

● PEST CONTROL ISSUES

# FIVE STEPS OF IPM HELP REDUCE PESTICIDE USE

BY DAN STEIN

One of the goals of pesticide reform is to reduce and eliminate pesticide use. There are a lot of different ideas on how best to accomplish this. Many activists have supported an Integrated Pest Management (IPM) framework that gives multiple opportunities to find ways to reduce pesticide use.

## What is IPM?

While IPM has many definitions, the well-respected University of California IPM program defines it as follows:<sup>1</sup>

“Integrated pest management (IPM) is an ecosystem-based strategy that focuses on long-term *prevention* [italics added] of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.”

Note the emphasis on prevention. Once there is an out-of-control pest problem, the situation may require difficult decisions that could have been avoided with better foresight. In pest control, like in many other areas, “an ounce of prevention is worth a pound of cure.”

## IPM—A Functional Definition

IPM also has a functional definition that can be used as the basis of making pest management decisions. The process below was developed by the Bio-Integral Resource Center in Berkeley, California.<sup>2</sup> According to this definition, there are five strategic steps involved in all pest management decision-making. Each step provides an opportunity to thoroughly think through the pest control process

and to reduce pesticide use.

Here are the 5 Steps, one by one...

### Step 1: Identify the Pest

This often-overlooked step is important. Most species of living things are NOT pests, but are contributing members of the broader ecosystem. By taking the time to ensure that a suspected pest is an actual pest, you can eliminate a lot of unnecessary pest control efforts.

### Step 2: Monitor Pest Activity

By monitoring pest populations over time, you can determine if there are sufficient numbers of pests present to be concerned about potential damage. Pest populations are dynamic and go up and down in response to many factors. Sometimes a stray pest shows up and passes through, doing no harm. Pest populations may decline due to natural forces. Nature is complicated. You don't really know what is happening unless you look. Monitoring ensures that unnecessary treatments are avoided.

### Step 3: Determine Action Thresholds

An action threshold is the point at which further damage is considered intolerable and some kind of pest control action needs to take place. Action thresholds can be determined according to different criteria—economical, legislative, medical, even psychological. Many sophisticated models exist that can help determine the point at which economic damage becomes unacceptable.

In an office or at home, individuals may have personal ideas on when “enough is enough.” It is important to keep in mind that many people are affected when one person decides pest control action is needed. This is the time for some discussion and for cooler heads to prevail. Setting the action threshold high delays the point at which pest control treatments take place, leading to fewer treatments.

### Step 4: Explore Treatment Options and Make Treatments

There are many treatment options besides pesticides, and prevention should always be considered the first. Committing to use Best Management Practices (BMPs) is another treatment option. Crops are less likely to get pests in the first place if they are pest-resistant varieties and are grown under conditions that optimize fertility and plant health.

In urban environments, exclusion is key. Using screens and caulking goes a long way to keeping pests out. Increasing levels of sanitation often plays a big role in preventing pests.

If pesticides are necessary, priority should be given to treatments that are highly targeted to the pest organism, and to pesticides that create the least havoc to human health and the environment.

### Step 5: Evaluate Results

A commitment to evaluating results loops the process back to the beginning. Pest management is a dynamic, ongoing process. Monitoring after treatments is how you know how effective the treatment was, and if pest populations are now at acceptable levels. No further treatments are made unless monitoring shows that pests are again at action thresholds.

## Five Opportunities to Quit

The five step approach of a pest management plan gives more opportunities to reduce and eliminate pesticide use. IPM can be very useful as a framework to help look at the big picture. The goal is not just to focus on the use of pesticides. Rather, the goal is to look at the ecosystem and how it is managed in order to figure out how to prevent pests in the first place. If treatments are necessary, IPM can help determine which treatments will be most effective and have the least negative impact. ♡

## References

1. UC IPM Online. 2006. UC Statewide IPM Program. <http://www.ipm.ucdavis.edu/IPMPROJECT/about.html>.
2. Bio-Integral Resource Center. Undated. What is Integrated Pest Management (IPM)? <http://www.birc.org/IPM.htm>.