



The financials

Pros

- Saving on fertiliser (nitrogen fixing plants can fix up to 250 kg N/ha).
- Saving costs of mineral feed plus supplementary feeding in drought.
- Increased yields – different plants, when grown together, can yield 50% more than an average rye grass sward.

Cons

- Increased seed cost.
- 'Trial and error' period of establishment.

Soil Association advice and support

Contact our Farming and Land Use Team

Speak to a farming advisor: 0117 314 5100

General enquiries: 0300 330 0100

Email: producer.support@soilassociation.org

Find out more at soilassociation.org/herbal-leys



Do you know about Soil Association Exchange?

Developed to enable farmers to reap the rewards of sustainable farming that works with nature. Register today for updates and to have first access to a service that works with farmers to help evolve the way we farm for the better.

soilassociationexchange.com



Good sources of further advice and information

Cotswold seeds

cotswoldseeds.com

Talk to an expert: 01608 652552

AHDB

ahdb.org.uk/knowledge-library/herbal-leys

Grassland society

britishgrassland.com



Herbal leys

The basics and benefits

Herbal leys (or diverse swards) are sown pastures made up of a mix of grasses, herbs and legumes. Together they deliver soil fertility, biology and structure, boost livestock health, encourage biodiversity and are productive with low rainfall.

Diversity is key

Each species has different functions, which makes the mixture work better overall. They improve the soil in different ways, producing greater yields, and also have different nutritional functions.

Choosing the right mix of seeds is key, and depends on your soil type, geography and desired outcomes. A mixture can include anything from 3 to 30 species, though a minimum of 6 is usually about right to get a good range of functions.





Planning is crucial, so think about:

- How establishing the ley fits within your arable rotation or other temporary grass reseeds.
- Achieving the best seed bed preparation possible (cultivate/harrow to fine tilth, roll, ideally broadcast sow, then roll and roll again! If drilling, ensure max 1cm depth. Over-sowing can be successful but destroy as much competition as possible).
- Timing of sowing – see 'Likely timescales', below.
- When to start grazing (i.e. if autumn sowing, light graze before winter).
- When to rest leys. You need to account for fencing, water provision and shelter.
- Sowing a diversity of plants with differing growth rates (which leads to a longer growing season overall).
- Allowing areas of the sward to flower and set seed to replenish the seedbank and provide food for wildlife.

When choosing species, think about:

- Your soil, climate and the management you intend to carry out (e.g. grazing, cutting).
- What functions you want from your ley (drought resilience, soil improvement, maximum forage production, biodiversity provision).
- How the balance of plants in the sward will change over time – be prepared for some trial and error.

Likely timescales

Four years is considered an optimal length for herbal leys in the rotation, to allow for root growth, soil fertility building and high species diversity. Longer periods will be even better for the soil, but you are likely to see a decline in species diversity unless it is very carefully managed.

Timing of sowing – warm soil is needed for germination (8-10°C), along with good levels of soil moisture – so sow in August/early Sept or later in April/May once soil has warmed. Be careful not to over graze too early (6-8 weeks post establishment).



Timing of sowing

	JAN
	FEB
	MAR
Spring sow	APR
	MAY
Light graze	JUN
	JUL
Autumn sow	AUG
	SEP
Light graze	OCT
	NOV
	DEC

Properties of key ley species

Grasses – energy rich | Legumes – protein rich | Herbs – provide micronutrients

Legumes

Clovers, Birdsfoot trefoil, Lucerne, Sainfoin, Vetches

Function: Build fertility by adding nitrogen.

Benefit: Cost effective and climate friendly alternative to adding nitrogen fertiliser.

Deep rooters

Chicory, Lucerne, Sainfoin, Cocksfoot, Sheep's parsley, Burnet, Yarrow, Plantain

Function: Access moisture from deep down while sinking carbon into soil; Tap roots break up compaction and rooting mat provide a 'sponge' in wet soils.

Benefit: Carbon is less likely to be released; Improves infiltration and drainage. Increased resilience to low rainfall.

Anthelmintics

Chicory, Sainfoin, Birdsfoot trefoil

Function: Contain high levels of condensed tannins.

Benefit: Reduces worm burden.

Mineral-rich

Plantain, Chicory, Sheep's parsley, Yarrow, Burnet

Function: Mine minerals from the soil making them available to livestock.

Benefit: Provides naturally rich source of minerals, reducing need to buy them in.

Flowering plants

Burnet, Chicory, Birdsfoot trefoil, Lucerne

Function: Food for pollinators.

Benefit: Attract beneficial predators and increase biodiversity.

