



# How-To: **MANAGING INSECT PESTS**

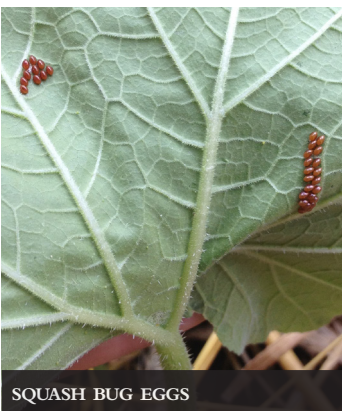
*Even healthy gardens can experience pest problems. Identify which pests are causing a problem, then follow through with a management plan.*



CROSS-STRIPED CABBAGEWORM



THIS LADYBUG LARVAE LOOKS LIKE A PEST, BUT ACTUALLY EATS INSECT PESTS!



SQUASH BUG EGGS

## FIRST STEPS

The first step in managing pests is identifying the problem. Once the pest is identified, choose a management strategy that addresses that specific pest.

To identify a pest, examine the affected plants closely. Insects that injure plants are usually (though not always) found on or near the damage, often on the underside of leaves. If the plants are injured but you can't find a pest, examine the type and extent of damage. Look for any signs of pests, like webbing, droppings, or eggs. Consult a pest ID book, the internet, or your local extension office to definitively identify the pest that is causing the damage.

Next, determine the severity of the problem. Seeing an insect or two is rarely cause for alarm. However, insect pests can multiply rapidly, in the right conditions. Check the crop carefully to see if the pest infestation seems to be spreading, if all of the plants within the planting are affected, and how much damage is evident.

## MANAGE PESTS

Determine a plan for monitoring or controlling the pests. If the damage is minimal, consider monitoring for a few days; taking time to observe pest damage levels can often be the best first step in pest management. Healthy, diverse gardens often mitigate pest pressure, with beneficial insects that visit the space on their own accord and eat pest insects. If the amount of damage stays the same or goes down, your garden may have taken care of the problem for you. If the pest problem increases, choose a method for managing the pests.

- Consider cultural tactics, like watering more or less, fertilizing, or trellising, which could create a healthier environment for the crop.
- Can the pests be removed by hand (caterpillars, large beetles) or sprayed off of the plants with a strong stream of water (aphids)?
- Determine if a pesticide is needed.

## USING PESTICIDES

Pesticides are always used as a last resort in an organic system. Here are some guidelines for pesticide use:

- Use the least toxic pesticide possible.
- Look for products with an OMRI seal. These have been approved by the Organic Materials Review Institute.
- Choose a selective pesticide. This type affects a limited range of insects.
- Spray in the morning or evening, before beneficial insects are active.



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THIS TOMATO HORNWORM HAS BEEN PARASITIZED BY BENEFICIAL INSECTS. LEAVE PARASITIZED WORMS IN THE GARDEN TO INCREASE THE NUMBER OF BENEFICIAL INSECTS



ROW COVER USED TO EXCLUDE INSECT PESTS, AND REMOVED FOR HARVESTING

- Follow the directions on the label carefully and make a note of the date that you spray. Many pesticides will need to be sprayed again after a certain number of days.
- Look for harvest interval information on the label. This information indicates how many days are needed between pesticide application and harvest.

## **PREVENTING PEST PROBLEMS**

Pest problems crop up in even the healthiest gardens. However, you can take some steps to minimize the problem.

1. Stressed plants draw pests. Create a healthy garden environment by providing what your plants need to thrive. Especially take care to provide healthy soil and plant crops in the correct season.
2. Plant strategically to avoid the worst pest infestations. For instance, if spring brassicas draw too many flea beetles, consider planting them in the fall instead.
3. Use fabric row cover as a barrier over plantings that you expect to draw pests. The row cover keeps pests out but allows sunlight and rain to permeate.
4. Draw beneficial insects by planting flowers and herbs throughout the garden.
5. Some beneficial insects parasitize pests. Research what parasitized insects look like, and leave them in the garden when you see them. They will hatch more beneficial insects!
6. Plant many different kinds of crops, as each type of pest tends to stay within the bounds of a single crop family.