



## Pesticides and IPM

*Billions of dollars are spent on pesticides every year. When a pest, disease, or weed problem emerges it is so convenient to pull out the sprayer and blast it into oblivion. But it's not that simple. . .*

### Pesticides

Pesticides are repellants and poisons that remove unwanted organisms. Fungicides, herbicides, and insecticides are the most commonly used pesticides.

### Drawbacks to Pesticide Use

Pesticides hit the market rapidly following World War II. They seemed to be a miracle cure-all. Agricultural production went up, lawns and landscapes turned green, and everyone was happy. Then questions about the safety of pesticides emerged. Many pesticides were tested and found to be deadly to unintended targets. These were reluctantly pulled from production. As recently as 1984 the Natural Academy of Sciences reported that 90% of pesticides being used had never been tested for long term health effects. Since that time many additional pesticides have been found to be dangerous to unintended targets. Many pesticides currently on the market are known to pose serious health risks.

The problem does not end there. While pesticides provided a temporary cure-all initially, they soon produced bigger problems. Pests and diseases began to develop resistance and tolerance, and they came back bigger and better. Currently pesticide use has been increasing while crop loss and damage increases as well. The situation has been referred to as the Pesticide Treadmill. No matter how fast you run you never catch up, and when you stop to rest it's all over.

*So what is a good response to this problem? IPM.*

### What is IPM?

IPM stands for "Integrated Pest Management." It is a philosophy that emphasizes the use of all suitable methods of pest control, beginning with the least toxic. The goal of IPM is to keep the damage caused by pests below critical levels, not to eliminate everything. This is important because non-toxic controls are often sufficient. Instead of dumping more pesticides into the environment responsible solutions are used. It is safer, often cheaper, and leads to less problems in the future.

### How Do I Practice IPM?

**You start by realizing that pests and diseases are a part of life.** They will never be completely eliminated—get used to them. This will help when you're fighting them.

**Select the right plant.** By placing a plant in the right setting you keep the plant from becoming vulnerable to problems.

**Practice cultural controls first.** Examples of cultural controls are planting the plant in the correct location, cleaning up fallen leaves that are diseased, and physically removing pests or diseases. In many cases this will be all you need to do to minimize problems.

**If you need to spray, start with the least toxic option.** Try using a natural control before a chemical. An example of this is using *Bacillus thuringiensis* (BT) to control leaf-eating caterpillars instead of a chemical insecticide.