ESPALIER

OVERVIEW

Espalier is simply the art of training a plant to grow in two dimensions. The technique became popular during the 17th century in Europe. Here, gardeners took advantage of warm, sunny walls to grow temperate fruit trees that were difficult to grow in cold climates.

In Australia, espaliers are enjoying favour for their function as well as beauty. They are proving a popular choice in a garden where space is limited or a screen is needed.

There are an amazing variety of plants that can be espaliered, and almost as many choices in how this can be carried out. The following is some advice on the processes you need to establish your own espalier.

WHERE DO I BEGIN

So, where do you begin? At the end of course!

When beginning your project, plan for it as if it was well established, 5-10 years into the future. Think about what kind of plant you might like to grow. How big you want it to be, the pattern or shape you want to achieve and what kind of structure you want it to be on.

Once you have a few ideas, it’s time to work through and flesh out your ideas.
CHOOSE A STYLE

There are many choices about what plants to espalier and how to do it.

INFORMAL

An informal espalier is a great place for a beginner to start. It has the advantage of not following any particular pattern which means the gardener can put a little of their own personality into it. It lacks the symmetry of a formal espalier, which enables it be shaped to suit the plant and the structure it’s grown on.

FORMAL

When you say the word espalier, most people have the image of an old formal tree on a wall. They are beautiful plants. A formal espalier takes longer and a little more pruning to establish and maintain, but they are not impossible for the beginner to grow.

The following page has some basic shapes you might like to try
Once you have chosen your plant and espalier style, it is time to design and erect your frame. Wire strung between star pickets, or two suburban fence posts, tensioned well, works just as well as an expensive system of marine grade wires and tensioners. Your choices are almost limitless. But, whether you choose a simple or elaborate design there are some important points to consider.

- Your structure should be able to bear a fair weight (think of a crop of apples).
- When choosing a formal pattern, the branches of your espalier should be spaced far enough apart to allow for good light penetration as well as air circulation. A series of wires spaced 30-40cm apart is ideal.
- We also recommend that if you plan to grow your espalier onto a brick wall or metal fence, you take into account the reflective heat. If it is a north or west facing wall we recommend that you build your structure 25-50mm off the wall to help prevent your espalier from being scorched.
- Remember that the aim is to cover your structure with a living sculpture. So don't worry if your frame is wire wrapped around some nails banged into a paling fence. Once your plant has grown you won't be able to see them at all.

Espalier Designs

- Vertical Cordon
- Oblique Cordon
- Stepover
- Horizontal Cordon
- Chevron
- Fan
- Single U
- Double U
- Multiple Cordon
- Belgium Fence
- Serpentine
- Heart
PLANT CHOICE

What kinds of plants are suitable for espalier?

Olives and citrus are great all rounders and tolerate a lot of sun. Fragrant climbers such as star jasmine and wisteria grow in a wide range of conditions. Magnolia Little Gem and sansanqua camellias are ideal for sites with softer light or the japonica camellia, with their beautiful winter flowers, for a deeper shade.

Almost any plant can be espaliered. Make a short list of the plants you like and then think about the cultural requirements of your prospective choices. The basic needs of your plant do not change just because it is being trained into two dimensions.

BUYING DECIDUOUS FRUIT TREES (Containerized vs. Barefoot)

CONTAINERIZED

Containerized trees have been established and maintained in the pot, using premium potting mix, fertilizers and consistent watering practices. As a result they have strong, fibrous root systems that are intact.

A containerized plant can be planted all year round. However it is important to note that these trees still take time to settle in. If you plant your tree in the middle of summer (after most of its seasons growth is completed) you may not see strong new growth until spring.

BARE ROOT

Bare root trees are generally cheaper than buying a containerized plant, and are only available during the winter months. They are grown in the ground and then dug up during winter when the plants are dormant.

When you buy bare root stock keep the root system damp (wrap them in some damp newspaper and place them in a plastic bag for the trip home). Remove any roots that have been broken or damaged and plant your tree as soon as possible. Remember that your bare root tree does not have its entire root system so prune back your tree as soon as it is planted.
SITE PREPARATION AND PLANTING

The more care taken now, the better the start your tree will have. Prepare an area larger than your plant. If planting near a building check for and remove any builders rubble. Add some organic material and fork it in well.

