Tomato Supports

By Kathy Wolfe
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Provide your tomatoes with a good support system.

The off season is a great time to evaluate last year's garden and plan changes to make for the coming year. Those of us who grow tomatoes often take extra time to determine how well various varieties grew in our garden and which will make next year's cut. Was the tomato flavor, texture, shape, and aroma what you had hoped for? Were fruits mature early enough in the season? Was the color and size to your liking? How was the yield and did it stand up to the pests and diseases as well as you expected?

Another factor often overlooked is how well your tomato support system worked with the different types of plants you grew. Did the tomato plant outgrow the support system? Were you able to easily prune branches and harvest tomatoes? Were the supports strong enough to carry the weight of the tomato plant and fruits or did it collapse part way through the summer? Answers to these questions will help you hone your choices for next year's supports.

You may find that you need a different type of support for different tomato varieties. Although tomatoes do not need supports to grow, getting plants and fruits off the ground reduces rot and the chance of exposure to soilborne pathogens as well as keeping them off the pathways. Weeds that may rob the plant of nutrients are more easily removed when plants are off the ground. Trellised plants have better air circulation throughout the plant to keep the canopy drier and deter the spread of foliar disease. Yield is optimized when plants are not growing into each other, sunlight can penetrate, and fruits are easier to find.

There are several trellising systems to choose from. Your choice will depend on what type of tomato you are growing (the tall and vining indeterminates or the more compact, bushy determinates), where they will be grown (inside a greenhouse/hoop house or outside in the garden), how much effort you want to put into the process and the cost of materials? Another consideration may be the ease of storing supports in the off season.

The most familiar support may be a form of the cage system which places your plant in the middle of a support structure. These can be metal, plastic or wood; cylindrical, square, or V-shaped; store bought or homemade. They vary widely in structure and strength so try to use ones that are robust enough and tall enough to support your tomato plant at maturity. The bushy determinate or semi-determinate tomatoes often do well in these cages while your taller Indeterminates will require 5 – 6' tall, sturdy cages or the use of another method to manage their height and weight.

This string trellis incorporates roller clips to more easily manage extra-long stems. *Photo by Nancy Crowell / WSU Skagit County Extension Master Gardeners.*

Some gardeners prefer using single posts made of wood or plastic that are placed next to the plant's central stem to offer support as the plant matures. Plant ties or tape are used to secure the stems to the stake as they grow. Some gardeners use stakes in conjunction with cages to offer a sturdier overall system.

Basket weaving systems are a common method used in open field gardening. There are different methods, including the Florida Weave that might work for you. Although it is a quick method to set up, plants are harder to prune due to the surrounding support strings that might get cut while pruning. Because determinate tomatoes need little or no pruning, they may work better in this system than the indeterminates that require more pruning throughout the season. In the basket weave system, strong metal or wooden stakes are driven into the soil at the end of each row and posts are placed between every two plants along the row. Twine is then looped from the strong metal or wooden stakes through the posts and between the tomato stems from one end of the row to the other and back again. The result will form a hedge-shaped row of tomato plants supported by the stakes and poles. For a detailed description of the process, watch the University of Maine Cooperative Extension video entitled "How to Grow Tomatoes: Basket Weave."

Another type of system used to train indeterminate or determinate varieties either inside a greenhouse/hoop house or in the field is the String Trellis method. Support posts (3 – 6 inches) that stand 5 – 6 feet above the soil are spaced 15 - 20 feet apart. Heavy gauge wire is stretched tight horizontally across the top of the support posts. Hanging strings are suspended from the

wire to each vine which will be supported. Secure the string at the base of the tomato plant but do not make a tight knot or it will cut into the plant as it grows. You may prefer to use tomato clips for this. Plants are pruned to 1 – 2 main stems and twisted around the vertical twine as the plant grows. Always twist in the same direction or your previous loops will unwind. Pruning side shoots should be done weekly to keep growth under control. See the Maine Cooperative Extension video "How to Grow Tomatoes: Trellis" for more details.

The determinate tomato in this inverted wire cage, secured at the base with yard staples, was further strengthened using a stake to stabilize the main stem. *Photo by Nancy Crowell / WSU Skagit County Extension Master Gardeners.*

A variation of the hanging trellis method is to use trellis netting instead of hanging strings. Garden catalogs are a good supply for trellis mesh netting. This method works well with climbing beans and peas also.

How-to videos and detailed instruction on all systems mentioned in this article are available online through university extension articles, trusted garden catalogs, and garden expert blogs and postings.

By providing your tomatoes with the correct support system, your yields will be higher, fruit of better quality and easier to harvest, and plants more disease resistant.

RESOURCES:

- "Tomato Support Methods." PennState Extension, updated, August 3, 2017. Tomato Support Methods (psu.edu)
- "How to Grow Tomatoes: Trellis." University of Maine Extension. Tomatoes - Trellising - Cooperative Extension at Highmoor Farm - University of Maine Cooperative Extension (umaine.edu)
- "How to Grow Tomatoes: Basket Weave." University of Maine Extension.

Tomatoes - Basket Weaving - Cooperative Extension at Highmoor Farm - University of Maine Cooperative Extension (umaine.edu)

- "Tomato Staking Techniques." Sue Evanicky with Nancy Garrison, UC Master Gardeners. Santa Clara County. University of California. 2001.
  Tomato Staking Techniques - UC Master Gardeners of Santa Clara County (ucanr.edu)
- "Training Tomatoes." Richard Jauron, Dept. of Horticulture. Iowa State University Extension and Outreach. May 9, 1997.
  Training Tomatoes in the Home Garden | Horticulture and Home Pest News (iastate.edu)
- "Trellising & Crop Support Systems for Tomatoes." Grower's Library, Johnny's Selected Seeds.
  Trellising Tomatoes | Basket-weave, String, Lower & Lean | Johnny's Selected Seeds (johnnyseeds.com)
- "An Alternative Trellis System my Improve Tomato Yield." Wenjing Guan. Purdue University. April 25, 2019.
  An Alternative Trellis System may Improve Tomato Yield | Purdue University Vegetable Crops Hotline (vegcropshotline.org)