

Breaking new ground

Fall is the best time to break new ground and prepare the soil for spring planting. If your chosen garden site currently looks like a jungle of weeds, remember to pace yourself and start small. This is your chance to get rid of many perennial weeds, making later weeding much easier. This step is the most physically demanding of all the vegetable gardening chores. Remember, many hands make lighter work!

Getting the sod off

To start clearing a plot, first cut down surface vegetation. This can be done with a mower, gas-powered trimmer (metal blade preferred), or by hand with a scythe. Rake off the cut vegetation and pile it in your composting area.

Use stakes and string to mark out the perimeter of the site. Using a sharp, square-bladed spade, slice a line through the sod around the edges. Make sure you push the spade as deep into the ground as it will go. Then slice the enclosed turf into a grid of chunks no bigger than you can lift. Using a garden fork, flip over the chunks, green side down. Knock as much soil off the sods as possible. Pile sods, green side down, in your compost area and cover with black plastic to discourage sprouting and to speed up composting.



Slice into the sod with a square bladed spade.
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If you are removing a large amount of sod, consider renting a sod cutter instead of spading. These machines are available in manual and gas-powered models.

Once the sods are gone, spade or fork over the entire garden area, removing large rocks and pulling out the deep roots of perennial weeds. Be sure to remove as many of the white stringy rhizomes of quack grass/ couch grass as possible. It's important to remove these roots now, before tilling: if they get chopped up, each tiny piece can grow a new plant. Also best not to compost the rhizomes as they can be very tenacious.



Rake the newly turned soil to remove roots and rocks.
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Depending on your soil, you may have to spade it over again or use a rotary tiller to break up large clumps. In either case, finish off with raking to catch any remaining roots and rocks. The surface does not need to be fully smoothed out until the spring.

It is very important to work the soil only when moisture conditions are right. To test, pick up a handful of soil and squeeze it. If it stays in a ball it is too wet. If it crumbles freely, it should be about right. Excessively dry soil is powdery and clumpy and may be difficult to work. If soil sticks to a shovel, or, if when spading, the turned surface is shiny and smooth, it is still too wet. Working soils when they are excessively wet can destroy soil structure, which may take years to rebuild.



Keep in mind that removing the cut sod results in a loss of organic matter from the site. Plan to return some organic matter in the form of composted sods or other compost or topsoil before planting.

Another approach to getting rid of sod is to cover the area after mowing. Depriving plants of light and moisture will kill or at least weaken them. A sheet of opaque, heavy plastic works well (try damp-proof membrane from the hardware store or silage plastic from a farm supply store). Make sure the material is weighed down; otherwise a strong wind can wreak havoc. The plastic will have

to stay in place for up to three months during warm weather to be effective. Once the vegetation is dead, you can start spading the area as described above.

Take a soil sample

Fall is the best time to take a soil sample. After working the soil, take a sample and have it analyzed for nutrients and pH (*See 'Improving the soil' for more details*). Some amendments, such as lime and slow-release nutrient sources are also best applied in the fall.

Activity

Experiment with different materials to smother existing vegetation after mowing.

Stake out 2 areas that you would like to convert into garden beds. A bed 90 cm (3') wide by 180 cm (6') long makes a manageable project size. Apply one of the following smothering materials in each area. Every 3 - 4 weeks, check under the material to see what is happening to the vegetation. Also check for signs of beneficial soil organisms such as worms. This project may take several months and is best started in the spring or summer. Garden beds will be ready in the fall or the following spring.

1. **BLACK PLASTIC:** Stretch opaque black plastic over the area. Securely anchor the edges.
2. **NEWSPAPER AND GRASS CLIPPINGS:**
 - Cover the area with newspaper. The layer should be about 10 sheets thick, with adjacent sections overlapping by a few inches.
 - To keep newspaper from blowing away, add a 5-6 inch layer of grass clippings. Lightly spray the area with water.
 - Grass clippings may need to be replenished over the course of the experiment.

