

Introduction

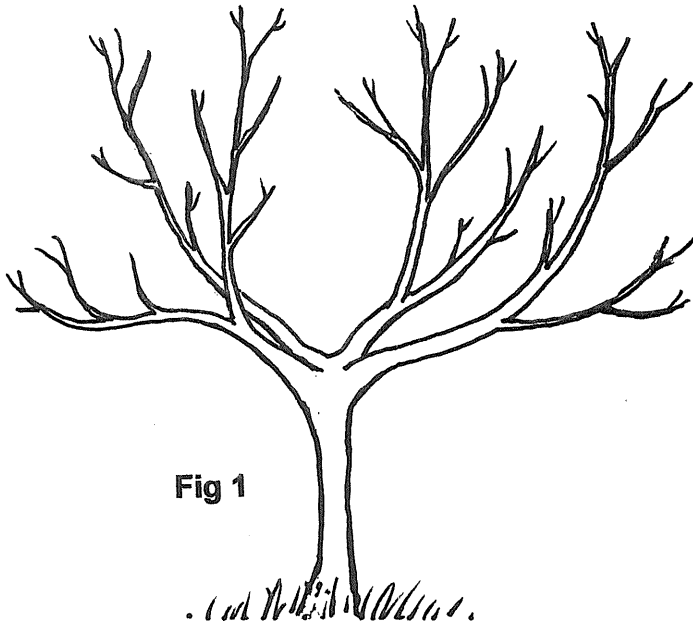
The aim of formative pruning is to produce an open, regular-shaped tree giving good air circulation throughout. See fig 1.

Fruit trees should generally be pruned as soon as they are planted, but see note 1.

They should ideally be planted when dormant, generally November to March – if planting at other seasons, delay pruning until winter. Don't prune when frost is imminent.

Note 1.

*Different varieties have different growth rates. With some slow-growers it is best to wait a year before pruning, whilst some fast-growers may have developed several side-shoots (feathers) in their first year. As a general rule it is best to remove these side shoots by pruning them back to the main stem. Then follow the instructions for **Year 1** pruning.*



Tree shapes at planting

Fig 2. A Maiden tree is one year old and has a single stem

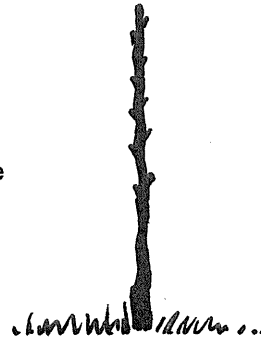


Fig 3. A Feathered Maiden is one year old and has a main stem with some side shoots (feathers)

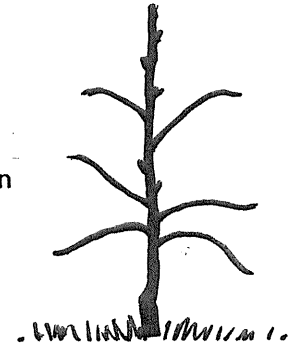


Fig 4. Containerised trees from garden centres are usually 2-3 years old and will have many side shoots

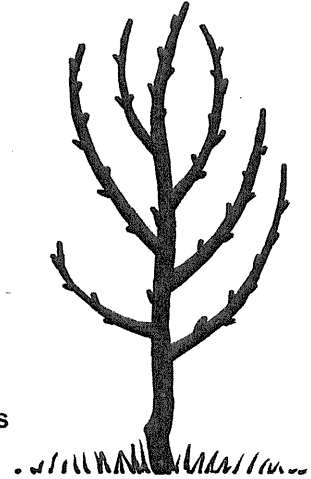
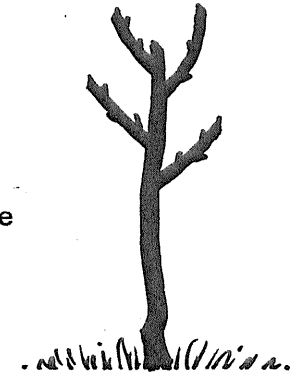


Fig 5. Containerised tree after initial pruning



Garden Centre trees

Garden Centres usually sell fruit trees in pots (containerised). The trees are often 2 or 3 years old and have many untrained side shoots.

