

Regenerative Agriculture: Integrating Livestock Practical Guide

Regenerative Agriculture is a set of farm management principles which put soil health at the centre of agriculture practice. This approach has many benefits including 'ecosystem services' such as water filtration, nutrient cycling and increased biodiversity.

The concept of regenerative agriculture often involves reduced inputs and increased management to tailor inputs and operations to the soil's needs.

This Practical Guide looks at the fifth principle of regenerative farming: Integrating livestock

The rationale behind this principle is that the inclusion of livestock in arable rotations delivers many benefits to the soil in terms of soil structure, plant diversity, microbial diversity – indeed all biodiversity – and fertilises the soil with nutrients in livestock dung.

Bringing livestock into the arable rotation could be done in a variety of ways:

1. Use of cover crops or catch crops as grazable ground cover between arable crops. This allows a farmer to bring livestock on to the farm temporarily. Livestock can help with arable weed control and to convert the plant biomass into nutrients for the soil. Manure will feed the soil food web that help make nutrients available for crops and soil structure.
2. The use of temporary arable reversion within the rotation. A wider crop rotation can allow temporary grass leys to be introduced into a rotation.
3. Grazing of cash crops. Farmers have been practising the grazing of autumn sown cereals and oilseed rape to manage lush growth, recycling the nutrients and add to the soil microbiology.



Five Principles of Regenerative Agriculture:

1. Maintaining a living root
2. Minimising soil disturbance
3. Maximising crop diversity
4. Keeping soil covered
5. Integrating livestock

For more Practical Guides, Case Studies, information and to see what other farmers have done, visit www.farmingforabetterclimate.org



Websites

www.farmingforabetterclimate.org

See also:

[Soil Regenerative Agriculture Group - Farming For a Better Climate](#)

www.farmingfutures.org.uk

www.ipcc.ch

www.agrecalc.com

www.soilassociation.org.uk

[Home | Scotland's soils \(environment.gov.scot\)](http://Home | Scotland's soils (environment.gov.scot))

 Scottish Government
Riaghaltas na h-Alba
gov.scot



Main Challenges

Some arable farms have not had livestock for many years, which has resulted in a loss of organic manures and a reduction in the amount of perennial crops on arable farms. Integrating livestock into an arable rotation has the potential to increase the diversity in the soil, which could lead to a more resilient soil system.

Challenges include:

- Lack of fences on some arable farms, coupled with the cost/time of putting up electric fences. However, modern electric fencing systems which can be erected and taken down quickly and utilise solar energy enable almost any field to be grazed even for a relatively short time period.
- Lack of water troughs in fields
- Higher labour requirement / lack of animal husbandry skills
- Higher capital investment



Benefits of integrating livestock

More farmers are taking a second look at integrating livestock into the rotation for the additional benefits it can bring, for example:

- Dung incorporated in to rotation increasing organic manure in the soil
- Promotes species diversity
- Grass leys and cover crops can help with weed control and cycling nutrients
- Provides a continuous cover to protect soil
- Spreads financial risk over different enterprises

Grass and clover leys can help to manage weed problems in an arable rotation, such as brome grass and can also build soil fertility. Ley selection is important to establishing grass, as some varieties perform better cut for silage as to grazing and vice versa. Selecting the correct ley can be significant to the financial return.



Key Points

- Improves soil health
- Supply of readily available organic manure
- Spreads risk over different enterprises
- Livestock can utilise cover crops and cash crops

Other Practical Guides in this 'Regenerative Agriculture' series look at the other four Principles of Regenerative Agriculture - find them on our website at:

<https://www.farmingforabetterclimate.org/soil-regenerative-agriculture-group/>

