Info Sheet

Pruning, Espaliering & Spraying Fruit Trees

Fruit trees benefit from pruning for a variety of reasons:

- To manage the size of the tree, allowing for easier harvesting of fruit.
- To increase the yield of the tree - pruning encourages new branching, and consequently greater harvests.
- To allow more sunlight and airflow around the plant. Improving the air movement prevents pest and disease problems developing, more light encourages even ripening.
- To remove dead and diseased branches and stems.

Ultimately, your pruning methods for fruit trees depend on the overall form you’re looking to achieve. Three of the most common pruning forms are bush (vase), pyramidal or espalier.

Bush (Vase) Shaped Trees

The first pruning should occur immediately after planting. Make sure you know if you have a one or two-year-old tree. The examples below show pruning starting at a one-year-old tree.

**PRUNE A ONE-YEAR-OLD TREE**

A one-year-old tree should be pruned immediately after planting – cut off the top half of the trunk with a sharp pair of secateurs.

Before cutting, make sure that the bottom half contains at least four buds or formed branches. If not, make the cut higher, above the fourth bud.

**PRUNE A TWO-YEAR-OLD TREE**

Below the thick black lines is the tree’s growth in the previous year – this should not be pruned. Above the thick black lines should all be pruned by a third. When pruning, cut just above an outward-facing bud – this bud will then produce a side-shoot in the spring. Which will grow away from the centre of the tree.

**PRUNE A THREE-YEAR-OLD TREE**

Pruning is similar to the two-year-old tree – below the thick black lines is the tree’s growth in the previous year. This should not be pruned. Above the thick black lines should all be pruned by a third. When pruning, cut just above an outward-facing bud.
Pruning Pyramidal Trees

PRUNE A ONE-YEAR-OLD TREE

The stem should be cut back to approximately 60cm above soil level. Make the cut (point A) just above a bud. Remove (rub out) the bud (at point B) below the top bud, making sure that there are at least three or four buds remaining below.

PRUNE A TWO-YEAR-OLD TREE

In the second year’s pruning, cut back the main stem by about 45cm just above a bud (point A). Below this cut, there should be three or four buds above the branches from last year.

Prune all the remaining branches so that they are about 25cm long. The cut should be immediately above a healthy looking bud.

PRUNE A THREE-YEAR-OLD TREE

In the third year’s pruning, again cut back the main stem by about 45cm, just above a bud (point A). Below this cut, there should be three or four buds, above the branches from last year.

Prune the branches, which have grown this year so that they are about 25cm long (points B). The cut should be immediately above a healthy looking bud.

MATURE TREES

A four to five-year-old tree can be considered mature and the basic shape will have been established. Pruning should consist of keeping the centre of the tree relatively clear of growth, removing all weak or diseased growth and keeping the tree within the space available.

Also remember that fruit trees are very forgiving if you make a mistake – they can be fixed the following year. If any larger sections of branch are to be pruned, seal the cut with a protective sealer (eg Bayer Bacseal).

Dwarf Fruit Trees

Not all fruit trees require an annual prune, and some new dwarf cultivars of apples, peaches, apricots and nectarines have been bred to eliminate the need for most annual pruning.
Planting & Creating Espalier Trees

Pros
● Great for properties with limited space.
● Look good when in blossom & easy access to fruit.
● Less fungicide spraying, as you have better air movement.

Cons
● Require patience and more work to train branches.
● Fruit is a little smaller than on a free-standing tree.

Most types of fruiting or hedging plants can be espaliered, although it can take up to 5 years to get a good looking espalier. Fruit trees are a good option for this – especially apples, as they give provide you with leaf, blossom and fruit - use dwarf or semi-dwarf varieties when possible. They fruit on spurs (spurs have a life span of 10-15 years, but are much less on stone fruit) and/or on laterals. Braeburn, Cox’s Orange pippin and Royal Gala fruit on both. All apples bear the best fruit on two-year and older wood.

Apple trees are generally easier to train than pears – the wood is much more forgiving, and the new stems do not harden off as fast. You can leave a new apple branch for a few weeks and come back and it will still be pliable. The best way to determine where the fruit will be is where it flowers, so wait until after the tree blooms before pruning.

There are several types of espalier, including:

- **Standard** - Branches grown horizontally out of one central trunk. By far the easiest to do.
- **Cordon** – The tree resembles a candelabra.
- **Belgian Fence** – a form of espalier that weaves a row of espaliers into a fence – very time consuming.
- **Palmette** – Branches grow in a fan-shaped pattern.
Espalier Tips

In general, light pruning and shaping is done in the autumn, heavy pruning in winter, and training the summer when growth is at its peak.

