

Latin Name/Genus: *Solanum lycopersicum*

Family: *Solanaceae*

Difficulty: Moderately challenging

Season: Warm season

Exposure: Full sun

Zone: Hardy between Zones 8-11



Timing: Start indoors in early spring over bottom heat; when seedlings germinate, remove from the heat and grow under bright lights. Grow seedlings on for 6-8 weeks at around 10°C; early season tomatoes can be planted out once night time temperatures are reliably above 7°C - or later. Other types should be transplanted out when night time lows are 10°C or warmer - or later. Optimal soil temperature for germination: 25-35°C. With bottom heat seeds should germinate in 7-14 days.

Starting: Sow seeds 5mm-1cm (¼-½") deep. Keep seedlings under very bright light to prevent legginess. You may have to pot on seedlings more than once before they go out to allow for root growth. Space bush (determinate) transplants 45-60cm (18-24") apart and vine (indeterminate) types 50-75cm (20-30") apart in rows 1m (3') apart.

Days to Maturity: From transplant date.

Growing: Ideal pH: 6.0-6.8. Tomatoes like fertile, well drained soil that is rich in organic matter. Dig in finished compost and manure, and add 1 cup balanced organic fertilizer beneath each transplant. The nutrition from heavy clay soils is excellent for tomatoes, but they are slow to warm, so transplanting should be done later. By the same token, lighter soils warm more quickly, so transplants can go out sooner. Adding glacial rock dust will supply all the calcium they will need. Regular watering is vital, but don't let the plants sit in water. Tomatoes are tropical plants so they require full sun and lots of heat. Vine varieties will require some kind of support such as a wire to grow up, or a trellis to be tied to as the plant grows. Bush types benefit from the support of a tomato cage in order to prevent sprawling. At the time of final transplant, plants can be buried up to their first pair of true leaves. This will encourage greater root growth, helping with both nutrient uptake and the plants' ability to stand up to dry conditions. Stop watering around the end of July to encourage the fruit to ripen. If tomato plants are grown under cover, you can encourage pollination and fruit set by tapping the stem from time to time. Tomatoes do not rely on insects for pollination. Vibrating the plant shakes pollen loose within the flowers, which then self-pollinate. Indeterminate tomatoes continue to grow and produce fruit until they are killed by frost. Remove any suckers (stems growing from the crotch of leaves) to keep the foliage under control, and they will set a later crop of larger fruit. Determinate varieties normally set fruit in a concentrated time period. Their suckers are not normally removed, though some trimming helps with ventilation.



Tomato Plant Care Information

Nutrient Preferences: Tomatoes require the basic three macronutrients (nitrogen, phosphorus, and nitrogen), as well as thrive from applications containing calcium, zinc, copper, iron, and sulfur.

Harvest: Harvest when the fruit is the desired colour. Green tomatoes can be ripened indoors at a cool temperature when they are blemish free. Very dark green tomatoes are unlikely to ripen fully.

Diseases & Pests: *Blossom End Rot* is an environmental disorder caused by a calcium deficiency. As the name of the disorder indicates it occurs at the blossom end of the fruit. It appears as a brownish dry and firm sunken area. Sometimes a secondary infection can occur at the damaged area, which turns it mushy and wet. Internal blackening can occur without the characteristic end rot. Calcium deficiency can happen when there is uneven watering. When the plants are too dry for a period followed by over watering, this encourages fast growth. The tomato plant can't take up enough calcium resulting in an unbalanced potassium-to-calcium ratio. Early fruit show the affects sooner than later fruit. Digging in bonemeal, dolomite lime and a balanced organic fertilizer will help prevent this disease as will an even and regular watering schedule. An airborne fungal disease causes *Late Blight*. It begins as leaf spots before spreading to stems and fruit. Water soaked areas appear on the leaves. These are greenish black and irregular in shape. Brown cankers develop on the stems and fruit. Blight infected tomatoes can have a fishy smell. Often the fruit manages to almost reach maturity before the cankers take over. Sometimes a bluish grey mould grows on the underside of infected leaves and on the fruit cankers. Prevention is key as there is no cure for the disease. Keep moisture off the plants. Use drip tape for watering and avoid splashing the leaves. Cloche systems are excellent for keeping rain and moisture off the plants. In a greenhouse or under a cloche, humidity can build up so high that the fungus will destroy plants in 24 hours. You must ventilate well. A spray application containing copper applied regularly in late summer prevents the fungus that causes Late Blight to germinate. Flea Beetles make many tiny holes in the tomato leaves, and can cause problems for small tender transplants, but a healthy plant can usually outgrow the damage; use a floating row cover for early season protection from Flea Beetles when transplanting your tomatoes.

Companion Planting: Tomatoes are sensitive regarding companions, however they do benefit being planted near asparagus, basil, beans, borage, carrots, celery, chives, collards, cucumbers, garlic, lettuce, marigolds, mint, nasturtiums, onion, parsley, and peppers. Avoid planting alongside Brassicas, dill, or anywhere near walnut trees. Corn will attract tomato pests, and kohlrabi will stunt tomatoes' growth; potatoes may spread blight to tomatoes, so keep them separated.