

## Cover Crops

Cover crops planted in late summer or early fall are an inexpensive way to build better soil for gardening. Cover crops are often referred to as green manure crops. They are grains, grasses or legumes that will grow during fall and winter and that you can till under in the spring. There are many advantages to growing a cover crop. One is erosion control, preventing top soil from being washed away in the winter rains. Cover crops recycle nutrients that might otherwise be lost to leaching or runoff during the winter and spring. Another is weed control. Some crops, such as broad-leaved buckwheat shade and smother weeds with their vigorous growth.



Soil quality will be improved whenever a plant establishes roots and grows in compacted soil. Certain cover crops, such as bell beans, have aggressive taproots that grow deep and break up soil. While doing this, the crop also uses nutrients that are deeper in the soil and after the plant dies, those nutrients are released in the root zone for the next crop. Legume cover crops, such as Austrian field peas or hairy vetch convert atmospheric nitrogen into a form they can use to grow and when tilled under, the nitrogen is released for the next crop. But what if your soil has too much nitrogen? Planting a non-legume, such as barley can take up excess nitrogen from previous crops and recycle the nitrogen as well as available phosphorus and potassium to the following crop.

The primary reason for growing a cover crop is to increase the amount of organic matter in the soil. Organic matter builds better soil structure and fertility and increases water retention, drainage and aeration. It also provides necessary food for earthworms and microorganisms.

Cover crops can also attract insects. If allowed to flower, crops such as crimson clover and mustard attract bees and beneficial insects that help with pollination and insect control in the garden.

Prepare the soil for planting as you would for any other annual crop. Till the area and make sure the pH is between 6 and 7. Broadcast seed at the recommended rates. Plant the cover crop early enough to permit four weeks of growth before cold weather sets in. The more established the crop, the better it will overwinter.

For maximum benefit from the crop, delay as long as possible killing or plowing under in the spring. Allow two weeks after tilling before planting your new crop or the new planting may be a bit nitrogen starved as the green manure breaks down.

Seed catalogs as well as agricultural supply stores, such as Cenex, Wilco, or Coast, carry individual crop seeds, as well as soil builder mixes. For a list of cover crops commonly used in Oregon and Washington, see the Oregon

State University Extension Publication FS304 at <http://eesc.orst.edu/agcomwebfile/edmat/FS304.pdf> or the Washington State University Extension Bulletin EB1824 located at the Extension Service Office in Brush Prairie, WA.