



Pruning Tomato Plants

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Why prune tomatoes? Pruning, or selectively removing some of the tomato plant growth, can improve harvestable yields and prolong the harvest season. Further, keeping tomato plants off the ground reduces common fungal diseases like early blight, Septoria leaf spot, and anthracnose, and improves fruit quality.

Tomato varieties are classified as having either determinate or indeterminate growth habit. The growth habit determines the most appropriate pruning system for that variety. Determinate tomatoes have a bush growth habit. These varieties stop growing once they set a terminal bud, usually when they are around 4' tall. Determinate varieties are typically earlier than indeterminate varieties, but they have a short and defined production season. Indeterminate varieties keep growing indefinitely until frost, and continue to set new flowers and fruit throughout this time. Examples of varieties of each type are listed below.

Determinate Varieties

Beefsteak type: Rutgers, Celebrity, Mountain Fresh, Florida 47, Orange Blossom

Plum type: Roma, Plum Dandy, San Marzano

Indeterminate Varieties

Cherry type: Sungold, Matt's Wild Cherry, Sweet 100

Grape type: Red Grape, Juliet

Beefsteak: Big Boy, Early Girl, Big Beef, Jet Star

Heirloom/Specialty: Brandywine, Black Krim, Cherokee Purple, Green Zebra

The two most common pruning systems in the Northeastern US are the basket weave and the overhead trellis systems. Both systems are described below.

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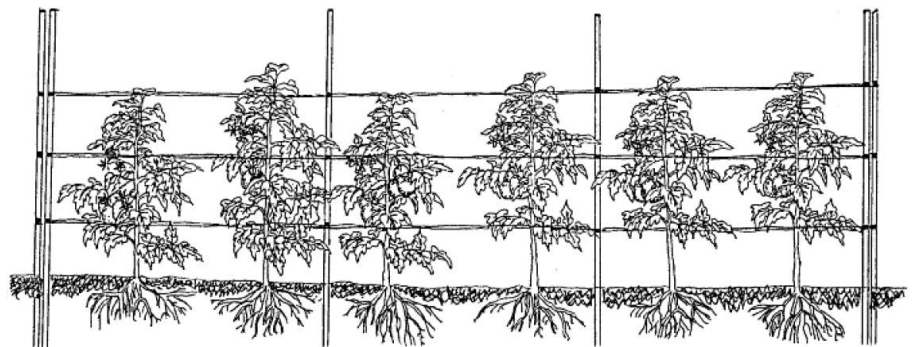
Cherry tomatoes

Tomato varieties are classified as having determinate or indeterminate growth habit. The growth habit determines the most appropriate pruning system for that variety.

| Pruning system | Type of tomato | Location used |
|------------------|---------------------------------------|-----------------------------------------------------|
| Basket weave | Determinate or Indeterminate (topped) | Outdoors or Tunnel/ Greenhouse |
| Overhead trellis | Indeterminate | Tunnel/Greenhouse or Outdoors (with sturdy trellis) |

Basket weave

The basket weave (sometimes called ‘Florida weave’) system uses about half as many stakes as individual staking, and also saves labor. This system is best suited to determinate varieties of tomatoes, but can be used for indeterminate varieties if the tops are trimmed once they reach the top of the stakes.



Basket weave system

- Use 4-5 ft sturdy wooden stakes, with double stakes at the end of each row for strength. If using indeterminate varieties, use 5’ stakes.
- Set stakes at least six inches deep, one stake for every two-three plants, as soon as the seedlings have been transplanted.
- Begin supporting tomato seedlings after they have set first flower clusters.
- Tie sturdy, untreated twine at one end of the row, about 12” up from the soil level. Weave twine in a figure eight pattern between tomato plants, wrapping twice around each stake down the row. After reaching the end stake, weave twine back up the row in the opposite direction, alternating with the first strand so each plant stem has a twine on both sides, holding it up.
- As plants grow, weave another layer of twine every 6-8 inches to keep plants well supported. Four layers of twine will support most varieties.

Did You Know?