One-year-old trees are best to use, and ideally they should be unbranched. If only branched trees are available, retain the straightest leader and cut away the rest. After planting, the central leader is reduced to 5cm above the first wire – this forces the tree to "break buds", or start to produce stems at or near the first tier level. When growth occurs, only the top three shoots should be allowed to grow. The top shoot is then tied to an upright cane that is secured to the wires. The 2 side shoots will become the 2 lowest branches. Tie the side shoots to canes at an angle of about 45° so the laterals maintain their strength of growth while training is started.

In late autumn, remove the supporting canes and tie the branches to the horizontal wires. With the central stem again cut back to about 5cm above the second wire to train the next tier. Continue every season until the tree reaches the top wire. You then only have to retain 2 buds to tie down.

Allow your tree over time to break every bud to create a uniform mass of sticks projecting upwards from the tier branches. Prune these back to 3 buds – these will then turn into your fruit spurs.

Peaches, apricots and nectarines are best pruned to hedges or fan shapes, and will need fairly heavy pruning. They fruit on new wood only, so require vigorous pruning to produce new fruiting branches to maintain the espalier form. Pears are similar to apples, but with a more upright form.

Watering Recommendations for Fruit Trees

<table>
<thead>
<tr>
<th>FRUIT</th>
<th>AMOUNT</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>Low-medium</td>
<td>Water during long dry spells</td>
</tr>
<tr>
<td>Apricot</td>
<td>Medium</td>
<td>Infrequent, deep watering</td>
</tr>
<tr>
<td>Blackberry</td>
<td>High</td>
<td>Water during growing season</td>
</tr>
<tr>
<td>Blueberry</td>
<td>Very High</td>
<td>Frequent water</td>
</tr>
<tr>
<td>Cherry</td>
<td>High</td>
<td>Regular, deep watering</td>
</tr>
<tr>
<td>Citrus</td>
<td>High</td>
<td>Do not let root zone get dry or soggy</td>
</tr>
<tr>
<td>Currant</td>
<td>High</td>
<td>Regular water</td>
</tr>
<tr>
<td>Fig</td>
<td>Low</td>
<td>Needs no water once established</td>
</tr>
<tr>
<td>Gooseberry</td>
<td>High</td>
<td>Water to maintain growth</td>
</tr>
<tr>
<td>Grape</td>
<td>Low-medium</td>
<td>Little water once established</td>
</tr>
<tr>
<td>Kiwi</td>
<td>High</td>
<td>Regular watering</td>
</tr>
<tr>
<td>Nectarine</td>
<td>High</td>
<td>Water while fruit is forming in hot weather</td>
</tr>
<tr>
<td>Peach</td>
<td>High</td>
<td>Water while fruit is forming in hot weather</td>
</tr>
<tr>
<td>Pear</td>
<td>Medium-High</td>
<td>Regular water during growing season</td>
</tr>
<tr>
<td>Persimmon</td>
<td>High</td>
<td>Regular deep water</td>
</tr>
<tr>
<td>Plum</td>
<td>Medium</td>
<td>Best with some deep watering in summer</td>
</tr>
<tr>
<td>Raspberry</td>
<td>High</td>
<td>Regular water</td>
</tr>
<tr>
<td>Strawberry</td>
<td>Very High</td>
<td>Frequent, deep soaking</td>
</tr>
</tbody>
</table>

Top tip - Too much water will dilute the flavour of most fruit trees, and can cause split fruit. Reduce your watering going into harvest-time, to ensure your fruit has maximum taste.
Seasonal Points to Remember for Fruit Pruning

**Late autumn/winter**

Prune fruit trees and dispose of nectarine and peach prunings that may have been infected with leaf curl.

Dispose of any leaves under your trees, as these can carry pests and diseases. This is a good time of the year to spray Liquid Copper Fungicide & Conqueror Spraying Oil

**Late winter**

Continue with preventive spray programme, apply Burnet's Fruit & Citrus Food and mulch with compost.

**Spring**

Continue preventive spray programme (see below). If growing conditions are cooler, or you think that the tree could do with a boost, you can spray a liquid fertilizer such as Organic Liquid Fish Fertiliser or Liquid Seaweed. This will also give some anti-fungal protection as well.

