

Pruning trees and lawn care

New Plymouth District Council manages a number of community orchards, trees, lawns and gardens in the district. Our Parks staff have prepared this information so you can apply their knowledge to your home garden.

For tips on disease management, sprays or organic gardening, check out www.yates.co.nz. Information on sprays for trees is also available on www.novachem.co.nz.

Lawn care

Have a good fertiliser programme. This will depend on the condition of your lawn, the type of grass and your location. For advice on the best type of fertiliser for you lawn, contact your local garden centre or a turf professional.

Keep your lawn well-groomed by mowing at a nice height (the best height is debatable; although longer, healthier grass can make it more difficult for sun-loving weeds to grow). Some say to not remove more than 1/3 of the leaf surface at any one time, although cutting the lawn shorter in spring will help remove dead grass, increase the penetration of sunlight to newly forming grass blades and help warm the soil sooner.

Mower blades should be kept sharp to prevent bruised and torn leaf blades, which can develop unsightly brown spots. Mow when the lawns are dry to help reduce the spread of some diseases and limit soil compaction, and also result in a cleaner cut.

Feed your lawn about two or three times a year between early September and the end of April. Parks staff use Bioboost (made by our own wastewater treatment plant) on some turf areas, which is for sale through local garden stores.

Weeds will appear in your lawn, coming from seeds which have been dormant in the soil or have been carried in by the wind or birds. Where required, spray your lawns once or twice a year in spring and autumn. Contact your local garden centre for a suitable spray.

Lawn diseases can be treated with a variety of all-round products. If there are patches in your lawn, it could be better to just dig out that part of the lawn and re-sow it with grass seed.

Thatch is the layer of dead grass that lies above the soil and root system, which can stop air and moisture reaching the roots and encourage fungal disease. Once a year, get an expert to come and carry out dethatching which will take that dead material out of your lawn. You can contact a lawn-care professional through the Yellow Pages.

Walking, playing or parking your car on the lawn can cause the soil to become compacted, which means water can't soak through and air can't circulate. You can fix this by coring your lawn once a year – either hire a mechanical corer yourself or get an expert in.

Reduce the moisture needs of your lawn by not over-fertilising, and not mowing it too short. As well as coring your lawn, you can improve water penetration by applying a wetting agent.

Pruning trees

Winter pruning results in strong branch growth, major structural development and the replacement of old wood. Summer pruning is for 'fine tuning' – bringing light into the tree's centre and removing growth that will only be cut out in winter.

When pruning, focus on the three Ds: Wood that is damaged, diseased or dead. Also remove vertical branches and those that are crossing another branch. You should end up with more light and more room for good-sized fruit to form.

Remember, you need to think ahead. If I make this cut how will the plant respond? Where will it grow from?

Hygiene

Make sure you disinfect pruning equipment between trees to reduce the risk of spreading viruses and diseases like silver leaf to healthy plants. We recommend burning clearly identified diseased wood, particularly for viruses, silver leaf current clear wing insect control.

Equipment

- Secateurs
- Loppers
- Saws
- Chainsaws (ensure prior training and safety equipment is used).

Research has negated the need for products such as pruning pastes. It is more important to make the cut in the right place.

NB: Hedge shears - are for hedges not trees!

Quick pruning tips

Smart pruning in the first three years of a tree's life will give it a good structure for fruit production during its life.

In the first-year summer prune, select three or four good-sized branches (called scaffolds) that aren't directly opposite each other on the trunk, removing the rest; and train these scaffolds out and down to encourage a wide vase shape.

You can gently weight down the end of a branch by clipping a clothes peg to it, or tying it with string and drawing the branch down to a peg in the ground – when freed, the branches will still grow up but will let more light into the tree.

For pip-fruit trees, after three years you should have three or four layers (called whorls) of scaffolds on your tree.

Keep any future fruiting wood on the scaffolds as close to the trunk as possible, to reduce tree breakage and to produce the highest-quality fruit.

Keep a good balance of fruiting spurs (fluffy growths that produce fruit) and vegetative buds (hard shell-like growths that produce branches) so your tree produces evenly sized fruit. Back up your pruning with a summer thinning of juvenile fruit.

Pruning a central leader tree

A multi-leader/vase shaped tree is similar to treating each leader in a similar way to the central leader except you remove any inward facing branches.

At Planting

As the buds begin to swell head the tree at 75-90cm above the soil surface.



Dormant Pruning

Head the tree at 60-75cm above the highest branch of the first scaffold whorl.

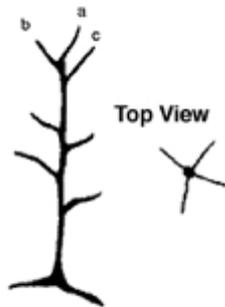


Top View



First year summer pruning

Summer prune when new growth is 75-100mm long. Leave **a** as the new leader, and remove **b** and **c**. Select four uniformly spaced laterals for the first scaffold whorl, and remove the remaining lateral branches.



