

Ask Dr. Vege – Good Bugs for the Garden

What Are Beneficial Insects?

- Beneficial insects are those bugs that are harmless. They actually help in the garden in many ways. Most beneficials fall into three groups.
 - Pollinators pollinate the garden's flowers. Many plants require pollination to produce fruit.
 - Predator insects help eliminate garden pests by eating them.
 - Parasiteizers prey on unwanted insects by laying their eggs on or in the bad guys. When the larvae hatch, they feed on their host, killing it off.
- Pollinators have been a global focus for a number of years now. And, most of us know a butterfly or bee when we see one. But, what about the other good bugs we need in our gardens? Let's take a look at who we want to invite to dinner.

1. Ladybugs

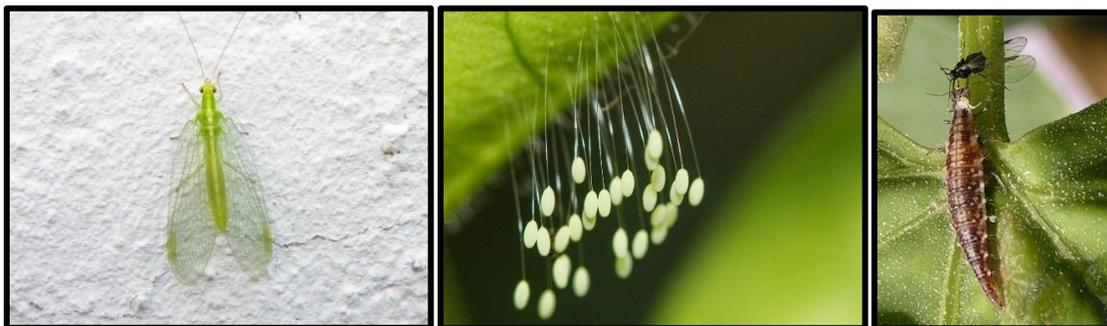
- a. Ladybugs, or rather their larvae, are ferocious predators. The larvae love to feast on aphids. Each little larvae can eat up to 40 aphids in an hour.
- b. Attract adult ladybugs into the garden with pollen-rich blossoms. They especially like the flat-topped flowers of yarrow, angelica, fennel and dill. Calendula, sweet alyssum and marigold are also favorites.



Mama ladybug and her ferocious larvae

2. Green Lacewings

- a. Adult green lacewings feed on pollen and nectar. Like ladybugs, it is their larvae that are the predators. The larvae feed on soft-bodied pests like caterpillars and aphids.
- b. Attract them into the garden by providing pollen-rich flowers. They like the blossoms of cosmos, yarrow, dill and fennel.



Green lacewing, egg masses and larvae

3. Praying Mantis

- a. Praying mantises are 'generalist predators' meaning that they will eat just about anything. This unfortunately, not only includes garden pests but also beneficial insects and pollinators. They are especially fond of flies, beetles, crickets, moths, grasshoppers and mosquitoes. But they have also been known to feast on bees and butterflies. It is not unusual to find them feasting on prey three times their size, like frogs, lizards and hummingbirds. They will even eat each other.
- b. Since the eggs hatch as adults, a ready supply of garden pests is all that is needed to attract them.



Praying mantis and egg case which may hold up to 200 eggs

4. Spiders (Yes, A.G. spiders are our friends))

- a. Spiders are not technically insects, they are arachnids. That being said, they are very beneficial to gardeners. The wolf spider is especially good at controlling pests.



Wolf spider

5. Ground beetles

- a. Ground beetles are a large group of predatory beetles that are effective at pest control as both larvae and adults. They feed on many insects including caterpillars, nematodes, silverfish, slugs, thrips and weevils.
- b. While Japanese beetles are considered ground beetles, they do not fall into the beneficial insect category.



One of many ground beetle species

6. Soldier Beetles

- a. Another garden pest predator, soldier beetle larvae feed on aphids, caterpillars, Colorado potato beetles and Mexican bean beetles.
- b. Attract adults to the garden by planting compound blossom plants such as Queen Ann's lace and yarrow.
- c. Their appearance resembles a childhood favorite, the lightning bug, but they do not have the ability to light up.



Adult soldier beetle and its larvae

7. Assassin Bugs

- a. Assassin bugs appear as a mix between a praying mantis and a squash bug. They have long legs and many can grow to be over an inch long.
- b. Also categorized as 'generalist predators' they use sharp curved mouthparts to eat different garden pests. They first sting their prey, injecting it with digestive juices. Then they slurp up the liquified prey through their long proboscis.
- c. While assassin bugs do not pose a threat to humans, they will sting if threatened



Assassin bug nymph

8. Hoverflies

- a. Hoverflies look like tiny yellow jackets, but they have no stinger. One can actually see the tiny flies hovering over blossoms.
- b. Adults feed on pollen and nectar, making them excellent pollinators. It is the larvae that are beneficial predators, feeding on aphids, beetles, caterpillars and thrips by sucking the liquids from their bodies.
- c. Attract them into the garden with plants that blossom in whites and yellows, their preferred color pallet.



Hoverfly

9. Parasitic wasps

- a. Parasitic wasps are so tiny that they are difficult to see with the naked eye. There are numerous types. The three most commonly seen are:
 - i. Braconid wasps are the wasps that lay their eggs on the dreaded tomato hornworm and other caterpillars.



Braconid wasp eggs on a tomato hornworm.

Move the caterpillar away from the tomato plant, allowing the wasp's larvae to do their job.

- ii. Trichogramma wasps are even smaller than braconid wasps. In fact, several can fit on the head of a pin. They lay their eggs *inside* the eggs of over 200 different garden pests. Their larvae hatch and eat the pests before it can hatch.
 - iii. Tachinid flies look like small houseflies. Their larvae parasitize corn borers, gypsy moth caterpillars, grasshoppers, Japanese beetles, Mexican bean beetles, squash bugs and green stinkbugs, just to name a few.
- b. To attract parasitic wasps, add plants with composite flowers like alyssum, cilantro, dill and yarrow. Adults need pollen and nectar for survival.

10. Earthworms

- a. While earthworms are not insects, they are vital to a healthy garden. As they tunnel through the soil, they improve aeration and drainage. They carry organic matter from the soil surface down to the root level, increasing soil fertility.
- b. Earthworms eat dead plant material. Their castings (poop) enrich the soil.
- c. Attract earthworms by maintaining a moist, organically rich garden plot. Avoid using pesticides.



Earthworms are a gardener's best friend

Beneficial insects, including spiders and earthworms, are invaluable allies in our gardens. Pollinators are crucial for flowers to become fruits. Predator and parasitizing insects are essential for controlling unwanted pests without having to resort to chemical solutions.

A healthy garden is its own ecosystem. Beneficial insects help insure a healthy garden.

Happy gardening
Alaine Bush
Advanced Master Gardener