

Pruning deciduous fruit trees - Stone fruit

The most commonly grown backyard deciduous fruits come from two groups - the stone fruits (including apricots, plums, peaches and nectarines) and the pome fruits (including apples, pears, nashis and quinces). This article will outline some of the hows, whys and whens of stone fruit tree pruning.

In the next issue *Canberra Organic* the pome fruits will be discussed.

Why prune?

Pruning of fruit trees influences both the growth of the tree and the amount of fruit produced. If left unpruned fruit trees will become too tall and tangled to comfortably and safely harvest and will produce much unproductive growth.

According to David Kilpatrick the objectives of pruning are:

- (a) to improve the size, colour and quality of the fruit,
- (b) to promote heavy and regular bearing,
- (c) to maintain the tree in a healthy condition, and
- (d) to enable cultural operations to be carried out conveniently and expeditiously. These cultural operations include harvesting, spraying and pruning.

Tree structure

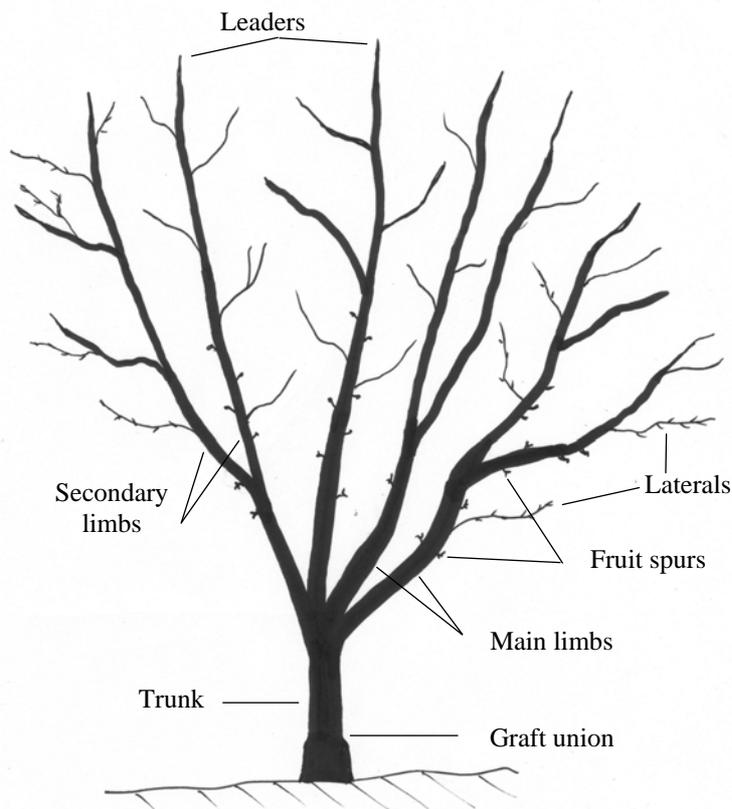
The above ground parts of a tree consist of the main framework of the trunk, the main limbs which arise directly from the trunk and divide into the secondary limbs which extend to the edge of the canopy forming the leaders. This framework forms the permanent structure of the tree and is developed over several years.

Fruit is not carried directly on the limbs but on laterals or spurs arising from them. Laterals are lengthy annual growths arising from the limbs which have both leaf and flower buds. If left to grow for more than one season, laterals become branches. Some species will also produce fruiting spurs from older branches. Spurs are short stubby growths arising directly from the branches, with multiple flower buds and can remain productive for many years.

It is necessary to understand where the fruiting wood on a particular tree occurs in order to promote its growth and to avoid inadvertently pruning it off.

Formative pruning is used to develop a strong, healthy branch structure in the years before the trees start

bearing. The aim is to establish a framework of well placed branches from which the fruiting wood will develop in later years. During this stage young trees should be allowed to retain as much leaf area as possible to hasten stem and branch thickening. Upright growing trees can be encouraged to spread by pruning the leaders to existing side branches rather than to a bud. Conversely spreading trees can be encouraged to more upright growth by pruning back to vertical



shoots.

Once trees start to bear compromises may be necessary between maintaining a healthy branch structure and promoting maximum fruit production.

Pruning tools

Clean, sharp and appropriately sized pruning tools should be used. Secateurs, long-handled loppers and pruning saws may all be needed. It is important to clean tools when moving between trees and from diseased to healthy wood. Wiping the blades with methylated spirits is sufficient.

When to prune

Traditionally deciduous trees have been pruned in Winter but it is now thought that Summer pruning of stone fruits is more beneficial. The warmer and drier

weather helps to promote faster healing of pruning cuts and reduces the chances of fungal or bacterial infections entering via these cuts. The main annual pruning can be carried out as soon as the fruit has been harvested. Any inward growing laterals, or crossing shoots can be removed whenever they are noticed.

Dead, diseased or damaged wood and any shoots from below the graft should be pruned out as soon as they are noticed.

Remember that the most important thing to know when pruning is where the flowers and hence the fruit will occur on the tree.

Apricots

Apricots are long lived, large trees with a moderately spreading habit. They can be susceptible to diseases such as gummosis and bacterial canker and excellent hygiene is necessary when pruning.

Formative pruning is used to create a vase shaped tree with three or four main limbs dividing into two secondary

limbs. Laterals will grow from these limbs and fruiting spurs develop on two year and older wood.

Flowers are produced on both one year old wood and, as the tree matures, on spurs which arise from older wood. Apricot spurs are not long lived, but will bear for 2 or 3 years.

Prune immediately after harvest provided the weather is fine and warm. Reduce upright growths to a well-directed lateral and remove old, crowded or weak spurs. This will encourage the formation of new spurs. Severely cut back or remove laterals from the centre of the tree to promote good air circulation.

Peaches and nectarines

Formative pruning is directed to creating an open vase shape which allows good air circulation to reduce future fungal problems. A framework of 4 - 6 branches is developed from which the fruiting laterals grow.

Peaches and nectarines require heavier annual pruning than other stone fruit as they bear solely on the

previous season's growth. Once a lateral has borne fruit it will never fruit again. Each year, old growth needs to be replaced with new growth to prevent branches becoming long, willowy, and productive only at their tips.

Pruning consists of removing all laterals that have fruited, either completely, or to a new lateral shoot or bud near their base. Current season's lateral growth may need to be thinned to allow sun and air into the canopy. New growth should be pruned in early to mid summer and the remaining pruning completed immediately after harvest.



Plums

There are two distinct species of plums - *Prunus domestica*, the European plums and *Prunus salicina*, the Japanese or blood plums. In general the European plums tend to have a more upright habit and to form a larger tree. Fruit is borne mainly on semi-permanent spurs but also on the previous season's growth.

Japanese plums have a more spreading habit and flower both on the previous seasons growth and, to a lesser extent, on semi-permanent spurs which arise from 3 year old wood.

Most plums are naturally vase shaped so formative pruning consists of removing any inward growing branches from the centre of the tree.

Annual pruning after harvest consists of reducing upright growths to outward growing laterals and removing or reducing lateral growth to promote spur formation.

References

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