

INTEGRATED PEST MANAGEMENT

1. Integrated pest management or IPM means using a combination of strategies to control pests (insects, weeds, bacterial and fungal diseases).

2. Monitoring is the first step in using an IPM approach.
 - A. Visually inspect plants for insects, mites, or diseases.
 - B. Look for holes in leaves or trails on leaves or plants.
 - C. Be sure to check the underside of leaves.
 - D. Inspect the soil.
 - E. Use sticky cards to catch insects so you know what kind you are dealing with.
 - F. Identify the pest so you can find the best control for it.

3. Then use a combination of the following management practices to control pests.
 - A. Cultural management – prevent pest problems
 1. Maintain plant health through proper watering, fertilizing, and mulching.
 - a. Too much water can cause root rot and breed diseases.
 - b. Too little water causes the plant to become stressed.
 - c. Too much fertilizer burns plants and can provide food for some diseases.
 2. Use plants that are resistant to pests.
 3. Remove plant debris which can hide insects and diseases. Many insects and diseases overwinter in plant debris
 4. Prune the dead, diseased, and dying plant parts to remove insects, diseases, and to prevent spreading.
 5. Manage weeds (which can crowd out healthy plants) by hand-pulling or hoeing.
 6. Use mulch to keep out weeds and retain moisture.
 7. Rotate crops.
 - B. Physical management – environmentally sound strategies to rapidly remove or kill pests
 1. Pull and hoe weeds.
 2. Step on slugs or beetles, pick off worms, wash aphids or mites from plants.
 3. Use a barrier of tin cans or strips of cardboard to keep worms out.
 4. Prune out infected branches.
 5. Use animal friendly traps.
 - C. Biological management – uses living organisms to control pests
 1. Some insects (praying mantis, spiders) eat insects.
 2. Some flowers planted around a garden may repel pests.
 3. Animal urine poured around a garden may repel pests.

D. Chemical management – the use of pesticides (insecticides, herbicides, fungicides, bactericides) to control weeds, insects, fungus, bacteria.

1. Pesticides, both organic and man-made, can be purchased at nurseries, garden centers, or big box stores.
2. Organic pesticides use soaps and oils to control pests. (example: neem oil)
3. Contact pesticides use chemicals to kill pests on physical contact (example: Raid), but to be effective must repeat spraying.
4. Systemic pesticides use chemicals that are applied to leaves, stems, or roots
 - a. These are taken up by the plant, move through the plant and kill it. (example: Round-Up)
 - b. They take longer to work, but the effects last longer.
5. Always read the directions before applying pesticides, and follow directions exactly because they can be harmful to wildlife, pets, and people.

Sources:

1. University of Illinois Extension websites

<http://web.extension.uiuc.edu/state/hort.html>

<http://web.extension.illinois.edu/vegguide/growing.cfm>

2. University of Illinois Extension Master Gardener Manual