



GROWING OUR FUTURE
**SCALING REGENERATIVE
AGRICULTURE IN THE UK:
ACCELERATING CHANGE
THROUGH COLLABORATION**

**FORUM
FOR THE
FUTURE**

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This project is made possible with funding from the Co-op Foundation, John Ellerman Foundation and People's Postcode Lottery.



**John Ellerman
Foundation**



About Forum for the Future

Forum for the Future is a leading international sustainability non-profit. For more than 25 years we've been working in partnership with business, governments and civil society to accelerate the shift towards a just and regenerative future in which both people and the planet thrive. As our environmental, social and economic crises intensify, the world is rapidly changing, with multiple transitions already reshaping how we all live and work. But will we go far enough, and fast enough? Forum is focused on enabling deep transformation in three game-changing areas: how we think about, produce, consume and value both food and energy, and the role of business in society and the economy. We're working with ambitious and diverse change-makers to shift how they feel, think, act and collaborate to drive systemic change for sustainability. Find out more at www.forumforthefuture.org

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EXECUTIVE SUMMARY

This decade brings a unique and urgent opportunity to reset the way we produce and consume food, as we tackle some of the biggest challenges to the health of both people and the planet. These are global challenges that need local and regional action, and this report explores how the sector can unlock and accelerate action in the UK.

This report is part of an ongoing enquiry by Forum for the Future that explores what it will take to transform the UK's food and farming system towards more regenerative agricultural practices that deliver positive economic, environmental and social outcomes alongside productivity. It asks: "How can the UK food system, and food companies in particular, support and enable a shift in agricultural practices that helps them to achieve their carbon, biodiversity, environment and social goals in a way that is compelling for consumers and beneficial to farmer livelihoods?"

A FOOD SYSTEM TIPPING POINT: WHAT NEEDS TO CHANGE?

The food system needs to transform rapidly at scale and approaches to producing, purchasing, and consuming food will need to shift in order to meet the scale of change needed. Food and agriculture, both in the UK and internationally, have played a key role in climate impacts, land and nature

degradation and, while contributing to mass production of cheap calories, fall far short of supporting equitable healthy diets for all. Farming and food production, with their close relationship to land, livelihoods, and human wellbeing, are at the forefront of regenerative transformation, from nature restoration to carbon drawdown, to access to healthy, sustainable diets. We have a narrowing window to stay close to 1.5 °C of global heating, and food and agriculture globally will soon become the greatest source of carbon emissions as the energy system rapidly decarbonises. But there is huge potential for positive change by reorienting the food system towards goals fit for the 21st Century.

A 2019 Environment Agency survey noted that almost 4 million hectares of soil are at risk of compaction, and over 2 million hectares of soil are at risk of erosion, while intensive agriculture has caused arable soils to lose about 40 to 60% of their organic carbon. Soil degradation was calculated in 2010 to cost £1.2 billion every year.¹ Defra data suggests UK food value chains leave

almost 30% of farmers with literally no profit from their endeavours,² while Sustain reported that farmers in major retail supply relationships often receive tiny fractions of profit, while bearing much of the production risk.³ These figures will differ across retailers and supply chains and may not reflect every farmer's experience or retailer support, but provide a picture of the sector as a whole. Increasing demands on land for biofuels, energy, carbon credits, housing, and rewilding will compete with food production, potentially driving land out of food production. The UK food system is also quite different from its European counterparts, in its highly consolidated nature, with (as of April 2023) 92.5% of spend through just eight retailers. This presents both a real challenge and opportunity in shifting supply chain behaviour and demonstrates the importance of reaching out to both well established regenerative practitioners and those embedded in mainstream agriculture.



Indeed, reconfiguring the UK's agriculture system could deliver for both businesses' net zero commitments and government ambitions for climate reduction.⁵ There is a fundamental need to shift the goals of our food and agriculture system from maximising yield and efficiency, to pursuing economic, environmental, and social outcomes alongside productivity and profit. Farming systems will need to deliver more holistic outcomes, across the health and productivity of soil, biodiversity and

ecosystem restoration, and support rural communities in ways that are economically viable and provide thriving livelihoods.

Regenerative agriculture and agroecology offer a route to support these interconnected outcomes. There is already much good practice underway, especially at individual farm level; but more action is needed to scale and mainstream, with structures that support and incentivise change, and an accompanying shift in skills, knowledge,

and mindsets. The burden of this challenge cannot sit solely with farmers. These goals need to be systemically embedded in how we grow, source, process, distribute, and eat food. It comes at a time when decisions on land use at farm, landscape, and national level need to provide greater resilience to current and future disruption from extreme weather events, supply chain uncertainties and, most importantly, ending reliance on fossil fuels.

SHIFTING THE GOALS OF FOOD AND FARMING: A SYSTEMIC APPROACH

Many other publications, such as the [2023 Oxford Farming Conference report](#), have made the detailed case for why the food system needs to refocus, with urgency, on broader goals than profit and productivity. These shifts are broadly (rather than comprehensively) outlined here:

Reframing the goals of the food and agriculture system toward future-fit outcomes

