



Using Cover Crops in the Home Garden

Get into the cover-cropping habit, and get all the soil-building benefits of compost without ever having to turn the pile! Even small home gardens spaces can be made more productive with cover crops. The concept is simple: If your soil is always covered with living plants, and never bare, it will host a healthy microbial community.



Cover crop seed mixes combine the nitrogen-fixing benefits of legumes with the biomass of grasses.

Why plant a cover crop

- **To add fertility to the soil:** Plant roots release compounds that support soil microbes, which in turn help plants take up necessary nutrients. A root zone that is active all year round contributes to soil fertility.
- **To prevent weeds:** A dense stand of oats or buckwheat will leave no room for weeds to grow. And when the cover crop is cut down or killed by frost, the residue on the soil surface will prevent the germination of weed seeds.
- **To improve the soil structure:** Cover crops with fibrous root masses, such as winter rye, loosen the soil as they grow and then decompose. Other cover crops, such as forage radish and sorghum-sudangrass, grow deep roots that break up hard, compacted soil.
- **To break the cycles of disease:** Cover crops of all types contribute organic matter to the soil. This contributes to increased activity of the bacteria and fungi in the soil, which has been shown to increase plants' resistance to pests and disease. In addition, mustard cover crops produce compounds that are toxic to some soil-borne pests and pathogens.
- **To solve a soil problem:** If a garden bed is unproductive, compacted, or weed-infested, give it a rest by planting an all-season cover crop, such as sudangrass. At the end of the growing season leave the residue on the soil until the following spring.

When and Where to plant a cover crop

- **During dormant periods:** Take advantage of off-season months—summer or winter—by keeping your garden beds green. Cut the cover crop down and incorporate the residue two weeks before you plan to plant a vegetable crop.

- **Between crops:** Often there is a garden gap—between spring greens and fall cabbage, for example—when your soil sits empty. Six weeks is all some cover crops need to go from seed to soil additive. Think of it as growing compost.
- **At the end of the growing season:** When your garden is winding down in late summer, sprinkle a cover crop seed around your plants to give it a head start. Clover is a good choice for overseeding.
- **Between rows of vegetables:** Renew your soil every other year by alternating planting rows with cover-cropped rows.

How to plant and incorporate a cover crop

- **Scatter seed over the entire bed:** Prepare the soil by roughing it up enough so that seeds can take root easily. Scatter seed and cover it lightly.
- **Turn the crop under:** Turn your cover crops under when they begin to flower, and *before* they set seed.

Impediments Home Gardeners May Face

- **Learning curve:** Knowing which seed to plant when can be a hurdle so start simply. Begin by choosing three cover crop varieties, one for summer, one for spring and fall, and one that will withstand winter conditions in your region.
- **Difficulty in finding seed:** After you determine the specific cover crops you would like to plant, inquire about seed at your local nurseries. If they do not carry it, mention that many gardeners use cover crops, and would patronize a nursery that sold bulk seed. If nursery owners hear this often enough, they will change. **Cover crop seeds are readily available through online and mail order seed sellers.**



Left to right: Buckwheat flowers attract pollinators; mustard has disease-fighting properties; rye can be planted in fall and cut down in spring—even in small home gardens.

Five Easy Cover Crop Choices for the Home Gardener

Radish (forage or oilseed): Choose radish if your soil is compacted; roots will break up compacted soil. Plants grow about 18” tall, and seed can be sown from spring through early fall.

Buckwheat: This fast-growing warm-season cover matures in just 6 weeks, choking out summer weed growth. Flowers attract beneficial insects.

Oats: This quick-growing grass grows 2 to 3 feet tall, and is killed by frost. Plant in spring, late summer, or early fall.

Winter rye: For a winter cover, plant this hardy grass in fall. It grows 4 to 5 feet tall, survives cold winters, and is a good soil conditioner—but more difficult to incorporate than oats.

Clovers: There are many suitable clover varieties for cool-season planting; all are nitrogen fixing and low growing.

And another five:

Soil builder mixes: Cover crop seed mixtures are formulated for summer or winter growing.

Sorghum-sudangrass: Grows tall and adds large quantities of organic matter to soil. Plant in warm soil, in mid- to late summer.

Mustards: Known for producing compounds that can be toxic to disease organisms, mustards can be sown from spring through fall.

Vetch: Hairy vetch fixes large amounts of nitrogen, and is often sown in combination with winter rye or oats in late summer.

Cowpeas: A good choice for summer, cowpeas grow 2 feet high and fix nitrogen.

Resources

<http://cru.cahe.wsu.edu/CEPublications/FS119E/FS119E.pdf>

<http://www.cefs.ncsu.edu/resources/organicproductionguide/covercropsfinaljan2009.pdf>