Master Gardener Newspaper Articles

Volunteer Program

Tulare/Kings Counties

Integrated Pest Management for Backyard Insects

by Michelle Le Strange, UC Master Gardener Adviser

Do you remember the days when gardening advice consisted of what bugs you had and what you needed to spray on them to kill them? Have you noticed that although TV commercials emphasize bug sprays, most TV gardening experts do not? What's going on? Home gardeners and commercial growers alike are being swept into a revolution in pest control called Integrated Pest Management (IPM). IPM is a strategy to prevent and lessen pest problems with little negative impact on human health, the environment, and non-target organisms.

IPM is not new. In fact, it has been around since 1976 and it has grown and improved through time. Scientists study the lives of insects and figure out some very green approaches to knock them down and keep them out of the garden. At first the efforts were concentrated on agricultural products, but now there is much information that applies to backyard flower, vegetable, and fruit tree gardens.

IPM has been embraced by virtually all farmers in our area because it is safe and effective. If it were not for IPM strategies, then growers would be spraying more and more pesticides on their crops, but that is not the case today. Unnecessary pesticide sprays are eliminated and safer pesticides are being used, which saves money and reduces the risks to health and the environment.

Repeated application of the same synthetic insecticide is never recommended because it leads to an insect developing resistance to the insecticide. Broad-spectrum pesticides that wipe out all insects often lead to a population explosion of another garden plant pest, like mites. This results because beneficial insects (those that prey and live off of pest insects) are also killed by the pesticide applications. Today's sprays try to target the pest insect and minimize the hazard to the beneficial insects. An example is Bt which is often sold as Dipel or Worm Ender. It primarily targets worms and causes no harm to other insects. Integrated pest management is a multi-sided approach to garden smarter, not harder.

Prevention is the first step. Choose plants that are adapted to our valley and are naturally pest and disease resistant. Sunset's Western Garden Book will often mention if insects are an annual problem. Sometimes plants are adapted, but there are big differences in the performance of varieties. This is often noticed in roses. You might have four different roses, two healthy ones and two covered with disease, yet all receive the same care. Replace the sick ones with a different variety. Why fight it?

Keep your plants healthy. Water, fertilize, and prune correctly to keep your plants strong. Did you know stressed plants give off chemicals that actually attract pests? The weak plant is a prime candidate for attack by pests and diseases. Take white birch trees as an example. This is a tree that is not adapted to our hot valley climate and as a result it easily becomes stressed in summer and is attacked by boring beetles who are attracted to the dying trees by a chemical scent.

Monitor your plants. Check your plants regularly for signs of pests or disease as well as cultural problems. Too wet? Too dry? Need fertilizer? Walk through your gardens, looking carefully at your plants. Try to diagnose problem pests early. Don't wait until your tree is black with sooty mold and dripping honeydew all over your car to figure out that it has aphids.

Identify the problem. Insects are often very small and hard to see. Get out the magnifying glass and really look at the problem. Can you describe the color and shape of the bugs? Use books or bring a sample to the Master Gardener office to identify your pest or disease and get some recommendations. Often bugs are blamed for a sickly plant, when actually it has a cultural problem caused by poor care, with a few bugs just riding along. Worse yet, I've seen several people get the pesticide out and start spraying for aphids, when the aphids are already dead. They had noticed the glistening leaves from honeydew, but what they were spraying were aphid mummies and molten skins.

Tolerate low pest populations to encourage beneficial insects. Remember that pests rarely kill plants. They often bother the gardener more than the plant. A key element in IPM is to allow a few of the pests to hang around, thereby inviting the beneficial insects to a tasty lunch. Help keep the pest population under control by blasting them with the hose.

When chemical controls are required, use the least damaging method. Most garden situations can be managed with pesticides that are no more toxic than soaps or horticultural oils. Botanical insecticides that contain pyrethrum or neem oil are the next step up. If synthetic pesticides are needed, choose the correct pesticide and apply it at the right time in an appropriate manner. Follow all label directions. If you use an incorrect pesticide, the wrong rate, or don't apply it right, you can do more harm to the environment than good.

So go out and look at your bugs with a new eye!

April 24, 2008