



STAKING AND PRUNING **TOMATOES** in the Home Garden

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A home garden simply is not complete without a few tomato plants.

At times, it can be a little challenging to keep tomatoes healthy, but no other vegetable comes close to bearing as much produce in such a limited space.

Staking and pruning are two common practices that can help tomatoes stay healthier and produce larger fruit. The system of staking you choose and how vigorously you prune your crop depends on the type of tomatoes you are growing.

TYPES OF TOMATOES

Tomatoes are divided into two main groups:

determinate and indeterminate.

Determinate tomatoes are normally stockier, less aggressive vines that develop most of their fruit during a short period of time. Technically, it is possible not to provide staking support to these plants, but it can be risky. Determinate tomatoes also tend to grow a dense canopy, and doing some light pruning on them is beneficial in allowing more air and sunlight into the plant. Staking determinate tomatoes provides an extra layer of security to prevent the plant from accidentally tipping over from excess weight or wind.

Indeterminate tomatoes grow in a taller, vining type manner and produce fruit slowly throughout the growing season. Indeterminate varieties require a support structure, otherwise they will eventually end up on the ground. Heavy vines are also very susceptible to breaking off and bending, causing additional damage. Vigorous pruning will also be beneficial to indeterminate type tomatoes, helping to allow more air and sunlight to penetrate and balancing some of the plant's top-heaviness.

STAKING TOMATOES

Staking tomatoes provides support to help keep plants off the ground while assisting in their upward growth habit. Because many diseases and insects start at the ground level, using a structured system to keep them away from ground contact is prudent. Any system of tomato staking should provide a strong structure that will hold up to the elements and last the entire growing season. Tomato structures should be made of durable, weather-resistant materials that can preferably last for several seasons. Growers should also consider the ease of installation, the maintenance required, and the cost of materials.

STAKING OPTIONS

Single-stake system

Perhaps one of the simplest and most economical forms of providing a tomato support is using a single stake (Figure 1). The stake is placed within an inch or two of the plant's base and the tomato stem, providing a structure to which the plant is loosely tied. Depending on the type of soil, stakes should be inserted into the ground 6 to 12 inches deep, providing rigid support. The stakes themselves can be made out of wood, plastic, or metal. Metal stakes, such as fence-type T-posts, are perhaps the most durable and can last for many seasons. Begin tying your tomato plant to the stake after it reaches a height of 10 to 12 inches. Garden twine, strips of fabric, or even pieces of pantyhose are excellent materials to use as ties for your stake. Stake your tomato plant about every 8 inches or so, up the entire length of the main trunk. While the single-staking system is easy and affordable,



Figure 1. Begin tying your tomato plant to the stake after it reaches a height of 10 to 12 inches. Garden twine, strips of fabric, or even pieces of pantyhose are excellent materials to use as ties for your stake. Stake your tomato plant about every 8 inches or so, up the entire length of the main trunk.

it provides the least amount of support out of all the options. It works best on stockier, determinate varieties. Indeterminate varieties, as well as vigorous cherry tomatoes, will require a more supportive structure when they begin to get larger.

Double-stake system

A double-stake system is created simply by adding a second stake to provide additional support to your tomato plant. Stakes are placed on opposite sides around your plant and each one is tied to the developing plant as you begin to secure it. Just as in the single-stake system, be sure to provide several feet between plants to allow for easy harvest and increased air circulation.

