

BENEFICIAL BUGS

John Dromgoole

Travis County Agriculture Extension Agent Skip Richter recently said, "Kill a beneficial insect and you inherit its job". He is absolutely right, and it is one of the most profound statements that can be made about broad-spectrum insecticide use in the home or farm environment.

The organic gardener relies mainly on beneficial insects to keep balance. The poster child of the organic movement is the **Lady Bug** (*Hippodamia convergens*); even children know this! There are purported to be hundreds if not thousands Lady Bug species that feed on mealy bus, the eggs of the Colorado potato beetles, aphid, and spider mites. Although the Lady Bug is the poster child, **Green Lacewings** (*Chrysoperla cernea*) is the top choice of any gardener or farmer because of its voracious appetite. This insect should be familiar to you; it hangs around porch lights and is unfortunately one of the most common insects killed by bug zappers. The Lacewing is about ½ inch long with clear wings, a green body and beautiful golden eyes. They can produce about 3 to 6 generations per year. They eat aphids, mealy bugs, scales, whiteflies, eggs of many insects, mites, thrips and spider mites.

Wasps are some of the most misunderstood insects of which I know. They eat worms (lots of them) and some types of wasps. **Trichogramma**, actually lay their eggs in the eggs of worms before they hatch. It controls the eggs of tomato hornworm, armyworm, webworm, cabbageworm, cabbage looper, corn borer, pecan nut case bearer, and unfortunately, the eggs of butterflies and moths. There are two types of *Trichogramma* available for purchase. The ***Trichogramma pretiosum*** is best for pests that are active anywhere up to 5 feet off the ground. For trees and other plants above 5 feet tall, the ***Trichogramma minutum*** should be ordered. The *Trichogramma*, like the Lady Bug and Green Lacewing, already exists in our area but spraying with chemical pesticides has reduced their numbers. They can be ordered for release to rebuild the population in your home garden environment. Order 3 packages of about 4,000 wasps each to be sent in 3 shipments approximately 2 weeks apart.

Many other beneficial insects also occur naturally like the **Tachinid Fly** that lays its eggs on caterpillars of many different types, and the Assassin Bug that feeds on flies, beetles, and large caterpillars. The **Assassin Bug** sticks its strong beak into other bugs and drinks them like a malt.

These are just a few of what is otherwise a generous population of beneficials (such as the **Big-Eyed Bug**, the **Braconid Wasp**, **Centipedes**, **Milipedes**, **Mud Daubers**, **Ground Beetles**, **Hover Flies** and **Aphid Midges**) and only serves to illustrate that not all bugs are bad, and that spraying creates an imbalance that usually allows the harmful insects to return to the farm or garden without any resistance to continue to wreak real havoc, causing even more spraying with stronger insecticides.

Some beneficials are invisible, like beneficial **nematodes**. Around here, microscopic organisms are locally available at many nurseries and are used to safely control grub worms, billbugs, cut worms, armyworms, fungus gnats, carrot weevils, root weevils, squash vine borer, peach tree borer, iris borer, wireworms, flea larva and fire ants. The nematodes are harmless to humans, pets, birds, earthworms, bees and beneficial insects.

Fire ants even have a natural control called the **Phorid Fly**. Unfortunately, it doesn't occur naturally here (at least for the imported fire ant) so it will have to be cultured and introduced to the area in order to have a natural predator. This is already underway.

You can create an environment that is a habitat for beneficial insects by planting seasonal and perennial flowers. These flowers will attract the beneficials to the pollen and nectar for nourishment during times of low insect activity. Water is equally important. Small birdbaths or other containers that hold water will greatly increase the number of beneficials in your backyard. Plant diversity is also critical. A larger selection of flowers, trees or shrubs keeps insect damage to a minimum.

John Dromgoole has hosted "Gardening Naturally" on KLBJ radio in Austin for 20 years. He has been involved in organic and environmental issues for 3 decades. He owns the Natural Gardener nursery in Austin and Lady Bug Natural Brand products. He originated Austin's Chemical Clean Up Day. He co-authored the Texas' original certification standards for organic farms for the Texas Department of Agriculture. His articles have appeared in Texas Gardener magazine. For more information about John, visit www.NaturalGardenerAustin.com.