

## Trellises and cages to support garden vegetables

Trellises and cages are common plant supports used in vegetable gardens. Many varieties of peas and beans need something to climb. Vine crops such as squash, melons and cucumbers can produce straighter, cleaner fruit if grown on a trellis.

Many tomato varieties are “indeterminate,” or vining, which means they will continue to grow all season long. They will sprawl along the ground unless you support and contain them. Even determinate varieties, which reach a certain height and stop growing, benefit from stakes and cages. Their fruits will be cleaner and less likely to rot or become food for slugs. Trellises also help prevent disease.



### Trellises for vine crops

Gardeners with small garden plots may bypass crops that need lots of space by planting short-vined or “bush” varieties of melons, squash and cucumbers. You can grow many long-vined varieties successfully in small spaces if you train them to grow on trellises. Varieties with fruit weighing up to three pounds and no larger than a cucumber, small melon or small winter squash, work best.

### Types of trellises

- You can make or buy trellises with a wide variety of materials.
- Trellises consist of two vertical supports with mesh suspended between them to provide support for climbing plants.
- There are many materials available for trellis netting or mesh. Newer products made of plastic are widely available, as are traditional materials such as chicken wire and galvanized fencing.
- Choose a heavier mesh for larger-fruited and more vigorous crops.
- Attach the trellis to the supports with nails, staples, plastic locking ties or lengths of wire.

### Stakes

- Pound metal or wooden stakes into the ground deeply enough that the trellis does not tip over in a strong wind.
- A six-foot stake pounded a foot into the ground will leave five feet of trellis area.
- The strength of stakes depends on the species grown, the vigor of the vines, the type of stakes and how deeply you set them in the ground.

- Try five or six feet between stakes. For a wider trellis, use three stakes. Divide the width into two parts with a stake in the middle.

Some gardeners place trellises at an angle to absorb maximum sunlight, and so that fruit hangs freely from the lower side of the trellis for easier harvest. To try this, set the stakes in the ground so that the trellis will face south, and will lean over the soil just north of it. The trellis may require extra support stakes, depending on how far you angle it.

### Planting crops with trellises

Plant the vines at the foot of the trellis at the same spacing between the seeds or transplants as if they were going to grow on the ground. Train the vines as they lengthen by weaving the growing tips gently between the openings in the mesh every few days.

### Melons

A problem for gardeners growing melons on a trellis is that many melons “slip” from the vine when ripe, and may fall to the ground prematurely. To prevent this, make hammocks or slings to support the developing fruit. Use strips of cloth several inches wide. The length of the cloth strips depends on the fruit size. Tie each end of the cloth to the wire loosely enough to allow the middle portion to form a sling. Set the fruit in the sling.

### Cucumbers and squash

Cucumbers and small squash do not slip from the vine, so they do not need support. Check vine crops frequently to ensure developing fruits do not become wedged themselves between the mesh wires.

Larger squash and pumpkins are too heavy to trellis. Grow them on the ground.

### Beans and peas

You can grow beans and peas on a trellis. While some beans are bush types, and some pea varieties do not grow long nor tall, others produce long vines that need support.

A simple trellis of lightweight netting will give adequate support. You can also attach sturdy wire between the two stakes at top and bottom, then weave twine between the upper and lower wire, so that the vines can twine up these vertical cords. Untreated sisal, cotton or hemp twine has the advantage of being compostable along with the vines once they finish bearing.

## Supporting tomato plants

When using any of these techniques, check the plants frequently and guide their growth so that they get the most support.

### Tomato cages

Commercially available conical metal tomato cages cannot always support and contain sprawling tomato plants. Determinate varieties such as 'Roma,' which reach a certain size and stop growing, can get enough support from these cages. Indeterminate tomato plants usually grow taller than the cages. Their branches are often long enough to grow outside of the cage and rest their fruit on the ground.

## Mulching

Some gardeners leave four or more feet between plants in all directions, mulch heavily with clean straw, and allow the plants to sprawl. Although this method is easy, each plant takes up much more space than it would otherwise, and the fruits are more vulnerable to slugs and rot than they would be if supported.

## Wooden stakes

A simple wooden stake can provide support. You must prune and tie the plant to the stake and pound the stake deeply into the ground.

Regular pruning reduces excessive foliage and the chance for disease. Pruning also causes fruit to ripen earlier. This system has the advantage of being inexpensive.

## New tomato support systems

Garden supply manufacturers have recently introduced a number of new tomato support systems. Heavier-duty square tomato cages are taller than the old-style conical cage, and they fold flat for storage.

Sturdy metal spirals support the main stem of the plant, allowing the branches to extend and droop. If you grow plants on spirals, you will need to prune and tie them to the support. Fasten a plastic coil to the top of a tall stake, allowing the tomato plant to grow up along the stake with its branches supported. These items should work better than the traditional conical wire cage, and will be simpler to store.

For gardeners who want to make an excellent tomato support device, cement-reinforcing mesh is the best material. Four-foot wide reinforcing mesh makes great tomato cages because of its strength and large four-inch square holes. This mesh is very stiff and difficult to work with. You need heavy-duty wire cutters or bolt cutters to cut it.

When working with the reinforcing mesh, wear gloves, a long sleeve shirt and long pants to prevent scratches. Wear eye protection.

Cutting the roll of wire at 56 to 60 inches will yield a cage about 18 inches in diameter. Form cages by attaching the cut edges together with lengths of lighter wire, or use pliers to form hooks from the horizontal wires and hook them onto the vertical wire on the other side. These cages will last for many years.

Place any supports when the tomato plants are still young and small, ideally at planting time. The plants will soon grow large enough to use the support. Secure homemade cages in place by putting two stakes on opposite sides inside the cages.

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