

Selecting, planting and taking care of apple and pear trees

The Tree Council is committed to supporting planting projects where trees are well cared for and have the best chance of long-term success. As fruit trees have special husbandry needs, we have collated this guidance with expert advice from Frank Matthews Nursery, orchard tree specialists and one of the largest fruit tree growing nurseries in the UK.

This guidance is designed to assist you with the practical aspects of selecting, planting and taking care of apple and pear trees in orchards and other locations. We have adopted the formal Defra definition of five well-spaced trees, as the minimum number of fruit trees necessary to form an orchard.

Apple and pear varieties

The first decision should be which fruit varieties to choose. There are many thousands of apple and pear varieties in the UK. However only a few hundred of the best performing varieties will be available as trees ready to plant, from specialist fruit tree nurseries, so selection should be relatively straight forward. The varieties chosen should be easy to grow, produce good quantities of fruit, and should be easy to manage.

It is also very important to consider the point at which the fruit will ripen. As fruit trees can produce their crop from mid-July onwards, it will be important for schools not to grow varieties where the fruit ripens during late July and August, when the school will be closed and the fruit wasted. Similarly, communities may be depleted by school holiday absences making it more difficult to bring people together to harvest the produce.

A fruit tree will not deliver a reasonable crop until it is between three and six years old for apples and pears respectively. (Please see below for more information).

The varieties in the table below are picked in September and October, making them ideal for school and community orchards, and all are relatively easy to grow. These are mostly dessert apples and pears but some cookers © are also included. Most varieties listed are excellent for making juice, an activity popular with local communities and schools.

APPLES - September	APPLES – October	PEARS
Bladon Pippin	Adam's Pearmain	Beth
Bountiful ©	Ashmeads Kernel	Concorde
Charles Ross	Bramleys Seedling ©	Conference
Core Blimey	Christmas Pippin	Invincible
Eden ©	Egremont Russet	Louise Bonne of Jersey
Greensleeves	Fiesta	Obelisk
James Grieve	Herefordshire Russet	Onward
Katy	Howgate Wonder ©	Williams Bon Chretien
Paradice Gold	Lord Lambourne	
Red Devil	Queen of the Realm	
Red Windsor	Red Falstaff	
Scumptious	Saturn	
Sunset	Spartan	
Surprize		

When making an application for funding for fruit trees, please bear in mind the above harvest times.

Some applicants may also wish to celebrate their local fruit varieties of apples. Unfortunately, many of these local varieties can be tricky to grow, therefore we advise you to consult a specialist nursery before ordering the more unusual or local varieties.

Pollination

All varieties of apples and pears produce more fruit if they are pollinated by a different fruit variety. This means that choosing a mix of apples and pears needs some careful thought. Most suburban and urban sites provide opportunities for pollination due to the close proximity of gardens, but a wide range of fruit varieties in your orchard will help with pollination. It is always worth introducing some crab apple trees into the mix. This is because crabs are a very good source of pollen, which helps to ensure good fruit production.

Although the apples produced from a crab apple are usually not edible straight from the tree, they can be easily turned into a fantastic jelly, providing another crop from the orchard. However, since it is important to get your pollination mix correct, talk to your professional advisor or supplier before ordering them and ask for their advice about inclusion of a crab apple in your application in order to aid the pollination process. If planting pears, you should also ask about pollinator pear trees.

For more information on pollination <https://www.frankpmatthews.com/advice/fruit-tree-pollination/>

Rootstocks

The Tree Council will only fund trees that are on these rootstocks:

Apples - M116, MM106, MM111, M25

Pears - Quince A, Pyrodwarf, Pyrus kirchensaller.

Please see the following link for more information regarding fruit trees rootstocks.

https://www.frankpmatthews.com/advice/fruit_rootstocks/

Spacing

Fruit trees must be planted with the correct spacing to accommodate the ultimate size of the tree and allow sunlight to reach the fruit. Please see pages 6 & 7 for more information.

