





# home grown - community owned

## information sheet

### Pruning

**Tip bearers**, such as apples Worcester Pearmain and pears such as Jargonelle and Josephine de Malines.

Remove unproductive or crowded branches. Tip prune the branch leaders , taking care not to remove too many fruit buds. Leave laterals under 30cm unpruned and shorten other laterals to produce more shoots or remove them altogether. Remove any low-growing shoots.

**Restorative pruning** is needed when trees have been neglected. Without pruning fruit trees can become over-vigorous, large and crowded. Ultimately, if a tree has been neglected for too long and is diseased, it may be better to remove it and plant a new one in its place. Aim to spread the renovation of a mature tree over a period of two or three years as hard pruning can stress the tree and result in even more vigorous growth at the expense of the fruit. Perhaps consider starting with the south facing side or the most productive side first.

First year: Remove any dead, diseased or broken branches, as well as some others in the centre of the tree to allow improved light penetration and air circulation. When removing branches, prune back wither to the point of origin or to a branch at least 1/3 the diameter of the branch being removed. Leave any old fruiting spurs and laterals at this stage, even if they are of poor quality as next year they may produce some flowers, thereby controlling the vigour of the tree.

Second year: Strong vertical shoots known as water shoots may be produced around large cuts from previous pruning. If you require a new branch then leave some unpruned, otherwise remove them at their base. Cut out any crowding and crossing branches

**To prune or not to prune?**  
 “The no-pruning option is usually ignored by fruit experts, though often practised by default in people's back gardens! But it has its advantages. Obviously it reduces work, and more surprisingly it can lead to higher overall yields” —Patrick Whitefield, How to Make a Forest Garden p16. 1996.

**Recognising fruit buds**

Fruit trees have two different types of bud: fruit buds (produce flowers and fruit) and vegetative buds (produce non-fruiting growth). Fruit buds are larger than vegetative buds as they contain embryonic flowers. However, the fruit buds on apples and pears, also contain vegetative buds, which produce a shoot from directly behind the flower (a bourse shoot). On young trees especially, it is a good idea to remove some of the fruit buds if the tree has too many, as the resulting crop could physically strain the tree and break branches

#### Additional resources:

- Orchard Link: <http://www.orchardlink.org.uk>
- Orchards Live: <http://www.orchardslive.org.uk/>
- Devon Apples: <http://devon-apples.co.uk/>
- Orchard Network: <http://www.orchardnetwork.org.uk/>
- Common Ground: <http://www.commonground.org.uk/>

#### References:

Pollock, Michael: RHS Fruit and Vegetable Gardening, 2002

Staniland, Charles: Information provided whilst on pruning course

Images:

[hwww.family-gardens.com/fruit-buds-and-leaf-bud.html](http://hwww.family-gardens.com/fruit-buds-and-leaf-bud.html) fruit buds pic

[www.gardening-howto.com/pruning-plants/pruning-fruit-trees.htm](http://www.gardening-howto.com/pruning-plants/pruning-fruit-trees.htm)





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### Pruning

Although it may seem like a very complex task, pruning is actually easier than you may think and, after a little practise, you will gain in confidence to have a go! This information sheet gives you an overview of why, when and how you prune a fruit tree. Please note that different varieties of trees are treated in slightly different ways and since we can't cover all of these here, we shall mainly be referring to the pruning of apple trees.

**Why prune?**

Pruning is the removal of growth to keep a plant healthy and influence its shape, size, flowering and fruiting. There are several key reasons for doing this:

- To maintain regular cropping by ensuring a good supply of young wood.
- To improve fruit quality, colour and size
- To control pests and diseases by removing dead, diseased and damaged branches. The most common disease affecting apple and pear trees is canker.
- To remove competition, increase air flow and light penetration, and create space for next years growth.
- Encourage more horizontal branches and shape the tree for easy picking.
- Remove excess ‘water shoots’ resulting from previous pruning.
- Increase tree vigour (if desired).

While pruning watch out for signs of voles around young trees as they eat roots and bark. Voles like to live under mulch so try to deter them by firming the ground around the base of the tree.



#### Tools/Equipment

The following is a list of the main equipment needed for successful pruning:

- Secateurs for basic pruning of shoots and woody stems up to about 1.5cm thick.
- Knife for cutting small shoots which are too awkwardly positioned for secateurs
- Ladder, for reaching upper branches safely
- Loppers for larger growth up to about 4cm in diameter
- Pruning saw for larger branches over 4cm
- Pole saw (only required for pruning mature trees)
- Pole pruners (only required for pruning mature trees)
- String for tying branches in to more appropriate directions



### When to prune

Apple trees can be pruned at any time of the year. Pruning is normally carried out in winter when the tree is dormant. It's easier to see the shape of the tree and easier to prune without leaves. Wounds and scars have only a short spell before new growth aids healing.

