Natural Insect Pest Management for Your Lawn and Garden

There are many things that home owners can do to reduce pest populations on their properties. By following some simple guidelines, anyone can reduce problem insect populations below levels where they cause noticeable damage.

Step 1. IDENTIFY THE PEST!

MAKE SURE THAT IT IS AN INSECT THAT HAS CAUSED THE PROBLEM. MANY DIFFERENT ORGANISMS MAY CAUSE DAMAGE ON PLANTS, HOWEVER:

- Insects often remain on the damaged plants
  - Adult insects *may* possess wings
  - Most insects possess 3 pair of legs (They may appear to have more)

- Insects 'make a mess'.
  They may:
  - -chew plant tissues, leaving holes or tunnels
  - - leave droppings (frass)
  - - produce 'sucking damage'
  - - produce honeydew (which may lead to sooty mould)
  - - produce webbing
  - - produce galls

YOU MAY NEED TO COLLECT A SPECIMEN (INSECTS AND/OR DAMAGED PLANT MATERIAL), AND TAKE IT TO YOUR LOCAL GARDEN CENTRE, OR TO A MASTER GARDENER, TO BE POSITIVELY IDENTIFIED.

Once the pest is identified.....

Step 2. LEARN THE LIFE CYCLE, AND THEN BREAK IT!

- When and where do you expect the pest to occur?

  - Which season of the year?
  - What are their host plants?

LOOK FOR THE PEST AND TAKE MANAGEMENT ACTION BEFORE IT HAS A CHANCE TO REPRODUCE AND SPREAD TO OTHER PLANTS.

REMOVE PREFERRED HOST PLANTS IF PRACTICAL.

- When are pests most susceptible to management actions?

TARGET THE STAGE THAT IS EASIEST TO MANAGE

- Where and how does the pest spend the winter?
  - In the soil?
  - On bark?
  - In dead leaves?

REMOVE THE OVERWINTERING PEST DURING GARDEN CLEAN UP!

MAKE YOUR GARDEN LESS HOSPITABLE BY REMOVING OR DAMAGING OVERWINTERING SITES.

Step 3. TAKE APPROPRIATE ACTION

- Prune out and destroy infested plant material

- Hand pick larger insects from infested plants and drown them in soapy water

- Use traps to catch pests (E.g. sticky bands, earwig traps, slug traps etc.)

- Apply registered products according to label directions (Note: while these products produce little environmental damage, they can be non selective, and will affect all organisms that are exposed to them)

  Apply dormant oil to branches of woody plants, when a susceptible stage spends the winter there.

  Spray Insecticidal Soap on exposed, soft bodied insects or earwigs.

  Use biological insecticides
  - *Bacillus thuringiensis (B.t)* - to kill larvae of moths

  Use organically derived pesticides.
  - Rotenone
  - Pyrethrum

  Apply diatomaceous earth where insects will crawl through it.

- Use biological controls.

  -Apply parasitic nematodes
  -Recognize and encourage predators and parasites on your property.

  Common beneficials in the Ottawa area include:

  - Ladybird beetles
  - Ground beetles
  - Rove Beetles
  - Tiger Beetles
  - Parasitic Wasps
  - Syrphid fly larvae
  - Parasitic Flies
  - Lacewing and Antlion larvae

Step 4. Prevent the Problem in the first place

- Insects are less likely to infest healthy plants, and vigorous plants are able to tolerate some pest damage.

  - Ensure that plants receive adequate light and moisture.

  - Ensure that plants receive adequate (not excessive) nutrients.

  - Maintain proper soil pH and tilth.

  - Provide winter protection where necessary.

  - Practice proper garden sanitation

- Select plants for your yard which have few pest problems.

  * Plants such as Roses, Lilies, *Viburnum*, Birch, Elm, etc. are known to have many troublesome insect pests. Choose alternatives or expect to do more work maintaining them to avoid infestations

- Select resistant varieties