

Integrated Pest Management (IPM)

Using non-toxic methods to manage lawn, garden, and household pests is ideal, but sometimes a pest problem needs more drastic measures. “Integrated Pest Management” or IPM is the new term describing a multi-step approach that does not resort to chemical pesticides until all else has failed.

An Ounce of Prevention: the First Step

As a first line of pest control, IPM programs work to prevent pests from becoming a threat. In home vegetable and flower gardens, the following control methods can be very effective and cost-efficient and present little to no risk to people or the environment.

1. Rotate different crops, select pest-resistant varieties, and plant pest-free rootstock.
2. Use mulch to reduce weed growth.
3. Remove diseased plants.
4. Use compost and organic fertilizers to grow strong plants which can resist disease.

For lawns, home gardeners should:

1. Mow at least 3” high to shade out crabgrass.
2. Apply lime and organic fertilizer to enable the grass to compete well against the weeds.
3. Use a mulching mower to increase soil nutrients by 30%.
4. When reseeding, use tall fescue blends, such as “Pearl’s Premium”, which are drought resistant.

Biological Controls: Humans, insects, and bats, oh my!

Humans as predators: Good old hands-on work is very effective on some common pests. For example, a long handled weed-popper makes pulling up dandelions less work. Your crop of dandelions will decrease by 50% per year when pulled before the flowers go to seed. Some weeds—minus their seeds--can be added to your compost pile to recycle nutrients.

Gardening Supply houses make natural predators available. Here are a few examples of natural predators you can purchase to get rid of pests using nature’s own controls:

1. Lady bugs eat aphids.
2. Pheromones attract unwanted insects into special traps.
3. Products containing *Bacillus thuringiensis* bacteria have been formulated to kill leaf-eating insects but are considered safe to humans.
4. Milky Spore powder will naturally kill lawn grubs.
5. A bat house on your property will encourage bats to control flying insects.
6. Fragrant products like citronella will repel mosquitoes.

Organic Chemicals—a Less Toxic Approach

The IPM approach asks you to use organic chemical treatments only in the specific areas where they are needed and to use targeted rather than broad-spectrum treatments. If white vinegar will kill the weeds on your patio, you remove any toxicity to your family and pets. If Terro Ant Bait Liquid allows ants to take borax back to their nest and die there, you won’t need to spray insecticide inside your house. Try organic pesticides such as permethrin, spinosad, or horticultural oil before treating with inorganic pesticides which may have greater toxicity.

Inorganic Chemical Controls: The Last Resort

If you decide you must use chemical controls, educate yourself before you use them. The EPA website <http://www.epa.gov/pesticides/health/safely.htm> contains common sense information and a huge database of information on specific products including 170,000 product labels. Read the complete label

before using pesticides. The basic precautions listed below suggest how potent and destructive such chemicals can be:

1. Keep children and pets out of the treated area until it has dried or follow label warnings.
2. If you hire a service, ask them to display a warning when treatments have been made.
3. Store chemicals in a cool, dry place out of the reach of children.
4. Keep pesticides in their original container.
5. Dispose of containers properly, using Hazardous Waste disposal if necessary.
6. Wear protective clothing and eyewear.
7. Avoid spraying on windy days.
8. Use a cardboard or plastic barrier behind the area you are spraying to minimize damage to your desirable plants.
9. Have phone numbers available for emergencies. Poison Control Center: 1-800-222-1222 Nation Pesticide Info Center: 1-800-858-7378.

My Evolution as a Gardener

When we built a house in Lincoln 35 years ago, we put in a garden and a dozen fruit trees. We used sprays on the fruit trees and insecticide dust on the veggies for a few years. By 1989, the fungicide Captan was banned. Rather than growing scabby fruit, we got out the chain saw and cut down all the fruit trees. In 1994, Captan was reclassified and is still used commercially on 28 fruit and vegetable crops including strawberries. We are aware that pesticide residues are still in the conventional fruits and vegetables in the store, but now we are not risking the weekly exposure that handling the powder and liquid applications could cause. I now buy organic apples, or peel them to reduce toxicity.

Years ago we began using the lawn products that combine fertilizer and herbicides or grub killers. Now that we have grandchildren visiting, we have gone to IPM methods. Organic soil amendments have replaced inorganic (chemical) ones. Milky spore powder and beneficial nematode treatments have replaced grub killer. It only took ½ hour to pull up last spring's dandelion crop.

I recommend you educate yourself and make decisions on your exposure to household and yard chemicals. Ask yourself how important it is to have a 'perfect', pest free lawn or garden. We all have learned about the hazards of cigarette smoke, but we have a long way to go to understand other hazardous chemicals which can lead to cancer, neurological disorders, and birth defects. For more information on IPM go to: <http://www.epa.gov/pesticides/factsheets/ipm.htm>

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