Winter pruning encourages growth. Summer pruning tends to reduce vigour so you may wish to consider pruning vigorous trees in summer and less vigorous ones in winter. Bear in mind that the more you prune, the more vigorous the growth will be next year, so try to balance the amount pruned with the tree vigour.

### How to make a cut

To avoid causing damage or disease to the tree it is important that you make clean cuts using sharp cutting tools. In general, always prune to just above a bud, otherwise you will be left with a useless and unattractive stump that is prone to disease.

A correct cut is made just above a bud, sloping at a gentle angle away from it so that rainwater will roll off. Try to cut it at the angle you want the new branch to grow at. When removing a large branch it is necessary to cut it in sections to avoid it splitting under its own weight. If removing a branch at the point of origin from the trunk, cut back to the slight ridge at the base of the branch, known as the collar, which will allow the wound to heal naturally without affecting the tree framework. Before cutting off a branch, make an initial cut across the underside of the limb, severing the bark, to prevent bark stripping on the trunk.

### Types of pruning

There are three main categories of pruning which relate to the age/size of the tree and whether it has been regularly pruned or neglected for a period of time. These are formative pruning, maintenance pruning and restorative pruning.



### Formative pruning

This is practised on young trees to produce a tree of the desired shape. It is usually fairly severe, encouraging strong growth and a well formed branch framework. The early years are crucial as a lack of formative pruning can result in a mature tree that is difficult to manage.

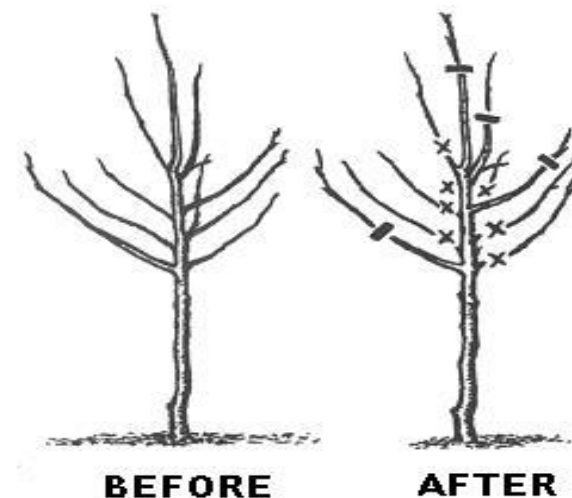
In the first year the pruning is dictated by the type of maiden (one year old) tree obtained. A maiden whip is a one year old tree with no branches, and therefore will take a year longer to develop than a feathered maiden (a single stem with a number of side branches).

### Basic points for all pruning jobs

- **Remove dead, diseased and damaged wood-** Any wood that is dead, damaged or broken may attract disease, and wood that is already diseased may infect the rest of the tree. Therefore any affected branches should be cut back to healthy material.
- **Remove competing branches-** Remove any branches that are competing for space with the main shoots and branches. You can either do this by cutting them or by tying them into a more desirable position. Tying has the advantage that it doesn't lead to more shoot production the following year, as is often the case with cutting. It is not always necessary to remove branches that cross over, although if they are touching then they can rub against each other and cause wounds and disease.

### Key decisions for size and shape

- **Identify the bottom branches-** Decide on the height you would like the lowest branch to be and remove any laterals below this point.
- **Identify the main shoots and branches-** Select the strongest and best shaped branches. A wide angle i.e. a more horizontally facing branch is the most desirable. Aim for a spiral shape as this allows the most light penetration and air circulation within the tree.
- **Leave some shoots for the future-** It is important to leave some new growth as apples usually fruit on three year old wood. If you remove all the new growth you may have very little fruit in two years time!



**Maintenance pruning** is the annual pruning used to maintain tree shape, health and vigour. If the tree has been regularly pruned then this is usually fairly light pruning. Apples can be divided into two main groups for pruning purposes: those that fruit on spurs, (less common) and those that fruit at the tips of new growth ('tip'-bearers). They need to be treated in slightly different ways.

**Spur pruning:** varieties include Cox's Orange Pippin, James Grieve and Sunset, and pears such as Conference and Doyenne du Commice .

Shorten each branch leader by approximately 1/3 of the previous year's growth to a bud facing in the required direction, which should result in branching and more spurs along the leader. If the leader is very vigorous do not prune it, or just lightly tip-prune it. Leave any laterals under 15cm un-pruned, and remove those over 30cm, pruning any remaining laterals to about six buds.