

Growing Guide: Buckwheat Cover Crop

Buckwheat is a warm-season cover crop that excels at suppressing weeds, protecting bare soil, attracting pollinators and other beneficial insects, and extracting certain nutrients to make them available for subsequent crops.

Fun Facts

- On farms in the northeast U.S., buckwheat has been used to suppress weeds for 400 years.
- George Washington and Thomas Jefferson corresponded about buckwheat, extolling its usefulness on their acreage.
- Buckwheat is related to rhubarb and sorrel, and is not a type of wheat.
- Buckwheat flowers are fragrant and are attractive to bees, and buckwheat honey has a unique, strong flavor.
- Fast-growing buckwheat starts producing seeds in as little as six weeks after sowing.



Buckwheat (*Fagopyrum esculentum*) is commonly grown as a summer cover crop in gardens and farm plots left fallow (unplanted with crops) for the growing season. Because it germinates and grows so quickly, its main function is to shade out weeds before they can get established. It creates a dense cover that protects soil from compaction by heavy rains, and shades soil to moderate its temperature, helping to create a favorable environment for soil inhabitants.

Notable among cover crops (many of which are nitrogen-fixing legumes), buckwheat extracts phosphorus and calcium from the soil. When the buckwheat plants die and decompose, those nutrients are released in plant-friendly forms that can be used by subsequent crops.

Buckwheat also provides habitat for beneficial insects, including honeybees, native bees, and hoverflies (also known as syrphid flies).

Although buckwheat will tolerate cool temperatures, it will be killed by the first frost, so it's important to time sowings accordingly.

Sowing Buckwheat Seeds

In spring. The key to optimizing buckwheat's weed-suppressing ability is to ensure speedy germination and fast early growth. Buckwheat can be planted as soon the soil is at least 55° F. Create a fine seedbed by breaking up big soil clumps, and then rake smooth. Sow the seeds at a rate of about ¼ lb. per 100 square feet. Barely cover the seed with a thin scattering of soil and water gently to help stimulate germination.

Between seasonal plantings. Buckwheat can be used as a cover crop for protecting the soil after the harvest of spring's cool-season crops until it's time for fall planting. Sow seeds as above.

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In fall. Depending on the climate, there may have time for a late-season planting after summer and fall crops have been harvested. Sow seeds at least four weeks before the average last frost date.

Stopping Growth

Allowed to grow unchecked, buckwheat will begin flowering in as little as four weeks after sowing. Seeds will begin to form in another week or two. On farms, it's commonplace to kill the plants — by mowing or tilling them under — to prevent the seeds from maturing and dropping onto the soil. Once that happens, the weed-suppressing cover crop can become a weed!

On small plots, this is less of an issue. Buckwheat has brittle, easy-to-pull roots, so any stray seedlings are easily dispatched. Still, it's a good idea to minimize seed dispersal. If you're growing in summer, cut the plants with a mower or scythe and allow the plant matter to remain on the soil as mulch. Or, if you have a small patch, simply pull the plants and lay them on the soil. Depending on the time of year, you may be able to sow a second planting of buckwheat.

If a killing frost is around the corner, that will do the trick to stop growth.

No matter how the plants meet their demise, the residue will decompose quickly, releasing the nutrients to the next crop.

No-Till Gardening

Buckwheat is an ideal cover crop for no-till growing systems. Simply allow the cut, pulled, or frost-killed plants to remain on the soil surface. Sow seed or set transplants right through the buckwheat remains, which will continue to protect the soil, suppress weeds, and contribute nutrients and organic matter.

No-till growing is gaining in favor in part because it supports the sequestration, or storage, of carbon in the soil. When soil is tilled or otherwise disturbed, some of the buried organic matter is brought to the surface. Once exposed, the carbon it contains can be lost to the atmosphere in the form of carbon dioxide, a greenhouse gas. Soil has the potential to store vast amounts of carbon if left undisturbed, or if managed with that goal as a priority.

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