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There are half a million km of hedgerows in the UK, and they have been a valuable part of the patchwork agricultural landscape for centuries. Recent decades have seen them in major decline, however, as traditional management practices have given way to agricultural intensification. Can hedgerows see a resurgence once again, capitalising on their economic potential but also ecological importance, for example as sinks for atmospheric carbon and as habitat for biodiversity?

1. We have investigated the potential of hedges as a source of biofuel. At Wakelyns Agroforestry and Elm Farm, trials were undertaken to assess the costs and viability of mechanised hedgerow coppicing, comparing different equipment. Measurement of

harvested woodchip quantity and calorific content provided evidence for the viability of decentralised energy production: the demand of a farmhouse boiler can be met by 320 m of hedgerow on a 15year harvesting rotation (or a total of 4.8 km). Our results on coppiced hedgerow woodchip quality also underlines its saleability on the open market, when comparing revenue and costs on a £ m⁻¹ hedge and a £ m⁻³ woodchip basis.

2. We have studied how hedgerows can be important for their wildlife and other ecological value. For example, surveys of



Testing machinery for coppicing hedgerows at Wakelyns Agroforestry

hazel dormice at Elm Farm in 2014-2019 detected records of this protected species in most years, whilst also uncovering other small mammals such as pygmy shrew, wood mouse and yellow necked mouse, using the hedgerows for habitat or dispersal. The data informed hedgerow management planning, whilst also fostering positive links with local nature organisations and providing enjoyment of the farm environment for the 66 people that took part in the data collection.

These and other research results have informed best practice guides (see references) for managing hedgerows in an economically and ecologically sustainable way.

FURTHER READING

- 1. Westaway and Smith (2019) tinyurl.com/84up3py6
- 2. Chambers et al. (2019) tinyurl.com/khdn99d6
- 3. Smith and Westaway (2020) tinyurl.com/27d3ust4



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