

College of Agriculture & Life Sciences
Department of Horticultural Science

PRUNING AND SUPPORTING TOMATOES

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Tomato plants have two general growth habits. It is important to know what type of plants you have in order to space and train them properly.

Indeterminate types are tall-growing plants, normally growing 5 to 8 ft tall, producing a fruit cluster on the stems between every third leaf. Plant terminals continue to grow as long as the plant is healthy. Most of our home garden varieties in North Carolina belong to this group. Some of the varieties in this group are Manapal, Better Boy, Big Boy, Fantastic, and Cherokee.

Determinate types are shorter growing plants, normally growing 1 1/2 to 5 ft tall, producing a fruit cluster on stems between each leaf, and each stem terminates in a fruit cluster — thus, they are often called “self-pruning” types. Some varieties in this group are Sun Start, Mountain Delight, Mountain Spring, Mountain Fresh, Florida 47, Floralina and Puebla (pear-shaped).

Indeterminate types produce a shoot or “sucker” at each leaf axil. These suckers, if left undisturbed, grow into larger stems and produce fruit. This type of plant is usually supported above ground with a stake or trellis. A 5- to 7-ft stake may be driven into the ground and the stems tied loosely to the stake with soft twine or cloth. Trellised tomatoes may be handled in a similar manner, leaving

one stem for each 8 to 12 inches of space in the row, i.e. if plants are spaced 3 ft apart, leave 3 stems per plant; if plants are spaced 2 ft apart, leave 2 stems per plant. Break out all other suckers *before* they become 3 inches long.

Determinate types are usually pruned only once when suckers are 2 to 4 inches long (later pruning reduces size). They are normally spaced 1 1/2 to 2 ft apart in the row. The plant is sometimes tied to a stake. More often, plants are supported in a weave of strings. This weave system is developed as follows: Stakes are placed between every other plant and 2 stakes are placed side by side at each end of a section. Sections are usually about 100 ft long. This break provides a path to carry fruit out of the field. When plants are about 12 inches tall, the first string is tied to the stalks at one end of a section. Then, pulling the string as tight as possible, it is wrapped around each stake making sure to keep it tight (this takes practice). The string is stretched down one side of the row and then back up the other. When one returns to the starting point the string is tied again. A second string is added in a week or 2 when the tops of plants are 8 to 10 inches above the first string and before plants begin to flop over. Usually only 4 strings are needed to support a crop. Many people use a 12- to 36-inch stick with a hole at the end to guide the string around the stake.

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With a little practice stringing can be done at a slow walk. Usually nylon “baler’s” string is used because it does not stretch like “binder’s twine.”

Wire supports can be used like string but here larger posts are located 10 to 15 ft apart. Wire is stretched on both sides of the row every 7 to 14 days as the plants grow. This wire is attached to fence posts at the end of each row. No breaks are used in the field and harvested fruit must be handed over rows or a harvest aid used. Plants are not normally pruned in this system.

Occasionally *wire cages* are used to support tomato plants. A cylinder, about 2 ft in diameter and 3 to 5 ft high, is made from strong hog fence or wire that is used for reinforcing concrete. This cylinder is placed over the plant and anchored to the ground. Plants growing in cylinders are normally spaced 3 to 4 ft apart in the row and are not pruned, but rather the suckers are pushed back in the cage to force them to grow upward in the cage. This is a good system to use if only a small number of plants can be grown because yield per plant is generally higher than from other systems of training.