Regenerative agriculture: What is it and where do I start?

New phrases and terms are introduced to our industry regularly, but only a select few stick and become the norm. More recently, “regenerative agriculture” has been having its turn in the spotlight, but what is it, and where to start?

As with many other agricultural systems, regenerative agriculture (RA) as first defined by a distinct movement in the USA in the 1980s is based on its own set of 5 core principles (see below). Regenerative agriculture aims to revitalise and regenerate the soil and wider environment, not just minimise the impact of production.

5 core principles of regenerative agriculture:

1. Keep the soil surface covered, as much as possible;
2. Try to limit the amount of physical and chemical disturbance of the soil, as much as possible;
3. A wide diversity of plants is encouraged to increase above and below ground biodiversity;
4. Keep living roots in the soil, for as much of the year as possible;
5. Integrate grazing livestock into the system.

Since this movement emerged, a wide range of definitions combining practices and outcomes have been identified by both researchers and practitioners seeking to improve the health of land, soil, systems, and communities through farming ‘regeneratively’. Within this ever-widening conversation, the dominant themes remain reduced tillage, cultivating biodiversity, retention of organic matter and systemic crop health.

Regenerative agriculture and Integrated Farm Management

More recently, a sixth principle of regenerative agriculture has been proposed; The context principle. This highlights the importance of site specificity and recognising the individuality of each scenario. The principles that underpin regenerative agriculture align closely with the integrated approach to farming through LEAFs Integrated Farm Management and as supporting practices within the LEAF Sustainable Farming Review. We are therefore confidently able to say that for over 30 years, LEAF has been developing and promoting regenerative agricultural practices and approaches through Integrated Farm Management (IFM).

Regenerative agriculture is not solely based on the outcomes, nor the practices and tools used – it is a mindset that takes you on a journey and involves generation as well as regeneration and as a consequence sits well with IFM and our work at LEAF;

- Regenerating the health of our soils
- Generating knowledge, collaboration, and relationships
- Generating healthy and resilient food and farming solutions
- Regenerating land and ecosystems
- Generating value
- Generating carbon and wider climate change solutions

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1 Newton et al, 2020
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LEAF and Integrated Farm Management

For some 30 years LEAF has been developing and promoting Integrated Farm Management (IFM), driving efficiencies and attention to detail. As climate change becomes ever more of an influence, such an approach is increasingly important.

IFM is a site specific, whole farm approach, made up of nine sections, each of which work together to address environmental, economic, and social sustainability across the entire farm business. An understanding of the importance of each section and the interactions between them is essential in appreciating how to implement regenerative practices, and in turn nurture biodiversity and generate healthy and resilient farming systems.

Driving circular agriculture through Integrated Farm Management

Through the basis of continuous improvement and a whole farm approach, the implementation of IFM helps deliver regenerative outcomes, in turn supporting the protection and resilience of natural resources and improved productivity.

Reference to the LEAF Sustainable Farming Review management tool and Control Points in the LEAF Marque Standard v.15.0 help LEAF farmers to implement regenerative practices on farm to support in the protection, maintenance, and enhancement of our environment.
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Organisation and Planning

Setting objectives and monitoring results provide evidence to quantify, demonstrate, and continuously improve the outcomes of an Integrated Farm Management and regenerative approach. LEAF Farmers:

- Have an IFM Policy, with reference to optimising efficiencies and reducing wastes
- Develop and review management plans, audits, and action plans for areas of Integrated Farm Management
- Implement a monitor, plan, act approach

Soil Management

A regenerative approach is centred around improving and revitalising soil health, in turn improving water retention and drainage, supporting biodiversity, and helping store carbon on the farm. LEAF Farmers:

- Monitor and measure Soil Organic Matter, and aim to increase this
- Have a written Soil Management Plan that includes targets to improve soil health
- Improve soil quality by incorporating organic matter into the soil and graze cover crops and leys with livestock
- Actively prevent soil erosion by using cover crops on high-risk areas and leave land rough cultivated or in stubble after harvest.
- Have a Nutrient Management Plan that emphasises reduced use of artificial nutrients
- Aim to establish the next crop as early as possible after cultivation to minimise nutrient leaching
- Use suitable equipment, such as low ground pressure tyres and a controlled traffic approach to minimise soil structural damage and compaction
- Use minimum, zero, or strip tillage as much as possible in the rotation

