A Greener View: Pesticides aren't always the answer to prevent pests

by Jeff_Rugg

Q: I have heard of a new method of treating insects in my yard called IPM. I don't know what all is involved, except it seems to be complicated.

What can you tell me about this program?

A: Well, the methods used in Integrated Pest Management (IPM) have been around for as long as gardening has existed. The term IPM was coined in the 1950s in California. The word integrated means to incorporate separate compatible parts to form a unified whole. The pest can be anything that is alive that can cause harm to people or their animals, crops and property. Lastly, we try to manage the whole program for economical, safe long-term pest control.

IPM was developed as a response to the broad scale and almost continuous use of insecticides on many farm crops; it is now used on farms, landscapes, schools and commercial properties. In an IPM system, environmentally and economically sound decision making comes first, instead of knee jerk reaction spraying. Pests are only controlled if necessary and other control methods are considered before pesticides. Safer kinds of pesticides are considered and reduced pesticide amounts are used due to a reduced chance of pests developing resistance. This all differs from programs that ban the use of pesticides (which are allowed using IPM), and from organic programs that require the pesticides to be organic in origin.

Most homeowners wait until plant problems become obvious before searching for the cause. Incorrect identification of the cause can result in useless pest control methods and wasteful, unsafe pesticide use. I can't tell you how often I find that someone is using an insecticide on a problem plant that has no insects harming it in the first place. Unfortunately, by waiting until disaster strikes, they need both short-term help and then a long-term IPM solution.

The first thing that needs to be done is to determine the cause of the problem. As I have said before, for plants in the home landscape, only three things cause problems: insects, diseases and everything else. Often the latter category includes weather problems that people mistake for pests, so they start spraying. If the problem turns out to be caused by a pest, then we need to decide if the pest is still causing damage and

whether the damage is tolerable.

Monitoring your landscape should be done at regular intervals. Most people come home and go right inside the house or even park indoors without even going outside for the whole week, except maybe to mow the lawn. Get outside and stop to smell the roses. And while you are there, check to see if there are any insects on them. If you regularly (weekly before you mow the lawn) check your landscape and lawn, you can stop most landscape problems from turning into big problems that require pesticides. Keep some notes in your garden photo album. And take more pictures. Accurate records are important for wise decision making and evaluating trends.

Finding pests before they have created a disaster allows you to determine if there is a threshold level that must be met before controls are needed. In many cases, the level is much higher than finding just one. For instance, finding a lawn grub puts many people into a panic, partly because they hear the radio and TV hype promoting pesticides for grub control. According to the Extension Service, if the population of grubs is above 10 in an area or the size of a sheet of notebook paper, pesticides could be warranted; however, if there is just a few, nothing needs to be done because a few won't do enough damage to be noticed.

A pest threshold of one may be the case if the pest is a heron eating the fish out of your goldfish pond, or if it is one cockroach found in the kitchen. The same pest may obtain a different threshold depending on who is monitoring as well as the type of damage it might do. Damage threshold levels may change with different stages of plant development and can vary from plant variety.

Once a pest could increase to a level where damage is going to be significant, a control measure must be found that will most likely produce an economical reduction of the pest population. The control should be the least disruptive to natural controls of the pest, the least hazardous to human health, the least toxic to non-target organisms and the least damaging to the general environment. It needs to be cost effective as well as easy to carry out efficiently over the short and long terms.

For many of our landscape pests we can use a cultural control to increase plant health and prevent pests. For instance, mowing a lawn creates stress to the grass plant, so it is necessary to fertilize and water correctly to help keep the grass healthy enough to prevent weeds from growing in the lawn. Proper care helps inhibit the need for herbicides.

Some plant diseases can be prevented by using plants that have a resistance to the disease. Many newer varieties of perennials, shrubs and garden vegetables are resistant to disease organisms. Biological control agents, such as using lady bugs to eat aphids, helps reduce the need for insecticides.

IPM is a pest control strategy that uses a complimentary array of ecological methods, from natural predators and parasites, pest resistant varieties, cultural practices, and biological controls to using pesticides as a last resort. It can be used outdoors in the landscape, garden and farm. It can also be utilized indoors at home, in schools and in businesses.

By continuously monitoring for pests of all kinds, the pest population can be found at tolerably low levels that allow wise decisions to occur on the type of control measure to use.

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