

# SELECTING A TILLER for the Home Garden

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Most gardeners realize that they must manipulate the soil in their garden to successfully grow vegetables. Whether by hand, with a shovel, or a mechanical piece of equipment, tilling is an important practice for reducing compaction and mixing organic amendments into the soil. While smaller gardens and most raised beds can be turned with hand tools, larger gardens may require more sizable equipment.

**One of the home gardener's most useful tools is a mechanical tiller.**



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# Selecting your equipment

While the original cultivator was pulled by mules, today's equipment is powered by strong two-cycle and four-stroke motors. Tillers can range dramatically in size, configuration, power, and price. It is a good idea for the gardener to know exactly what they want to accomplish before purchasing a particular tiller. Tillers can be purchased at equipment stores, big box stores, and online. It is advisable to select a tiller that is slightly bigger than you need rather than too small. A larger tiller can do many small jobs, but a smaller tiller may have difficulty tilling a large area. In general, tillers may be classified in four different sizes—miniature, small, medium, and large.

## MINI TILLERS



▲ Mini tillers normally carry a powerful two-cycle motor similar to those on chainsaws and leaf blowers.

These subcompact tillers normally carry a powerful two-cycle motor similar to those on chainsaws and leaf blowers. There are also some four-stroke mini tillers on the market. Two-cycle motors differ from four-stroke motors in that they use a mixed fuel of gas and oil. Typically, the ratio of gas to oil could be 50:1 or 40:1. There is no separate reservoir in a two-cycle motor for engine oil. Four-stroke motors, also called four-cycle motors, run straight fuel with a separate reservoir for oil. Almost all tillers larger than the miniature type will have four-stroke motors.

Mini tillers have a special niche in the home garden. While they are relatively small, they do a very effective job of tilling the soil. Almost all mini tillers are designed to operate by pulling them backwards, which allows them to dig into the soil. Larger tillers operate in a forward direction. Mini tillers are an excellent choice for tilling raised beds or gardens that are no larger than about 10-feet by 25-feet in size. They can, however, also be effectively used in and around plants in larger gardens to assist with weeding and incorporating side dressed fertilizer.

If a garden area has never been tilled and is compacted with heavy clay, you may want to consider using a spaded shovel first or a larger tiller to initially break up the ground. After that, the mini tiller should do the job. Prices on mini tillers can range from about \$150 to \$300. When selecting any equipment, consider the quality of the product as well as the warranty. It is also important to select equipment for which you can order replacement parts or have the equipment repaired.

## SMALL TILLERS (5 to 8 horsepower)



As you begin to move up in power, the equipment itself will be more powerful and capable of tilling larger areas. The smaller tillers are excellent for tilling up gardens that are approximately 3,000 to 4,000 square feet in size. Rear-tined tillers are the norm today and are easier to operate than the older, front-mounted tillers. Like everything, quality can vary, depending on the manufacturer. The price is normally indicative of the quality. Small consumer tillers can be purchased between \$400 to \$700. Higher-end commercial models are also available.

◀ Small to medium tillers are excellent for tilling gardens that are approximately 3,000 to 4,000 square feet.

## MEDIUM TILLERS (9 to 11 horsepower)



Medium-sized tillers open the door to working a larger garden area. It's possible to till a quarter-acre garden with this size tiller. The digging tines of the tiller are somewhat larger and heavier in gauge, and some models may even offer an electric start option. As these tillers begin to get larger, they are not necessarily more difficult to operate. The heavier weight of the tiller helps it to penetrate the ground more easily and keeps the machine from bouncing too much. A tiller this size can be used for multiple purposes such as tilling up a new lawn area or working in new flower beds.

With the increase in size of the tiller, the price begins to climb as well. Most of the tillers in this category will range in price from \$800 to \$1,500. A high-end, midsize tiller with all the bells and whistles could run as high as \$2,000. On many of the higher-end tillers, however, you get a shaft-driven implement rather than belt-driven. You also gain the ability to change attachments so that you can go from a tiller to a mower—and even to a snow blower in the case of one machine.

## LARGE TILLERS (12 to 30 horsepower)



▲ Large tillers use heavy-duty motors that can handle the extra capacity of the larger tilling box.

▼ Three-point tractor-mounted tillers are extremely useful in larger garden plots.



Large tillers give home gardeners the ability to create a garden greater than a half-acre in size. The tiller box itself will be larger than any other models. Tiller widths range from 18 inches up to 25 inches. While actually fairly easy to operate, these machines are quite heavy and can be a bit intimidating. Despite their weight and ability to dig in, many of these tillers can be operated with one hand while you walk alongside. Most of the larger tillers use heavy-duty motors similar to commercial motors that can handle the extra capacity of the larger tilling box.

You may need to go to an outdoor equipment store to locate these larger tillers, as they are not typically sold in the garden centers of big box stores. Prices could range from \$1,500 up to \$4,500, depending on how many added features you select. Some of the higher-end large models can even be purchased with a diesel motor. This size tiller is not for the weekend gardener—large tillers are more appropriate for someone gardening on a larger scale or interested in marketing some of their produce.

Another option for the home gardener, if they happen to have a garden tractor, is to purchase a tiller as an implement. Three-point tractor-mounted tillers are extremely useful in larger garden plots. Most home garden sites would be best suited to a 4- or 5-foot-wide model. A garden tractor with a power take-off shaft (PTO) and three-point hitch system should have approximately 18 to 30 horsepower. It is hard to beat a tractor with a garden tiller if you are trying to grow in an area much larger than a half-acre. Prices for these tractor-mounted tillers can range from about \$1,800 to \$3,200.





# Maintenance

In order to increase their efficiency and extend their life span, tillers should be maintained on a regular basis. Since most tillers are not used every day, check the engine oil prior to operating them. It is also a good idea to regularly inspect and clean the air breather on the machine. Tillers work in dusty, dirty conditions and it does not take long to clog up the air filter. Fuel should be kept fresh with a gasoline ethanol treatment, or preferably, by exclusively using an ethanol-free fuel in the motor. Keep an eye on your tiller tines as they wear down over time and will eventually need to be sharpened or replaced. Tillers should always be stored indoors and protected from rain to keep the motor from rusting. Long-term storage should include draining the fuel and running the excess gas out of the carburetor prior to storing it.

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