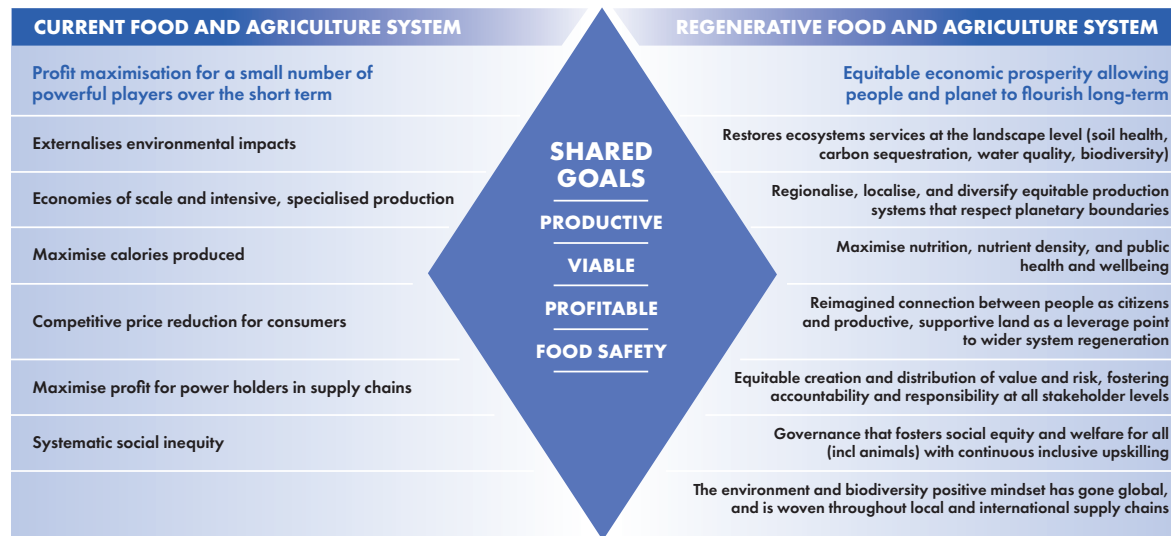
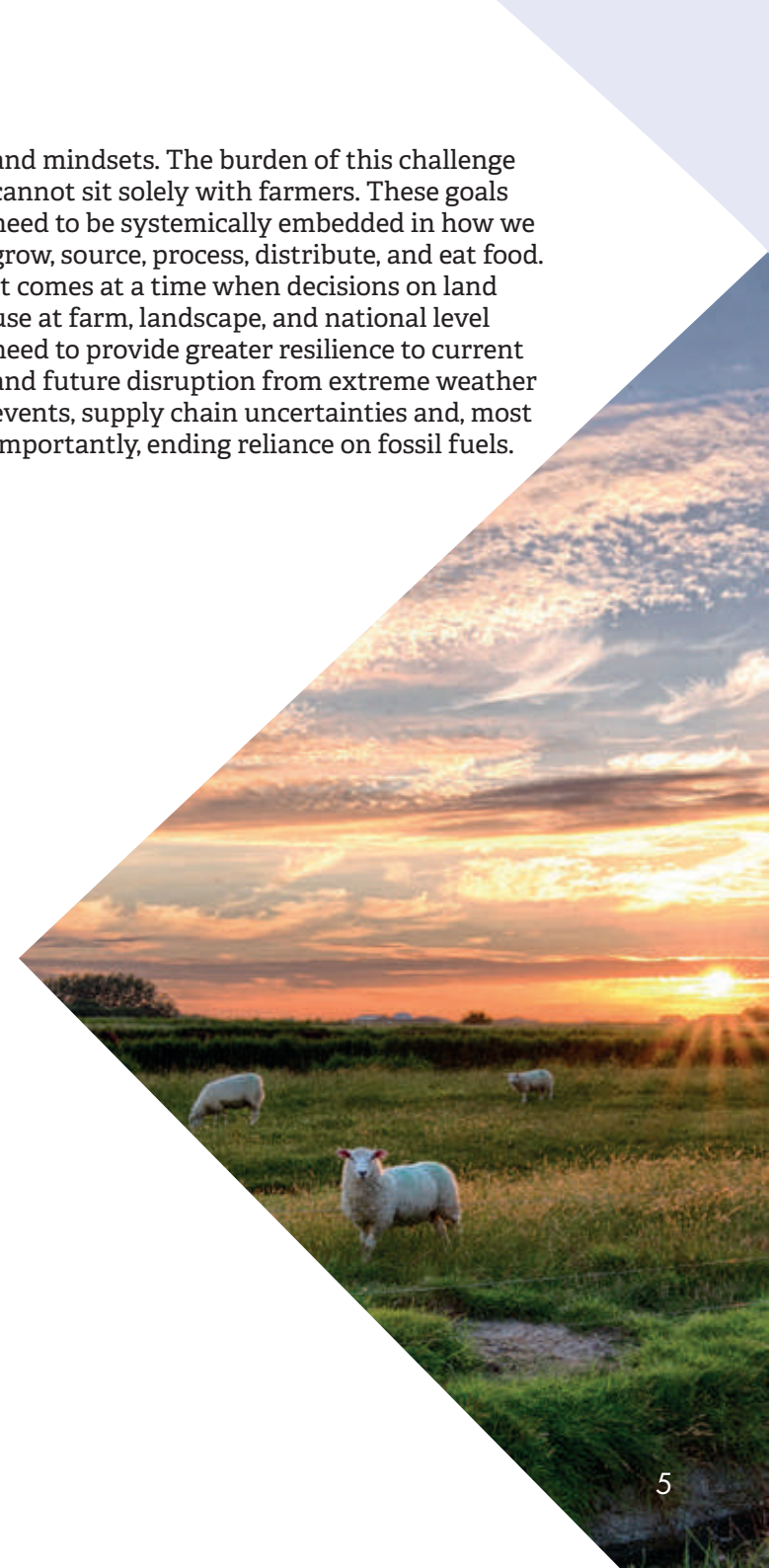


Figure 1: Reframing the goals of the food and agriculture system



GROWING OUR FUTURE: JOINED UP ACTION TO ACCELERATE TRANSFORMATION

In the coming years, changes in the natural environment and the food system's operating context will come whether we prepare for them or not. The rapid pace and complexity of change will continue to accelerate whilst expectations from government, investors, and consumers grow. Challenges are bigger than any one actor can solve and will need the collaborative effort of people and organisations from every part of our complex food system, working together. A new style of pre-competitive collaborative action from multiple actors including farmers, retailers, policymakers, and citizens, will be key to unlocking potential change and driving greater impact.

