ORGANIC PEST CONTROL

10 Common Garden Bugs and How to Kill Them Without Using Harmful Pesticides





Amy Andrychowicz GETBUSYGARDENING.com

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Dear Gardener,

Pest control can be one of the most challenging things about gardening. Tomato hornworms, squash bugs, cabbage worms, grapevine beetles... I mean seriously, is there a specific bug for every type of plant or what!?

It's tempting to reach for synthetic pesticides when you see a plant covered by clusters of Japanese beetles, or full of holes from slugs... but being an organic gardener really isn't that difficult.

Let's learn about some basic organic methods together.

Happy Gardening! Amy



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FIRST LET'S TALK ABOUT SOME BASIC ORGANIC METHODS

There are a few basic methods of controlling garden pests that work for most bugs, and I will mention them several times throughout this book*.

- Hand picking Once the bugs are picked off the plant, you can either squish them or drop them into a bucket of soapy water (soap kills bugs). It doesn't matter what type of liquid soap you use in the bucket, but use enough so there's foam on top of the water.
- **Soapy water spray** Mix up a batch of this simple homemade bug killer and spray it directly on bugs to kill them. I use (and recommend) Dr. Bronner's Baby Mild liquid soap because it's organic, and doesn't contain harsh chemicals that can harm plants.

Simple soapy water spray recipe: Mix one teaspoon of a mild liquid soap with one liter of water and pour it into a clean spray bottle.

- **Diatomaceous earth (DE)** DE is made from the fossilized remains of creatures; which are ground into a fine powder. Use DE in the garden by sprinkling it on bad bugs or around infested plants. DE works to kill most insects, so be careful around bees and other beneficial bugs.
- Eggshells When ground into a fine powder, eggshells have a similar effect as DE.
- Ladybugs Ladybugs are wonderful predators in the garden, and they love to feed on tiny bugs, larvae and eggs. You can purchase ladybugs and release them in your yard.
- **Beneficial nematodes** Beneficial nematodes will attack and kill several types of soil dwelling pests, and can be sprayed in your yard and gardens without worry (plus they do not harm other predatory insects like ladybugs).
- **Neem oil –** Neem oil is a great organic way to fight pests in the garden, and it works on bugs that like to eat the leaves of plants. Neem oil also has a residual effect, so you don't have to spray it every day.

*You can find recommended pest control products that I use here... Organic Pest Control Supplies (I keep that page updated, so be sure to bookmark it)

Related Article: Nematodes as Organic Pest Control





10 COMMON GARDEN BUGS AND HOW TO KILL THEM WITHOUT USING HARMFUL PESTICIDES

1. Squash vine borer

The squash vine borer is the larvae of the squash borer bug (a type of moth which, I hate to admit, is actually kinda pretty in it's adult form). Squash borers burrow into squash vines and feast on the plant from the inside out, sometimes even making it into the squash themselves. If a squash borer infestation is left untreated, the entire squash plant will collapse and die.

Symptoms

- The entire plant suddenly droops
- Small holes in the vine
- Mushy stuff that looks like sawdust anywhere on the vine
- The vine itself is mushy

Methods of control

The only way to get rid of squash borers once they're inside the squash vine is by digging them out. To remove the squash borers, carefully slice open the squash vine the long way and pry it open (taking care not to sever the vine). Make the cut just above the spot where you see the hole or sawdust mush.

After you pry open the vine, you might see the ugly squash borer right away, or you may need to search around for it. Squash borers are white worms with black heads.

Once you find the squash borer, pluck it out with a needle and then either squash it (pun intended!) or drop it into a bucket of soapy water to kill it.

When you're done removing borers from the vine (there may be more than one borer in each vine), bury the injured part of the vine in dirt. Squash vines will grow new roots under the dirt, and the plant will grow stronger because of it.

2. Slugs

Slugs can be a major pain in the garden. Often times you won't see them because they feed at night. But look closely in the shade or on a cloudy day, especially after a rainfall, and you will likely find slugs.

Symptoms

Slugs eat holes in the leaves of plants (they especially love hostas), and can also feed on fruits and vegetables.

Methods of control

- Hand picking
- Diatomaceous earth or eggshells (sprinkled around the base of the plant)
- Sink a shallow dish of beer into the mulch or soil so it's the top is level with the ground. The slugs will climb in for a drink and drown.



Related Article: <u>Using Ladybugs as</u> <u>Organic Pest Control</u>



3. Cabbage worm

The cabbage worm is a very common type of caterpillar that feeds on plants in the cabbage family. Cabbage worms are the larvae of the cabbage moth, a pretty little white moth that you may notice fluttering throughout your gardens during the summer. You can find cabbage worms on the undersides of the leaves. They are green and can be difficult to spot.

Signs

Holes in the leaves of your kale, cabbage, brussel sprouts, broccoli, cauliflower or any other plant in the cabbage family.

Control

- Hand picking
- Soapy water spray
- Neem oil

4. Aphids

Aphids come in many varieties and can be just about any color. They are small and fat and juicy – and gross. Aphids can also have wings, but winged aphids are less common. Aphids multiply quickly, the life cycle of an aphid is about one week.

Signs

Aphids feed on a plants by sucking the sap from the leaves, so the first signs of aphid damage are dull colored or deformed leaves. You may see the large clusters of bugs before you notice any damage to the plant.

Control

- Soapy water spray
- Neem oil
- Ladybugs

You could also get out the hose and spray the leaves of the infested plant with a strong stream of water (not too strong, you don't want to damage the plant) to dislodge the aphids.

