

Pruning fruit trees

Introduction

Pruning is the selective removal of parts of plants to promote patterns of growth. It relates mainly to branches, stems and leaves, but can also involve roots and fruit.

In stone fruits (peaches, plum, apricots), pome fruits (apples and pears) and citrus (oranges, lemons, naartjies) a very heavy crop of fruit in one year can be followed by very few or none the next year. It is thus a good idea to thin fruit on an over crowded tree. This also ensures fewer, but larger fruit, rather than many small fruit.



Above: Thinning of fruit. Generally you should leave about 7-8 fruits per meter of branch, or about 4 fruits per arm's length.

Why do pruning?

The pruning of branches on fruit trees creates a strong structure that can:

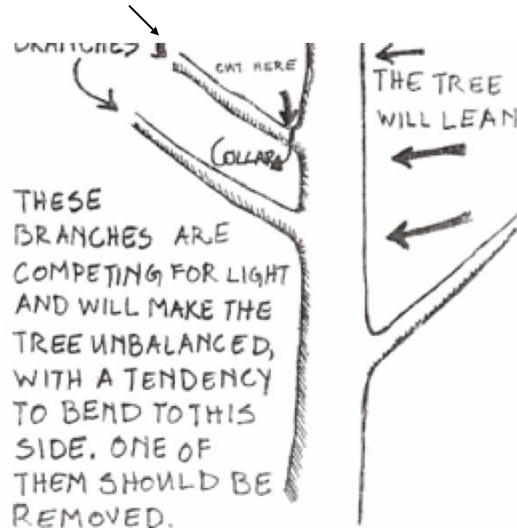
- With-stand wind without breaking
- Carry heavy crops of fruit
- Be harvested from easily, as the tree is not too large.

Pruning also increases light and air circulation between the branches of the tree to reduce diseases and help fruit to form and ripen.

Steps in pruning

- First; remove all the dead and diseased branches.
- Then remove any unnecessary limbs; Those that cross over one another, are too close together or rub against each other. Make the cut just above the collar as shown on the picture below.

Competing branches



Always cut away any branches growing below the



union of grafted trees. This is the root stock growing through and it will compete with the fruit growing part of the tree.

Picture on the right shows a man cutting a shoot from below the graft union

- Fruit trees are generally pruned to be either to have **open centres** or to have **central leaders**

Open Centre(left):
Creates a spreading tree that allows light into the centre for fruiting. It is generally used for stone fruit (peaches, plums...)

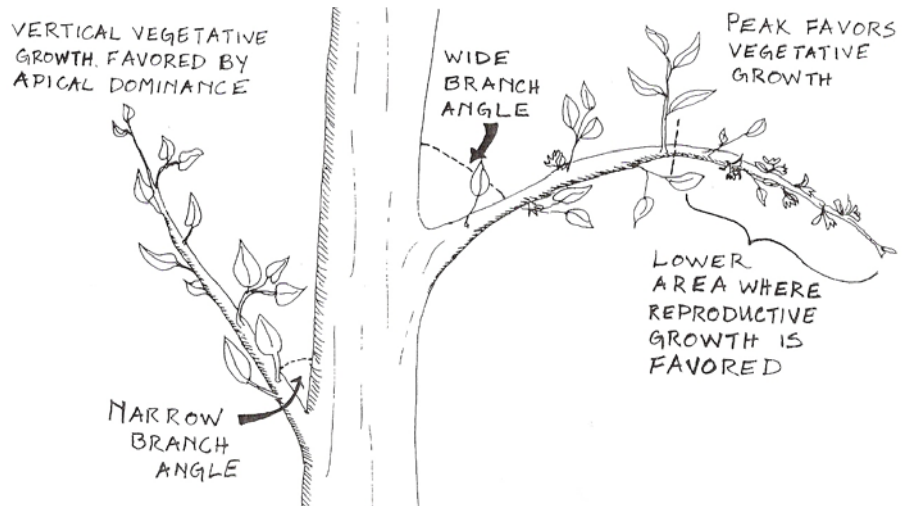
Central leader (far left): takes up less space. It is generally used for pome fruits (apples, pears...).



