

No-Till Garden Site Preparation
By: Kelly Feehan, Extension Educator
Release: Week of October 25, 2021

If planning to put in a new garden next spring, you might not need to wait until spring. Consider starting site preparation now with a no-till option.

Research shows that tillage damages soil structure, kills beneficial soil microbes, reduces soil organic matter and leads to other issues. The preferred method for garden site preparation is changing to no-till.

With traditional site preparation, existing plants are removed and the soil is tilled. With no-till, the soil is not disturbed. And while existing plants are killed, they are left in place except where seed or transplants are planted.

Because existing plant cover remains after it is killed, the benefits include reduced soil erosion, fewer weeds since weed seeds are not exposed to sunlight during tillage, and conservation of organic matter, beneficial organisms and moisture.

Because the no-till method can take a few months to accomplish, it is typically started the previous season in preparation for planting the following spring.

Find a sunny site, especially for a vegetable garden, then outline where the new bed or beds will be. This can be done with a garden hose, rope or spray paint.

With no-till, walking in garden beds is best avoided or limited to avoid soil compaction. To help with this, lay out the garden beds so you can easily reach any part of the bed from a path while kneeling.

If the new garden is being put into an existing lawn, grassed strips can be left as pathways. These need to be wide enough for your mower.

After laying out the garden, the next step is to kill existing sod and weeds. This can be done with a smothering method or the use of the non-selective herbicide glyphosate (i.e. Roundup).

For the smothering method, a layer of newspaper and organic matter is used. Place a thin layer of newspaper on top of the sod or weeds to block light.

Moisten the newspaper and then spread a 2 to 4 inch layer of compost or other organic matter such as chopped leaves or grass clipping on top. Moisten this layer as well. Organic matter holds the newspaper in place while it smothers the sod and weeds.

Next spring, when it is time to plant, simply pull aside the mulch only in rows for seeding or where transplants are placed. Leave the rest in place to decompose, shade out weeds, and conserve soil moisture.

During the first planting season after using this methods, you may need to dig out old roots of existing sod or weeds and add topsoil or compost to the holes where planting will take place.

It will also be especially important to use nitrogen fertilizer at recommended rates during the growing season. The microorganisms that break down sod, newspaper and other organic material use soil nitrogen for the decomposition process. This could result in a nitrogen deficiency for crops.

Another garden task to do during fall is a basic soil test. These are inexpensive and provide information such as pH, organic matter percentage and current nutrient content. It is a good idea to have a soil test taken about every few years. Call your local Extension office for information about soil testing and soil labs.