Fruit Pruning

People are often concerned about pruning fruit trees as it can appear to be a difficult task, requiring specialist skills. Fortunately, fruit trees are fairly resilient and can usually survive even poor pruning attempts. Fruit trees will also need formative pruning in the early spring after they are planted, before they come into leaf. Formative pruning is important as it will determine the ultimate shape of the tree and aid in its establishment in its first year. Applicants will need to either seek professional help or do further research so they feel confident to do this themselves.

During the first few years, leaving a tree without any pruning can cause problems. It is needed to establish a shape that is suitable for the space available, and to remove unwanted growth such as overlong branches, crossing or unproductive branches, or dead and diseased wood. Therefore, we would recommend that during the first few years you undertake pruning as outlined below.

Establishing shape

The initial pruning of a young fruit tree is perhaps the most important, because this establishes the tree's shape. In an orchard, the aim should be to produce a tree with a clean stem, and a balanced shape to the canopy. This balanced framework is important to be able to support the fruit when it develops.

To achieve a balanced shape, during the first three years, clean off all the lower branches (feathers) up to 1.5 metres, whilst allowing the main leader to grow. Once the leader has reached a height of over 2 metres, prune it back to the 2 metre point. This will encourage growth from the side branches in the top half-metre, giving the tree a spreading shape and ensuring that the fruit should be within reach of most pickers.

Late winter pruning

It is possible to prune apples and pears at any time of year, but late winter is ideal when the weather is improving but also earlier enough so that tree will respond to its treatment in the following months when growth is active. At this time pruning can be undertaken to remove limbs growing in the wrong place and should concentrate on removing lower, crossing or rubbing branches and taking out diseased branches where there are signs of canker or mildew.

Aftercare

Please refer to the leaflet 'Managing and Caring for Trees' in the supporting materials section of the guidance, for more information on any of the guidance below.

Just like any other tree, young and newly planted fruit trees can die if they don't receive some basic aftercare during their first five years.

One of the greatest threats to young trees is being outcompeted by weeds and grass. Every March, the focus of maintenance should be to ensure that the young trees are not surrounded by weeds and grass. This can be achieved most effectively by mulching (see below).

Careful attention should be paid to the water requirements of the young trees (see below).

During the spring of the first year after planting, pinch out any flowers that develop to prevent fruit growth. Allowing fruit to develop in the first ~~few~~ years after planting diverts energy away from developing new shoots and roots. During this early stage in the trees' life, successful establishment is crucial. It may be necessary to extend this approach for the second year if the tree is looking in any way under stress. If trees are putting on good extension growth this is a good sign that they are ready to produce good quality fruit.

Mulching

Grasses and other fast-growing, herbaceous perennials will compete with young fruit trees for moisture, nutrients, space and light. To help the fruit trees to establish it is important to keep the base of the tree largely free of weeds for at least five years. Mulching is the most efficient method of keeping weeds under control.

Mulch should be applied immediately after planting, and one application of mulch is usually adequate for a number of years. However, the trees will benefit from being re-mulched in years 2 or 3 and this is best applied early in the year when the ground is moist – but after all weeds have been cleared.

Mulch should be spread to a depth of 50 – 100mm (2 – 4 inches) and could be:

- wood chips – although not fresh or too coarse because it can take too long for the wood chip to degrade causing nitrogen loss from the soil.

- composted bark;
- well-composted lawn clippings preferably mixed with other leafy material.
- leaf litter.
- There are also various proprietary mulch mats available to purchase or that can be home made from organic materials.

Cover an area around the tree of at least 1 square metre making sure that whatever used is not in contact with the bark of the tree as this can encourage mice and voles to damage the bark and roots unnoticed.

Weeding

If the area has been mulched correctly, there should be few weeds to deal with. If weeds do occur, hand weeding can be the simplest method. Pull out grasses, woody plants and herbaceous perennials so that they are uprooted. They should not be cut back or mown, as this encourages re-growth. Once the area has been weeded, cover with another layer of mulch if needed.

Watering

Except in long dry spells, it is rarely necessary to water a newly planted fruit tree if autumn or winter planted, provided attention is paid to mulching and weeding. If a long dry spell occurs, then water infrequently and heavily, as this allows water to penetrate deeper into the soil. This ensures that the fruit tree roots don't grow close to the surface during establishment. When planting in the spring a thorough drenching after planting is recommended and to follow the above guidance thereafter.