After pruning the third year

Three scaffold whorls have been developed with three to four branches uniformly spaced around the tree in each whorl. A light slot of 50-60cms is left between each scaffold whorl. Note the Christmas tree shape that allows light penetration to the lower braches and interior of the tree.



Steps in pruning

- Leave only one trunk for the central leader.
- Remove branches with crotch angles less than 60 degrees.
- Remove all branches directly across from one another on the leader.
- Space lateral branches uniformly around the leader to prevent crowding as the limbs grow in diameter.

Open Centre or Vase Training - Peach, Nectarine, Plum

With the open centre system the leader is removed, leaving an open centre. Instead of having a central leader, the open centre tree has 3 to 5 major limbs called scaffolds, coming out from the trunk. This training system allows for adequate light penetration into the tree which minimizes the shading problem prevalent in higher vigour trees such as peach.

At Planting

At planting peach trees should be set so that the graft union will be 50mm above the soil surface. As the buds begin to swell, the unbranched trees (whips) are generally headed approximately 75 to 85cms above the soil surface and new branches will come from the buds that are 15-25cm below the heading cut.

Trees that are branched at planting are handled differently than the whips. The work that needs to be done under the tree determines the appropriate height for branching, which is usually 60-80cm. Remove branches that are too low.

If there are 3 to 4 uniformly spaced branches around the tree that can be selected as scaffolds the tree is headed just above the highest selected scaffold. Any remaining branches not selected as scaffolds should be removed. However, if there are less than three scaffolds the tree should be cut back to a whip and the side branches removed.



Figure 10a. Training and pruning young peach trees.

Left: Well-branched peach tree to be trained to open centre system.

Right: 3-5 well spaced scaffolds re selected and the tree us headed above the highest scaffold.



Figure 10b. Training and pruning young peach trees.

Left: Tree after heading, branches lower than 24 inches are also removed.

Right: Top view of uniformly spaced scaffolds.

Summer Pruning

After the new vegetative growth is approximately 75-100mm long it is time to select the shoots that will become the major scaffolds. The lowest scaffold should be 60-80cms above the soil surface to avoid interfering with cultural work under the tree such as harvesting and weed control. It is best to select 3-4 scaffolds that are uniformly spaced around the tree with wide branch angles and not directly across from another scaffold.



Figure 10a. Training and pruning young peach trees.

Left: Well-branched peach tree to be trained to open centre system.

Right: 3-5 well spaced scaffolds re selected and the tree us headed above the highest scaffold.

During the summer these shoots should be spread out to a 45-60 degree angle and held in place with a toothpick or clothes peg. All other upright growth should be removed. It is best to come back through every month during the summer to remove upright growth that is shading the primary scaffolds and to make sure that the scaffolds have been spread to a proper angle. Many times the crotch angle is proper initially, but as the scaffolds grow, they turn upright. A spring clothes peg placed on or near the end of a shoot will pull the scaffold down to a proper angle. Extreme care must be taken when using the clothes peg as weights. Periodic checking is essential to assure that the scaffolds are not too flat.

Succeeding Years

After the first year of growth the primary scaffolds should be selected and properly trained outward. Scaffolds should be headed during the dormant season of the first three years to promote continued lateral branching on the scaffolds and to stiffen and strengthen the scaffold. Scaffolds should be headed to outward growing shoots similar in angle to those being removed. Bench cuts should be avoided.



Figure 11a. Dormant pruning a mature open-centre peach tree.

Left: Tree before pruning.

Right: Heading a scaffold to an outward growing shoot.

If summer pruning is being practiced, undesirable shoot growth can be removed as soon as growth is 10-15cms long. Summer pruning can also be used to direct scaffold growth outward to the desired growing points instead of waiting until the dormant season.

For bearing trees the goal of dormant pruning is to remove vigorous upright growth on the scaffolds and trunk that was not removed during the summer.



Figure 11b. Dormant pruning a mature open-centre peach tree.

Left: Removal of vigorous upright shoots in the centre of the tree.

Right: Tree after pruning.

The upright growth left in the tree during the growing season may shade out lateral growth near the trunk. This shading causes lateral fruiting wood only on the ends of the scaffolds which results in broken scaffolds under a heavy fruit load. It is best to keep the fruiting wood on the scaffolds as close to the tree trunk as possible to reduce tree breakage and to produce the highest quality fruit.

Also, during the dormant season, damaged, dead and diseased wood such as cankers, should be removed from the tree. Shoots with shrivelled and dried fruit from the previous season, called mummies, should also be removed from the orchard to reduce disease pressure from the coming season.