**Early summer**

Thin the crop if you have had a good fruit set, especially on younger trees. This will allow better fruit size and enable the branches to support all of the fruit. You can always prop up branches if you have a heavy crop.

**December/January**

Summer prune if necessary, stone fruit respond particularly well to this. Prune back to retain tree shape and to keep good light and air movement. This would be generally on trees over 4 years old.

**Harvest Time**

To achieve maximum flavour and quality, allow your fruit to ripen on the tree. You don't have to pick all the fruit at once, especially on apples.

**Harvest Over**

Remove all fruit left on the tree and clear any lying on the ground to help prevent the spread of disease.
## Spraying Regime – Pip & Stone Fruit

**PIP FRUIT: Apples/Pears**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Spray Used</th>
<th>Pest / Disease</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dormancy</td>
<td>Conqueror Spraying oil</td>
<td>Over wintering Insects &amp; Fungal Spores</td>
<td>Do not spray oil at flowering time or on Cox Orange Pippin at dormant stage</td>
</tr>
<tr>
<td></td>
<td>Liquid Copper Fungicide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bud Swell</td>
<td>Liquid Copper Fungicide</td>
<td>Powdery mildew, black spot and rust on apples.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Bloom</td>
<td>Bravo or Fungus fighter</td>
<td>Broad spectrum fungicide Powdery mildew, blackspot and rust on apples.</td>
<td></td>
</tr>
<tr>
<td>Petal Fall</td>
<td>Bravo or Fungus fighter. Success Naturalyte (Insecticide)</td>
<td>Broad spectrum fungicide. Codling moth, leaf roller gicide</td>
<td>Withholding periods (Before eating): BRAVO Grapes: 28 days. All other crops 7 days.</td>
</tr>
<tr>
<td>21 days after Petal fall</td>
<td>Bravo or Fungus fighter. Success Naturalyte (Insecticide)</td>
<td>Powdery Mildew. Leaf Rollers, Aphids, Woolly Aphids,</td>
<td>DO NOT SPRAY SUCCESS NATURALYTE WHEN BEES ARE FORAGING.</td>
</tr>
</tbody>
</table>

Apply Liquid Copper Fungicide (50ml/10L) at the beginning of leaf fall - this will do a final clean up before winter starts.

*Limitation of Liability:*
*This spray sheet has been produced with care to provide basic information. As this information is generalised, Southern Woods Nursery Ltd is not responsible for the application of any particular spray program. All sprays applied are at the risk of the user.*
## STONE FRUIT: Peaches, Apricots, Nectarines, Plums

<table>
<thead>
<tr>
<th></th>
<th>Spray Used</th>
<th>Pest / Disease</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dormancy</strong></td>
<td>Conqueror Spraying oil Liquid Copper</td>
<td>Over wintering Insects &amp; Fungal Spores</td>
<td>Do not spray oil at flowering time</td>
</tr>
<tr>
<td><strong>Bud Swell</strong></td>
<td>Liquid Copper Success Naturalyte (Insecticide)</td>
<td>Leaf curl, Shot hole Fungus, Bladder Plum, Downy Mildew Aphids</td>
<td></td>
</tr>
<tr>
<td><strong>Full Bloom</strong></td>
<td>Bravo or Fungus fighter</td>
<td>Broad spectrum fungicide Powdery mildew, blackspot and rust.</td>
<td></td>
</tr>
<tr>
<td><strong>Petal Fall</strong></td>
<td>Liquid Copper Success Naturalyte (Insecticide)</td>
<td>Bladder Plum, Rust, Powdery Mildew Leaf Rollers, Mealy Bugs, Aphids, Woolly Aphids, Caterpillars, and Spittle Bug.</td>
<td></td>
</tr>
<tr>
<td><strong>21 days after Petal fall</strong></td>
<td>Liquid Copper Success Naturalyte (Insecticide)</td>
<td>Powdery Mildew. Leaf Rollers, Aphids, Woolly Aphids, Withholding periods (Before eating): Naturalyte: Fruit 3 days. All other crops: 7 days</td>
<td>DO NOT SPRAY SUCCESS NATURALYTE WHEN BEES ARE FORAGING.</td>
</tr>
</tbody>
</table>

Apply Liquid Copper Fungicide (50ml/10L) at the beginning of leaf fall - this will do a final clean up before winter starts.

