Growing and pruning soft fruit and tree fruit – notes

Pruning

Rule One

Always assess the whole plant before making any cuts.

Rule Two

Never prune without good reason.

When a plant is pruned new growth will break elsewhere on the plant, often hard pruning leads to more vigorous re-growth. When pruned to an outward facing bud the subsequent growth sprouts in the desired direction.

Reasons to Prune

1. Removal of dead, diseased or damaged wood
2. Removal of rubbing wood
3. To produce safe, sound specimens
4. To create pleasing shapes e.g. Topiary
5. To stimulate new vigorous growth
6. To encourage desirable habits e.g. hedging
7. To maximise fruit and flower

Tools required for pruning

1. Secateurs- for finger thick branches.
2. Loppers- for thumb to 5cm thick
3. Pruning saw- for over 5cm
4. Long arm pruners- for high branches
5. Shears- for hedges, lavenders and heathers.

How to prune

1. When using bypass secateurs always ensure thinnest blade is closest to the main stem or trunk.
2. Never try to cut too thick a stem with secateurs.
3. Don't leave stub cuts, it's unsightly and encourages P&D.
4. Always cut to an outward facing bud (see the bud next to the orange arrow).
5. Ensure no bark tearing occurs.
6. If pruning diseased wood clean blades with Jeye's Fluid to sterilize before pruning a healthy plant.

Always cut at an angle opposite of a bud (look at the green and orange arrow in the picture).
Note – if you cut at the green arrow, the new growth will be "inward-facing", whereas, if you cut at the orange arrow, the new growth will be "outward-facing". We should always aim to have more outward-facing growth.

Disposal of Pruning

- Soft un-diseased material can be composted
- Clean woody material can be shredded or chipped
- Burn or bin all diseased wood.

Timing of Pruning

Soft fruit (gooseberry, black, red and white currants and autumn fruiting raspberries) tree fruit (apple, pear) should be pruned between December-February. Plum, greengage, nectarine should be pruned in spring and summer. Summer fruiting raspberry should be pruned after fruiting has finished in summer.

Pruning Gooseberry

In additional to the general instructions mentioned above, there are two ways of pruning gooseberry:

Spur-pruning – prune leader branch to 3-4 buds of the new growth and prune all new shoots to a bud (about 3 inch from the base).
Pros/cons - very labour intensive pruning method; if you would like large fruit of small quantity, then you should go for this method.

Regulated pruning – Remove old branches and replace them with new, healthy growth; remove all growth arising from less than 4 inch from the ground.
Pros/cons- easy to maintain, gives large quantity of small fruits.

Pruning Apple

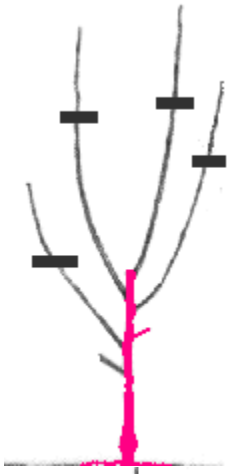
How To Prune Bush Trees

The first pruning should occur immediately after planting (normally November or December) - 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.

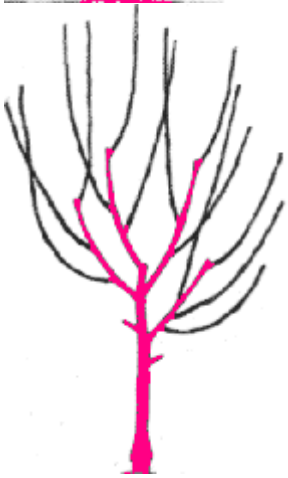
Before cutting, make sure that the bottom half contains at least four buds or formed branches. If not, make the cut higher, above the fourth bud.



PRUNE A TWO YEAR OLD TREE

Prune from December to February. The pink coloured parts of the tree show growth in the previous year, this should not be pruned. The black coloured side shoots should all be pruned by a third - see the thick black lines.

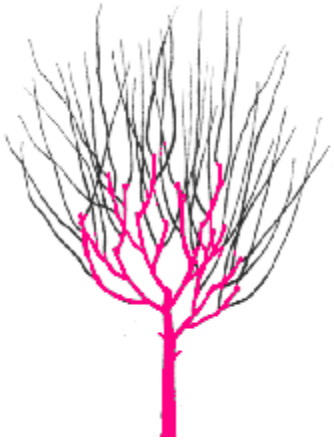
When pruning, cut just above an outward facing bud - this bud will then produce a side shoot in the spring which will grow away from the centre of the tree.



