



Guidelines for planting apple and pear tree planting and maintenance

These notes are written to assist you with the practical aspects of planting and taking care of apple and pear trees. A helpful booklet, *School Orchards*, is published by The Tree Council member organisation Learning Through Landscapes, and is included in this grant pack, and complements these guidelines with a school-friendly step by step guide to planning an orchard as a whole-school project, explaining how fruit trees can enrich learning, encourage wildlife and enhance school grounds.

The Tree Council is concerned that, because fruit trees have special husbandry issues, some of the projects may not see the sort of long-term success that they expect from the planting of other species.

As a result of this, **successful applicants will be asked to comply with the following advice in order to release grant payments.**

We adopt the formal Defra definition of five well-spaced trees as the minimum number of fruit trees necessary to form an orchard.

Fruit Variety

The first decision should be which fruit varieties to choose. There are many thousands of apple and pear varieties in the UK. However, 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 early 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 crop until it is between three and six years old. (Please see below for more information).

The varieties in the table below fruit from September onwards, making them ideal for school and community orchards, and all are relatively easy to grow.

Apples	Pears
Charles Ross	Conference
Fiesta	Beth
Adams's Pearmain	Onward
Red Windsor	Concorde
Bramley	Williams Bon Chrétien
Saturn	Invincible
Scrumptious	
Bountiful	
Red Falstaff (Falstaff)	
Greensleeves	
Katy	
Egremont Russet	
Red Devil	
Spartan	
James Grieve	

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 apples 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.

Rootstock

The Grant Allocations Committee will limit funding to trees that are on these rootstocks:

Apples - M116, MM106, MM111, M25

Pears - Quince A , Pyrodwarf, Pyrus Kirchsaller.

Please see below for more information regarding fruit trees rootstocks and spacing.

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 below for more information regarding fruit trees rootstocks and spacing).

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.

During the first few years, leaving a tree without any pruning can cause problems as it is needed to establish a shape that is suitable for the space available, and to remove unwanted bits of the tree such as overlong branches, crossing or unproductive branches, or dead and diseased wood. Therefore we would recommend that during the first few year's 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 the 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 on. 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.

This initial pruning is best done in June/July or the winter months.

Winter pruning

During winter, pruning can be undertaken to remove limbs growing in the wrong place and should concentrate on removing crossing or rubbing branches and taking out any dead or diseased branches.

Aftercare

Please refer to the Booklet 'Managing and Caring for Trees' 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. 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 two years after planting, pinch out any flowers that develop to prevent fruit growth. Growing fruit in the first few years after planting diverts energy away from developing new shoots and roots. During this early stage in the trees' life, getting established is crucial. So although you may want apples immediately, a little patience will pay dividends in the longer term.

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

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 ones because there is a danger of nitrogen loss from the soil as they degrade;
- composted bark;
- well-rotted lawn clippings – or grass clippings from the previous cut ;
- leaf litter.

Cover an area around the tree of at least 1 square metre.

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, but it can be time-consuming. Pull out grasses, woody plants and herbaceous perennials so that they are uprooted. They should not be cut back or mown, as this encourages growth. Once the area has been weeded, cover with another layer of mulch.

Watering

Except in long dry spells, it is rarely necessary to water a newly planted fruit tree, 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 (where they will dry out and potentially lead to the tree's death). **Check 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 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 three or four 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 three or four 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 four or five 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 five or six 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).