

## Establishing passionfruit

There are a number of decisions to make when establishing passionfruit. You need to consider where to plant your crop, where to get plants from (from a nursery or grow your own from cuttings or seed), what kind of supports to grow your passionfruit on and what materials to use for them. You also need to think about when to plant, what spacing to use and how you will train your crop.

### Propagation

Passionfruit is usually grown from seed taken from a healthy parent plant, but they can also be grown from cuttings taken from a disease-free plant.

Seeds are extracted from fruit of the parent plant, washed and dried in a cool shady place. Seed should be planted soon after it is extracted because it is less likely to germinate the longer it is stored.

Seeds can be grown under glass in seedling boxes (mid-autumn) or outdoors (October). If grown under glass the seedlings will be ready to plant out by October, but if grown outside they will not be ready until mid-summer.

If you are growing from cuttings, it is best to take cuttings with one or two leaves in October or March. These need to be treated with rooting hormone and grown in a rooting medium for roots to appear.



*Passionfruit - the seeds are extracted from the pulp*  
[http://www.passionfruit.org.nz/Photo\\_gallery.htm](http://www.passionfruit.org.nz/Photo_gallery.htm)

### Site selection

Passionfruit need a warm, moist environment to grow well. The site you select should be frost free (or have few and slight frosts), have free draining soil, shelter from wind and access to irrigation if necessary.

Passionfruit are easily damaged by frost. While a minus 1-2°C frost won't do much harm, a more severe frost may kill growing shoots and damage fruit. Good

practices such as mowing the grass between the rows and keeping a weed-free strip under the vines may reduce frost damage in a slight frost.

Shelterbelts are necessary to protect the crop from strong, cold winds. There are many trees which make useful shelterbelts - ask advice for the best one to use in your area. Remember that a shelterbelt should be porous (allow some wind through) to stop turbulence on the sheltered side.

Passionfruit will grow on most well drained soils, but a deep sandy loam is best and heavy clay soils are not suitable. Soils that become waterlogged encourage root disease and may kill the plant. If your soil does not drain well, a drainage system can be put in - get advice about doing this.

Soil nutrients should be tested and improved if necessary before planting. Once you know what your soil needs you can apply the right nutrients to improve it. Passionfruit grow best at a pH of about 6, and have a high requirement for nitrogen in particular.

Although they don't like water-logged soil, passionfruit are also intolerant of drought conditions. In summer it may be necessary to irrigate, especially if your site doesn't get much rain. If your site is in a dry area you will need a plan for irrigating - where will you get water from and how much will you need?

### Layout and support structures

Passionfruit is grown over supporting structures to support the vine above the ground. Ideally rows are set in a north-south orientation to get maximum light along each side of the vine. Common structures are the 'A' frame, pergola and fence structures.

The 'A' frame structure is built in an 'A' shape, with a row spacing of about 3.5m (depending on machinery). Wires are strung along each side of the frame for the vines to be trained along. A similar structure is the 'Y' frame.



*An 'A' frame structure with young passionfruit*

[www.passionfruit.org.nz](http://www.passionfruit.org.nz)

The pergola structure is a frame of posts about 2m high with rows spaced 5-6m apart, with timber or steel attached across the top of the posts. Both the pergola and 'A' frame structures need to be strong to hold the weight of the vines and fruit.

Two wire "fence" structures about 1.8m tall with row spacings of 2.5-3m can be used, although they are no longer as common. Posts are placed about 5m with strainers at either end. Two wires are strung along between the posts at the top of the fence and about 1m above the ground. The vines are "trained" to grow along the wire.



*Young passionfruit growing along a fence structure*

[http://www.passionfruit.org.nz/Photo\\_gallery.htm](http://www.passionfruit.org.nz/Photo_gallery.htm)

Advantages of the 'A' frame and pergola structures are increased canopy area and fruit quality compared with fence structures. Wind and sun protection and spray coverage are also better, and less mowing is required between rows. However these structures are more expensive to build than a fence structure and need to be pruned regularly to allow sunlight through the top.

## Planting

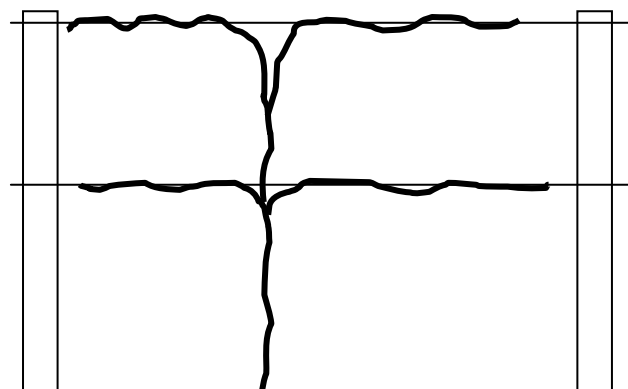
The arrangement of vines is usually in rows about 2.5-3m apart, with about 5m between plants in a row. However some people double plant, putting a plant in every 2.5m.

Planting young vines in spring and summer, from mid-October to January, avoids danger to young shoots from frosts. In some areas young plants are planted with an organic fertiliser such as blood and bone in the bottom of the hole to add nutrients for the new growth.

## Training the vines

Once the young plants have produced shoots, you can begin to train the plant. The aim of training is to get the vines supported by wires as soon as possible.

The four strongest shoots are selected and grown up (usually supported by a stake) towards the wires (two to the left wires and two to the right). Other shoots are removed to encourage growth in the selected four. Once the shoots are long enough the vines are wound loosely around the wires and tied.



*A vine being trained to the wire*

If the rows are double planted it may be best to train the vines only in one direction.

## Yield estimates

A reasonable average yield in the second year is 6 tonnes/ha. This doubles in the third and subsequent years to about 12 tonnes/ha, but yields may drop off after a few years as vines get older and less productive.

**'Te Pānui Tips' are simple fact sheets that cover topics designing organic crop production systems on the East Coast.**

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