Garden beds benefit from cover crops

For many years, farmers have made good use of cover crops; however, cover cropping isn’t just beneficial for on farm and ranch land, it also has benefits in the home garden.

Cover crops are plants grown to improve soil quality or to provide a benefit to the ecosystem. Sometimes referred to as green manure or living mulch, cover crops can be valuable in preparing a new site for gardening.

With the growing season slowing down, it’s a good time for gardeners to consider planting cover crops, which also are known as catch crops. They’ve garnered this name because their deep roots absorb nutrients from the soil that could otherwise leach away or are unavailable to garden crops with shorter roots. When the cover crops are tilled under, they decompose and release those caught nutrients. Some cover crops, like those from the legume family, even trap and transform atmospheric nitrogen in their roots. This nitrogen serves as a fertilizer source for future crops.

Cover crops can also help reduce erosion, which poses the greatest risk to bare soil. Cover crops reduce erosion by slowing moisture runoff both above and below ground. This allows water to infiltrate into the soil instead of simply moving across the top of the soil.

The soil structure can be improved with the use of cover crops. This occurs by increasing organic matter into the soil and adding biomass below the soil surface. Improved soil structure means improved soil pore space and better soil infiltration, drainage and aeration. Gardeners also will benefit from improved water and nutrient holding capacity and soil microbial activity.

Cover crops are divided into two categories - warm-season and cool-season - based on the optimum times to plant and grow. Cool-season cover crops will survive through the winter and should be planted by the end of October. Over the winter they’ll provide protection from soil erosion. Get these crops in the ground as soon as possible so the roots will develop before winter, but late enough they don’t complete their growing cycle before winter weather arrives.

Warm-season types won’t tolerate freezing temperatures and should be planted after all possibilities of frost. Most take six to eight weeks, or longer, to grow large enough to turn under.

When planting cover crops, prepare the garden soil as you would for your vegetable garden. If using legume crops, inoculate the seeds by moistening them, draining the excess water, adding the inoculant powder and mixing well. Broadcast the seeds evenly and cover with a thin layer of soil. Harvest cover crops before they flower and produce seeds and till under about two to four weeks before planting next season’s garden crops. This provides time for some decomposition. Microorganisms in the soil will break down the plant material.
The type of cover crop you grow depends on the availability and desired function. In general, cover crops are annuals or biennials that complete a life cycle in one or two seasons. As mentioned earlier, members of the legume family are good choices for cover crops. A few cool season species that work well this time of year include Austrian winter peas, clovers, fava bean, winter rye, and barley. For more information on these and other species see the OSU Extension fact sheet HLA-6436 Healthy Garden Soils.