

# ORGANIC GARDENING BASICS

Organic gardening practices are simply about maintaining a balanced ecosystem for plants, wildlife, and people. That begins with declining to use toxic pesticides and synthetic fertilizers. But organic gardening is much more about what you will do than what you don't do. **Organic gardeners focus on giving plants a healthy environment**, addressing the causes—not the symptoms of problems—and trusting in natural processes. **These basic principles will help you get started.**

## Build the Soil

Plants naturally grow up healthy and vigorous in biologically active soil. That's because the billions of bacteria, fungi, and other microbes in soil form a mutually beneficial partnership with roots, providing essential nutrients in exactly the form the plants can absorb readily. This "soil food web" relies on a steady supply of organic matter, or the decaying parts of plants. **Mixing compost into soil before planting** and adding an inch or two on top of the soil during the growing season is the best way to ensure the soil has plenty of organic matter.

## Choose the Right Plant for the Conditions

When placed in their ideal environment, plants are likely to thrive without the need for artificial stimulants and are able to ward off outside threats to their well-being. Most garden plants are susceptible, for instance, to fungal diseases where the soil stays persistently soggy. Likewise, **varieties that need bright sun tend to struggle in the shade.**

Picking plants for the conditions in each area of your garden will help them perform well in organic care.

## Plan for Diversity

**Mixing a variety of plants**—including edible and ornamental species—**helps to establish a balanced ecosystem in your garden.** In a monoculture, with row after row of the same plants, pest and disease infestations tend to spread rapidly because they generally affect the same species. But when you intermingle different kinds of plants, a problem with one plant won't readily jump to another.

## Feed Naturally

Plants can—and should—get most of their nutrients from the soil. But at certain stages of their lives, you may want to supplement their diet with fertilizer. Organic gardeners steer clear of products made with urea or other synthetic fertilizers because they stimulate rapid unhealthy growth and do not nourish the soil food web—and may actually harm it. Instead, use liquid plant foods made with seaweed and fish or granular products made with ingredients such as alfalfa meal and feather meal. If you need a chemistry

degree to understand the ingredient list on a fertilizer package, chances are it's not organic. **To find out if a gardening product is organic, check with the Organic Material Research Institute ([omri.org](http://omri.org))**, which has been designated by the U.S. Department of Agriculture to approve farming and gardening products for organic use.

## Preventative Strategies

Avoiding problems is the smart way to keep your organic garden healthy. Fresh air flowing around plants dries off moisture that can be a breeding ground for blackspot, powdery mildew, and other fungal diseases. When planting, leave enough space between plants for air to circulate through them. Look for "disease-resistant" or "disease-tolerant" on plant tags. **Avoid planting the same vegetable types in the same spots in your garden every season.** Instead, rotate crops in your garden, which disrupts the life cycles of soil-dwelling pests and diseases.

## Observe Before Reacting

For many gardeners, the sight of insects on their plants is a trigger to respond with sprays, dusts, and other treatments to eliminate them. But the overwhelming majority of garden insects do little or no damage to plants. **The most helpful way to react to insects in your garden is to first observe what they are doing.** Unless they are causing harm that would diminish your harvest, don't do anything. If you do see damage to your plants, take the time to see what's causing it. The symptoms of plant diseases and nutritional deficiencies can look a lot like insect damage. Treating these problems requires very different strategies, so it's critical to understand the cause before responding.



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## Natural Allies

The food chain is the simplest, most natural form of pest control. Birds, reptiles, and all kinds of beneficial insects feed on the plant-eaters. The most helpful role for gardeners is to make all of these creatures welcome, putting out bird baths and other sources of essential water, planting a variety of flowers and herbs alongside the vegetables, and leaving an area near the garden uncultivated to provide shelter to wildlife.

## Access Control

Organic gardeners don't use toxic pesticides but they do take steps to protect their crops from destructive insects. Row covers are light horticultural fabric that is draped over vegetable plants to shield them from invasive insects, such as flea beetles and cucumber beetles. **Cardboard collars made from paper towel rolls protect seedlings from cutworms.** Sticky traps capture whiteflies and other winged pests before they infest your plants.

## Biological Treatments

There are nontoxic organic solutions when pests get out of control. *Bacillus thuringiensis* (commonly known as *Bt*) is a naturally occurring bacteria that disrupts the feeding of targeted pests such as caterpillars or beetles, but does not harm people, pets, or wildlife. *Bt* is sold as a liquid you spray on plants or as dust you sprinkle on them. **Neem oil, an extract from a tree that's native to India,** can be used as a spray to control common pests, but is safe for other living things. A simple solution of 3 tablespoons of baking soda and a tablespoon of liquid dish soap mixed in a quart of water sprayed on leaves is an effective treatment for fungal diseases.

## Weed Containment

Herbicides don't just kill weeds—they wipe out the microorganisms in the soil that plants rely on to stay nourished and healthy. **Keep bare soil covered with a natural mulch all season long to suppress weeds from sprouting.** Dried grass clippings or straw are the best mulches for vegetable gardens. Bark chips or shredded hardwood work well in ornamental beds.

## Soak It Up

An organic garden is a vibrant place full of living things going about their business. Find a spot to sit and appreciate the beautiful safe harbor you've created for all of them and yourself.

## LEARN MORE

[PHS McLean Library Horticulture Basics Subject Guide](#)

[University of Missouri Extension: Organic Vegetable Gardening Techniques](#)

[Organic Materials Review Institute](#)

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