PRUNE A THREE YEAR OLD TREE

Prune from December to February. Pruning is similar to the two-year old tree - the pink coloured parts of the tree show growth in the previous year, this should not be pruned. The black coloured side shoots should all be pruned by a third.

Always prune to just above an outward facing bud.



PRUNE A FOUR YEAR OLD TREE

Prune from December to February. Pruning is the similar to the three-year old tree - the pink coloured parts of the tree show growth in the previous year, this should not be pruned unless it is diseased. The black coloured side shoots should all be pruned by a third.

Always prune to just above an outward facing bud.

A 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. Remember that apples will grow on wood produced the previous year, so always leave a good proportion (say 50%) of the previous year's growth.

Pruning for a cordon shape

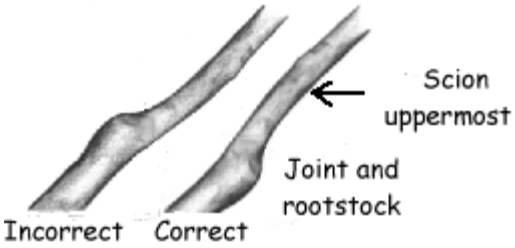
A cordon is a single stem tree with pruned side shoots (known as fruiting spurs). The tree is planted at an angle of 45 degrees to restrict its size and ensure that it produces apples early in its life. They are relatively easy to prune and occupy very little space for the crop of apples produced.

However, they do require some preparation beforehand, to ensure that the necessary supports are in place.

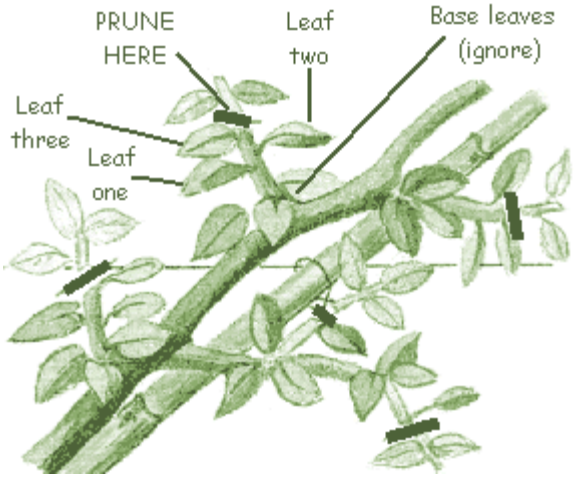
When buying a cordon, make sure you either buy a one year old tree (known as a maiden) which can be trained to the correct shape, or that you buy a two or three year tree which has been trained as a cordon. This article begins with the pruning and care required for a one year old tree which has been purchased in November to January.

The cordons will need three wires (25mm) along their length to support them (see wires in picture above). These should be supported at either end by strong posts. The heights of the wires should be 600mm, 1.2m and 1.8m. For each cordon tree (allow 75cm between each tree), fix a 2.4m long bamboo cane to the wires at an angle of approximately 45 degrees.

The cordon should be placed in the soil, with the joint between rootstock and scion above ground and with the scion uppermost - if planted with the scion on the lower side, there is a risk that the stem will break.



After planting the cordon at a 45 degree angle, secure it to the bamboo cane with ties which should be checked every few months to ensure they are not cutting into the stem. All side shoots longer than 10cm should be pruned immediately after the third bud.



Cordons need to be pruned annually around mid August. The tree is ready for pruning when the side shoots from the main stem begin to develop woody stems at their base. Shorten all side shoots from the main stem to three leaves above the cluster of leaves at the base of the shoot - see the diagram to the left. Where a side shoot from the main stem has a side shoot coming of it, prune this to one leaf above the cluster of leaves at the joint of the two side shoots

Pruning Plum Trees

There are two considerations when pruning plum trees. The first is to establish a good shape. The second is to avoid any infection with silver leaf disease. The key to avoiding this infection is to prune plum trees at the correct time of year (see below). Click on pests and disease in the left hand menu for a detailed description of silver leaf disease.

To avoid silver leaf disease, prune plum trees in June when they are growing strongly, do not prune in the winter. Try to make the pruning cuts as cleanly as possible, and avoid crushing the wood. If any larger sections of branch are to be pruned, undercut the branch first to avoid tearing the bark. Burn any diseased or dead wood.

Pruning of plum trees depends on the form wanted - pyramid, bush, standard or half standard. Pyramid trees are pruned in a different way from the other forms.

