How To:
TILL AND CULTIVATE YOUR GARDEN

Skill Level: BEGINNER  These how-to's are suitable for people who are new to DIY and who have a basic knowledge of tools. If you’ve painted a room or re-potted a plant, you can probably complete one of these projects by yourself in a few hours or less.

MATERIALS
- Rototiller or Cultivator (gas or electric)
- Power Source (gasoline, electric cord, electric battery)
- Replacement Parts (as indicated by manufacturer)
- Adjustment Tools (as indicated by manufacturer)
- Ear Protection
- Safety Glasses
- Work Gloves

A hobby that’s becoming more and more popular is gardening. To get healthy and bountiful plants, you need to properly prepare the soil. These instructions and the accompanying video show you how to do that with a rototiller or cultivator.

PREPARATION

01 Select a rototiller based on the size and labor requirements of the chosen planting area.
   - Rear-tine rototillers typically are the largest and have the most power with a gas engine and a tilling width of 12-24". They are most popular for breaking up native (untilled) soil and quickly adding soil amendments in larger gardens.
   - Front-tine rototillers are powered by smaller gas engines with 12-36" wide tines used to till established gardens.
   - Cultivators are even smaller and are powered by gas or electric motors. They’re designed to remove weeds and turn soil near existing plants.
   - TIP: 4-cycle gas engines typically are larger and have more power than 2-cycle engines. 4-cycles run on gasoline; 2-cycles require a mixture of gas and oil as indicated by the manufacturer. Ask a Lowe’s associate for assistance in selecting the appropriate rototiller and accessories for your garden.

02 Make sure that the selected garden area does not have underground utility lines that can be damaged by digging tools. Before digging or cultivating a new garden, call 811 to be connected with the local utility companies. They will mark your utility lines for you.

03 For new gardens, remove the grass sod and any rocks or stones. For existing gardens, pull up the thick weeds; smaller weeds will be chopped up by the tiller.

IMPORTANT
Before operating a rototiller or cultivator, thoroughly read the manufacturer’s operating manual for specific guidance and safety tips. If you have additional questions, contact the manufacturer directly. For general questions on rototilling and gardening, discuss the job with a Lowe's associate or call a professional for help.

For more how-to videos visit Lowes.com/Videos
EVALUATING SOIL

Good growing soil must have nutrients and allow water to reach the roots and drain excess water away. Inspect the soil with your hands to determine whether water can permeate it. If the soil is excessively damp or has high clay content, consider adding sand or gypsum to help break it up and allow moisture and nutrients to move through the soil.

Most soil can be improved with organic material. However, some soil conditions require extra attention. If the soil is extremely wet or thin, consider constructing a raised garden bed instead. Check out Lowe’s How to Build a Raised Garden Bed video for specific instructions.

01 Test the soil with a test kit, available at Lowe’s, to check for permeability and nutrients.

Typically, all you have to do is scoop up some dirt in the tube and follow the instructions with the tester. Another option is to have your local agricultural extension office test the soil for a nominal fee.

02 Test the soil for pH balance to determine whether the soil is acidic or alkaline.

Some plants do better in soil that’s acidic, others do well in alkaline soil, and some do best in neutral soil.

- A pH test reading around 7 means the soil is relatively neutral.

EVALUATING SOIL

<table>
<thead>
<tr>
<th>Soil pH Level for Plants</th>
<th>5.0-6.0</th>
<th>5.5-6.8</th>
<th>6.0-7.0</th>
<th>7.0-8.0</th>
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<tbody>
<tr>
<td>Acid</td>
<td>Blueberries</td>
<td>Beans</td>
<td>Asparagus</td>
<td>Cabbage</td>
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<td></td>
<td>Raspberries</td>
<td>Sprouts</td>
<td>Beets</td>
<td>Cauliflower</td>
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<td>Rhubarb</td>
<td>Carrots</td>
<td>Broccoli</td>
<td>Cauliflower</td>
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<td>Shallots</td>
<td>Corn</td>
<td>Grapes</td>
<td>Celery</td>
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<td>Strawberries</td>
<td>Garlic</td>
<td>Lettuce</td>
<td>Cucumbers</td>
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<td></td>
<td>Sweet Potatoes</td>
<td>Parsley</td>
<td>Oats</td>
<td>Olives</td>
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<td>Watermelons</td>
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<td>Tomatoes</td>
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- If the test gives a pH reading below 7, the soil is acidic. Add lime or wood ash to balance it.
- If the pH test result is higher than 7 pH, the soil is alkaline. To balance it, add some peat moss, composted leaves or sawdust.

- CAUTION: Do not use treated lumber for sawdust.
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EVALUATING SOIL (cont.)

03 Add soil amendments as indicated by the test.
- If you purchase your soil amendments from Lowe’s, follow the label directions for application.
- If you’re adding compost, pile it on—a good mix of organic composted materials is great for any type of soil.

04 Mix the amendments into the soil with a rototiller according to the following instructions.

ROTOTILLING A GARDEN

01 Read the rototiller manufacturer’s instructions carefully to become familiar with the controls and how to operate it safely. Make sure to wear the appropriate safety gear and clothing when tilling.
- **TIP:** When is a good time to till? For best results, wait a day or so after it rains so the dirt is semi-dry. Plus, with a little moisture, it will be easier to till.

02 Set the tiller for the appropriate depth. Use a shallow setting to start on hard, compacted soil. For softer ground, start at a medium setting.

03 Start the tiller, following the manufacturer’s directions.

04 Engage the tines and slowly make parallel passes across the garden. Let the tiller do the work.

05 Once you have tilled the entire garden, adjust the tiller to its deepest setting, and begin making passes perpendicular to the first pass rows. Walk slowly and remember to let the machine do the work.

06 Continue tilling until the organic matter is thoroughly mixed into the soil to a depth of about 8”.

07 Allow the nutrients and organic material to enrich the soil for a few days, or if possible, several weeks before continuing.
08 Set the tiller at a medium depth setting and make passes back and forth across the garden to aerate it and make sure the nutrients are well blended.

09 Set the tiller to a deeper setting and make the final perpendicular passes across the garden soil.

Your garden soil should now be loose, fluffy and finely textured—perfect for planting a great garden. For tips on planting, check out the Plant Guide at Lowes.com/Plants. And to see other outdoor projects with step-by-step instructions, visit Lowes.com/Videos.