

All About Tomatoes

Information about our favourite vegetable... errr... fruit?

Botanically speaking, the tomato you eat is a fruit. So are watermelon, green pepper, eggplant, cucumber, and squash. A "fruit" is any fleshy material covering a seed or seeds.



Horticulturally speaking, the tomato is a vegetable plant. Most fruits, from a horticulture perspective, are grown on a woody plant (apples, cherries, raspberries, oranges); the exception is strawberries.

In 1893, the United States Supreme Court ruled that the tomato was a "vegetable" and therefore subject to import taxes. The suit was brought by a consortium of growers who wanted it declared a vegetable to protect U.S. crop development and prices.



Nomenclature and "genealogy"

The botanical name for the tomato has changed several times. Its earliest name was *Lycopersicon* or literally, wolf peach. Once the tomato was placed in the *Solanum* (*Solanaceae*) family, the botanical name changed to *Solanum lycopersicon*. Today the tomato is known as *Lycopersicon esculentum*, literally "edible wolf peach".

Tomatoes belong to the same family (*Solanaceae*) as potatoes, peppers and eggplants. *Lycopersicon esculentum* (tomato) is a perennial plant in the tropics but in northern climates it is grown as an annual. Flowers are generally borne in clusters of 4 to 8 but small fruited types (cherry tomatoes) may have 30 to 50 flowers per cluster. The flowers are mainly self pollinated by the wind. The fruit has 2 to 18 locules (chambers or sections).

The tomato is a native of the Peru, Bolivia, and Ecuador area of the Andes Mountains. Its antiquity is uncertain in regard to cultivation but it was being cultivated prior to the arrival of the Europeans. It was not until the early 19th century that the tomato was considered suitable as a food crop in the northeastern United States.

Tomatoes and temperature

Tomatoes respond well to warm temperatures. The minimum temperature for seed **germination** is 10°C (50°F) with a maximum temperature of 35°C (95°F). Growth of the tomato plant takes place over a range from 12°C to 30°C (54°F – 86°F) but the BEST growth occurs between 17°C and 20°C or 63 °F – 68°F,

Soil and water

Tomatoes require adequate, even moisture, particularly at flowering and during fruit set. Tomatoes grow best in well-drained soils with a good supply of organic matter. Sandy soils are suited for the speedy production of fruit. Loam and clay loam soils promote slower development. Shelter from wind is important.

A student investigation on the [growth of green plants](#) can be found in the Classroom Curriculum Documents section.