Across the UK and Ireland there are many convenings, initiatives, pilots, and partnerships, all contributing to the transition to regenerative agriculture in a meaningful way. How could we, together, connect these initiatives to support and build greater ambition and proliferation of regenerative food and farming? How can we unlock the barriers that stand in the way of change? How can we enable mainstream actors to dig deeper into transformation while enabling the great breadth of regenerative producers and communities to flourish?

Forum for the Future's *Growing our Future* programme aims to support the action that is already underway through system-wide co-created opportunities for collaboration that enable new partnerships and pathways to action. It is not here to replicate or duplicate existing efforts but to **bring together all those working towards a more just and regenerative food system to maximise shared impact.**

This collaboration aims to address three key questions:

- **Where is there potential to catalyse new or increased action in the transition to regenerative agriculture, through more coherent, collaborative action and how can this potential be realised?**
- **What role can major food companies play in enabling the shift to regenerative production and consumption, and what do they need to enable this?**
- **How can the UK food system unlock new routes to market that connect regenerative producers and consumers through new business models, and what more is needed?**





GROWING OUR FUTURE: AN INTERNATIONAL INITIATIVE

The UK *Growing our Future* programme is part of an international programme that builds on learnings from similar projects. In the United States, Forum for the Future has convened a similar programme since 2019, bringing together over 135 actors, including Indigenous farmers, the largest commodity businesses, investors, and retailers - often diverse and unlikely allies. This unique collaboration has explored the root causes and levers to action, with a thriving community and co-created active workstreams exploring new pathways to market, an ecosystem services pilot, an assessment of social outcomes for regenerative agriculture frameworks, and transformative agriculture policy. Forum for the Future learnt from this earlier work and created our current active programme to address specific UK challenges.

Participants in the US collaboration have highlighted significant benefits from contributing to *Growing our Future*.

1. Collective action can achieve greater impact by addressing shared barriers to change;
2. Systemic change can happen through new partnerships and relationship building;
3. Addressing multiple challenges and recognising interconnection allows for more complex and comprehensive solution development;
4. Collaborative co-creation leads to more equitable outcomes and an understanding of the new action underpinning them;
5. Collaboration can lead to new innovation initiatives.

THE VALUE OF COLLABORATION

Each actor in the food system has potential to influence both upstream and downstream. Action can happen within organisations themselves, within their immediate supply chains and customers, or in influencing the wider operating context such as policy or finance. While many organisations are currently focused on the first level of their own operations, many are facing the same challenges, but doing it alone. Collaboration can de-silo action, broaden spheres of influence and provide insights from and access to other sections of the food system that drive greater action.

As part of creating a food system that is fit for the future, regenerative agriculture has the potential to build resilient supply chains, restore biodiversity, distribute value and access to land equitably, and enable farmers, businesses, and communities to thrive. While progress towards regenerative agriculture in the UK has accelerated over the last five years, there are significant barriers holding us back. We have been holding conversations with, and listening to, people across the UK food system to develop a deeper understanding of these barriers and the enablers for change. This includes a call from many for greater collaborative action to address the challenges, activate leverage points and move towards the future we need.

For example, collaborative action to accelerate the transition to a just and regenerative food system could support:

- **UK farmers, growers or farming and growing networks** interested in regenerative agriculture, whether aiming to transition existing operations, to scale the work you already do, or to address barriers to entry;
- **UK businesses, brands and retailers** that are exploring how future business models or value chains could support farmers in adopting regenerative agriculture;
- **Policymakers** seeking to create a supporting environment for action commensurate with the challenges the UK's food system faces;
- **NGOs and civil society** involved in creating the enabling conditions for change in the UK's food system;
- **Investors or finance actors** seeking to leverage financial mechanisms to catalyse positive food system transformation;
- Existing **food system collaborations and networks** looking to maximise reach and potential for impact;
- **Organisations interested in food innovation**, particularly in new access and alternative routes to markets for farmers producing regenerative food and services;
- **Consumer groups and other actors** with a stake in the shift to more regenerative food and farming.



JOIN GROWING OUR FUTURE

Growing our Future aims to bring together the vast range of perspectives, expertise and initiatives to collaboratively identify opportunities to catalyse faster and deeper transformation. It is not a membership programme, nor a secretariat or a pay-to-play collaboration. Through time-bound co-creative activities, participants can together identify and shape areas of work that are ripe for action, and help ensure existing work creates maximum impact to transform our food system.

We invite you to join us to meet the urgency for transformation, while ensuring a robust shift that delivers across our social, environmental and economic goals and paves the way for a thriving just and regenerative future.

Contact us on info@forumforthefuture.org



**TRANSFORMING UK
FOOD AND FARMING:
WHAT IS THE CHALLENGE
WE FACE?**

THE CONTEXT FOR REGENERATIVE TRANSFORMATION

Farming has huge potential to deliver multiple benefits, not just to continue to feed the population and maintain a thriving export income, but to produce food and fibre whilst increasing crop diversity and nutritional quality, economically sustainable farm businesses, access to regeneratively produced food in thriving communities, and meeting the multiple challenges upon us, particularly the urgent challenges of climate change and biodiversity loss.

