

# Pruning hazelnuts.

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30<sup>th</sup> August, 2022

# Reasons for pruning

- Maintain adequate light into most of the tree to maximise yields. Excessive shade reduces shoot vigour and cropping potential.
- Remove dead or weak wood that might foster disease.

## Early pruning to establish a productive canopy

- Top new plants at 80 cm to 1 metre high.
- Leave 4 to 6 buds, spaced out at the top of the plant and gently rub off the lower buds.

## Second year

- Select 3 to 5 major limbs, evenly spaced around the trunk with some vertical space between them, to become the scaffold branches. The aim is to create the typical “vase” shape.
- If the scaffolds have grown out longer than about 60 cm and failed to send out lateral growths, then head them back to stimulate lateral branches.

# Pruning mature orchards

## When do I need to prune

- If reasonable fertilizer and soil management fails to produce at least 15 cm of extension growth annually
- If there is a build up of dead or very low vigour twigs in the middle or lower parts of the trees due to excessive shading.
- The outside rows of trees have more leaf and vigorous growth than inner rows that are subject to greater shading.
- Yields have peaked and started to drop.

## How to rejuvenate mature trees

- Oregon State University recommends pruning on a 5 year rotation, removing about 50% of the cropping wood on pruned trees.
- Sequence of removal: 1: remove dead and weak wood; 2: remove low branches that get in the way; 3: remove limbs growing into the centre of the tree; 4: shorten limbs that are too high or wide; 5: remove or shorten vertical shoots growing up into the canopy; 6: thin out lateral growths to leave 15 to 30 cm between them.
- Research in Oregon shows that yields drop in the first year after pruning but increase substantially after that.
- Prune in late winter – can see flowering wood easily, wounds heal faster with vigorous spring growth.



Onamalutu March 2009 Ennis & Barcelona at 5 x 3 spacing  
Unpruned





Onamalutu March 2009. Pruned block

Photo: M Redpath 2009





Wairata : Tonda Romana, planted 1990, topped and pruned 2004.



# Wairata: Tonda Romana 2005, 1 year after pruning





**Organic solar powered mulching mowers arrive**

Wairata Block December 2014



# Example 3: Mature Kentish Cob



## Typical weak growth

- Many dead twigs
- Short spindly shoots with few buds



Damaged branch (opossum damage splitting the bark) resulting in weak growth beyond the damaged area. Plan to cut back behind the damaged area to wood with existing buds.



Tree previously topped with major growths into centre of the tree removed (2012?). Right hand photo shows typical growth in the centre of the tree that should mostly be removed.



Completed job.

If sufficient new buds are initiated in the lower part of the tree this year, the tall growths that have been left will be removed in winter 2023



# Example 4: Lansing

Tree is part of a hedge. It has suckered strongly, the middle has died and a lot of the other growths are also weak. It is also starting to shade the seedling selections being assessed to the right.



## Views from each side



Weak growth with dead wood at the end of branches

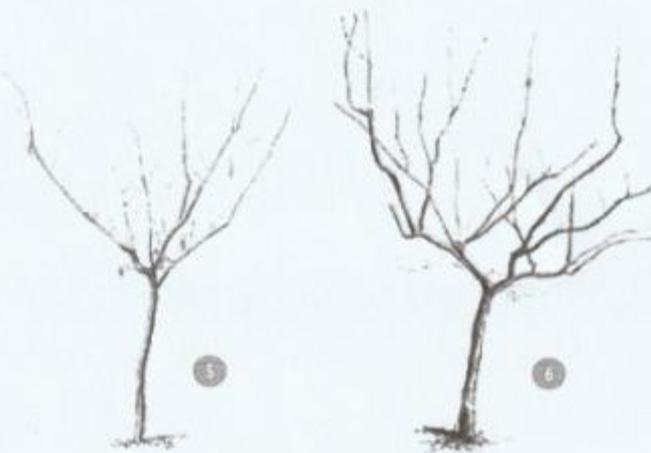
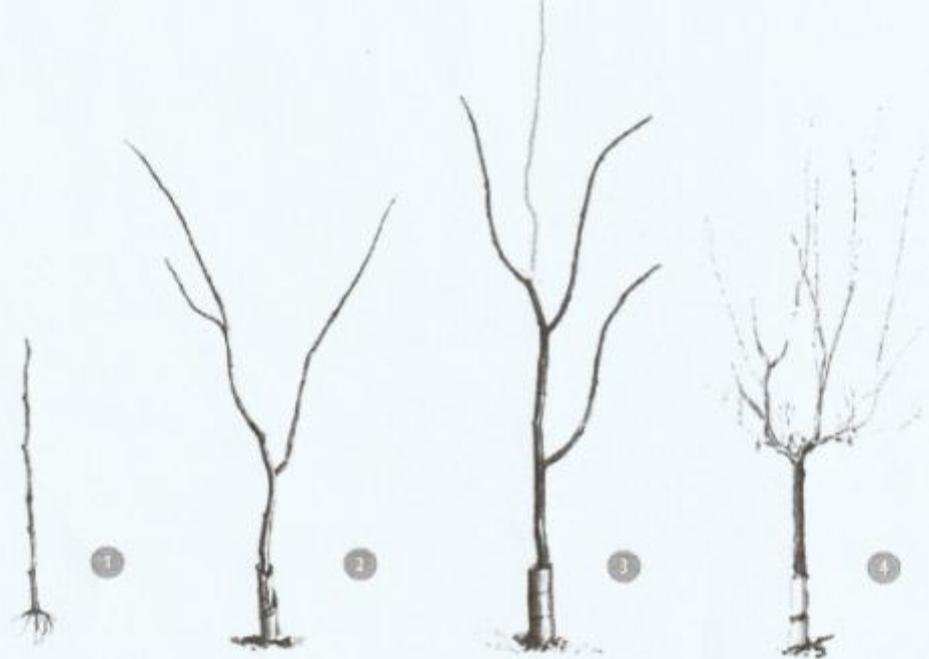


Typical wood in the centre of the tree.  
Check for location of fresh buds



Finished job





1. Bare rooted one year old nursery plant
2. If the tree has grown well the leading shoot can be shortened to encourage buds below to break and develop a vase structure. Remove all suckers
3. Tree height is about 110 cm. Remove central leader and cut to a shoot with an obtuse angle
4. Tree is now four years old and developing good structure. Between years four and five centre upright shoots can be removed or shortened slightly to reduce dominance
5. Continue open centre shape. Remove strong upright shoots and shorten dominant branches to horizontal side shoot. Attain even vigour around the framework
6. Maintain framework branches. Remove crowded upright growth and ensure new cropping wood. Shorter weaker branch tips can be removed and renewed over the years

Figure 11. Development of the tree framework (Kentish Cobnut Association)