The basket weave is best suited to determinate varieties, but can be used for indeterminate varieties if the tops are trimmed once they reach the top of the stakes.

- Removing suckers (new shoots that develop in the leaf axils) reduces potential yields, but increases airflow. Leave the sucker just below the first flower cluster (remove all other suckers below that one), and allow all suckers above the first flower cluster to grow.
- Indeterminate varieties will reach and exceed the top of the stakes. At that point, cut the tops off of indeterminate tomatoes to maintain a tidy hedge and to prevent the row from becoming top-heavy.

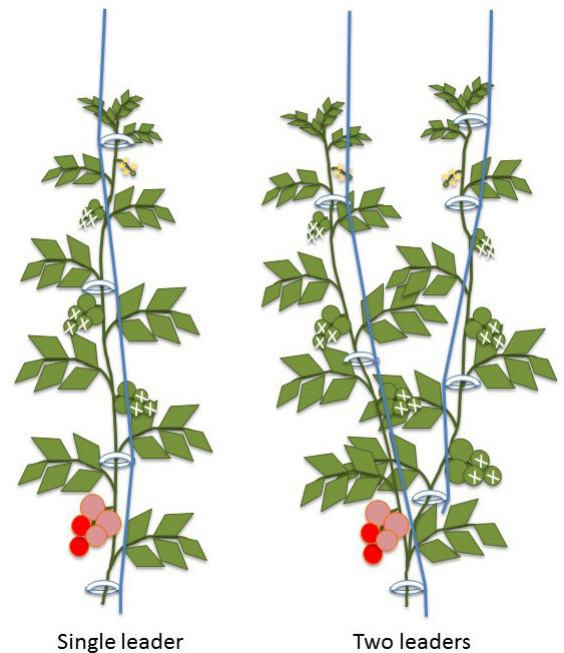


Removing a sucker

Overhead trellis

The overhead trellis system is appropriate for indeterminate varieties. It is best suited to tomatoes grown indoors (e.g. in high tunnels), where overhead support infrastructure already exists. This system is more labor-intensive than the basket weave system, but it results in sustained yields over a longer period of time.

- Establish a strong overhead support at least 8' above each row of tomatoes. This can be a heavy-gauge wire or metal conduit, but consider that each plant may weigh 30 lbs or more at peak fruit set, so be sure that it is secured firmly and can support this weight. If the tunnel frame is supporting the weight of the crop, it is important that it is strong enough to do this.
- Cut pieces of twine the length of the distance between the overhead support and the ground. If you intend to keep the tomatoes growing for several months, specialized rollers and hooks are available to hold a length of twine at the top of the support, so that you can increase the length of twine and lower the plants gradually as they grow.
- Begin supporting tomatoes once they have set the first flower clusters, or when they are at least 12" tall. Use a tomato clip to attach the twine to the tomato at the base of the plant without girdling the plant.
- Trellised tomatoes can be trained to one or two leaders. One leader is most commonly recommended. If you are keeping one leader, remove all suckers (new shoots that develop in the leaf axils). If you are keeping two leaders, save the sucker just below the first flower cluster. Remove all other suckers. Remove suckers when they are still small (less than 2 inches).
- As the plant grows, use clips or ties to attach the tomato to the twine, as often as necessary as the plant grows, repositioning if needed. A plant will usually be well supported by clips placed every 12-18" along the vine. Be sure to attach clips beneath a leaf rather than beneath a fruit cluster, to avoid damaging the cluster. If the twine is not too taut, another option is to wrap the plant around the twine as it grows, so the twine holds the plant up with fewer or no clips.



Single leader

Two leaders



- Maintain good airflow by removing lower leaves. Keep the leaf just below the lowest cluster of fruit, and all leaves above that.
- When the plant reaches the overhead support, the top can be removed to stop further growth, or the vine can be lowered to allow the plant to continue to grow. The “lean and lower” approach involves releasing more twine while moving the top twine away from the plant, which allows the plant to gently lean without breaking.

Other resources:

To see the basket weave in action, watch this excellent [University of Maine video](#).

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