

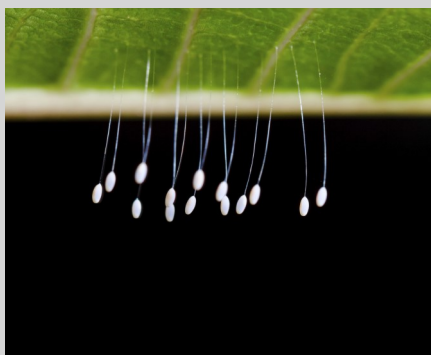
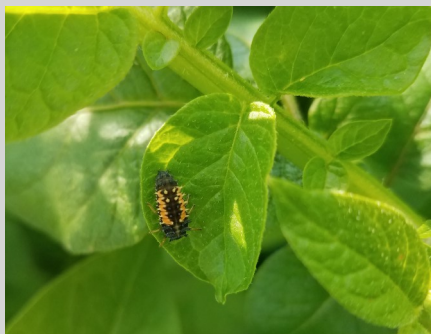


## ***Good & Bad Bugs in the Garden***

### **Bug in the Garden**

Working along side different bugs is an key part of backyard and community gardening success. With so many different types, it is often hard to tell the difference between a harmful bug and a beneficial one.

With some careful observation and prevention measures, your garden can become a balanced environment where bad bugs are controlled and good bugs thrive.



### **GOOD BUGS**

Beneficial bugs in the garden play many roles. Some bugs are pollinators and are essential for fruit production. Other bugs are predatory and help to control bugs that cause damage to our plants. Good bugs emerge at different times throughout the growing season. Knowing when and where to expect these bugs can help gardeners have a more successful harvest.

### **GOOD BUGS THROUGHOUT THE YEAR**

#### **SPRING**

- **Wasps**, although intimidating, are very beneficial to the garden. They are pollinators and some are parasitic, meaning they lay their eggs in a harmful insect, eventually killing it. Brachonid, trichogramma, mud dauber and paper wasps are among the most common.
- **Assassin Bugs** usually lay their eggs in crevices, on branches or under rocks. They emerge in late spring and help control aphids, caterpillars, mosquitos and other small flying insects.
- **Lacewings** lay their eggs on long silk stalks in spring and summer. This delicate insect's larvae feeds on aphids while the adults feed on nectar and honeydew.
- **Praying Mantis** are excellent insect hunters. The adults and nymphs prey on aphids, beetles, caterpillars and even small lizards. Egg sacks can be purchased for release.

#### **SUMMER**

- **Butterflies and moths** are a welcome guest in the garden. The adults are pollinators while the larvae are caterpillars and can be destructive in the garden. Plant extra and be patient with the caterpillars.

#### **FALL**

- **Spiders** play an essential role in the garden. Many different kinds are predators for troublesome garden pests. Spiders live in mulches, dense brush, beehives and other protected areas.

#### **WINTER**

- **Ladybugs** overwinter and emerge in early spring. They help control aphids and spider mites in the garden. The larvae are extremely efficient at controlling aphid infestations. Release lady bugs in your garden for extra protection.

## BAD BUGS THROUGHOUT THE YEAR

### SPRING

- **Aphids** are very common in vegetables gardens most of the year but are most active during the spring. They feed on tender growth and suck the sap out of the foliage. Besides beneficial insects, aphids can be controlled with a strong blast of water, garlic-pepper tea, soapy water or orange oil.
- **Cucumber beetles** lay their eggs at the base of the plant and hatch in early spring. The larvae eat the roots and stem of the plant and the adults chew on the leaves. Most commonly found on beans, corn, cucumber, eggplant, melons, peas, potato squash, tomato and fruit trees. They can be controlled by spiders and assassin bugs or orange oil.
- **Slugs & snails** are active year-round but are most destructive when the soil is moist and warm. They are active at night and feed on almost any foliage. Encouraging biodiversity will help manage populations. Infestations can be treated with hot pepper flakes, DE, citrus oil or beer traps.
- **Squash bugs** look like stink bugs and you will begin to find their eggs on the underside of squash leaves in late spring. The eggs are bronze colored and are laid closely together. These bugs suck sap from the plant causing the plant to die. Crush any eggs you find and hand-pick the adults in the spring.



### SUMMER

- **Fire ants** do not harm the plants in your garden but they do sting and will bite anyone who disturbs their mound. They prefer open areas with poor soil quality. To deter the ant, amend your soil with dried molasses, increase biodiversity and apply beneficial nematodes. Use orange oil as a last resort.
- **Leaf-footed bugs** emerge throughout the late spring and into the summer. Adults and nymphs suck the sap from the leaves and fruit, most commonly on tomatoes. Biodiversity will help keep populations under control. Use orange or neem oil in extreme cases.
- **Spider mites** prefer dry climates and stressed plants. Keep your plants watered and happy during the summer to prevent infestations. Ladybugs and lacewings can help control the mites along with garlic-pepper tea.
- **Squash vine-borers** are hard to control and can devastate a squash crop. The adults are a beautiful red and black moth that lays its eggs in the stem of the squash plant. You will find little black holes on the underside of squash stems that indicate an egg is present. The larvae will eat the plant from the inside out and kill it. With no proven remedies, just plant extra plants or wait until late summer to seed summer squash.

### WINTER

- **Cabbage loopers** overwinter in a cocoon and will emerge in the spring as a brownish moth. The eggs will hatch in later winter or early spring. The bright green caterpillars will feed on anything in the Brassica family. Wasps and birds will help control populations. Infestations can be controlled with Bt or plant oils.
- **Flea beetles** overwinter as larvae in the soil. These larvae can damage plant roots. The beetles emerge in late winter and chew small holes in leaves. This damage does not usually kill the plant. Control with beneficial nematodes or garlic spray.
- **Harlequin bugs** look similar to ladybugs. However, these appear in late winter on Brassicas that are near the end of their life. Control by removing the infected plant.
- **Pill bugs** or roly pollies feed on decaying matter and are beneficial in some parts of the garden. However, they do attack young seedlings and tender fruit. They can be controlled with hot red pepper flakes, DE or coffee grounds. Hand-picking helps, but pill bugs can live up to 6 years!

### Pest Prevention Tips

#### Plant Flowers that Attract Good Bugs

Alyssum, caraway, coreopsis, coriander, lantana, roses, sunflowers, tansy, yarrow.

#### Encourage Biodiversity

Welcome other creatures into your garden. Allow birds, snakes, lizards, spiders and other creatures to make a home in your space.

#### Create Healthy Soil

Amend your soil with compost and dried molasses at least twice a year. Feed your plants with organic fertilizer and water your plants adequately. Healthy soils make healthy plants. Healthy plants attract fewer pests.

#### Be Patient, Make Observations, Do Research.



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