



## Headline costs

In arable systems, cover crop seed can be a cost – the more complex the mix, the more expensive. But this can be offset by grazing charges or increased productivity of your farm’s own livestock. Cover crops can be sown pre- or post-harvest and do not need expensive equipment.

Cover photo © Rob Thornhill



# Livestock in arable farming

A mixed farming system, based around livestock and cropping, is a key part of organic, agroecological and regenerative farming. This 'whole farm' approach can improve soil health, increase revenue and reduce input costs.

## A good place to start

To reduce inputs, trials have shown the benefits of grazing winter cereals and oilseed rape. The weeds are grazed out and reduction in overwinter plant material reduces pest and disease pressures. Crops respond by tillering which increases yield potential. Cover crops deliver for soil health, most mixtures are grazeable, including those with cereals and brassica mixes.

## What to expect

Although there can be practical issues bringing in livestock, good temporary fencing and mobile water systems resolve most of them. Ideally covers should not be grazed down to the ground – the 'graze a third, trample a third and leave a third' rule is a good one to follow.

## 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](mailto:producer.support@soilassociation.org)

Find out more at [soilassociation.org/farmers-growers](http://soilassociation.org/farmers-growers)

For more information on bringing livestock into arable systems, see [soilassociation.org/livestock-arable](http://soilassociation.org/livestock-arable)

## 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](http://soilassociationexchange.com)



## Good sources of further advice and information

### AHDB

[ahdb.org.uk/livestock-and-the-arable-rotation](http://ahdb.org.uk/livestock-and-the-arable-rotation)

### Agricology

[agricology.co.uk/resources/livestock-and-arable-rotation](http://agricology.co.uk/resources/livestock-and-arable-rotation)

### National Sheep Association

[nationalsheep.org.uk/workspace/pdfs/nsa-the-benefits-of-sheep-in-arable-rotations.pdf](http://nationalsheep.org.uk/workspace/pdfs/nsa-the-benefits-of-sheep-in-arable-rotations.pdf)



## Two common approaches:

### Adding grass and clovers into arable rotations

By adding grass and clovers into arable rotations we can break disease cycles, improve soil structure, add organic matter and produce additional income. Lengthening the rotation can also help with weed control, particularly grass weeds like blackgrass.

Herbal leys or simple diverse leys such as red clover/ryegrass ley can produce large yields of forage without fertiliser which can be sold or fed to cattle or sheep over winter, producing farmyard manure (FYM) as an additional resource. Longer term species like lucerne and sainfoin give the opportunity to sell high quality forage to others.



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### Using over-winter crops to protect soil

Overwinter cover crops protect soils from the risk of erosion. Their roots provide anchorage and also help feed key elements essential in soil biology. They can help recycle nutrients, reducing pollution risk. The plant material, when incorporated or left as mulch, in turn improves soil organic matter.

Where cover crops are grown over winter for their soil health benefits, grazing can be used as a means of terminating covers, reducing the need for chemical methods. By converting plant material into dung and urine, you are recycling nutrients so that they become more available to plants.

By using winter crops as feed for cattle and sheep you can also increase farm resilience by reducing expensive housing periods or reducing costs associated with winter feed production or purchase.

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## Likely timescales

Cover crops can be sown at any time, either by undersowing prior to harvest into a growing crop, or post-harvest. Your cover crop choices will influence grazing time, but some mixes can be grazed 6 to 8 weeks after planting. Some can be re-grazed. Manage your stocking densities to make sure that the crop is clear by drilling time, although crimpers or chemical methods can be used instead where appropriate, to terminate the crop.

Cover crop	Seed and cultivation cost	Grazing potential	Yield potential	Notes
Forage rape	Low – can be broadcast	70-90 days after sowing	4-5 tdm/ha	Brassica so care needed with rotations
Grazing rye	High – due to high seedrate and seedbed preparation needed but can be direct drilled	High and can be re-grazed	High	Can be cut for silage
Mustard/phacelia/buckwheat/berseem clover	Medium – can be broadcast	Frost intolerant so needs to be early grazed	Medium	Can be included in mixes with other species which can be grazed
Westerwolds ryegrass	Medium – needs good seedbed but can be direct drilled	Potential multiple grazes over length of crop	10-18 tdm/ha if fertilised	18 month crop, so not short term
PRG (or festolium)/red clover mix	Medium – needs good seedbed but can be direct drilled	Multiple cuts or grazes possible.	10-20 tdm/ha possible without fertiliser	18-36 month crop cut and grazed
Multi annual species cover crop mix including legumes, brassicas cereals	High – can be direct drilled	Grazeable in spring to terminate	Medium	