Pruning Pyramid Trees

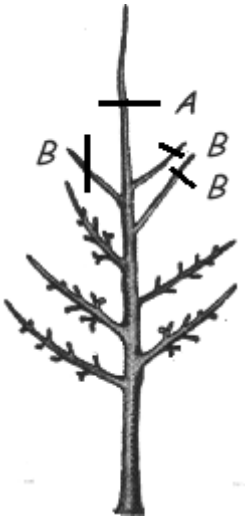
MAIDEN

Prune in June to avoid the risk of silver leaf disease. The stem should be cut back to approximately 600mm 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 at least three or four buds remaining below.

SECOND YEAR

Prune in June to avoid the risk of silver leaf disease. In the second year's pruning, cut back the main stem by about 450mm 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 250mm long. The cut should be immediately above a healthy looking bud.



THIRD YEAR

Prune in June to avoid the risk of silver leaf disease. In the third year's pruning, again cut back the main stem by about 450mm just above a bud (point A). Below this cut, there should be three or four buds above the branches from last year.

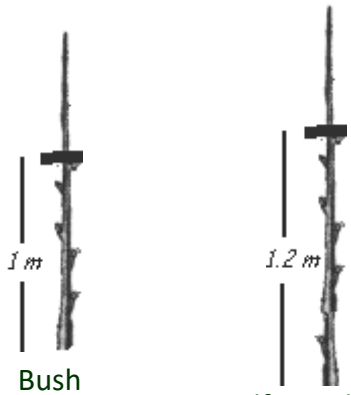
Prune the branches which have grown this year so that they are about 250mm long (points B). The cut should be immediately above a healthy looking bud.

Established plum trees should be pruned in June and the pruning is restricted to new growth not bearing fruit this year. The aim is to keep the tree size within the available space. Pinch out strong-growing side shoots (grown this year) to 6 leaves from their parent branch - this will encourage fruit next year. When the central stem gets to about 2.5 m high, prune it back into old wood, 1m above the highest branch.

Whilst pruning this new growth, look for any dead wood, prune this out and burn it.

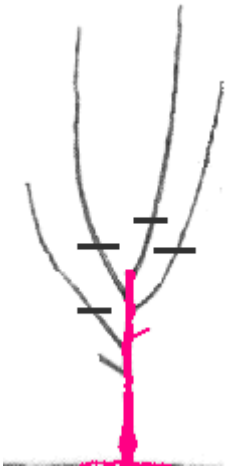
Pruning Standard and Bush Plum Trees

To avoid the risk of Silver Leaf Disease, always prune plum trees when they are growing strongly, mid-June is a good time.



Bush Half-standard

In the second year, the plum tree should again be pruned in. All growth should be cut back (just above a healthy bud) to about 25cm from the main trunk. This may sound severe, but it will encourage new healthy growth next year. The new growth will come from the pruned branches.



In the diagram to the right, last year's growth is shown as pink, the current year's growth as grey and the pruning points shown as black lines.

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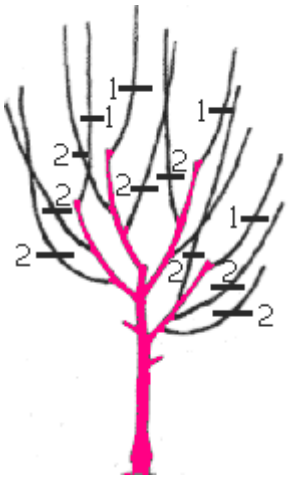

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In the third year, the plum tree should again be pruned in June. Prune the leading shoots back to 30cm from their main stem (see points marked 1). Other shoots should be cut back to 15cm from their main stem (see points marked 2). All shoots should be pruned just above a healthy shoot.

In the diagram to the left, last year's growth is shown as pink, the current year's growth as grey and the pruning points shown as black lines.

In the fourth and later years, prune in June. Cut all leading shoots back by about a third and all other shoots to 15cm from their main stem. Cut out all diseased or dead wood (and burn) and trim up any shoots which cross others. The aim is to go for a wine goblet shape. The centre of the tree should be kept un-crowded to allow air to circulate freely and let in light.

Pruning White and Red Currants

Prune all last year's growth to one bud, including the leading shoot once the plant is fully established. Thin mature spur when necessary; remove any new shoots less than 4 inches from the ground.

Pruning Blackcurrant

Remove less productive two-year old shoots
Cut out older wood at the base
Prune low, horizontal branches to a strong upward –growing shoot.

Raspberry (autumn fruiting)

Summer fruiting varieties fruit on previous year's growth so fruited wood should be cut back to the ground after fruiting has finished in the summer. New growth should be tied in to horizontal wires with the tall growth cut back to 6" (15cm) above the top wire. Tie in and space at 6" intervals.
Autumn raspberries fruit on current season's growth and should have all canes cut back to ground level in February. . For better result, remove less healthy growth late in the spring.