Dig a hole at least one and a half times the size of your plants’ root ball. Loosen the soil in the bottom of the hole (this will help out with drainage and encourage the roots to move down as well as out).

Prune back broken or damaged roots and (if your plant has come out of a pot) gently tease out the roots.

Place your tree in the hole. Look for the existing soil level mark on the trunk of your tree and back fill to this level. Keep all graft/bud points above your final soil level. These two steps will help prevent disease such as collar rot.

Lightly pack the soil down around the roots to reduce the chance of air pockets.

Create a well around the base of your tree, scatter some fertilizer and then water well.

TRAINING YOUR TREE

Once you have planted your tree, you can begin shaping it immediately. The process is simple and the pretty much the same for every espalier design.

Gently bend down the branches to the desired position, secure to your frame and take out the tips. If a branch is in the wrong position or is not aesthetically pleasing; prune it back, or prune it out.

Every time you move a branch from vertical to a horizontal position you are slowing down the sap flow to the tip of the plant. This enables the plant to push out more lateral growth. As the growth rate of that branch slows down, it puts more effort into growing fruit buds.

Be gentle as you move the branches around. It is a good idea to secure them to your frame with more than one tie. Place the ties wherever your hands are applying pressure to your plant to manipulate it into position. Once your plant has hardened up and is retaining its shape you can remove the ties and use them to tie down another part of your plant.

Your ties should be firm, but not cut off the circulation of the plant. Rubber and plastic ties are ideal. Please do not use any tie containing wire!

Pruning can be carried out at any time of the year. Summer is a busy time for tip pruning and taking out any growth that is growing in the wrong position. Winter is the time to prune out any large branches and finesse your design. And if you are lucky enough to have a deciduous plant, it’s a great time to admire the ‘bare bones’ of your labour.
FORMAL HORIZONTAL CORDON DESIGN – STEP BY STEP

Once you have planted your tree, you can begin shaping it immediately. The following is a description on how to establish a formal horizontal cordon design. The same principles can be applied for other designs.

The ideal start for this pattern is to choose a tree that already has two side branches as well as a central leader. Plant your tree so that your lowest branches begin just below your first wire. Secure your central leader to the bottom wire.

Gently bend down your two side branches (one each side of the trunk) and secure to the wire. Choose a healthy bud facing downwards (towards the wire) about 30-40cm away from the central leader. This will ensure that your first layer will continue with good strong growth whilst your next layer develops.
Now look for three strong healthy buds on your central leader around the height of your next wire. The best scenario is to have your top bud at the front of your plant and a bud on either side. Cut just above this bud.

Soon the top bud will shoot off and head to the next wire and your two side buds will shoot off as well. Let them grow until the new shoots reach about 15-20 cm. Very gently pull them down towards the horizontal wire.

Never force a branch near where it joins the trunk as it may split. If you are afraid of this happening pull the branch down over time (down to 45 degrees today and then more in a weeks time). Remember to take the tips out of any branch that you have pulled down horizontally to encourage new growth.

Leave the central shoot. It will grow strongly until it reaches the next wire where you begin the process again. Once your espalier has reached the height you want cut the central leader off.

As your upper layers have been forming, your lower layers will continue to grow. Continue to form your side branches. Wait until new growth reaches 20 cm, pull them down to the horizontal wire and cut to a healthy bud.
New vertical shoots will begin to grow from your horizontal cordons. Many of these new shoots will be thin. When they grow to about 10-15cm long cut them back to about 3cm. These small ‘pencils’ will slow down to form fruit buds or ‘spurs’ without too much fuss.

Watch for water shoots, strong healthy growth heading straight for the sky. These need to be cut back to about 3cm long. If they shoot again, cut them back again. Keep repeating the process until the new shoots slow down. Eventually they will also form fruiting spurs.

Remember the overall espalier should be aesthetically pleasing to you. So don’t be shy, if you think a branch is in the wrong place or is too long cut it back. It’s your tree.

Happy Espaliering!