

Soil Preparation for a New Garden
By: Kelly Feehan, Extension Educator
Release: Week of April 5

Vegetable gardening is on the rise. The hope is people will continue to garden to gain all of the benefits of exercise, stress relief, eating more fresh vegetables, family togetherness and the list goes on.

For new gardens, site selection and preparation is the first step. This may best be started in fall, but spring is okay too.

For vegetables, choose a location that receives at least six hours of sunlight a day. Eight to ten hours would be even better. The site should be near a water source and have some protection from strong winds.

While a well-drained soil with good water and nutrient holding capacity is ideal, we usually have to live with the soil our site has. However, soil can be improved. Even if you start with a heavy clay soil or a very sandy soil, both can be improved to make them easier to work and to increase production.

Once the site is selected, the next step is to deal with existing vegetation, such as sod. Physical disruption or no-till are two methods to use.

The traditional method is physical disruption where existing sod is removed and the soil is tilled. Remove sod with a sod cutter or spade. Recycle it by using the sod elsewhere or composting it.

To avoid grass coming back from structures left in the soil, kill the sod first with an application of glyphosate (i.e. Roundup). Wait two to three weeks after application, then strip off the dead sod or till it into the soil to increase organic matter.

Before tilling, and especially if sod is removed, spread a two to four inch layer of compost over the garden and till it in six to eight inches deep. Increasing organic matter improves drainage in clay soils and water holding capacity of sandy soils.

Do not add sand to clay soils to try and improve drainage. While this seems logical, the amount of sand it would take to make a difference is not feasible and the end result can be a cement-like soil.

Organic matter is one of the best ways to improve soil. A soil with 5 percent organic matter is the goal. Send in a soil sample to a soils lab to learn organic matter percentage as well as pH, nutrient content and more. Soil tests only cost about 20 dollars and the information gained is valuable.

If you use tillage, make it a goal to avoid over-tilling. Tilling soils too often or tilling them too fine destroys soil structure and can lead to a number of problems and lower yields over time.

While rototillers are convenient, they can till soils too fine or create hard pans. If feasible, use a garden spade, garden fork or a broad fork to rough till soil; then use a rake to create smoother seed beds or rows.

For no-till, the only sod that would be removed is from the rows or beds where seeding or transplanting will take place. The rest of the sod is left to hold soil in place and protect it from foot traffic or excessive tillage that can damage structure. It will decompose so mulch the pathways between rows and beds.

With no-till, the sod does need to be killed first. During spring, glyphosate might be the best route to use due to time constraints.

Smothering sod is another method and works best if done the previous fall as more time is needed to kill sod with this method. To smother turf, spread a layer of newspaper over the sod and then spread 4 to 6 inches of organic matter or compost over the newspaper to hold it in place.