Although this is the norm wholly, or partially, for some small and large food and farming businesses across the UK, it is fragmented and there is huge scope for great changes and transformation at a large scale to reverse the major negative footprint food and farming have on the planet. At a global level, agriculture is the largest user of water, a major contributor to climate change, and a source of ecosystem degradation and biodiversity loss.^{6/7/8} The growing demand for food and subsequent agricultural expansion have been a contributing factor to the world crossing six out of nine planetary boundaries: land use system change, biosphere integrity, biogeochemical flows, freshwater change and novel entities (chemical pollution). Climate change is expected to reduce major crop yields by 3-7% for every 1°C increase of warming, while the frequency of extreme weather events will, to a higher degree, affect food production and supply chains.^{12/13}

This combination of global agricultural expansion, ecosystem degradation, and environmental impacts of climate change is contributing to the degradation of the natural resources that food systems are dependent on. While we know that future food production is dependent on natural resource conservation and sustainable use,¹⁴ monocultural production has stripped soil fertility — the UK has lost 84% of fertile topsoil since 1850.¹⁵ Soil degradation costs England and Wales an estimated £0.9-1.4bn annually, with almost 17% of land affected by soil erosion.¹⁶ 27 gigatons of soil organic carbon is expected to be lost by 2050, leading to fewer soil nutrients and lower water-retention capacity, potentially reducing resilience and impacting agricultural yields, which in turn will threaten the UK's food security and the livelihoods of farmers and their communities.^{17/18}





Disruption has been rife for the UK's food and agriculture sectors over the last few years. Brexit, the impact of the COVID-19 pandemic,¹⁹ Russia's invasion of Ukraine, the avian influenza pandemic, and the cost of living crisis have led to uncertainty, volatility, and an increase in prices of fuel and farming inputs that have driven producers to the edge of financial viability. Behind these is the greater spectre of the climate crisis and impacts on growing seasons and weather extremes. Throughout, the food sector needs to maintain affordable and available food supplies. This raises the question of how to build greater resilience to shocks and disruption, while reducing dependence on fossil fuel hungry inputs.

This increasingly precarious situation is having tangible effects across the food system, from farmers to consumers. For consumers, even before the energy crisis hit hard, more than a sixth of all UK households were food insecure in April 2022,²⁰ and in 2020/2021 almost one in five children lived in families in food poverty.²¹ For farmers, in 2020-21, 29% of UK farms had a Net Farm

Income of less than zero, with an average of £33,000/year.²² Many farmers have survived due to the presence of the Basic Payment Scheme (BPS) and other subsidies. In order to weather the turbulence of the coming decades, we will need a food system that delivers on both positive environmental and social outcomes, delivering long-term resilience to multiple challenges, to both our ecosystems and communities.

This is not just an issue of environmental concern, but one for the operating context of businesses throughout the food system.²³ Scrutiny is increasing from both regulatory and financial environments upon action and disclosure on carbon, nature and biodiversity impacts, and more recently on social impacts, whether from the Task Force on Climate-related Financial Disclosures (TCFD),²⁴ its equivalent on nature-based disclosures (Task Force on Nature-related Financial Disclosures (TNFD))²⁵ or attention to ESG risk for investment, and from international benchmarking agencies such as the World Benchmarking Alliance's Food and Agriculture Benchmark.²⁶

Work toward regenerative agriculture, both globally and in the UK specifically, has accelerated, but is fragmented, with gaps in existing approaches and often a lack of trust or connection between initiatives. We recognise that many have been farming regeneratively for a long time and there are a growing number of trailblazing farms transitioning towards regenerative agriculture. Some major food companies have begun to include regenerative agriculture as a key component of their strategies towards reaching net zero carbon and becoming nature positive. But the pathways to making this a reality at scale are still unclear, or piecemeal, and require new structures that support and incentivise these outcomes. Most governments are yet to introduce policies which support regenerative or agroecological farming, meaning the business case is challenging for farmers, most of whom have relied on government support for at least some of their income.

Importantly, the challenge of revolutionising our food system does not just involve farmers and their fields. These goals need to be embedded in how we grow, source, process, distribute and eat food, including enabling citizens to understand the benefits of regeneratively produced food and the power of their purchasing choices. Transitioning to new agricultural practices and farming models will require new incentives, knowledge, finance, and connections – involving a wide range of actors from farmers to retailers, advisers, researchers, manufacturers, wholesalers, investors and policy makers, to name a few.