- Generally

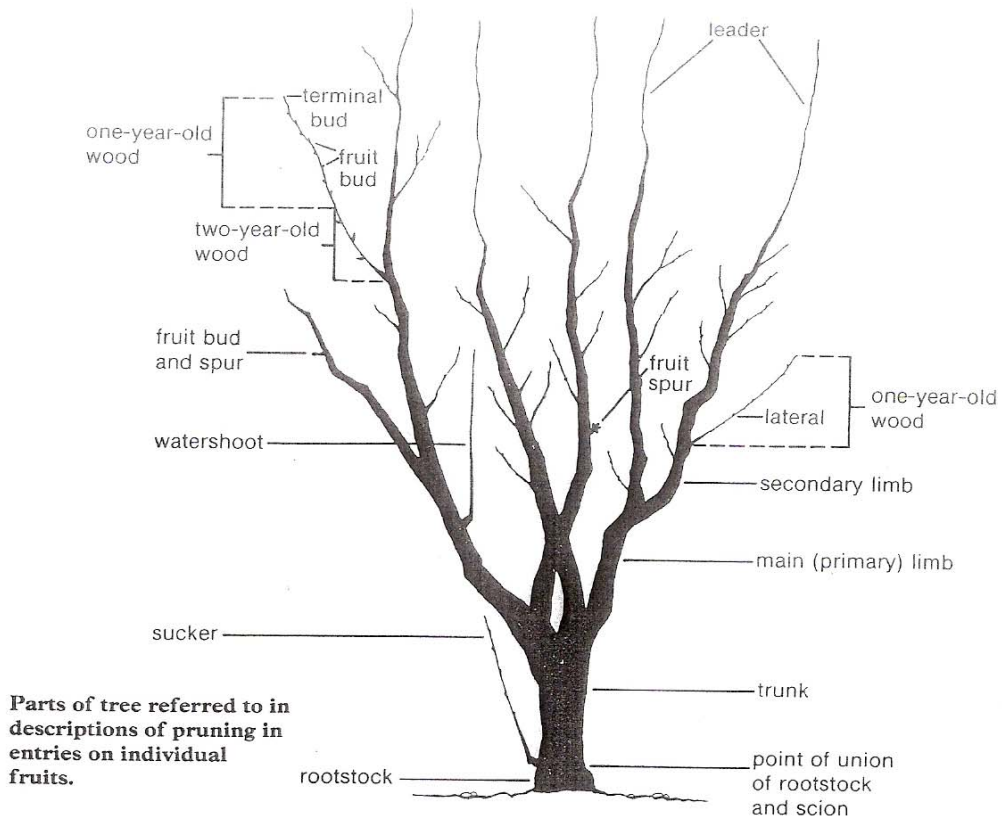
branches that are good for fruiting are at angles of 45-65 degrees off the main branches. Branches with wider angles tend to break in high wind. Only keeping one main vertical branch on a tree, together with promoting narrow angled branches, stimulates production of fruit rather than more growth because the tree spends more energy producing fruit than trying to grow taller. This is called apical dominance.

The shape and angles for good fruiting

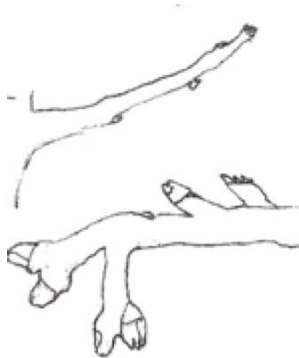


branches

Below: Parts of the tree referred to in the descriptions on pruning.



Parts of tree referred to in descriptions of pruning in entries on individual fruits.



Fruiting wood on peaches showing



Fruit spur on older wood of plum trees

laterals and fruiting spurs.

