

Pesticides-Think before you spray!



A pesticide is any substance used to kill, repel or control certain forms of plant or animal life that are considered to be pests. Pesticides include herbicides for destroying weeds, insecticides for controlling a wide variety of insects, fungicides used to prevent the growth of mold and mildew, disinfectants for preventing the spread of bacteria and compounds used to control mice and rats.

When used properly, pesticides can play a valuable role in controlling weeds, insects, and other pests. On the other hand, they can harm wildlife if the user does not follow label directions. Wildlife includes non-target birds, mammals, fish, aquatic invertebrates, insect pollinators, and plants.

Before you use a pesticide, ask yourself these questions:

- Has the problem been properly identified? Insects and diseases are not the only cause of plant problems. Improper planting and other environmental stresses cause a large majority of problems.

Some examples of this would be a plant that needs full sun being planted in the shade, a plant that needs dry conditions being planted in a wet area, and planting a tree too deeply. Planting the right plant properly in the right place will help to reduce plant problems.

- Is the problem just cosmetic or serious enough to warrant the use of a pesticide? Seeing some insects on plants is normal. It might surprise you to know that a mere 2% of the insects that we come across in our lives are actually harmful. Mosquitos are one example of the small percentage of insects that are harmful to humans. The remaining 98% are either benign or beneficial so you may not need to use chemicals.
- Have I considered a non-chemical or alternative pest control solution first? Changing the location of a plant or a gardening practice can often solve the problem. Many non-toxic products work just as well or better than their more toxic counterparts. Think about using these first.
- Are pollinators or beneficial insects present? Beneficial insects are doing much good in the landscape. Insects can be beneficial for several reasons. They may help you control pests if you give them a chance. Spraying needlessly can reduce the population of insect predators and drastically upset the balance in your yard. The result is often more plant damage. Secondly, they can be pollinators, which are essential to our food supply. One out of every 3 bites of food we eat is there because of pollinators. Most of us can recognize common pollinators like honeybees and butterflies, but there are hundreds of thousands of other pollinator species in this world; beetles, moths, wasps, ants, flies, bats and birds. We hear a lot about the imported European honeybee but let's not forget about the more than thirty-five hundred species of native bees in the United States that do lots of pollination work. The worth of pollinators is undeniable.

You can save time and money by contacting the Penn State Cooperative Extension Garden Hotline. They are happy to help you with the diagnosis and will tell you if the problem is serious enough to warrant the use of a pesticide.

If you do need a chemical treatment, after careful consideration, please follow these important guidelines:

- Check the pesticide label to be sure the pest you are trying to control is listed there.
- Timing is most important! Be sure to spray when the pest is vulnerable.
- Protect our pollinators. Please don't spray plants in bloom or when bees are on the plants.
- Look for bird and mammal nests prior to spraying. One conservative estimate states that as many as 72 million birds die each year as a result of pesticide exposure.
- Choose the least toxic pesticide available. Horticultural oil and insecticidal soap are labeled for many pests.
- Mix according to the directions. More is NOT better and may harm your plants and the environment.
- Spray only the parts of the plant affected by the pest to protect beneficial insects.
- Do not use pesticides near water unless they are labeled for that use.
- Dispose of pesticides properly. Never pour them onto the ground!
- Read the label before using.

Think of your garden and all of the space on your property as a wildlife preserve. By reducing pesticide use and having an insect-friendly habitat in our yards, our beautiful gardens can live in harmony with billions of insects. We can create gardens that protect and balance common garden pests and beneficial insects. These tiny creatures have an amazing and indispensable responsibility. Without insects the world wouldn't be.

Rita Potter is a Master Gardener in York County. Penn State Master Gardeners are volunteers for Penn State Cooperative Extension. For more information, contact the Master Gardener office at 717-840-7408 or YorkMG@psu.edu.