**SHIFTING THE GOALS OF THE FOOD
AND AGRICULTURE SYSTEM**



A SYSTEMIC APPROACH

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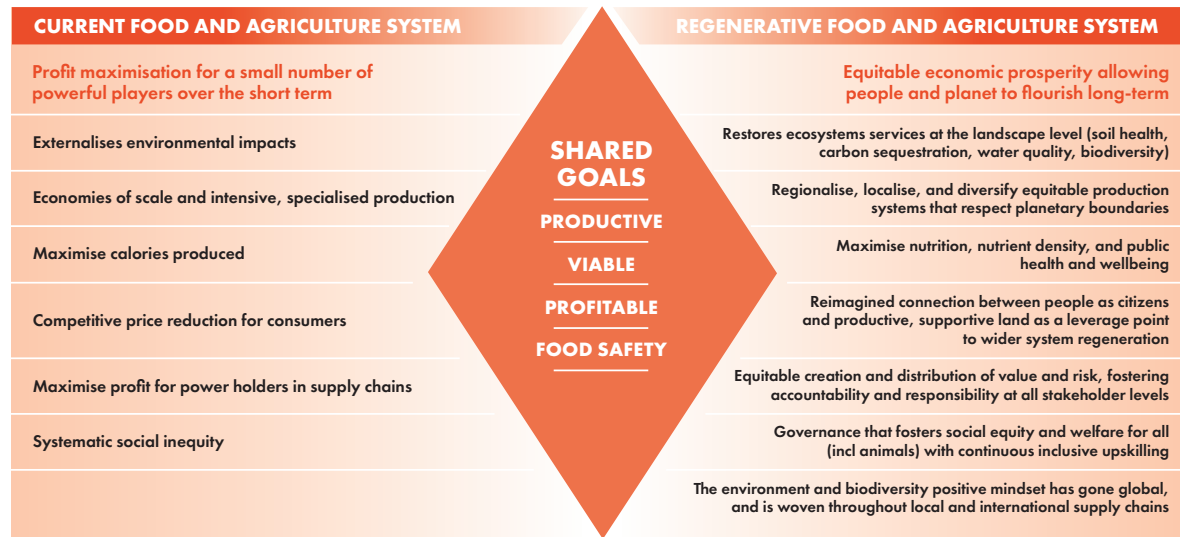


Figure 2: Reframing the goals of the food and agriculture system

WHAT IS 'REGENERATIVE' ?

At Forum for the Future, we specifically refer to regenerative agriculture. Forum's vision and the principles that underlie our strategy and work are built on a just and regenerative future, which goes beyond sustainable and net positive to transformed understanding of the relationships between the economy, society and planet, enabling the capacity of all living beings to thrive and with that capacity to adapt to future challenges. This includes the food system as one of three major global transitions. To reach this just and regenerative functioning, transition and transformation is required.

There is currently no universally-accepted definition of regenerative agriculture, nor is there clear alignment around results that measure outcomes of regenerative agriculture. There are many farm-level practices within the regenerative agriculture umbrella (which overlaps into other holistic land management systems), including agroforestry, cover crops, crop rotation, integrated livestock, no or low tillage, intercropping, and minimal use of agrochemicals, among others. This long-list of practices allows farmers to adapt their approach to their given location and situation, allowing for context specificity to adopt practices that best suit their farm and its ecosystem. Within this focus on context specificity, regenerative agriculture also considers practices that connect the farm to its community and farm workers. This includes practices such as worker ownership, cooperative agreements, community engagement in farming systems, and direct-to-consumer selling.

There is a risk of focusing on practice-based definitions of regenerative agriculture that can draw accusations of greenwashing and, at worst, 'predatory delay' - a deliberate avoidance of taking prompt and necessary action on global problems. At its heart, regenerative agriculture is a different way of seeing the farm, the produce, the livestock, the community, and the farmers as interconnected systems - be they ecological, societal, or economic systems. Regeneration, in the origin of its meaning, is "to bring forth again".

Although sometimes definitions narrow in on soil health, regenerative agriculture is a broader transformation. Regeneration aims to build a system that delivers equitable economic prosperity allowing people and planet to flourish long term. Outcomes include optimising nutrition and public health, equitable distribution of value, rewarding stewardship of ecosystem services, diversified production systems and deeper connections between consumers and production, reflecting the shift to a more resilient and thriving agriculture system.

Many people are just beginning to think about nature based and regenerative farming and are at different stages in this transition. *Growing our Future* aims to build and support broad engagement, but also recognises the need to move towards a reconfiguration of mindsets, behaviours, and approaches to agriculture and the system within which food is produced. Even when focusing on outcomes, there is a risk that key factors such as sequestration of carbon may be prioritised and rewarded in agriculture at the expense of other highly connected and critical goals, such as water stewardship, biodiversity, livelihoods, fair value and even food production itself. The power of the regenerative mindset is to enable consideration of multiple interconnected outcomes for the long-term health of the planet, people and economy.

**"I'm seeing systems much more clearly and simply."
- *Growing our Future* US participant**





**COLLABORATIVE
ACTION TO UNLOCK
ACCELERATED PROGRESS**

THE POWER OF PARTNERSHIP

Collaboration is rapidly emerging as an essential part of successful business. From facing rising resource costs, to concerns about financial shocks, disruption in supply chains, changing consumption patterns, and emerging new business models – and the urgent need to reduce impacts on the environment – businesses are having to learn to navigate a rapidly changing context. These pressures call for significant innovation and reimagination of how to operate for long-term viability.

Combining insights, resources, creativity, and collective leverage for action can enable a shared goal of creating a food system that is more resilient, healthy, and sustainable for people and the planet. By collaborating on the transition to regenerative agriculture, we can drive greater impact, catalyse systemic change, address multiple challenges, achieve equitable outcomes, and drive innovation in the sector.

SHARED CHALLENGES RIPE FOR COLLABORATION

The *Growing our Future* programme has undertaken extensive interviews, desk research and immersion in the UK food system over the past year, to explore where there is potential for action, taking stock of the current state of agriculture broadly, and regenerative agriculture specifically,

in the UK. This research coincided with Forum's production of the 2023 Oxford Farming Conference report on "[Supply Chain Synergies: What is the appropriate role of supply chains in achieving responsible production at farm level?](#)". The report focused on the barriers to food supply chain transformation, identifying pathways to change, and outlining how both voluntary food sector action, as well as policy, could enable these ambitions.

This extensive research made it clear that the barriers to transitioning to regenerative agriculture are significant. Given the multitude of initiatives around regenerative agriculture in the UK, finding a path forward can also be a daunting task. How can we ensure that we avoid pulling in different directions and, instead, pull together coherently?