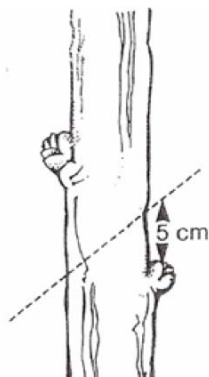
Pruning stone fruits

To prune, it is also important to know HOW a tree fruits:

PEACHES: *fruit only on shoots from last year's growth on both laterals and fruiting shoots.*

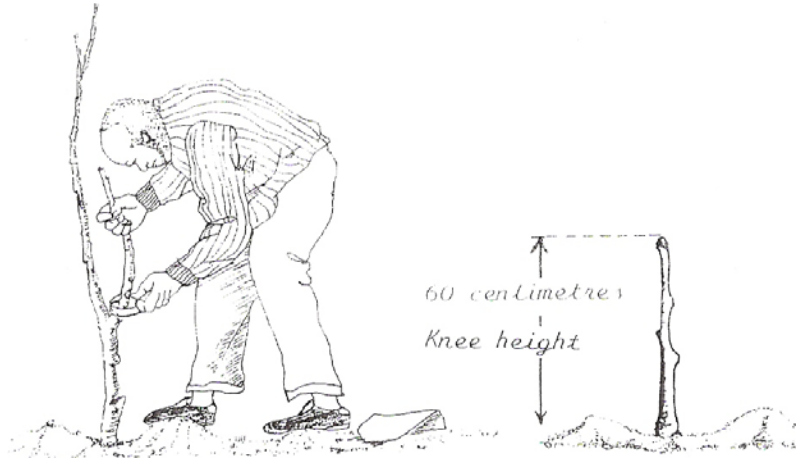
PLUMS: *Fruit is borne on laterals or spurs that are two years or older. On young trees the spurs look more like a group of short laterals and on older trees like multiple buds*

When cutting back a branch; make the cut just above an outward pointing bud or shoot, to encourage new growth as *shown in the picture BELOW*



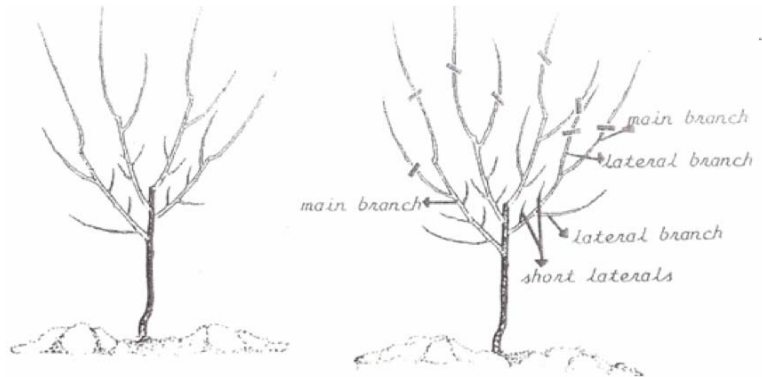
Prune strong branches at an angle of about 45° so that the highest point of the cut is directly above the bud.

- 1. AT PLANTING:** prune the tree's roots and also prune the tree itself to about knee height (60 centimetres). This will force the tree to branch out rather than grow straight up.



- 2. IN THE FIRST WINTER:**

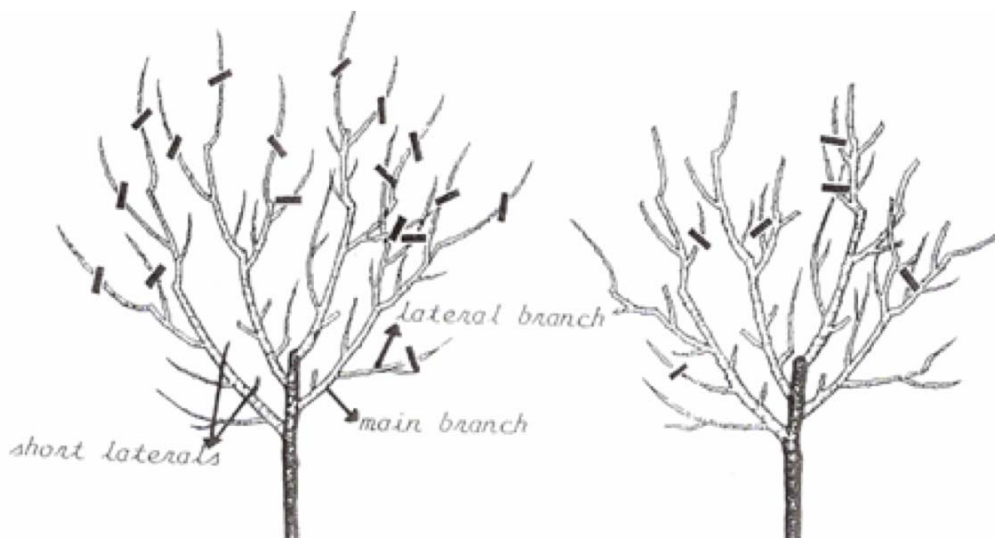
- Cut the main branches at the top
- Some laterals will have grown on the main branches. Leave 2-3 laterals on each branch; the first lateral should be about 40cm from the main branch and the second further along.