Cages

Cages come in many different sizes and shapes and can be made from a variety of materials (Figure 2). Garden centers often sell cone-shaped wire cages that are available to the home gardener. While these lightweight cages can work on determinate and patio type tomatoes, they are not strong enough to support



Figure 2. Garden centers often sell cone-shaped wire cages that are available to the home gardener. While these lightweight cages can work on determinate and patio type tomatoes, they are not strong enough to support larger-growing plants.

larger-growing plants. It is often difficult to find strong, durable tomato cages, which leads to many gardeners building their own. The best material for building strong cages is galvanized livestock fencing that has 4- to 6-inch woven squares. The large holes in the woven fence make it easier to access when harvesting. The cage should be a minimum of 3 feet in diameter. This allows for the expansion of the tomato branches without being confined. Another durable option for cage building material is concrete reinforcement wire. This heavy-gauge mesh wire will last for a very long time and provides the optimum support for your

tomatoes. Depending on what gauge wire you choose, you may need to use small stakes or landscape fabric staples to pin the cages down to the soil for additional security. Without doing so, a large, top-heavy tomato plant can still tip over if the cage is not anchored.

Tomato cages can also be built out of wood in either a square or triangle design, or even in a trellis fashion.

Florida weave

The Florida weave method (Figure 3) gives tomato plants the support they need using only stakes and durable string. Begin by planting your tomato transplants in a row, leaving the appropriate amount of space needed between each plant. Place stakes on either end of the row and in between every third or fourth tomato plant, making sure that each stake is securely in the soil. Stakes can be made from the material of your choice, but metal T-posts are more effective and secure than wooden stakes. Once all stakes are secure, tie a piece of durable string around one of the end posts, 1 or 2 inches from the ground. Begin weaving the string in and out between each tomato plant, making sure to keep the string tight and looping the string around each middle post once to create extra support. Cut the string once you are at the end of the row and tie it to the stake placed there. Repeat this process, ensuring that the string is on the opposite side of the plant, as it was the time before. Leave about 1 or 2 inches between each set of woven string, until the string is above each tomato plant. This will allow you to easily place your tomato plant between the extra woven string once it has grown more.



Figure 3. After securing all stakes, tie a piece of durable string around one of the end posts, 1 or 2 inches from the ground. Begin weaving the string in and out between each tomato plant, making sure to keep the string tight and looping the string around each middle post once to create extra support.

PRUNING

Pruning tomatoes should start at planting time as you remove all lower stems that will come in contact with the soil, thereby preventing the possibility of disease transmission (Figure 4).

As the tomatoes are beginning to develop, remove any drooping limbs that are close to the soil surface. Sharp, scissor-type hand clippers are the best tool for tomato pruning. Determinate tomatoes, in general, require less pruning than

indeterminate types. However, all tomatoes can benefit from some maintenance pruning during their production period. Eliminating sucker shoots is one way to increase energy to the plant's fruit production and also increase air flow (Figure 5).

Selective nonbearing branches may also be removed to allow more sun and air to reach the plant, which can help with disease control. Pruning early damaged or



Figure 4. To prevent disease transmission, remove all of the lower stems that will come in contact with the soil.



Figure 5. Remove sucker shoots to increase air flow and allow the plant's energy to go to fruit production.

diseased leaves or branches is also essential for good health management. Remove tomato clippings from the site and do not allow them to drop at the base of the plant. Leaving clippings on the ground can contribute to further disease issues. One other measure of disease or virus control is to spray your clippers with a disinfectant containing alcohol between pruning plants. While pruning tomatoes is often a good cultural practice, take care not to remove too much foliage.

The tomato fruit itself prefers to be shaded, and if exposed to full sunlight, may develop scald. The final form of pruning is fruit thinning (Figure 6). Any tomatoes that appear to be diseased or insect ridden should be removed immediately. If you want to grow larger tomatoes, pick off clusters of fruit, leaving only one. This will send energy and nutrients into only the remaining fruit.

CONCLUSION

Growing healthy tomatoes in the state of Georgia is rewarding, but can be challenging. Pruning and staking are two important cultural practices that can lead to a healthier and more abundant harvest. Virtually every tomato variety can benefit from some type of support system as well as occasional pruning. By using these concepts, it is possible to extend the growing season from planting time in the spring until the first frost.



Figure 6. Fruit thinning is the final step in tomato pruning. Any tomatoes that appear to be diseased or insect ridden should be removed immediately.

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