Check ties, guards and shelters

Check tree guards to ensure they are effective (no bark is missing or twigs bitten or broken off) and not rubbing or cutting into the tree. Repair/replace damaged guards. If a guard is damaging the tree, adjust, modify or replace it. If the trees are staked ties should be inspected annually to make sure they are not too tight.

If a guard is inadequate or the risk has changed, please consider a different protection, e.g. a taller tube to protect against deer, or fencing to keep off cows and other animals.

Replant any failures.

Remove the guard when there is no longer a risk of damage and clear away any material that has built up inside.

Fruit tree rootstock and spacing

Name of rootstock: M116 (semi-vigorous)

Fruits: Apples (including cider) and Malus crab apples.

Suitable for: half standards.

Start fruiting: After two or three years.

Ultimate height: 3-4m (10-13ft) x 4m (13ft).

Growing conditions: Tolerant of a range of soils including grassed orchards and poor soils, resistant to crown and collar rot, recommended for poorly drained conditions (unsuitable for small spaces).

Staking: 5 years; longer in exposed locations.

Spacing: 3.6 (12ft) with 4.5m (15ft) between the rows.

Name of rootstock: MM106 (semi-vigorous)

Fruits: Apples (including cider) and Malus crab apples.

Suitable for: half standards.

Start fruiting: After two or three years.

Ultimate height: 3-4m (10-13ft) x 4m (13ft).

Growing conditions: Tolerant of a range of soils including grassed orchards and poor soils provided there is good drainage. The most widely used rootstock; unsuitable for small spaces.

Staking: 5 years; longer in exposed locations.

Spacing: 3.6 (12ft) with 4.5m (15ft) between the rows.

Name of rootstock: MM111 (vigorous)

Fruits: Apples (including cider) and Malus crab apples.

Suitable for: standards and half standards.

Start fruiting: After three or four years.

Ultimate height: 4-4.5 (13-15ft) x 4.5 (15ft) less on light soils.

Growing conditions: Suitable for most soils including orchards in grass and on poor soils

Staking: Staking is not necessary if planted as a one year old, but those planted as 2-3 year old trees need staking for the first 3 years.

Spacing: 4.5m (15ft) apart with 6m (20ft) between rows.

Name of rootstock: M25 (very vigorous)

Fruits: Apples (including cider) and Malus crab apples.

Suitable for: Standards.

Start fruiting: After four or five years.

Ultimate height: +4.5 (15ft) x 6m (20ft).

Growing conditions: Most soils including orchards in grass and on poor soils. They are too vigorous for most gardens except where the soil is poor.

Staking: Staking is not necessary if planted as a one year old but those planted as two- or three-year-old trees need staking for the first 3 years.

Spacing: 6m (20ft).

Name of rootstock: Quince A (semi-vigorous)

Fruits: Pears, quinces and medlars (excluding perry).
Suitable for: Half-standard.
Start fruiting: After four years.
Ultimate height: 3-4.5m (10-15ft).
Growing conditions: Most medium to heavy fertile soils.
Staking: Retain for five years.
Spacing: 3-4.5m (10-15ft).

Name of rootstock: Pyrodwarf (Semi-Vigorous)

Fruits: Pears, quinces and medlars (including perry).
Suitable for: Half-standard.
Start fruiting: After five years.
Ultimate height: 3.5-5m (12-18ft).
Growing conditions: Most medium to heavy fertile soils.
Staking: Retain for five years.
Spacing: 3.5-4.5m (12-15ft).

Name of rootstock: Pyrus kirchensaller - a superior selection of Pyrus communis (very vigorous)

Fruits: Pears (including perry).
Suitable for: Standards.
Start fruiting: After seven or eight years.
Ultimate height: +4.5 (15ft) x 6m (20ft).
Growing conditions: Most soils including orchards in grass and on poor soils. They are too vigorous for most gardens except where the soil is poor.
Staking: Staking is not necessary if planted as a one year old but those planted as two- or three-year-old trees need staking for the first 3 years.
Spacing: 6m (20ft).