Crop Health and Protection

It is essential to consider a range of crop health approaches to ensure that the balance between optimising yields and quality, crop health, cost efficiency, and environmental protection are maintained. LEAF Farmers:

- Have a Cropping Plan that includes reference to cover crops
- Aim to cover land with vegetation year-round
- Aim to maximise diversity and extend rotations
- Take steps to minimise damage to beneficial species and other non-target species when using plant protection products
- Implement Integrated Pest Management
- Only use synthetic plant protection products as a last resort
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Pollution Control and By-Product Management

Creating a circular system is essential for regenerative outcomes. Wherever possible, farmers should reduce, reuse, or recycle any wastes. LEAF Farmers:

- Have completed an annual Waste Audit and Action Plan
- Use lean management principles to help identify potential sources of waste
- Investigate ways to reduce Greenhouse Gas (GHG) emissions
- Reduce, reuse, and recycle

Animal Husbandry

The sustainable integration of livestock is one of the core principles of a regenerative approach, as it supports a more circular and self-reliant farming system. Optimising animal welfare, herd/flock health, and feeding are crucial components to this approach. LEAF Farmers:

- Have completed an Animal Feed Audit and Action Plan, reviewing the source, content, and cost of their animal feed.
- Have a written Livestock Health Plan, with a Breeding Policy referenced.
- Use rotational/paddock grazing, managed intensive rotational grazing, and mob grazing to optimise livestock and pasture performance
- Manage stocking density and grazing of sensitive habitats appropriately
- Return manures back into the system to reduce reliance on artificial fertilisers

Energy Efficiency

Effective use of energies on farm will help save costs, use resources more efficiently, and reduce waste, as well as contributing to an overall reduction in GHG emissions. Farmers:

- Generate energy from renewable sources
- Measure and monitor energy use and efficiency
- Measure and monitor carbon footprint and farm emissions

Water Management

Managing water wisely as well as assessing and enhancing the efficiency of on-farm water use, saves money and helps provide for future needs. LEAF Farmers:

- Have a Water Management Plan, referencing targets to improve water quality and water use efficiency
- Source water in periods of abundant water availability
- Locate feeders/drinkers to avoid potential water contamination
- Manage reservoirs for wildlife
- Measure and monitor applied water use efficiency
**Landscape and Nature Conservation**

Responsible management of the landscape leads to enhanced biodiversity and helps protect soil and water, improve land value, farm image, and market opportunities. Environmental Land Management will support a range of ecosystem services that benefit both the farm and surrounding area. LEAF Farmers:

- Seek to preserve carbon sinks, maintain forests and areas of natural vegetation which naturally absorb CO₂
- Seek to preserve the ability of the soil to store carbon
- Retain natural habitats and maintain areas of semi-natural grassland, wet meadow, hay meadow, and other areas of wildlife value
- Use rotation and leave uncropped land to provide areas of the farm for wildlife
- Retain permanent pasture where appropriate
- Use native species when sowing margins or establish them by natural regeneration

**Engaging Society**

A regenerative approach is not just about the land and the environment. It’s about the relationships you build and the communities that support the land. LEAF Farmers:

- Regularly communicate and work with the local community
- Work with other local farmers and landowners
- Participate in LEAF Open Farm Sunday and Farmer Time

**Climate Positive Farming**

LEAF’s strategic vision is of a global farming system that delivers climate positive action, builds resilience, and supports the health, diversity and enrichment of our food, farms, the environment and society. In order to achieve this, LEAF will continue to drive collective action and deliver climate positive solutions through the development and dissemination of IFM and the advancement of whole farm systems. We will continue to embrace regenerative solutions and outcomes that deliver Circular Agriculture.

It is clear that many farmers are on regenerative agricultural journeys, including LEAF farmers. Some may not even be aware of this. If you are implementing the practices advocated by LEAF and certified by LEAF Marque, then you are on your way. LEAF Farmers are well positioned to be part of the solution to drive Climate Positive action through activities, events, and on-line engagement.

We invite you to join us on our journey towards Climate Positive Farming. Our full ten-year (2021-2031) strategy can be accessed here. For more information on the different focus areas of IFM, please see our IFM Guide, or the Simply Sustainable Series covering Soil, Water, Biosecurity, Biodiversity, Integrated Pest Management, and Plastics.

For more information, please contact enquiries@leaf.eco