After planting the tree, decide what height you'd like the tree to branch out from. Remove the centre stem just above this point. Remove all the lower shoots below this point, leaving some at the chosen point as a framework. See fig 5.

Prune the remaining branches as instructed for **Year 2** trees, checking the position of the annual growth rings and not pruning back beyond the previous year's growth. See fig 12.

YEAR 1

Tools required: sharp penknife, sharp secateurs

Remember - Sharp tools = clean cuts = less risk of infection to the tree

- choose a point on the stem of the one year old 'maiden' tree where you want the main side branches to develop. Just over a metre above ground level is ideal for an apple tree grown on an MM106 rootstock or a pear tree grown on a semi-vigorous Quince A stock.
- ensure there are five or six healthy looking buds on the stem below this point
- remove the stem directly above the healthy buds, cutting just above the chosen topmost bud
- See **fig 8**. To encourage the upper-most buds to develop into the tree's main framework of branches, carefully undercut the topmost bud and remove the bud below this one using a sharp knife. This action weakens the normally dominant growth of the topmost bud and discourages the bud below from taking its place as a new leader. Plant growth hormones are redirected to the lower buds and they will start to grow outwards the following year to form side branches

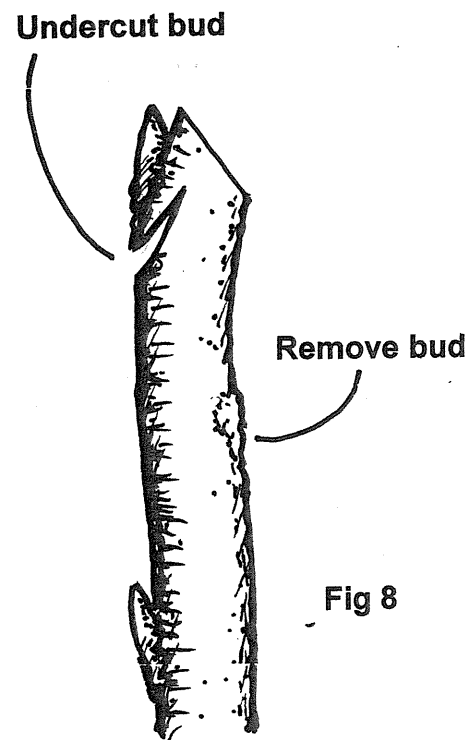
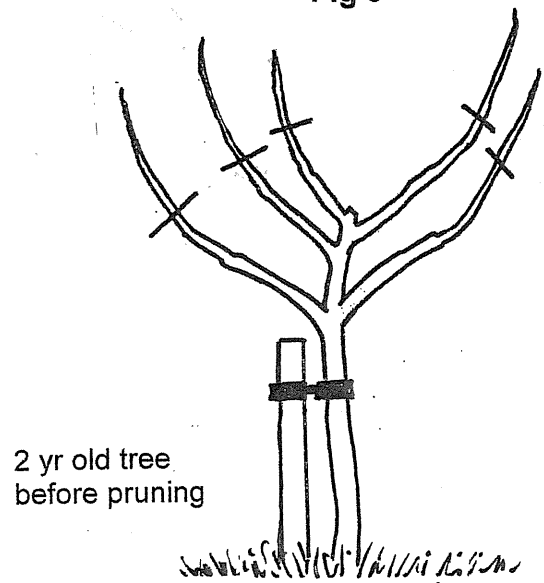