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A Common Sense Guide to Spraying Safely

- Keep garden chemicals and spray equipment in a locked cabinet, or on a high shelf out of the reach of children.
- Always store sprays in their original labelled containers. If the label comes loose, keep it in place with a rubber band.
- Set aside a shelf or bench preferably outside to mix garden chemicals. A level uncluttered surface helps avoid spills. Gloves, spray mask & protective eye wear should be worn when mixing & using chemicals.
- Keep a set of mixing tools measuring spoons and a graduated measuring cup. Use them for measuring sprays and dusts only. Keep them with your garden chemicals away from children and out of the kitchen.
- Read the label carefully. Follow the directions and precautions to the letter. Some chemicals just won’t mix so don’t try to out-guess the experts. The label is the best way.
- Do not spray on a windy day. Coverage will be spotty and spray drift can be dangerous. Spray in the early morning or late afternoon when winds have dropped.
- A dry plant can be burned when there is insufficient moisture in the tissues. Midday spraying can result in serious burning of plant tissue by the sun. Never eat or smoke while spraying or dusting.
- Wear a spraying mask. For a little investment you can purchase a simple but effective mask that covers your nose and mouth. Very highly recommended.
- Throw away empty chemical containers and clean up after spraying. Wash empty spray containers inside and out and put in a closed rubbish bin. Don’t throw empty aerosol containers into an open fire or an explosion may result causing metal flying fragments.
- Wash out sprayer bottle, clean spray gun by back-flushing as directed. Wash your hands and face with warm water and soap after spraying and before eating or smoking.
- Use a separate sprayer for fertilisers and weedkillers. Even sprayers cleaned out thoroughly can retain some potency, therefore it is best to avoid using a sprayer that has contained weedkiller as a fertiliser sprayer on your trees and shrubs, as some damage may still be caused.
Leaf Diseases in Fruit Trees

Black Cherry Aphid

This shows as a mass of black aphids that cause all the tip growths to curl. Black cherry aphid normally only show in November, on younger trees, after a period of vigorous growth.

Treatment: Prune off affected growth and destroy or spray with an insecticide such as Yates No More Insects.

Leaf Curl on Peaches & Nectarines

Found on peaches and nectarines, leaf curl is a fungal disease. There are a number of fruit tree varieties listed in our catalogue that show some resistance to leaf curl.

Treatment: The main control used is a copper spray such as Liquid Copper fungicide applied in autumn just after leaf fall, and again in late winter just before the blossom buds begin to swell. It is important to collect and destroy all infected leaves if an infection occurs.

Leaf curl (midge) on Plums

Often confused with leaf curl that occurs in peaches and nectarines. It is actually a leaf-curling midge that causes the leaf to curl.

Treatment: Spray with an insecticide such as Yates Confidor.

Pear or Cherry Slug

A leech-like, small, dark slug that shows on the leaves of pears cherries and some ornamentals such as hawthorn. It usually only occurs in late spring, after a period of good plant growth. They feed on the upper leaf surface. As the leaves mature the pear slug finds the leaf harder to eat, and the cycle of infestation begins to disappear.

Treatment: Pear slug is very easily controlled with any insecticides such as Yates “Confidor” or Yates ‘No more Insects”.
Diseases in the Fruit

Brown Rot

This disease affects the fruit of nectarines, peaches and occasionally plums. The symptoms are rotting and browning of the entire fruit. Eventually the fruit will shrivel and fall off.

*Treatment:* The disease is spread by contact, so all infected fruit, whether on the tree or on the ground, should be removed and burnt as soon as possible. Spray with Bravo or Fungus Fighter. A winter spray of copper will help prevent infection. The best control is plant hygiene – remove all infected fruit when sited on tree and all fruit after harvest.

Keep the soils and grass around the tree clean. Remove leaves and other debris regularly.

Organic Options for Fruit Trees

**Bicarbonate of soda organic fungicide:**

Use two litres of water, and a drop of vegetable oil, which helps to fix the spray to the leaf when it’s dried. A drop of detergent helps to spread the mix over the leaf. Then add the active ingredient – bicarbonate of soda. Don’t get carried away with the soda because if you make it too strong, it’ll cause all sorts of problems. Put in two teaspoons per litre. The bicarbonate of soda makes the leaf surface alkaline and this inhibits the germination of fungal spores. You can also use it on tomatoes. The Royal Botanic Gardens in Sydney has found this to be effective on powdery mildew, rust and blackspot on roses.

**Milk fungicide:**

Mix one level teaspoon of bicarbonate of soda into one litre of water. Add one litre of skim milk and a pinch of Condy’s Crystals, which you can get from a produce agent (someone that supplies to horse owners). Shake thoroughly.