5. Japanese beetles

Japanese beetles are a big problem for many gardeners, and they can cause major damage to many different types of plants and flowers. Adult beetles are oval with an iridescent brown/green body, and they are 2-3 times larger than a ladybug. Japanese beetles can fly and are usually very active during the day.

The lifespan of an adult Japanese beetle isn't very long, adults are usually present for less than two months. They lay eggs in the soil, and the larvae hibernate deep underground during the winter.

Signs

Adult Japanese beetles damage plants by eating holes in the leaves and flowers, and quickly skeletonize the foliage – they can decimate a small plant in a short time.







Control

- Hand picking
- Soapy water spray
- Diatomaceous or eggshells
- Beneficial nematodes (kills the grubs)

You can also buy Japanese beetle traps, which work really well. But some people prefer not to attract more beetles to their yard.

6. Squash bugs

Not to be confused with the squash borer bug, the squash bug is a common pest that can plague all types of squash and pumpkin plants. Squash bugs, both adults and nymphs, will feed on squash leaves, the outside of the vines and even the squash. Squash bugs can cause severe damage to the squash and the plants if left untreated.

Signs

Yellow and brown leaves that are curling up (usually starts at the tips of the leaves). You might spot the nymphs first. They are tiny greyish bugs with rounded bodies and long black legs.

Control

- Hand picking
- Soapy water spray
- Neem oil
- Diatomaceous or eggshells

You can also gently scrape the eggs off the plant. Squash bug eggs are pretty easy to spot, look for red-ish colored egg clusters under the leaves.

7. Iris borer

The iris borer is the larvae of the iris borer moth. The moths lay their eggs on the foliage of iris plants in the late summer and fall, and the eggs overwinter on the iris leaves. The eggs hatch in early summer, and the larvae crawl down and burrow into the bulb, then feast on them from the inside out. Iris borers are pinkish in color, and look similar to a squash borer.

Signs

- Tan colored streaks on the foliage of irises in early summer
- Mushy stuff that looks like sawdust around the base of the plant, or the tops of the iris flower bulbs
- Leaves that turn brown in the late summer

Control

Once the iris borer has infested your irises, it's difficult to get rid of them. The best way to protect your irises is to avoid the borers all together. As I said before, iris borers lay their eggs on the leaves of the plant where they overwinter until early summer. So, the best way to avoid the iris borer is to cut the plants all the way down to the tops of the bulbs in the fall or very early in the spring.







8. Grapevine beetle

Grapevine beetles are hard to miss; they are HUGE. They're twothree times the size of a junebug. Like a junebug, the grapevine beetle is nocturnal and is attracted to bright light. They overwinter as larvae in the ground and adult beetles emerge in June or July. Adult grapevine beetles feed on grapevine foliage and fruit. They may feed on other types of fruits in the garden too.

Signs

The damage they cause is similar to the Japanese beetle; they eat holes in plants and skeletonize the leaves.

Control

Even though the adult feeds on grapevines and other stuff, they don't normally cause major damage in the garden. A large infestation of these beetles could cause damage, but it's pretty uncommon; one or two grapevine beetles in the neighborhood isn't anything to be a concerned about.

If an infestation occurs, the best organic control for the adult grapevine beetle is hand picking the pest from the plant and dropping them into a bucket of soapy water.

9. Flea beetles

Flea beetles look like tiny black or brown specks on the leaves of a plant. They are very small and it's hard to spot them from a distance, so flea beetle infestations can easily go unnoticed. Flea beetles can kill seedlings in a short time – at a minimum they will stunt the growth of immature plants. Once the plants are mature, flea beetles aren't as much of a concern.

Signs

Yellowing, discolored or spotty looking leaves. When you take a closer look, you can see the tiny beetles crawling around on the plant. An easy way to make a positive identification is to disturb the plant or surrounding soil. Flea beetles jump around when they are disturbed.

Control

- Soapy water spray
- Diatomaceous earth or eggshells
- Ladybugs
- Beneficial nematodes (for the grubs)
- Neem Oil
- Heavy mulching
- Coffee grounds sprinkled around the base of the plant can help to deter flea beetles





10. Tomato hornworm

Tomato hornworms can be major pests in the garden, and can quickly defoliate a plant. They are large (4 inches or more!) green caterpillars, and they love to feed on plants in the nightshade family (like tomatoes, potatoes, peppers and eggplant). They will eat all parts of the plant, but most commonly feed on the leaves and stems. Tomato hornworms can be hard to spot because they're green and tend to blend in with the leaves of the plants.

It's too bad that these guys are so destructive, because in their adult form, the moths are actually very pretty. Adults feed on flower nectar and hover like hummingbirds. We call them hummingbird moths around here, but they're also known as sphinx or hawk moths.

Signs

You may notice damage to your plants before you ever spot a hornworm. Black mush on or around the plant is also a sign of hornworms.

Control

- Hand picking
- Ladybugs (they eat the eggs)

Hornworms are prone to attack by parasitic wasps (don't worry, they don't sting). If you spot a hornworm with what looks like bits of rice all over it, leave it alone. Those are eggs and once they hatch, parasitic wasp larvae will burrow into the hornworm and feed on it, eventually killing it (sounds horrible, I know!). So, if you let nature take its course, you'll soon have an army of parasitic wasps to battle the hornworms for you, woohoo!

SUMMARY

Bugs are a part of gardening, for better or worse. Knowing the type of bugs you're dealing with, and the best organic methods to control them are the first steps to winning the battle against bugs in your garden. Complete elimination of pesky bugs in the garden isn't a realistic goal. The key is to find a balance so that your plants will thrive despite having a few bugs munching on them.





Related Article: Japanese Beetle Traps





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