

Hedges for Heat

from the
**South Devon
Wood Fuel Hub**

- Heat your farmhouse and buildings with fuel from your hedges.
- No manual handling necessary.
- Save money by not trimming every year.
- Improve the health of your hedges.
- Let hedges pay their way!

Hedges are, in effect, multi-functional linear woodlands

Hedges can produce excellent woodfuel crops, be great wildlife habitat, enhance the landscape, provide shelter for livestock, boost populations of pollinators and crop pest predators, and reduce downstream flooding.

Farm woodlands can be a good source of woodfuel but may be difficult to manage because they are on steep or wet ground. In contrast, most hedges are easily accessible along one or both sides. Devon's hedges could produce more woodfuel than farm woods (up to 50 ha).

Logs or chips?

Producing woodchips is more economical than producing logs and can be done entirely from the excavator or tractor cab. But logs from hedges can still produce heat at a lower cost than some fuels.

What hedges are suitable?

Most Devon hedges! Even those previously kept short will produce good crops if managed right. Typical mixed-species hedges with lots of thorns or hazel are fine, although those with oak, ash, beech, sycamore or willow will be better.



Left:
Woodchips
self dry in 3
to 4 months
when placed
in a heap

This guidance outlines how, using modern machinery and techniques, farmers can manage their hedges to produce renewable energy, generate revenue, save money and improve hedge health. It has been produced for the South Devon Woodfuel Hub.

The management and cropping techniques recommended are based on research and practical experience in southern Britain, including Devon, and elsewhere in Europe.

Chipping
whole hedge
trees and
bushes



Right:
Coppicing
a hedge for
woodfuel
using a
felling head
with tree
shears



How do I manage and crop hedges for fuel?

- Allow them to grow up for 15 to 20 years. Side trimming is OK.
- Harvest when the larger stems are 15 to 20 cm (6 to 8 inches) in diameter, cutting them off near the base (i.e. coppice them). This can usually be done most economically and safely using an excavator with a felling head. These heads cut and grasp stems, lifting them clear.
- When the ground is firm, use a large grab-fed chipper to chip the trees and bushes. (Alternatively, cut material can be transported back to the yard and chipped after seasoning outside, for direct use.)
- Transport the green chips (e.g. in a silage wagon) to a well-ventilated shed and place in a heap. They will self-dry in 3 to 4 months, ready to use in boilers. No turning necessary!

Farm planning and working with others

- ✓ It's good practice to have a hedge management plan in place. Always leave large mature trees for wildlife and allow a few young ones to grow to maturity.
- ✓ The transport costs of hiring excavators with felling heads and whole-tree chippers can be high, so are best shared with neighbours.
- ✓ Consider building links with your local community as a source of willing labour and market for surplus fuel.

Further guidance

Visit www.devonhedges.org and www.tinyurl.com/TWECOM to find links to handbooks and other resources available from the Devon Hedge Group and the Organic Research Centre.



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Key facts ...

1

Hedge woodchips for on-farm use cost 1.5 to 3.5 pence/kilowatt hour (p/kWh). This includes all felling and processing costs, based on machinery hire. That's cheaper than buying heating oil, woodchips, LPG or electricity.

2

This cost excludes savings from not trimming hedges every year (typically 88 p/metre). Over the coppice rotation, this is a saving of £45,000 over 3 km of hedge!

3

You need just 100 to 200 metres of hedge each year to heat an average farmhouse. So, on a 15 – 20 year coppiced rotation, you need 3km of hedge for woodchips if they are your only source. Most commercial farms in Devon have much more than this.

4

Twigs and bark have very nearly the same energy value as wood. Burning them produces a little more ash, but modern boilers are so efficient the increase is inconsequential.

5

Some makes of boiler will accept woodchips of low quality in terms of size and shape. Wood chips from whole trees and bushes are widely used in boilers without problem.

Woodchip boiler used to heat a Devon farmhouse



Save £1000's by not having to top cut hedges

