

EDIBLE GARDENING

Raising the Stakes on Growing Tomatoes

by Craig LeHoullier



Above left: A wire cage provides ample support for ‘Legend’, a determinate tomato. Above right: Indeterminate paste tomatoes need stronger support like this heavy wire fencing.

Words like “staking,” “pruning,” and “topping” often strike fear and confusion into the hearts of tomato growers. It doesn’t need to be that way. Understanding how tomatoes grow naturally can help gardeners provide efficient support and maintenance, resulting in better plant health and higher yields. Tomato plant growth is best controlled by staking (keeping them upright), caging (keeping them upright and contained), pruning (reducing the plant density), and topping (restricting plant height).

STAKING TOMATOES

Although we often refer to tomatoes as “vines,” their stems are floppy and don’t climb like ivy, for instance. They need to

be secured to maintain vertical growth. The simplest method of supporting them involves driving a tall (6 foot or higher), sturdy stake next to the plant and tying branches to it at regular intervals using twine or an equivalent material. Additional stakes can be placed to provide even more support. Plants can also be tied to various types of fencing, such as cattle panels. Another creative method for larger gardens is to drive sturdy poles at the end of each row and connect the tops of the poles with a strong cord. Strings can be dropped down from the cord to the planting hole, and the vines tied to the suspended strings.

Staking tomatoes allows for closer spacing between plants and the improved air circulation and sun exposure

help reduce the incidence of fungal diseases. It’s also easier to spot problems such as diseased foliage and insect damage as they arise. The bottom line is that staking results in greater productivity and higher quality fruit.

CAGING AND WEAVING

Tomato caging—which can be created by shaping concrete reinforcing wire into 6-foot tall, 3-foot wide tubes—provides an effective alternative to staking. Tomatoes grown in cages need minimal pruning, and potential yields are very high. It is important to secure the cages to keep them upright as the plants grow; the easiest way is to drive six-foot tall stakes into the ground and tie them to

the cages. The plants should be topped when their stems reach the top of the cage to prevent stem breakage as they droop over the top edge. Pre-made cages can work fine, but the four-foot wire cone-shaped cages commonly found at garden centers are only suitable for dwarf and determinate tomato varieties.

The Florida Weave support technique works well for tomatoes grown in rows. Sturdy stakes are driven in at the end of the rows, and strong twine is used to connect the stakes at roughly 10-inch intervals, starting one foot off the ground and ending at the top of the stakes. As the plants grow, they are carefully woven upward between the rows of twine. For very long rows, stakes should be placed at 10-foot intervals to provide sufficient support.

THE PROS AND CONS OF PRUNING SUCKERS

Suckers, or side shoots, are additional fruiting stems that emerge from the main stem of the tomato at every junction with foliage. Removing all suckers results in a narrow plant that is easy to stake but has limited potential yield, and a higher chance for tomatoes to suffer sunscald. Leaving suckers to develop increases potential yield and lessens the chance of sunscald, but it also increases the risk of disease because



Removing suckers from indeterminate tomato plants may lessen the yield but improve disease resistance due to better air circulation.

of reduced air circulation and requires additional watering and feeding to support a fuller plant.

Suckers should only be removed from indeterminate tomato varieties; removing them from determinate or dwarf varieties will significantly reduce yields. Remove suckers by snapping off the emerging growth with your thumb and forefinger or snipping them with shears. To get the most advantage from suckers, I suggest removing those at the higher branches but allowing the ones lower on the plant to develop.

REMOVING FOLIAGE TO LET THE AIR AND SUN IN

Foliage is essential for tomato plant health, providing photosynthesis for the development of maximum flavors. Very dense areas of foliage, which limit sun exposure and air circulation, can be breeding areas for fungal diseases, particularly septoria leaf spot and early blight. To increase air circulation and sunlight, thin some of the inner tomato foliage to open the plants up a bit. This can be particularly helpful for the dwarf varieties. Leaves that exhibit lesions of fungal disease should always be removed as soon as they are spotted.

TOPPING TOMATO PLANTS

Indeterminate tomato varieties can grow upward at the rate of two inches or more per day during the heat of summer. The top of the stake is often reached by mid-summer. Plant growth above the top of stakes can't be supported, so they end up drooping over and when heavy with tomatoes, stems may crack and the weight load can topple the stake.

The easy remedy: simply snip the vines when they reach the top of the stake. The plant won't mind a bit, and allowing a lower sucker or two to develop will provide compensation for any potential tomato yield that you removed.

Use these tips to ensure a bounty of your own homegrown tomatoes. ■

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TYPES OF TOMATOES

It is important to know what kind of tomatoes you are growing when considering each of these treatments. There are three major types of tomatoes:

Indeterminate tomatoes, which includes the vast majority of cultivars, grow with more of a vining form and produce fruit throughout the season. Examples are the hybrid variety 'Better Boy' and the heirloom 'Cherokee Purple'. This tomato type is suitable for staking, pruning, and topping.

Determinate tomatoes grow in a bush form and fruit abundantly over



'Roma' is a popular determinate tomato..

a short period of time. Examples are 'Taxi', 'Sophie's Choice', and 'Roma'. These can be staked but they should not be pruned or topped.

Dwarf tomatoes, which combine the full season of fruiting with the restricted height of determinates, are less common but becoming more available through the efforts of the Dwarf Tomato Breeding Project. Dwarf tomatoes should be thought of as indeterminate tomatoes that grow upward at half of the rate. Examples are 'Rosella Purple', 'Dwarf Emerald Giant', and the hybrid Husky series. Staking is recommended; foliage pruning only is appropriate, but not topping. —C.L.