Pruning Gooseberries

Prune the bushes in February each year. Keep the centre of the bush clear of most growth by cutting out any weak or dead branches. On the outside of the bush, young growth should be left untouched, older and longer side shoots should be cut back to within 2cm of their base. The aim is to achieve a wine glass shape with the centre of the bush reasonably clear of growth.

What to grow, where

Tree fruit

Apples

Apples are fairly soil tolerant but do not enjoy waterlogged soils. Check variety for soil suitability. While some varieties are self-fertile (which means they do not need a pollinator), most are not, so they need a pollinator. All apple varieties available are grouped into 7 pollinating groups and an apple from one group helps pollinate apples from another group.

Pears

- Pears will tolerate fairly heavy soils, plant as for apples
- Pears flower early so will benefit from some shelter to protect the blossom from frost
- NB. Finches are very fond of pear buds so protect with netting or chilli spray.

Peaches, nectarines, apricots, plums, gages, damsons

- Stone fruit need well drained but moisture retentive soil with neutral to slightly acid pH.
- Feed young trees with Growmore or poultry waste pellets in spring following manufacturers guidelines
- Mulch with organic matter (10cm) avoiding the stem after feeding to supress weeds and conserve water.
- If planting near a wall ensure the roots are outside any rain shadow caused by the wall

- Sprays of Sloe blossom can be hung in the trees to aid pollination
- Nectarines and Peaches should be grown against a wall or at least in a sheltered position with full sun. They do well when grown in polytunnels which must be unheated in the winter to afford the plants a dormant season
- Peach leaf curl can be a major problem but copper based sprays are available if desired

Soft fruit

Raspberries

- Raspberries prefer free draining soil rich in OM.
- Water well in dry weather especially at flowering time.
- Mulch with BOM in February.

Blackcurrants

- Plant deep so that graft union is 2" (5cm) below soil surface. This is to encourage cane formation.
- Blackcurrants will tolerate fairly poor drainage but enjoy rich soil and protection from the wind. Avoid frost pockets.
- Plant November to March at 1.5 meters apart.

Gooseberries

- Plant to the soil collar mark.
- Pull off any suckers from below this point as they will come from the root stock.
- Remove low growth to 6" above soil level.

What are rootstocks?

Rootstocks are used to restrict the vigour of fruit trees (NOT soft fruit) and allow a range to grow in a small space. They can also contribute to the disease resisting abilities of the plant and be suitable for particular soil types

Rootstock choice

Apples

Name of rootstock: M27 (extremely dwarfing)
Suitable for: for small gardens where the soil is fertile
Start fruiting: After two years
Ultimate height 1.2-1.8m (4-6ft) x 1.5m (5ft)
Growing conditions: Unsuitable on poor soil and for weak cultivars
Staking: Permanently
Spacing: 1.2-1.5 (4-5ft) apart with 1.8m (6ft) between rows

Name of rootstock: M9 (dwarfing)
Suitable for: an excellent stock for small gardens
Start fruiting: After two or three years
Ultimate height as trained as bush: 1.8-2.4m (6-8ft) x 2.7m (9ft)
Growing conditions: any soil

Staking: Permanently
Spacing: 2.4-3m (8-10ft) apart with 3.6m (12ft) between rows

Name of rootstock: M26 (dwarfing)
Suitable for: small garden, trained fruit and containers
Start fruiting: After two or three years
Ultimate height as trained as bush: 2.4-3m (8-10ft) x 3.6m (12ft)
Growing conditions: Average soils
Staking: Permanently
Spacing: 2.4-3.6m (8-12ft) with 4.5m (15ft) between rows

Name of rootstock: MM106 (semi-dwarfing)
Suitable for: All forms except standards
Start fruiting: After three or four years
Ultimate height as trained as bush: 3-4m (10-13ft) x 4m (13ft)
Growing conditions: Tolerant of a range of soils but unsuitable for small gardens.
Staking: 5 years; longer in exposed locations
Spacing: 3.6 (12ft) with 4.5m (15ft) between the rows

Name of rootstock: MM111 (vigorous)
Suitable for: standards and half standards
Start fruiting: After four or five years
Ultimate height as trained as bush: 4-4.5 (13-15ft) x 4.5 (15ft) less on light soils
Growing conditions: Suitable for most soils too large for small gardens
Staking: Staking is not necessary
Spacing: 4.5m (15ft) apart with 6m (20ft) between rows