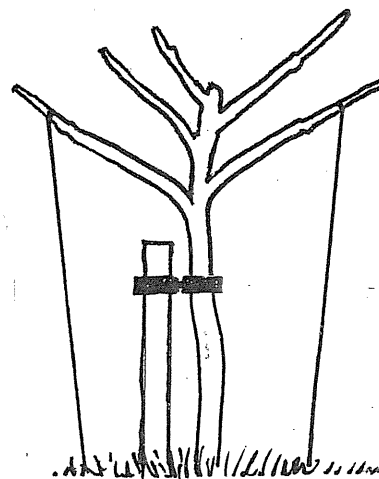
Fig 8

Fig 9



2 yr old tree before pruning

Fig 10



2 yr old tree after pruning and 'tying down'

YEAR 2

Tools required: sharp secateurs

- the tree will have developed its first proper side shoots or 'feathers'
- remove the remains of the stunted leader from the centre of the tree
- select the five to six best placed new side shoots and prune their ends back to encourage them to start growing smaller side branches, or 'bush out'

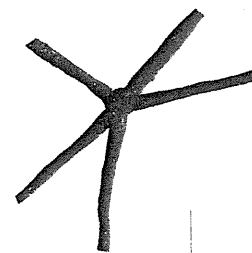
Remember - the harder you prune back a side shoot the more it will grow the following year. So:

- Prune the ends of weak growing shoots by up to a half
- Prune the ends of stronger growing shoots by no more than a third

Remember - as a general rule only prune back the previous year's extension growth on each shoot, or branch. If you look along a shoot or branch each year's new growth will be divided by distinct visible 'growth rings'. See fig 12.

- Prune back to just above a bud on each selected side shoot. The position of the new end bud on the pruned shoot will dictate the direction that shoot will grow the following year. If you want upwards growth, prune back to an upward pointing bud. For lateral growth, prune back to a sideways pointing bud. See **fig 9**.
- If the new shoots are very vigorous and upright growing you can encourage more lateral growth by tying them down, after pruning, using soft jute string. Tie them down to a stake or a peg, not to the tree itself. See **fig 10**.
- Having pruned the main selected shoots, remove any unwanted branches below them, pruning them right back to the stem
- Ideally, the shoots selected will create a star-like pattern when viewed from above. See **fig 11**.

