

Tomato Tips from the Ahwatukee Community Garden Project

Solanum lycopersicum is a member of the night shade family. It is believed to have originated in South America and first been domesticated in Mexico. The leaves are toxic and should not be eaten.

When you choose what variety of tomato to plant in your garden there are many things to consider.

Heirloom, Hybrid, and GMO (Genetically Modified Organism)

The definition of an Heirloom tomato is vague, but unlike commercial hybrids, all are self-pollinators that have bred true for 40 years or more.

F1 Hybrids are traditionally bred to achieve specific characteristics by cross-pollination. If seeds are saved and planted, there is only a 50% chance that the second generation will resemble the hybrid and not the individuals that contributed to the cross. This happens frequently without human intervention - “mutts”

A Genetically Modified Organism (GMO) is the result of direct manipulation of an organism’s DNA in a laboratory environment, such as combining fish DNA with that of strawberries. This never happens in nature.

Determinate vs. Indeterminate

Tomatoes are classified as determinate or indeterminate. Determinate, or bush, types bear a full crop all at once and top off at a specific height; they are often good choices for container growing. Determinate types are preferred by commercial growers who wish to harvest a whole field at one time, or home growers interested in canning. Indeterminate varieties develop into vines that never top off and continue producing until killed by frost. They are preferred by home growers and local-market farmers who want ripe fruit throughout the season. The majority of heirloom tomatoes are indeterminate.

Diseases

Various forms of mildew and blight are also common tomato afflictions, which is why tomato cultivars are often marked with a combination of letters that refer to specific disease resistance. The most common letters are: **V** – *verticillium* wilt, **F** – *fusarium* wilt strain I, **FF** – *fusarium* wilt strain I and II, **N** – *nematodes*, **T** – *tobacco mosaic virus*, and **A** – *alternaria*.

Pests

Some common tomato pests are stink bugs, cutworms, tomato hornworms and tobacco hornworms, aphids, cabbage loopers, whiteflies, tomato fruitworms, flea beetles, red spider mite, slugs, and Colorado potato beetles.

Tomato plants produce the plant peptide hormone systemin after an insect attack. Systemin activates defensive mechanisms, such as the production of protease inhibitors to slow the growth of insects.

Using a variety of companion plants help control diseases and pests in various ways.

Days to Maturity

Small and medium-sized varieties do best in our desert gardens. Look for tomatoes labeled for 50- to 70-day maturity. Some varieties that have done well include: yellow pear, pearson , Juliet, and punta banda. We are trying several varieties new to us in the demo garden. While tomatoes will still flower after daytime temperatures hit 100's, they won't set fruit. Afternoon shade, or 50% shade cloth beginning in May can keep them producing into July. Mulching with compost, straw, or bark also helps.

Planting

In Phoenix, the prime planting window is mid- February through mid -March. It's ideal if the soil temperature is above 50 degrees for root development. Tomatoes, peppers, potatoes and eggplants should not be planted where they grew last year, reducing the likelihood of soil born disease. When planting in the cooler months of February and early March, consider planting young transplants on their sides in 2- to 3- inch trenches where the soil is warmest. Remove all but the top 2 to 4 sets of leaves from each plant, lay plants in individual trenches about 24 inches apart, and bury all but the leafy part of the plants. The stalks will produce new roots and give new plants a better start. New vegetative growth will reach upward toward the sun within a few days.

Plant with companions: borage, asparagus, basil, carrots, celery, dill, grapes, marigolds, marjoram, mint, nasturtiums, onions, and parsnips. Using some of these will help to combat diseases and pests.

References: <http://ag.arizona.edu/maricopa/garden/html/pubs/0103/bountiful.html>

<http://ag.arizona.edu/pubs/garden/mg/vegetable/tomatoes.html>

http://www.ehow.com/info_8144922_desert-plants-under-shade-cloth.html

bu Rawan - Determinate—Another variety contributed to the tomato world by our friend, expatriate Iraqi seed collector Nael Aziz. He stated that it is a bit unusual for an Iraqi type, because in Iraq the people tend to favor tart tomatoes, while this one is sweeter. Having solid, all-purpose flesh, it will take the heat, like Iraqi types generally. Named for the onetime caretaker of the greenhouses at the Agricultural College at Al Ghraib. Maintained in cultivation in private gardens there since the 1970's.

Some varieties recommended by Baker Creek for hot, dry areas.

Al Kuffa - This little tomato is early and produces 3-4 ounce fruit on compact, dwarf vines that yielded till frost. We received this mild-tasting Iraqi variety from our friend Aziz Nail who said, "Delicious one, useful for any purpose, strong bush plant cultivated in the south of Iraq in cool greenhouses for late spring or early summer markets. Also it is [grown] in the middle and north Iraq without greenhouse."



Abu Rawan

Bison – 65 -77 Days. Originally offered by Oscar Will in 1937. Dwarf determinate plants require no staking or pruning. 3-inch, deep red fruits are produced even in cold, damp weather. Has produced as much as 40 pounds of fruit from a single plant!! Another of Dr. A.F. Yeager's triumphs. Our foundation seed came from Todd Wert and Bryce Farnsworth, and originated with the North Dakota State University breeding program.

Nineveh Tomato – A very acid, almost sour-tasting tomato that is best for cooking uses. This tomato comes from Mosul (formerly Nineveh) Iraq, but is now said to be lost to cultivation due to the long on-going war and promotion of hybrid and gene-altered seeds. Bush plants set bright red, small to medium sized fruit. From Aziz Nail, an Iraqi friend that supplied us with a few seeds.

Pearson Tomato – Determinate, 80 days. This tomato was one of the most popular varieties in California in the 1950's. Excellent yielder in hot, semi-arid areas; produces large red, globular fruits that are very solid and perfect for canning!

Rouge D'Irak – 75 days Medium-sized fruit are finely flavored; good yields, too. This variety is endangered even in its own country, where saving seeds has become difficult under the "Colonial Powers" that now control much of what happens in this grand old country.

