

Improve Soil Quality with Cover Crops

Leimone Waite, Master Gardener, Oct. 26, 2018

Q: I would like to plant a cover crop in my vegetable garden, but I'm not sure how to choose the best seed to plant. Can you recommend a good cover crop for this time of year?

A: I'm glad you're considering growing a cover crop. There are a lot of benefits to it.

Cover crops are usually grown in the off season to improve the soil or add additional nutrients to next year's garden beds. Reasons to plant them include reducing soil erosion, outcompeting invasive weeds, fixing nitrogen in your soil, growing as a source of green manure – using organic material for composting or turning into the soil, improving soil structure and breaking up compacted soils.

According to the Sustainable Agriculture Research and Education site, SARE.org, “many types of plants can be used as cover crops. Legumes and grasses (including cereals) are the most extensively used, but there is increasing interest in brassicas (such as rape, mustard and forage radish) and continued interest in others, such as buckwheat.”

The first thing to do when choosing a cover crop is decide what goal you would like to accomplish with the growing of the cover crop. For instance, if your goal is to loosen compacted soil, select a crop with a deep root structure, such as Sudan grass. This is a fast-growing warm-weather grass that is great for loosening soil and outcompeting weeds. But it wouldn't be suitable for planting now as it dies once the frosts come.



Best cover crops for fixing nitrogen in the soil include clover, like these sprouts. (Photo: Robert Scheer/IndyStar)

The best crops for fixing nitrogen in the soil are legume crops such as peas, fava beans or clover. These can be planted now to grow through the winter. Most are then turned under in early spring and allowed to decompose at least a couple of months before planting.

If your goal is to improve soil structure, prevent erosion and have a green manure crop to till into your garden beds in the spring, then winter wheat, barley, annual rye or oats are a good choice for fall planting.

With any fall-planted cover crop, it's best to plant at least four weeks before cold weather limits growth. Broadcast seed over the area and then rake the seed into the soil for good soil-seed contact. Make sure to water if the soil conditions are dry. You may also need to fertilize your cover crop if nutrient levels in the soil are low.

Here are some resources you may find helpful as you choose you're the best cover crop for your garden:

Iowa State University has a nice handout on cover crops for vegetable production at http://mccc.msu.edu/wp-content/uploads/2016/09/IA_2015_Cover-Crops-in-Vegetable-Production-Systems.pdf

Peaceful Valley Farm Supply has a “Solution Guide for Cover Crops” that can be downloaded. This is a chart that lists the different types of cover crops and their benefits. This site also has a couple of videos

on growing cover crops that may be useful to getting started. This information can be found at <https://www.groworganic.com/cover-crop-seeds/annual-cover-crops.html>

The UC Davis Cover Crops Database can be another helpful tool in making a decision. Go to <http://asi.ucdavis.edu/programs/sarep/research-initiatives/are/nutrient-mgmt/cover-crops>

The Shasta Master Gardeners Program can be reached by phone at 242-2219 or email mastergardener@shastacollege.edu. The gardener office is staffed by volunteers trained by the University of California to answer gardeners' questions using information based on scientific research.