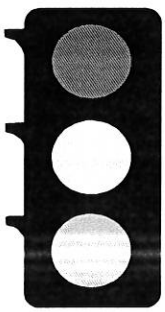
DON'T BE A NOZZLEHEAD!

THINK BEFORE YOU SPRAY

BASIC IPM PRINCIPLES

Integrated Pest Management (IPM)



- ***Do you have ants on the kitchen counter?***
- ***Aphids on the roses?***
- ***Some kind of insects on your prize dahlias?***

If your first thought is to reach into the back of the closet for the can of insect killer or get the sprayer out of the garage and fill it with pesticide and wage war against these pests–

STOP!

Maybe you should consider another traffic signal–the common traffic light. **Red–Stop–** don't do anything yet. **Yellow–Caution–**think about the consequences (good and bad) of applying a pesticide. **Green–Proceed–**but in an orderly fashion. What (exactly) are the insects? Monitor the insects and see what they are doing. Are they causing significant damage? Are there alternatives to applying a pesticide that may be safer for the environment, for you, your children? Could they be just as effective as a spray? Congratulations! You have, in a simple way, just followed the principles of Integrated Pest Management (IPM) to help you make educated, environmentally friendly decisions.

Integrated Pest Management (IPM) may sound like a fancy, hard to understand system. It is not. IPM is a simple, practical and flexible way to help manage pests in the home or when they attack plants. It involves the use of a blend of pest management tactics to protect the home and landscape against insects, mites, plant diseases, nematodes and weeds. People who practice IPM monitor their plants and homes and integrate cultural, biological, mechanical and chemical techniques to suppress pests. Think about going to the doctor. Your doctor uses a form of IPM on you. Information is gathered about history, signs and symptoms. Tests may be performed. Only after a diagnosis is made are treatment options considered.

Basic IPM Principles

Identification and Diagnosis of the Pest

The first step in pest control is accurate identification. It is necessary to understand the biology of a pest and its interactions with other organisms and its environment. Early, accurate identification and diagnosis are essential to a successful IPM program. Any and all management decisions must be based on proper identification of the pest (insect or disease).

Monitoring

Monitoring is the regular inspection of plants or the home to determine the nature of the pest and cultural problems. This information can then be utilized to make decisions about management of the pest. Regular inspections allow one to pinpoint problems early on. Small problems detected in this way are controlled with less effort and expense than large problems. Even if a pesticide is necessary, it is often needed only as a spot application which can reduce the potential for misapplication or overuse.

continued

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Action Threshold

It is important to know that all pests don't have to be controlled. The term "action threshold" is used to describe the level of pest presence that requires control. Action thresholds vary considerably from pest to pest. Seeing a single cockroach run across the kitchen floor would probably indicate the need for some type of control. The presence of just a few aphids on a large tree would not need control but would require further monitoring to check on the population and damage levels. Action thresholds are generally lower (control needed) where human health is a concern. They are usually higher if aesthetics are the only concern and the damage is slight. These decisions may be based on the tolerance of the tree or plant that is affected and also how much aesthetic damage the individual person will tolerate on his/her plants.

Pest Management Strategies

IPM uses a combination of compatible control techniques. These include cultural, biological, mechanical, plant selection and chemical techniques. Sometimes they may be successful alone, but in many cases a combination of these strategies may be necessary.

- **Cultural controls** are modifications of practices to disrupt or reduce pest populations.

  For examples:

  1) growing healthy plants is one of the best ways to reduce pest populations– correct watering and fertilization influence the health of plants and susceptibility to pests and...
  2) keeping food in sealed containers, rinsing cans and bottles before depositing them in the recycle bin and containerizing all edible garbage waste are cultural ways to discourage cockroaches and rodents.

- **Biological control** refers to the use of natural enemies to control pests. Enhancing and preserving natural biological control agents is an important component of IPM. In some cases, it is advantageous to release commercially reared natural enemies (e.g. praying mantids) to augment control.

- **Mechanical control** refers to the use of barriers or traps to exclude or catch pests, such as a row cover over cabbage transplants to keep out some insect pests.

- **Plant selection** involves the selection and use of plants that are disease resistant and compatible with the existing conditions (shade, soil type, drainage, exposure). An example would be disease resistant tomatoes. The "right plant for the right place" is a popular term that is a portion of an IPM program.

- **Chemical control** is a very common technique and includes the use of pesticides. These should be used either after, if not successful, or in combination with the other methods (cultural, mechanical, etc.). The least toxic pesticide should be used initially. In other words, **use pesticides as a last resort after other techniques have failed or show little success**. If applied at the correct time and rate, pesticides are usually safe and effective. If pesticides have to be applied, **READ AND FOLLOW DIRECTIONS ON THE LABEL.** If careful monitoring is done, it may be possible to make spot applications rather than blanket sprays to minimize the use of pesticides and their effect on the environment.

Using Integrated Pest Management (IPM) is the best way to safe, long-term pest management with minimal adverse effects on the surrounding environment. Careful record keeping on what has been successful is also a portion of the whole process.

Pesticides are just one of the tools used to effectively manage pests. Integrated Pest Management (IPM) practices can help you have an attractive, healthy landscape and home while minimizing adverse impacts on the environment and others.

OTHER BROCHURES AVAILABLE

- **IPM – Household Insects**
- **IPM – Lawn Care**
- **IPM – Home Landscape**

FOR ADDITIONAL INFORMATION

HORTICULTURE CENTER AND DEMONSTRATION GARDENS AT EAST MEADOW FARM

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Walk-in Service and Garden Helpline

Tuesday, Wednesday, Thursday, Saturday
10am–1pm
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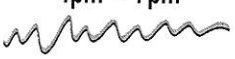
4pm - 7pm



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