  - ✓ Know the tolerance threshold - the point at which you have to take action
  - ✓ Correct for drainage problems, thatch build-up and compaction on your lawn

Use biological methods to reduce pest infestations...

- Natural remedies
- ✓ Remove diseased plants and try to spray bugs off with water
  - ✓ Deter pests by changing environmental conditions
  - ✓ Apply remedies in a timely fashion - when plant reserves are lowest
  - ✓ Know what insects are beneficial, and which are natural predators
  - ✓ Provide habitat for the beneficial insects and animals (lady bugs, birds, bats, toads, spiders, praying mantises) by naturalizing part of your lawn
  - ✓ Plant grass species that contain endophytes - a natural fungi pest repellent
  - ✓ Top dress your lawn with compost - this will decompose thatch, and add nutrients

# IPM Integrated Pest Management



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Use organic pesticides initially, such as...

- Safer products
- ✓ Diatomaceous earth - kills after being ingested by insects
  - ✓ Baking soda - fungicide
  - ✓ Pyrethrins - a natural derivative of the daisy - can be toxic if overused
  - ✓ Insecticidal soap - it kills on contact
  - ✓ Horticultural oils - suffocates insects
  - ✓ Corn gluten - pre-emergence control for weeds
  - ✓ Onion spray - non-toxic fumigant for aphids, ants, termites

If you have to use a pesticide...

- Use with caution
- ✓ Properly identify what you are trying to control - use the internet or local gardening centres to identify pests and diseases
  - ✓ Use a mild or natural pesticide first - spot treat -, and graduate to more extensive treatment only if necessary
  - ✓ Always read the label, and follow the instructions carefully.
  - ✓ Do not spray on a windy day, or before or after a major rain event.
  - ✓ Do not get pesticide residue on your clothes
  - ✓ Wash your hands immediately after use - and then take a shower
  - ✓ Never leave pesticides in an unlabeled container, and keep containers away from children and pets

What you should know about pesticides...

- Your right to know
- ✓ All pesticides are registered under the Pesticide Control Products Act
  - ✓ Do not leave the container unattended, and dispose of it at the HHW depot
  - ✓ Always store pesticides in a secure, ventilated room - away from food or drink products
  - ✓ A Material Information Data Sheet (MSDS) is available from the manufacturer
  - ✓ Any commercial pesticide spraying must be conducted by a registered technician - and a sign must be posted for 48 hours after
  - ✓ MOEE internet site: <http://www.ene.gov.on.ca>
  - ✓ Federal internet site: <http://www.hc-sc.gc.ca/pmra-arla/>

If you suspect that you have been poisoned...

- Poisoning
- ✓ Seek medical help if your health changes after using a pesticide
  - ✓ Contact the Poison Control Centre at 1-800-267-1373 (Toronto)
  - ✓ Symptoms of poisoning include headache, nausea, dizziness, shortness of breath, vomiting
  - ✓ Identify the pesticide with the PCP number for accurate identification

# Organic or Chemical Fertilizers

*...is there a difference?*

<b>ORGANIC</b>	<p>Contain carbon - may be natural or man-made.</p> <p>Examples include bonemeal, fish emulsion, and processed animal or vegetable by-products. Also includes rock powders.</p> <p>Slow acting - relies on micro organisms to break them down before they can enter the plant.</p> <p>Will build soil health, thus reducing the need for fertilizers over time.</p>	<p>Man-made products containing no organic elements.</p> <p>Highly water soluble, thus releasing nutrients quickly into the plant, and leaching through the soil rapidly. May contaminate groundwater.</p> <p>No value as a soil amendment</p> <p>Use of chemical fertilizers and pesticides result in "dead" soil that requires an increasing amount of chemicals to maintain growth.</p>	<b>CHEMICAL</b>
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## Types of Organic Fertilizers

Fertilizer	Nutrient Value	Comments
Blood Meal	12-1-1	Also often used to deter animals, such as deer
Bone Meal	3-18-0	Available steamed, or raw, steamed less likely to burn
Chicken manure	6-4-3 (dry) 1.5-1-0 (wet)	Use carefully to avoid burning. Helps retain moisture in sandy soils.
Fish emulsion	5-2-2	Fast acting, needs frequent re-application.
Fish Meal	8-4-0	Especially helpful to root vegetables.
Rock Phosphate	0-25-0	Mix into soil at planting time to activate roots.
Sawdust	4-2-4	Use to loosen clay, or as mulch. Mix with high N fertilizer for quicker breakdown.
Seaweed	2-1-3	Fast-acting. Also encourages beneficial organisms.
Manure (cow, steer, or horse)	0.5-0.3-0.5	Use only aged manure - may contain weed seeds.
Wood Ashes	0-2-6	Fast-acting. Do not use around young seedlings.