Cover Crops

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The Big Cover-Up: Protect and feed your garden beds

‘GREEN MANURE’ FOR WINTER RAIN AND COLD

Don’t neglect your garden soil – it’s probably hungry, and needs extra nutrients and protection to provide fertile ground for next year’s garden. Hungry soil? Yes, some garden crops draw heavily from soil: corn and beans are both heavy feeders, drawing lots of nitrogen from the dirt to create tasty food. A healthy, balanced ecosystem returns nutrients to the soil, via decaying plants, animals and other creatures. Gardeners have many choices that are less messy and more systematic, i.e., composting yard and food waste, then digging it back into the soil.

But even well-fed (or well-amended) garden beds are vulnerable to the elements. Your garden’s hungry soil is about to be drenched with fall and winter rains that will leach nutrients. Heavy rain can erode and wash away soil completely! Taking the time to plant a specialized crop can protect your precious garden soil.

COVER CROPS TO THE RESCUE!

Also known as green manures, cover crops do many important jobs at once, working quietly in the soil when it’s too cold for even the heartiest gardeners to lift a trowel. Cover crops include many species of plants: grains, grasses and legumes (beans and peas). These versatile plants are used to suppress weeds, retard erosion, add organic matter and store nutrients for future plants. Organic matter builds better soil structure and fertility, increasing water retention, drainage and aeration. Also, cover crops provide necessary food for earthworms and microorganisms. Cover crops plants are truly masters of multi-tasking.

For those of us dealing with clay instead of rich loam, planting varieties with heavy taproots can help break up impossibly heavy soils. To add nitrogen to your garden bed, clover is the cover crop to use. Clovers are nitrogen-fixers, taking atmospheric nitrogen (from the air) and converting it into a form that plants can use. These generous clovers then store this vital nutrient in small nodules on the roots. When the plants decay in the ground (or are tilled into the soil after being composted) the nitrogen is available to feed other plants.

Clovers are one of several cover crops that benefit from ‘inoculation’ – coating the seeds with nitrogen-fixing bacteria before planting. This increases the amount of nitrogen each plant can retain. Most seed dealers sell small packets of inoculum, which are actually bacterial spores. The inoculum and seeds are an easy, inexpensive way to nourish your hungry soil.

HARVESTING COVER CROPS

The best time to cultivate the green manures is after most of the plants have started to bloom or are close to heading, but before they go to seed. For fall-planted cover crops this means tilling them under in the spring. Don't wait too long before harvesting, or the plants will become woody, decomposing more slowly.

Use a spade, mower or string trimmer to chop up the plants. Either mix them in with the top few inches of soil or rake them up and add them to the compost bin. If you dig them directly back into the soil, allow two to four weeks before planting your next crop. Give the cover crop some time to feed the hungry soil before planting your vegetables! This allows the organic matter to break down, nourishing the soil and the multitude of beneficial critters living there.

PLANT NOW, TILL IN THE SPRING

Autumn is the perfect time to plant cover crops. You can help your cover crop get off to a good start by digging in some well-rotted compost into the entire garden bed before planting. The soil temperatures of fall are still relatively warm enough to allow soil bacteria to mineralize the nutrients in the compost, making them available for that cover crop.

Britta Eschete of Mount Vernon scatters rye seed in late September at Riversong Farm, west of Mount Vernon, where she is a Community Supported Agriculture member. Rye is one of several garden cover crops that benefit the soil. Photo by Scott Terrell/Skagit Valley Herald.

Large, coarse rye seeds are easily spread by hand. Riversong Farm owner Christie Stewart Stein said rye seeds ideally are scattered about an inch apart in late September and early October to form a protective, nourishing soil cover before winter. Photo by Scott Terrell/Skagit Valley Herald.

Cover crop seeds are available at farm supply stores, seeds companies such as our local Osborne International Seed Company, garden stores, the Skagit Valley Food Coop, and many seed catalogues, including the very informative 'Winter Gardening' publication from Oregon's Territorial Seed Company. Planting cover crops in the fall and tilling them in the spring is a great investment in healthier soil and healthier plants.

Some ‘Green Manure’ Crops

Crop	Planting Date	Spacing	Seeds/100 Sqaure Feet	Comments
Crimson Clover	Sept - mid October	Broadcast	1-4 oz.	Legume. Does poorly in poorly drained, acidic, infertile soil. Avoid other perennial clovers, such as red clover. Inoculate seed.
Vetch	Late Aug - mid Oct.	Broadcast	5-10 oz	Legume. Soak seeds overnight before sowing. Inoculate seed.
Field Peas	Late Aug - October	Broadcast	10-12 oz	Legume. Does reasonably well in poorly drained or infertile soil. Very hardy. Matures late than crimson clover. Inoculate seed.
Fava Beans	Late Oct-early Nov.	6-8"	12-14 oz	Legume. Soak seeds overnight for quicker germination. Large plants, lots of organic matter, nitrogen for soil. Not very hardy. Inoculate seed.
Cereal Rye	Late Sept-early Oct.	Broadcast or 5" spacing	5-10 oz	Produces lost of biomass. Harder than legumes to chop up. Breaks down more slowly. Roots improve soil structure. Chop before stalks turn brown.
Winter Wheat	Late Sept-Early Oct.	Broadcast or 5" spacing	5-10 oz	Same as rye.
Buckwheat	June - August	Broadcast	5-10 oz	Good summer green manure. Does not need lots of water. Attracts beneficial insects. Not winter hardy.
Tyfon	May- Sept	Broadcast or transplant	0.5 to 1 oz	Cabbage family. Do not follow with other members of cabbage family. Edible greens and roots.
Corn Salad	September	Broadcast	1 oz	Good salad greens in winter. Allow to grow in early spring before chopping.

Courtesy of WSU Extension: Stewardship Gardening
http://gardening.wsu.edu/stewardship/covcrops/growcovr.htm

Crimson Clover adds nitrogen to the soil, and adds color to your garden if you let it bloom before tilling it into the soil. Photo courtesy of Tracey Korthuis.

Crimson Clover

Crimson Clover is my favorite cover crop. It's a beautiful way to nourish the soil.

I plant it in the fall, scattering the seeds thickly to provide thorough protection for my precious garden beds. Then in the early spring I dig in most of the clover plants, but leave a few patches in strategic areas.

In May and June they bring forth vivid red blossoms, attracting bees and other beneficial insects providing pollination and insect control. After blooming, I dig in the remaining clover to nourish the soil in preparation for planting a fall crop such as chard or broccoli.

The only challenge is that Crimson Clover does not grow well in heavy, waterlogged soils, so the ubiquitous clay just won't do. I save this lovely cover crop for my garden beds that are already well-amended with compost, to protect the nutrients and organic matter.

Cover Crop Resources

1. 'Cover Crops' WSU Clark County Extension
   http://clark.wsu.edu/volunteer/mg/gm_tips/covercrops.html
2. 'Green Manures/Cover Crops' WSU Cooperative Extension Stewardship Gardening
   http://gardening.wsu.edu/stewardship/covcrops/growcovr.htm
3. In Spanish: 'Cover Crops: An Easy Way to Improve Your Soil' ('Los cultivos de cobertura: una manera fácil de mejorar el suelo')
   http://extension.oregonstate.edu/catalog/html/ec/ec1538-s-e/