

KPOV – *The Point*

Gardening: Get Good at It

“Fall Soil Amendments”

October 2, 2018

Take time to enjoy the crisp, cool days of fall. Observe the beauty around you and the warmth of the sunlight. Take a deep breath and enjoy the fresh air because now is the time to prepare your soil for spring planting. What should you be adding to your soil this fall? Three things: finished compost, raw organic matter, and organic nutrients.

The spring soil food web is fed by the fall garden. You can use your own homemade compost, or are purchase compost in bags or by the truckload. Loosen the soil, and mix in a layer of compost. While soil temperatures are still warm, the nutrients and organic matter in the compost will stimulate microbes and other beneficial organisms.

The residues left after the garden has finished feed the soil with essential organic matter. Chop the residues into smaller pieces that decompose more quickly. The chopping action also mixes the material into the soil to activate a feeding frenzy.

Roots contribute an enormous amount of organic matter to the soil. Narrow zones around roots, known as the rhizosphere, are hot spots of microbial activity. If there's not a good reason to pull up roots in the autumn, then leave them in place, they will decompose over winter.

To boost the amount of organic matter in your soil— beyond what you can get from finished compost— consider incorporating raw organic matter directly into the soil. Shredded leaves are a great choice for raw organic matter. Keep in mind when you're adding raw organic matter to your soil that the beneficial soil organisms that will help decompose this material, require nitrogen to do their work. This means that if you don't add some additional nitrogen along with the organic matter, the microbes will start using up the nitrogen in your soil. To avoid this, you can either add some nitrogen-rich manure along with the raw organic matter, or sprinkle on some granular organic fertilizer.

A good thing about adding animal manures in the fall, is that it doesn't really matter if the manure is fresh or aged. Over the winter months, the caustic ammonia will dissipate, leaving behind valuable nutrients and organic matter. Most organic fertilizers release their nutrients slowly over many months, so applying them in the fall helps ensure they'll be available to your plants next spring. Over time, organic matter improves soil aeration, water infiltration, and both water- and nutrient-holding capacity. Many organic amendments contain plant nutrients and act as organic fertilizers. Organic matter also is an important energy source for bacteria, fungi and earthworms that live in the soil.

Fall is also a good time to determine the pH of your soil. Take a sample from the soil and test it at a testing facility or with a soil testing kit. Home testing kits usually require combining the sample with water in a special testing tube, which changes color to indicate nutrient deficiencies and soil pH. Most plants, including vegetables, grow best with a soil pH between 6.0 and 7.0, but it varies depending on the plant varieties. if you need to add sulfur to lower or lime to raise the soil pH, fall application allows time for the chemical reactions to take place that are necessary for a pH change to occur. Always base your addition of sulfur or lime on soil test recommendations, rather than adding products on a hunch.

Remember that too much of a good thing is not always good. If you want to plant your beds in the spring and summer, then don't exceed your soil's ability to eat up the added amendments. Generally don't apply more than 1-2 inches of compost, 1/2 to 1 inches of manure, or 2-4 inches of leaves or other raw material.

Improving the soil in your garden makes a huge difference in its ability to retain water, support healthy plant growth, and help your plants fend off diseases, pests and other stresses. Whether you're new to gardening, or a seasoned pro, building better soil is the single most important thing you can do to improve your gardening success. And fall is the best time to do it!

Resources:

<https://extension.oregonstate.edu/gardening/techniques/central-oregon-climate-how-it-relates-gardening>

<http://extension.colostate.edu/topic-areas/yard-garden/choosing-a-soil-amendment/>

<https://lancaster.unl.edu/hort/articles/2011/SoilAmend.shtml>

University of Minnesota Extension

https://extension.umd.edu/sites/extension.umd.edu/files/images/programs/hgic/Publications/HG42_Soil_Amendments_and_Fertilizers.pdf

<http://extension.colostate.edu/docs/pubs/garden/07235.pdf>