- 3. IN THE 2ND and 3RD WINTERS:**

- Trim the tops of the main branches. If you cut them further back than the previous year's growth, it will delay fruiting.
- Shorten the laterals. Cut them 1cm above a flowering bud or cut them back to the join between the old and new wood
- Shorten the side branches coming off the laterals. Again leave 2-3 side branches on each lateral.

In the 3rd year fruit will be carried on the pruned back lateral. Once established, prune



lightly each winter.

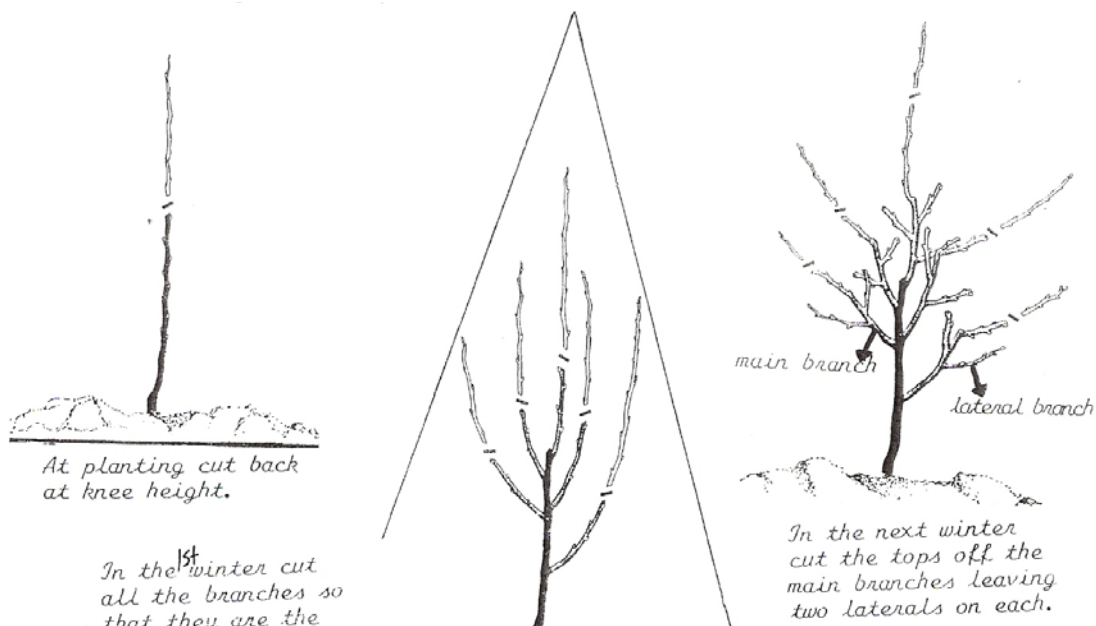
Pruning pome fruits

These trees start fruiting around their fifth season in the ground. Fruit is picked green and ripened off the tree.

Generally a leader system of pruning has been preferred. Fruit grows on small side branches coming off the laterals and these side branches will bear fruit for many years.

INITIAL PRUNING

- Cut the planted tree back to knee height.
- In the first winter trim the main branches (leaving one central branch and leave 2-3 laterals on each main branch).
- In the 2nd and 3rd winters trim the main branches and laterals and leave 2-3 side



branches coming off each lateral.

Pruning grapes

Grapes form fruit on one year old canes (the present year's growth) that are growing off two year old canes. If they are growing off older wood they will not always bear a lot of fruit.

- In the first winter, cut to about 30cm high
- In the 2nd winter, prune hard to leave 3-4 main branches that are about 30-40cm long
- Retain well positioned shoots for the development of the secondary limbs/canes.
- In the 3rd and subsequent years, remove about 2/3 of the annual growth.

This section on grapes needs to be expanded.