Fig 11



one year's extension growth

growth ring

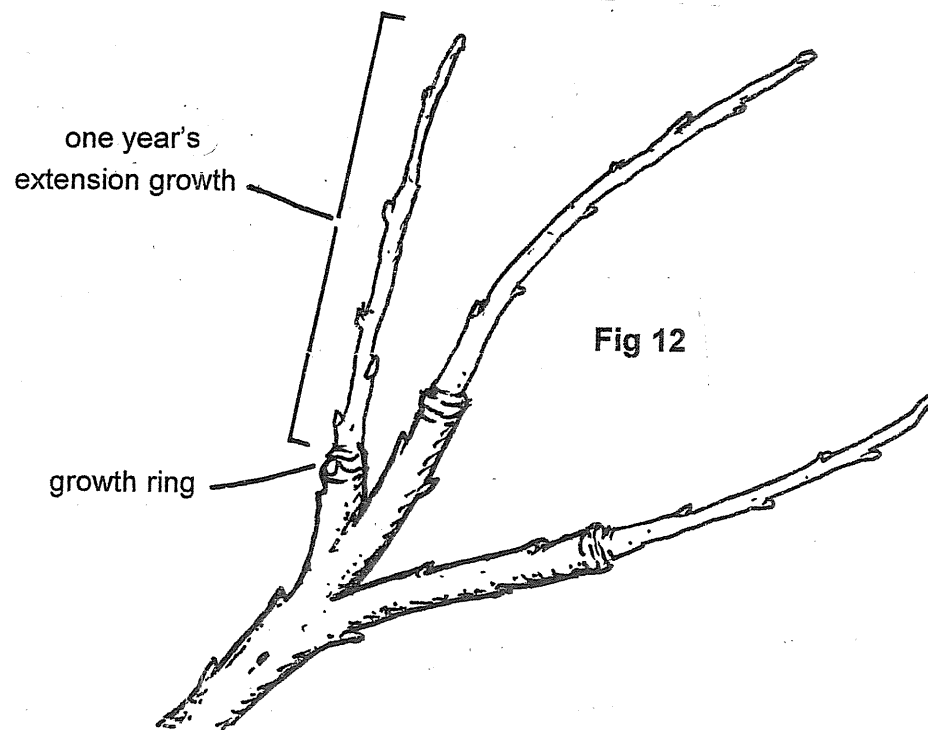


Fig 12

Year 3 and after

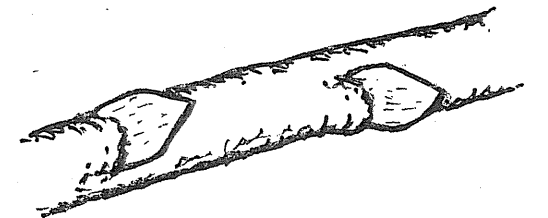
Tools required: sharp secateurs, sharp pruning saw, step ladder

- the tree's framework of around six main side branches will have developed numerous small side shoots of varying length and thickness
- these will need selectively pruning back every year until about year 5 by a third or an half, depending on their vigour (see **Year 2** notes for guidance)
- aim for an 'open-centred' tree as this ensures that air and sunlight reach all parts of the tree. See **fig 1**.
- prune out any dead, diseased or damaged shoots/branches and any that grow into the centre, are over-vigorous, upright-growing or cross over other branches
- You may need to continue tying down framework branches which are too upright-growing as the tree matures
- the tree will fruit on the numerous small side shoots on the developing complex of small branches arising from the main framework branches
- continually remove any suckers from the trunk and any upward growing non-fruit-bearing 'waterwood'

What sort of bud is it?

Maiden trees have 'growth' or 'vegetative' buds that can only develop into leaves and side shoots. After a year or two fruit buds will develop.

When pruning it is important to prune back to a vegetative bud, then that bud, plus one or two close by, will grow into shoots the following year.



Growth/vegetative buds are small, triangular or pointed and lie flat against the stem.



Fruit buds are larger, appear fatter and may be furry.

Formative pruning of plums and cherries

Plums and cherries do not need as much pruning as apples and pears

Plums

Do not prune plum trees in the winter months as they are susceptible to silver leaf, a fungal disease whose spores are spread by winter rains and enter the tree by open wounds and cuts. Summer pruning allows time for the cut marks to heal up. As a general rule, small pruning cuts can be made at anytime after bud burst (flowering), and into early summer, until the tree bears fruit, when cuts should only be made after fruiting has occurred.

Plums tend to grow vigorously and should have their main shoots shortened each year by about a third in order to secure a strong framework of boughs. If this is not done, long whip-like shoots will develop in the early years, with new growth and fruit developing at the tips. These shoots may be unable to support the weight of the fruit and may break off completely

The general idea is to end up with a well-balance tree with four or five evenly spaced branches which are stout and strong.

The first spring after planting - Cut the main stem at 1.2m (4ft) for a half standard tree.

Second spring - Select three, four or five branches, as evenly spaced around the trunk as possible, and shorten these by about a third. Remove completely any other shoots at this time.

Third spring - Shorten all tree growth by about a third. This should leave you with a sturdy framework that forms the main structure of the tree. No further pruning should be necessary.

Cherries

In the first spring after planting cut the main stem to the desired height of 1.2m (4ft) for a half standard tree. It is wise to rub out the first two uppermost buds at this time. As with plums, cherries grow quite vigorously, and the same pruning techniques will apply, although some varieties will be more vigorous than others.

As a general rule, if the new shoots are long and whippy, reduce them by a third. Shorter growths can simply have their tips shortened, by no more than a third. Again, because of the risk of infection, only prune after bud burst and directly after fruiting on established trees, and never during the winter.

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Formative pruning of Apple, Pear, Cherry and Plum trees



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