

Three IPM Approaches

BIOLOGICAL CONTROL is the use of naturally occurring predators, parasites and pathogens to manage pests. In IPM, for example, lady beetles are used to control aphid populations.

CULTURAL CONTROL involves selecting resistant plant varieties, growing plants in the proper conditions, and maintaining plants through proper irrigation and pruning practices. A healthy plant is more resistant to insect and disease attack in much the same way that a healthy person is more resistant to sickness.

CHEMICAL CONTROL is the use of commercially available pesticides to protect plant material.

Why Practice IPM

Through IPM, the use of chemical pesticides is greatly reduced. The use of pesticides is a last resort, taking care to adopt cultural and biological controls first.

When pesticide use on lawns, flower beds, and gardens is reduced, the number of beneficial organisms in the soil and environment increases.

BENEFICIAL INSECT	TARGET PEST
Ladybugs	aphids, ealybugs , white
Lacewigs	aphids, mites, lace bugs
Hoverflies	aphid, adelgid
Ground beetles	gypsy moth caterpillars
Parasitic wasps	aphids, caterpillars, cicadas, lace bugs, scale insects, whiteflies, sawfly larvae, ants, leafminers
Nematode	grubs, Japanese beetle

Lawn to Lake is a collaborative program to protect water resources in the Great Lakes region by promoting healthy lawn and landscape practices. With funding from the U.S. EPA Great Lakes Restoration Initiative, partners are coordinating a pollution prevention campaign addressing the needs of those responsible for lawn and landscape care in the Southern Lake Michigan basin. Collaborating partners include Illinois-Indiana Sea Grant, Lake Champlain Sea Grant, Safer Pest Control Project, and University of Illinois Extension.



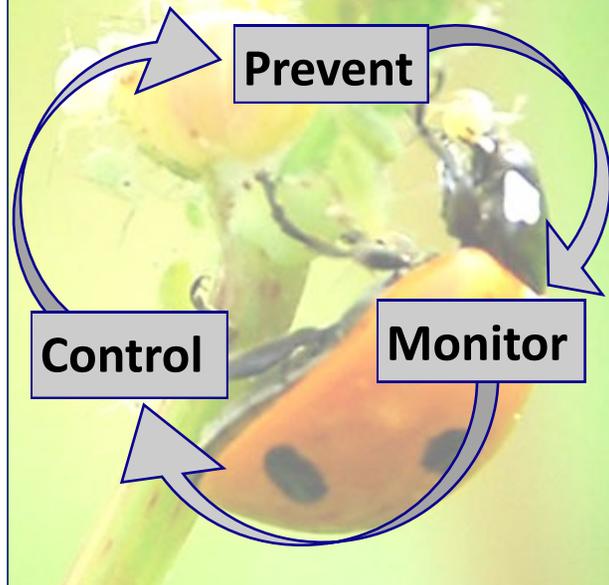
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LAWN TO LAKE

Integrated Pest Management (IPM)



IPM is a process that uses biological, cultural, and chemical practices to manage pest problems in a way that minimizes chemical use that can pose risks to human health and the environment.

Pest Management Tips

Get to know your pests

Every one to two weeks, take a walk around your lawn or garden. This will help identify pest problems before they get out of control.

- ◆ Early identification can eliminate the costs and hazards of using chemical pesticides.
- ◆ Proper identification will determine if the pest is a beneficial insect or an undesirable insect, what biological controls (predators of pests) may be effectively used, and at what point in the life cycle of the insect the proper control is most effective.



Keep plants healthy—take a soil test

Stressed plants are more susceptible to pest and disease damage. Proper watering, soil preparation, mowing and pruning are essential for optimal plant health.

- ◆ Get a soil test in May each year.
- ◆ Purchase disease resistant plant varieties.

Don't allow pests to become established

- ◆ Inspect plants before purchasing to ensure they are pest and disease free.
- ◆ Clean up around the garden and yard. Many pests survive through winter among weeds and plant debris. Remove any leaves, weeds, and decaying plant material.

Manage for beneficial organisms

Limit use of pesticides, herbicides, and fungicides. This helps maintain the population of beneficial organisms in the soil.

- ◆ Grow a wide variety of plant materials in the landscape to provide alternate food sources for beneficial insects.
- ◆ Using biological controls reduces the amount of pesticides applied while maintaining a healthy landscape.

Chemicals as a last resort



- ◆ Apply pesticides directly on target to minimize drift and runoff.
- ◆ Avoid applying pesticides before rain or during windy conditions.
- ◆ Don't apply pesticides within five feet of paved surfaces or near standing or running water.
- ◆ Sweep paved areas after application and safely dispose of plant debris.
- ◆ Use the least number of pesticide applications possible.
- ◆ Use insecticidal soaps or horticultural oils rather than chemical pesticides whenever possible.
- ◆ Treat only infested plants, using the lowest application rate possible.
- ◆ When cleaning equipment, keep the rinse water on the lawn, not on paved surfaces or down storm drains.