FARM FORESTRY SERIES NO. 3

SHAPING YOUNG BROADLEAVES FOR QUALITY TIMBER

REVISED

teagasc
AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

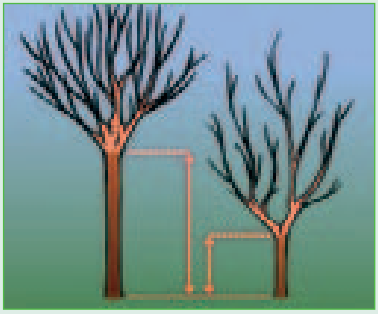
Shaping

Shaping is the process of removing forks (and very large competing side branches) in order to produce long straight lengths of timber for sale to high value markets.

Forking may be caused by exposure, frost, animal damage, insects or diseases. Your crop should be checked regularly.
It is easier and cheaper to shape when branches are light. It is not necessary to remove light side branches.

Shaping is a requirement for payment of the second instalment grant at year 4 for broadleaf plantations.

If a tree forks, the fork always remains at that height on the tree. The drawing shows two trees. The dark brown colour indicates the usable length of timber. The tree on the right forked while still young. This resulted in a much shorter length of usable timber.



High value tree:
Single straight stem, no large side branches

Low value tree:
Forked, crooked, damaged or diseased stem, excessively large side branches

How to shape

Choose a single straight dominant shoot as a leader:

Correct forks by removing the weaker side of the fork

Remove excessively large side branches (larger than half the diameter of the main stem)

Shape now: this young tree is growing vigorously

Remove other side branches **only** if they are competing with the main leading shoot.

Shaping should start early if trees are growing vigorously.

Remember:

- More than one shaping is usually necessary
- Do NOT remove more than 1/3 of the foliage
- Only remove branches that may cause a defect

The trees in the photos below should have been shaped already. Shaping has been left very late.

Standard quality grades:

Grade 1

Grade 1: very good
straight stem
single leader
narrow form
light branches
no forks
no shaping required

Grade 2

Grade 2: good
stem can be wavy
good form
one heavy side branch
no forks
one or at most two cuts to be converted into grade 1

Grade 3

Grade 3: poor
crooked stem
poor form
one or more heavy branches
one or more forks
numerous cuts to be converted into grade 1 or 2

Grade 4

Grade 4: very poor
crooked stem
very poor form
many heavy branches
extensively forked
shaping not economic

When to shape

The optimal timing for shaping is:

Species	Best period for shaping	2nd best period for shaping
Oak	Mid Winter	June to July
Ash/sycamore/cherry	June to July	Mid Winter
Beech	June to August	Mid Winter

Do NOT shape during Spring

The correct cutting technique

When removing a fork or branch, do not damage the branch collar.

Use sharp, good quality secateurs. Loppers and a pruning saw may have to be used if shaping is left very late.

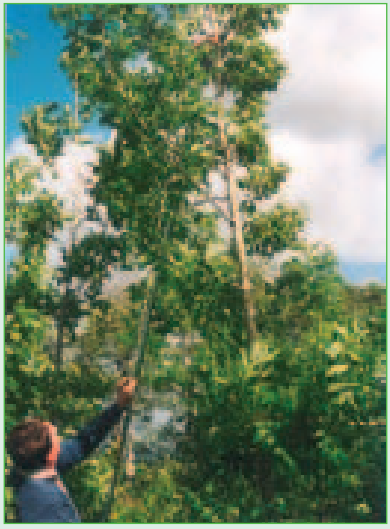
A correct cut is made just outside the branch collar without leaving a peg.

Correct: clean cut, no peg

1 year later: wound has healed

wrong: peg left, bark damaged, possible infection

wrong: branch collar cut off, bark damaged



Shaping may need to be repeated until the main stem is up to 6 metres in length. Telescopic pruning saws are very useful to carry out this operation.

It is sufficient that approx. half of the trees have good form: the remainder will be removed in early thinnings.

Teagasc provides advice and short courses on the correct techniques for shaping broadleaved trees.
These services are backed up by forestry research work at Teagasc, Kinsealy and are provided in conjunction with the Forest Service.

For further details on shaping grants and short courses, contact your local Teagasc office.

Teagasc Agriculture and Food Development Authority
NDP National Development Plan
Forest Service
The Department of Agriculture & Food
An Roinn Talmhaíochta agus Bia

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