

Hedge planting to improve farm productivity



Background

Crainoch farm manages nearly 1000 ewes and 30 suckler cows over 57 ha of rough grazing and 105 ha of improved pasture and cultivated land. In the past, it was conventionally farmed, however, the tenant is now taking a more holistic approach, using mob grazing, based on short duration, high density grazing with a longer than usual grass recovery period. This has led to improved soil condition, increased plant diversity, better animal health and reduced costs. However, the farm had dyke and fenced boundaries (including electric fencing for mob grazing), with only a few trees, providing little natural shelter to provide animals protection from adverse weather.

Approach

A decision was made to plant hedgerows and trees, so in future stock would have some protection from the driving rain and snow and find shade during the summer months. They began planting new trees and hedges, breaking up a couple of big fields into smaller areas. The benefits were soon realised in better grass utilisation across smaller, easy to manage fields and increased shelter for the flock, resulting in a reduction in lamb loss.

Cost and benefits

Over the past five years they have planted 1,100 m of new hedgerow and 9.9 ha of trees across their land, with grant aid available to offset much of this cost. This has supported the mob grazing system, with the trees and hedges providing vital shelter and shade for stock, as well as creating wildlife habitat, connecting existing habitat on the farm, stimulating grass growth and helping with nutrient and water cycling.

The hedges provide an alternative food source, which the stock browse at certain times of year and there is evidence that hedgerows provide additional minerals (e.g. cobalt) to support healthy sheep flocks (cobalt deficiency in ewes can impair foetal development). The hedges and trees also provide other natural capital benefits, such as pollination and carbon sequestration.

The key financial benefits to the business arise from lower lamb mortality and improved live weight gains. Exposure is a major cause of neonatal lamb deaths and good shelter can make a significant difference to survival rates in young lambs. The National Sheep Association (NSA) advises that lamb losses can be reduced by up to 30% if good shelter is provided in cold, wet and windy weather. The NSA also refers to trials showing that daily live weight gains will increase by 10-21% as a result of good shelter provision.



We set out below a simple table of costs and benefits. The benefits include:

- **Lower lamb mortality**
- **Lower vet & med costs**
- **Improved live weight gains meaning lower concentrate costs**
- **Better grass utilisation resulting in an extended grazing season, reducing the time when supplementary feeding is required as a result of more efficient forage utilisation in the mob-grazing system**

Table with cost and benefits – Hedge planting to improve farm productivity

Annual Marginal Costs	Per Hectare (£)
Loss of gross margin due to taking land out of production	36.99
Hedge trimming every other year	2.96
Hedge planting costs (amortized over 15 years @ 4%)	60.71
Total	100.65
Annual Marginal Benefits	
Improvement in livestock gross margin	43.28
Total	43.28
Annual Marginal Cost: Benefit	-57.37

Please note that once the capital costs of hedge planting (inc AECS funding¹) are accounted for, there is a net cost (paid back over 15 years) of £57.37 per 100 m. However, this does not account for the additional benefits of hedgerow creation, such as biodiversity and amenity benefits and carbon sequestration benefits.

Challenges

Establishment of a young hedge can be a challenge. It needs careful management to give it a good start. Further information on planting and managing hedgerows can be found on the following websites: <https://hedgelinek.org.uk/hedgerows/> and www.hedgerowsurvey.ptes.org

More information

Rural Payments and Service: Supporting guidance for Management, Restoration or Creation of Hedgerows <https://www.ruralpayments.org/topics/all-schemes/agri-environment-climate-scheme/management-options-and-capital-items/management-or-restoration-of-hedgerows/guidance-for-management-of-hedgerows/>

Rural Payments and Service: Planting or Replanting of Hedges <https://www.ruralpayments.org/topics/all-schemes/agri-environment-climate-scheme/management-options-and-capital-items/planting-or-replanting-of-hedges/>

In addition, up to 6 plots, not exceeding 0.25 ha, can be created under the small-scale-tree-and-shrub-planting with associated fencing

Rural Payments and Service: Small-scale Tree and Shrub Planting (on a site not exceeding 0.25 hectares) <https://www.ruralpayments.org/topics/all-schemes/agri-environment-climate-scheme/management-options-and-capital-items/small-scale-tree-and-shrub-planting/>

¹ Hedgerow planting is supported by AECS with £5.40 per metre of planted hedge and £5.50 per metre for stock fencing. There is also funding for ongoing management in future if hedges need to be laid or coppiced.