Name of rootstock: M25 (very vigorous)
Suitable for: Standards
Start fruiting: After five or six years
Ultimate height as trained as bush: +4.5 (15ft) x 6m (20ft)
Growing conditions: Most soils, too vigorous for most gardens except where the soil is poor
Staking: Staking is not necessary
Spacing: 6m (20ft)

Pears and quinces

Name of rootstock: Quince C (dwarfing)
Suitable for: Cordon, bush, central leader
Start fruiting: After four years
Ultimate height as trained as bush: 2.5-3m (6-10ft)
Growing conditions: Fertile, moisture retentive soil
Staking: Permanently
Spacing: 3m (6-10ft)

Name of rootstock: Quince A (semi-vigorous)
Suitable for: Fan, cordon, bush, central leader, half-standard, espalier
Start fruiting: After four years
Ultimate height as trained as bush: 3-4.5m (10-15ft)
Growing conditions: Most medium to heavy fertile soils

Staking: Retain for five years
Spacing: 3-4.5m (10-15ft)

Peaches, nectarines, apricots, plums, gages, damsons

Name of rootstock: Pixy (semi-dwarfing)
Suitable for: Cordon, dwarf bush
Start fruiting: Three or four years
Ultimate height as trained as bush: 3-4m (10-12ft)
Growing conditions: Good light, loamy soil
Staking: Permanently
Spacing: 4m (12ft)

Name of rootstock: Saint Julian A (semi-vigorous)
Suitable for: Bush, half standard, fan-trained
Start fruiting: After three or four years
Ultimate height as trained as bush: 4.5-5m (14-18ft)
Growing conditions: heavy soils are tolerated
Staking: 5 years
Spacing: 5m (18ft)

Name of rootstock: Torinel (semi-vigorous)
Suitable for: Bush, half standard, fan-trained, good for containers
Start fruiting: After three or four years
Ultimate height as trained as bush: 2.4-3m (6-10ft)
Growing conditions: loamy
Staking: Five years
Spacing: 3m (10ft)

Cherry

Name of rootstock: Gisela 5 or G5 (semi-dwarfing)
Suitable for: Bush, pyramid, fan
Start fruiting: Three or four years
Ultimate height as trained as bush: 2.4-3m (8-10ft)
Growing conditions: Fertile, loamy soil
Staking: Permanently, **Spacing:** 2.7m (9ft)

Name of rootstock: Colt (semi-vigorous)
Suitable for: Bush, half standard, fans
Start fruiting: After three or four years
Ultimate height as trained as bush: 6m (20ft)
Growing conditions: Many soils tolerated including clay and light, chalky soils
Staking: Permanently **Spacing:** 6m (20ft)

Soil Preparation for Planting Top & Soft Fruit

Digging

- Prepare the planting area by digging over the soil, ideally a month before planting is due to take place.
- Dig an area at least 1 metre diameter and remove all perennial weeds.

- Bulky organic matter (BOM) can be incorporated at this stage; this will aid drainage and water retention and boost soil flora and fauna.
- Bone-meal should be added to the backfill at planting.

Planting

- Dig a hole one spit (spades depth) deep, large enough to accommodate the root-ball.
- Fork over the base of the hole to aid drainage
- Crack the sides with a fork if the soil is very heavy.
- Position tree in the hole ensuring the soil collar mark is at the same level as the surrounding soil.
- Position stake to the windward side of the tree avoiding the roots
- If hole is the correct depth remove tree and cover roots to avoid desiccation
- Hammer the stake in aiming for the eventual height to be a third the overall height of the tree. Use an upright stake for bare root plants and angle the stake at 45^0 to avoid root-ball.
- Position tree and loosely attach to stake with a tree tie
- Add bone-meal and BOM to the back fill and incorporate breaking up any big lumps
- Gradually fill in around the roots heeling in gently as you go avoiding scraping the stem and damage to the roots. NB. DO NOT plant too deep.
- When all soil is in place tighten up the tie ensuring there is a spacer between stem and stake.
- Clear up, water in and apply guards as required
- Mulch to 10cm avoiding base of stem

Aftercare

- Keep watered in dry weather during the first year.
- Adjust tie as stem grows
- Control weeds
- Control P&D

Tools required

Spade, fork

Tree guards and tree support

A range of tree guards are available online please see below some examples). The choice of guards depends on the size of the plant and type of protection needed, for example from rabbit, deer, other animal, etc.

There is a debate about whether to have tree support (see the one inside the metal tree guard) or not. If the site is not too windy, there is no need to have one (see fruit trees in our orchard in Marlpit).