

How to grow tomatoes

Tomatoes are the most popular of the garden vegetables. They are easy to grow, produce a lot of fruit and are rich in vitamins A, B and C. They can be used fresh or cooked, in salads or sauces and can be frozen, dehydrated or canned. Tomato fruit are red, pink, white, orange, green or yellow, depending on the variety. Most are round, but some are pear-shaped.

Kinds of tomatoes

All-purpose tomatoes are medium-size and used for a variety of purposes.

Early varieties produce tomatoes from transplants in as little as 49 days.

Cherry and grape tomatoes are small, tangy or sweet and grow in clusters.

Heirloom tomatoes are older tomato varieties with desirable characteristics.

Paste tomatoes are used for making sauces or ketchup.

Giant tomatoes produce the largest tomatoes.

Tomato terms

Determinate varieties grow to a certain size and all the fruit ripen within a several-week period. They take up less garden space and usually do not require staking. These tomatoes are ideal for large containers planted on a deck or patio. Very small varieties may be sold as "patio tomatoes."

Indeterminate varieties continue to grow all season and produce fruit until frost. Cage or stake them to keep fruit clean and prevent it from being damaged from lying on the ground.

Many **disease resistant tomato varieties** will have V, F, N or T listed after the tomato name



Heirloom tomatoes are many colors.

on the tag. This indicates the plant is resistant to verticillium (V), fusarium (F), nematodes (N) or tobacco mosaic virus (T).

Start early

Tomatoes are a warm season crop and develop best when temperatures are between 70°F to 75°F. Many gardeners plant transplants the last week or two of May, after danger of frost has passed and air and soil temperatures warm.

Tomatoes take some time to grow, so use transplants to give them enough time to produce adequate fruit. Many places will sell transplants in the spring. It is also possible to start tomatoes from seeds indoors about six to eight weeks before transplanting them outside in the garden. Use fluorescent lighting to produce sturdy, compact, green plants. Buying transplants is often easiest for beginning gardeners.

If you buy transplants

Choose dark green, stocky plants six to 10 inches tall with stems the thickness of a pencil. Don't buy tall, spindly plants with leaves spaced far apart or those with leaf spots, yellow or curling leaves. They are already experiencing difficulties.

Avoid plants with flowers or fruit on them. They will not produce as much fruit. Once plants begin flowering and fruiting, they do not grow much more in size. Picking off flowers or fruit will not change the pattern of growth.

Transplanting

Tomatoes cannot withstand cold air or cold soil. Transplant them after danger of frost has passed. It is also best to plant tomatoes in the evening or on a

cloudy day to prevent them from drying out.

Set plants into the soil two inches deeper than they were growing in flats or containers. If plants are long-stemmed with few leaves, use the trench planting method by removing all but a few of the top leaves. Bury the stem horizontally under two to three inches of soil leaving the top cluster of leaves uncovered. In a few days, the top will straighten up and grow. Roots will develop along the buried stem, providing a good base for strong growth.

Keep soil moist with water. You can use a diluted starter fertilizer, if desired.

Cover plants at night if there are frost warnings. Remove the covers in the morning the next day.

Growing basics

- ✓ Tomatoes need full **sun** (eight or more hours a day) and warm soil for good yields.
- ✓ Plant in well-drained, loose **soil**.
- ✓ Tomatoes draw a lot of nutrients from the soil, so use a **fertilizer**. Get a soil test and follow the recommendations. Beware of using too much nitrogen; you may grow a large plant without much fruit.
- ✓ Provide **water** as needed. Prevent blossom end rot (caused by irregular watering) by keeping the soil evenly moist. Blossom end rot causes the bottom of a ripe or semi-ripe tomato to be flat, black and leathery. It is often caused by uneven watering in hot weather. Mulching helps maintain even moisture and decreases this problem.
- ✓ Tomatoes should be **caged or staked** for cleaner fruit with less damage. Containers can

be used to grow tomatoes, but must be large enough for growth. Choose one of the determinate varieties or patio tomatoes.

Harvesting

Pick tomatoes when ripe for best flavor or allow them to fully ripen in a warm, dark area. The day before a killing freeze is expected, harvest all green mature fruit that is desired for later use in the fall. Wrap the tomatoes individually in paper and store at 60°F to 65°F. They will continue to ripen slowly over the next several weeks.

Do not can tomatoes from dead plants, such as those killed by frost in the fall, as the acidity level may not be high enough to safely preserve the fruit.

Tomato do-not's

Do not plant within 50 to 70 feet of a **black walnut tree**. Walnut roots contain a plant toxin called juglone. When tomato and walnut roots come in contact, the tomato quickly dies.

Do not plant tomatoes in the same area each year or after other members of the nightshade family: peppers, eggplant and potatoes. Disease and insects will be more likely.

Fun tomato facts

Botanically, the tomato is a fruit. It is classified as such because the portion that is eaten contains reproductive structures (seeds). But in 1893, the tomato was declared a vegetable by the United States Supreme Court. The reason involved the collection of import duties. So, the tomato is either a fruit or a vegetable, depending on whose definition is used.

Notes:

MSU is an affirmative-action, equal-opportunity employer, committed to achieving excellence through a diverse workforce and inclusive culture that encourages all people to reach their full potential. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Jeffrey W. Dwyer, Interim Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.