

## GROWING TOMATOES USING A TRELLIS

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GENEVA, NY: Increasingly, more and more tomato growers are using the Florida weave, short stake, or trellis system (all names for the same technique) to grow their crops. This production system keeps plants growing upright and off the ground and most growers who have tried it are convinced the fruit quality is better (bigger fruit, less rots, easier to pick). Researchers in New Jersey demonstrated that fruit grown this way have fewer storage rots, likely from better fungicide coverage as well as foliage and fruit that dry more quickly after rains or heavy dew. It's really a pretty simple technique once you get the hang of it. Here's some helpful suggestions.



First, use determinate or semi-determinate varieties. Indeterminate types can be used but require longer and thicker stakes and much greater pruning. The guidelines given here are for determinate and semi-determinate types. Space the plants 18 to 24 inches in the row on 5 to 6 foot centers. Prune the plants so that you establish a balance between fruit and vine growth. Prune all the suckers off up to the one immediately below the first flower cluster. Try to remove them when the suckers are between 2 and 4 inches in length. Prune before the first stringing and only when the plants are dry to avoid spreading bacterial diseases. You may have to go back and prune a second time. DO NOT remove the sucker below the first flower cluster or any above the cluster. Doing so will result in severe stunting. Some varieties may do better with leaving the two suckers below the first flower cluster. Do some experimenting on your farm. Remember, its better to leave too many suckers than to remove too many.

Once you have done the pruning, you are ready to set up the trellis. Place a stake at every other plant, spaced evenly between the two plants. Use a sturdy stake, at least one inch square, 4 to 4.5. Stakes can be reused but make sure that you sanitize them before reusing using a Clorox wash. Drive the stake into the soil about 12 inches. For small plantings, make a stake driving tool. Get a 2 foot length of galvanized pipe, wide enough to fit around a stake. Screw on a cap on one end. Put the pipe over a stake, lift it up and let it fall. For larger acreage, use a power-driven stake driving tool.

The plants will need to be "strung" for the first time when they are about 8 - 10 inches tall. Make sure you get to them before they flop over. For stringing, use lightweight, thin, plastic twine, available in 3 - 4 pound boxes (30 pounds per acre are required). To make tying convenient, a homemade stringing tool can be made. The tool will work as an extension of your arm which limits the amount of bending you will need to do. Take an old broom handle or a shortened tomato stake, about 2 feet long, and drill two holes one inch from each end. The holes must be wide enough to allow the string to be fed through. Attach the box of string to your belt and thread the twine through both holes. Tie the end of the string to the first stake, about 10 inches above ground level. You are now ready to weave.

Use the stringing tool to pass string along the near side of the first tomato plant and the far side of the second. As you get to the second stake wrap the string tightly around the stake and continue down the row in the same fashion. When you reach the last stake in the row, work your way back down the row in a similar fashion. Between each stake the twine should be in the shape of a figure eight so that each plant is held firmly in place. When you get back to where you began, tie the string on the first stake and you are done, at least for the next couple of weeks. Repeat the procedure as the plants grow, placing strings about every 10 inches. You do not need to make the figure eight around each plant for the other strings. Simply run the string down one side of the plants and up the other side when you return. That will leave you with about 4 to 5 strings and a row of very sturdy tomato plants.

Some advice, however, to get the most out of the system. Make sure the two end stakes are anchored securely. They are under the most pressure and if they start leaning, the twine gets loose and the vines could fall over. Also, don't prune, stake, or string the plants when they are wet since that is a sure way to infect plants with bacterial diseases.