

Six Steps of IPM

1. Proper identification of damage and responsible "pest"

Cases of mistaken identity may result in ineffective actions. If plant damage due to over-watering are mistaken for a fungal infection, a spray may be used needlessly and the plant still dies.

If a beneficial insect is eating aphids on a sickly plant, the insect might be killed because of "circumstantial evidence", and make the problem worse.

2. Learn pest and host life cycle and biology

At the time you see a pest, it may be too late to do much about it except maybe spray with a pesticide. Oftentimes, there is another stage of the life cycle that is susceptible to preventative actions. For example, weeds reproducing from last year's seed can be prevented with mulches.

3. Monitor or sample environment for pest population

Preventative actions must be taken at the correct time if they are to be effective. For this reason, once you have correctly identified the pest, you begin monitoring BEFORE becomes a problem. for example, in school cafeterias where roaches may be expected to appear, sticky traps are set out before school starts. Traps are checked at regular intervals so you can see them right away and do something before they get out of hand. Some of the things you might want to monitor about pest populations include:

- pest present/absent?
- distribution - all over or only in certain spots?
- increasing or decreasing in numbers?

4. Establish action threshold (economic, health or aesthetic)

In some cases, a certain number of pests can be tolerated. Soybeans are quite tolerant of defoliation, so if you have only a few caterpillars in the field and their population is not increasing dramatically, there is no need to do anything. Conversely, there is a point at which you MUST do something. For the farmer, that point is the one at which the cost of damage by the pest is MORE than the cost of control. This is an economic threshold. Tolerance of pests varies also by whether or not they are a health hazard (low tolerance) or merely a cosmetic damage (high tolerance in a non-commercial situation). Personal tolerances also vary - many people dislike any insect; some people cannot tolerate dandelions in their yards.

5. Choose appropriate combination of management tactics*

For any pest situation, there will be several options to consider. See Six Tactics section below.

6. Evaluate results

Did your actions have the desired effect? Was the pest prevented or managed to your satisfaction?

Was the method itself satisfactory? Were there any unintended side effects? What will you do in the future for this pest situation?