Although not exhaustive, clusters of potential action areas were identified. These are being explored further through the *Growing our Future* programme and collaborative activities, with the aim of prioritising pathways for action and partnership. Areas identified include:

New framing and ways of thinking:

- Recognising the potential to deliver value through regenerative farming;
- Rethinking the value created through pre-competitive action;
- Willingness to act without complete information and prioritise action to bridge the innovation and knowledge gap;
- Reframing goals of food and agriculture to underpin future strategies;
- Exploring the level of ambition to prevent watering down of progress and ambition;
- Building social, environmental and ethical components of food systems into regenerative agriculture, and not just focusing on soil and environmental impacts;
- Considering longer timelines, financial commitments and complexity in determining the need for different infrastructure, logistics and relationships to support more diversified and regenerative production, processing and supply.

Public movement and advocacy:

- Galvanising a movement towards regenerative agriculture that brings consumers along as informed citizens and addresses diets and nutrition;
- Researching and identifying potential for

regenerative agriculture to deliver healthy diets and food security.

Creating viable business models that recognise wider value:

- Generating mechanisms to guarantee purchases of new diverse farm outputs;
- Creating new business models and marketplaces for regeneratively produced food;
- Shifting economic models to reflect regenerative outcomes;
- Paying for ecosystem services: Developing equitable voluntary payment mechanisms for ecosystem services and incentivising and rewarding action beyond the standard price;
- Developing economic models that reward diverse and smaller actors, not just economies of scale.

De-risking the transition:

- Developing fair mechanisms that share the risk of transitioning to regenerative agriculture along the food system value chain.

Outcome frameworks:

- Developing and aligning on standardisation of an outcome-based framework for regenerative agriculture between on-farm, regional, and global level metrics and initiatives.

Enabling diverse farmers and farming systems to co-create solutions:

- Bringing together diverse voices from across the agricultural sector and supply chain to have honest conversations around power

and consolidation within food and agriculture and identify ways to address this;

- Addressing the lack of financial, policy, and infrastructure support for small scale and community-focused food production that provide multiple benefits to society and local communities;
- Addressing historic issues facing new entrants to farming, including land access.

Creating enabling policy and finance mechanisms:

- Developing evidence for policy and infrastructure which supports a less centralised, more regenerative system;
- Overcoming uncertainties around ELMs and the anticipated Land Use Frameworks for England;
- Defining how to drive public sector procurement to drive change in the wider system;
- Streamlining robust green finance mechanisms and regulatory environment.

Building accessible and attractive education and knowledge exchange mechanisms to reshape the skills base across the food system:

- Developing knowledge hubs to support diverse actors transitioning to regenerative agriculture;
- Increasing funding for research on agroecological systems, addressing gaps in knowledge of impact, business cases for regenerative practices and how to viably create multiple gains and prevent trade-offs (e.g. where is the productivity vs. biodiversity 'sweet spot?').

SPOTLIGHT ON MAJOR FOOD BUSINESS ACTION

Through this research we looked specifically at the mechanisms that major food companies and retailers are using to enable more regenerative agricultural practices in their supply chain and for products to reach the market. This is a rapidly emerging area for action and, given the potential impact and leverage of these businesses, these levers will inform decisions on where *Growing our Future* could contribute. Across the UK, US, and internationally, we identified a range of levers that major food businesses are exploring:

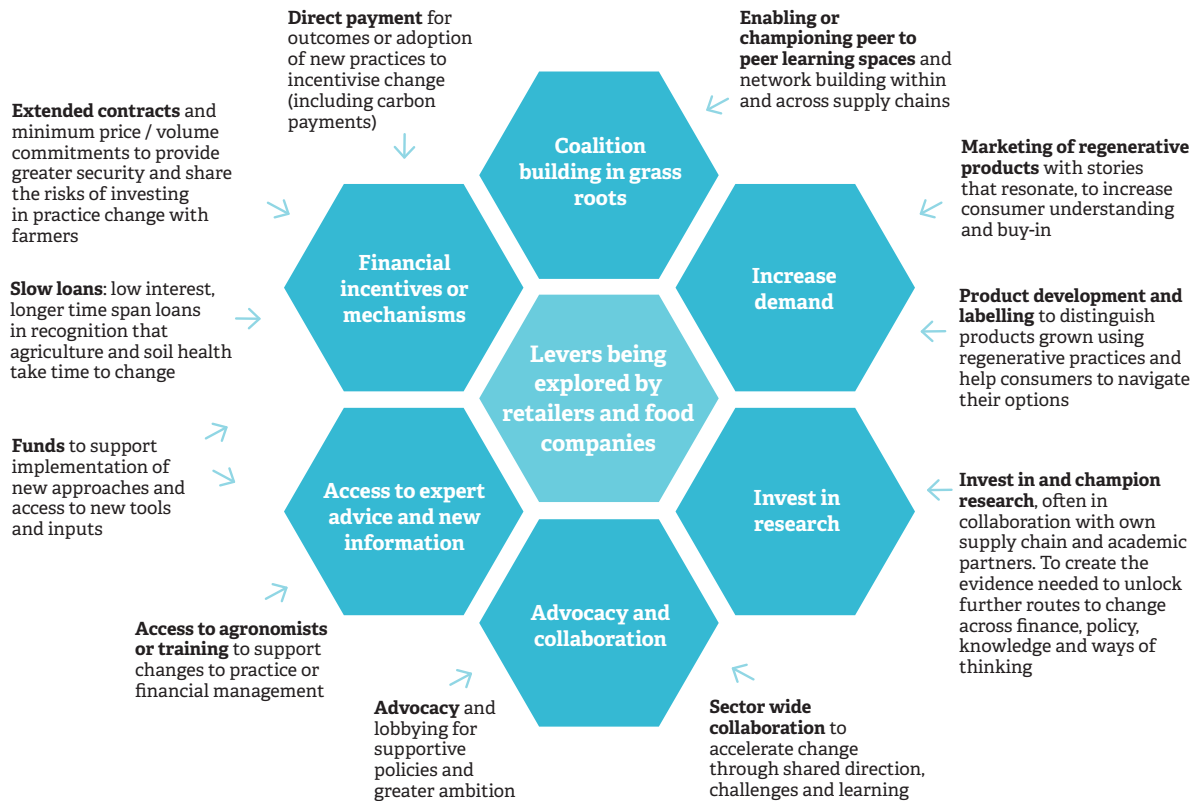


Figure 3. Examples of retailer and food company actions to test how to accelerate the shift of their supply chains towards regenerative agriculture / agroecology.

CASE STUDY: EXPLORING THE OPPORTUNITIES FOR AND BARRIERS TO THE ADOPTION OF REGENERATIVE FARMING PRACTICES IN THE M&S POTATO GROWER BASE

During the development phase of *Growing our Future*, Forum for the Future worked with long-term partner and leading British retailer, Marks and Spencer (M&S), to explore how to “find fair mechanisms between retailers, suppliers, processors, and farmers and growers to share both the risks and the benefits of the transition”. The intention of this pilot was to explore the role M&S can play to support shifts in conventional agricultural practices to more regenerative agriculture approaches, working within its potato supply chain. This case study, ongoing since 2021, has provided invaluable insights and learnings around what approaches would support M&S growers to adopt regenerative practices in a way that builds soil fertility and carbon, whilst avoiding impact on quality and remaining commercially viable for the grower and M&S. Insights from this case study will be fed into the collaboration and more details can be found in the Appendix.



***GROWING OUR FUTURE:*
WORKING TOGETHER
TO ACCELERATE ACTION
TOWARDS A JUST AND
REGENERATIVE FOOD
SYSTEM IN THE UNITED
KINGDOM**



Forum for the Future's *Growing our Future* programme aims to bring together the vast range of perspectives, expertise, and initiatives to collaboratively identify opportunities to catalyse faster and deeper transformation.

Growing our Future is not a membership initiative, nor is it a secretariat, or a pay-to-play collaboration. Instead, it is a time-bound pre-competitive programme for food system actors and organisations to come together to identify and implement areas of work that are ripe for collaboration. These areas of work will build on existing action, but by combining forces and aiming to work in a more coherent, joined-up way, *Growing our Future* will aim to ensure the existing work helps drive maximum impact to transform our food system. Its ultimate outcome is to accelerate the transition towards a more just and regenerative food and agriculture system.

Forum for the Future aims to engage diverse actors, from farmers and growers, farmworkers and landowners, NGOs, and civil society, to agricultural producers and suppliers, investors and policymakers, and retailers and brands. It aims to build a community, bringing in diverse and differing perspectives, with a willingness to address the hard challenges this transition will encounter.

Participants will have the opportunity to find new connections and partnerships, experiment with new ways of thinking about the potential of their businesses or those they work with, broaden their sphere of influence, and clearly see their role in driving change. We hope this will open new ways of thinking and avenues for action.

Growing our Future has also been mapping the diverse array of action that is underway in the UK in the regenerative agriculture movement. The aim of this map is to enable organisations to navigate regenerative action and identify potential partners. It demonstrates where there is significant momentum in the food system and highlights potential gaps and opportunities for further action and has been used as a first step in group discussions. Together, we are exploring implications of this work and focussing on priority areas of potential action.

GROWING OUR FUTURE - WHAT IS THE PLAN?

Throughout 2023 and 2024, *Growing our Future* is bringing together food system actors in focused collaborative working sessions. These will be in-person wherever possible and necessary, ideally alongside other major events in the food and agriculture calendar, and geographically dispersed, at venues that demonstrate agricultural regeneration, to engage actors across the nations. Together, participants are collectively defining which priority areas warrant collaborative action, where there is potential to develop programmes of work and pathways to action.

Additionally, in late 2023 *Growing our Future* will also host an innovation sprint - a rapid workshop process - to reveal what is needed for niche and disruptive actors to grow alternative routes to market and greater market access for regenerative producers and farmers. This will build momentum for innovation by identifying priority areas for action, raising visibility of existing initiatives that show how new approaches can work in practice, alongside what the wider mainstream food and agriculture sector can do to enable these shifts.





**WHAT OUTCOMES IS
GROWING OUR *FUTURE*
WORKING TO ACHIEVE?**

Forum for the Future’s international *Growing our Future* programme is seeking to support the transition to a just and regenerative food system in the UK, US, India and at the international level. Forum has tested this approach through its *Growing our Future US* programme. Three major outcomes underpin the initiative:

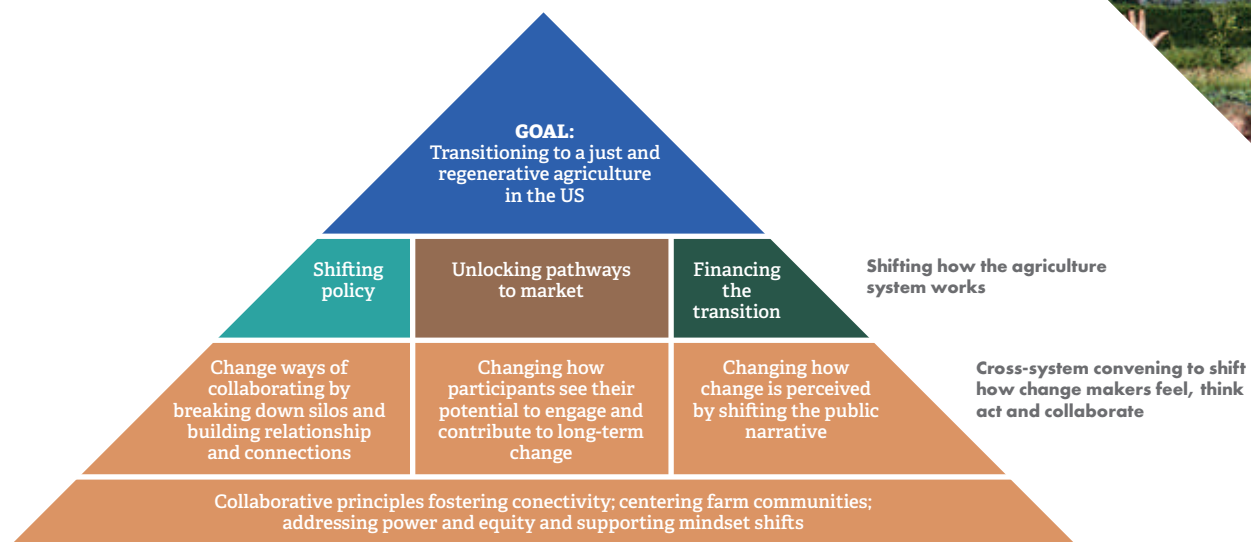


Figure 4: *Growing our Future’s* collaborative approach to change

“Participation in *Growing our Future US* gave me a greater understanding of how to look at everything with the lens of equity and justice.” - *Growing our Future US* participant



GROWING OUR FUTURE'S OUTCOMES

1. CHANGING WAYS OF COLLABORATING

Growing our Future is being convened with the understanding that while there has been significant activity and interest in regenerative agriculture, that activity has largely been happening within existing silos. For example, there is currently insufficient interaction between incumbent players, innovators, and marginalised groups; food and fashion companies rarely connect and farmers are often disconnected from the very organisations and resources seeking to support them. By convening diverse regenerative agriculture actors, our aim is to harness the benefits of collaboration and support participants to see the whole, inspiring new ideas of what the UK food system can be, empower individuals as change agents, and catalyse action.

Participants will be guided through working sessions to collectively define which priority areas in regenerative agriculture warrant collaborative action to drive further impact. The collaboration will bring forward these prioritised areas into workstreams, defined by the participants. The aim is to be the 'connective tissue' between people already changing the food system.

2. REFRAMING HOW CHANGE IS PERCEIVED

We are working to raise awareness of the potential of regenerative agriculture, spark dialogue, surface major challenges and differing perspectives - and ultimately enable new collaborative pathways and solutions to transition the UK food system. We will aim to bring together existing and unlikely allies and foster a clearer understanding of regenerative agriculture that integrates both social and environmental goals. In turn, the programme's outputs can help shape today's dominant narrative around what the agriculture system is, and demonstrate what future it could be working towards.

3. CHANGING HOW PARTICIPANTS ACT

The first outcome is greater collaborative action. Priority action areas will be defined and shaped by participants. Recognising the dynamism of regenerative agriculture and agroecology in the UK, as well as the wide-ranging initiatives and networks that are already underway, *Growing our Future* will aim to be additive to existing initiatives, adding value to other work and momentum in the wider system.

FOUR KEY PRINCIPLES FOR COLLABORATIVE ACTION

Four key principles underpin design and implementation of *Growing our Future*.

1. Foster connectivity between actors

- Recognise trust, data and technology as critical enablers of change;
- Break down silos between stakeholders and across different projects across the UK;
- Support data alignment and connectivity.

2. Centre farmers and growers

- Enable farmers and growers to participate in and self-determine their own thriving future in the UK food system;
- Provide farmers and growers with credible information, evidence, and tools to give confidence in regenerative agriculture.

3. Address power and equity

- Foster social justice and equity;
- Shift the power dynamics that underpin the system today.

4. Support mindset shifts

- Shift from short-term to long-term thinking;
- Understand, value, account for the true cost of food/crops;
- Shift from a siloed view to a more systemic, holistic view;
- Shift to a regenerative and just mindset.

These help ensure that our interventions are not simply different approaches to policy, marketing, operations, or growing, but are simultaneously addressing specific challenges while intentionally bringing in some of the deeper change needed across the food system.

THE IMPORTANCE OF MINDSET SHIFTS: NEW THINKING DRIVING NOVEL ACTION

In order to achieve a transformation that does not fall into the same traps as our current food system, and does not perpetuate the extractive practices or render regenerative agriculture another tick box exercise, new mindsets will be needed (in other words, our way of thinking and our underlying assumptions²⁷).





What is a mindset? The term ‘mindset’ is often used interchangeably with world-view or paradigm. It is a set of assumptions, concepts, and values that inform how we see the world. For individuals, it informs how we act, consciously or subconsciously. For communities or organisations, it underpins how we organise.

Many of us in the food system are looking at regenerative agriculture through a specific lens or practice, but in doing so we miss an opportunity to see regenerative agriculture as a new *system*, and not simply as a set of practices. The vision of a future just and regenerative agriculture system is one of a system that has been fundamentally reformed and rewired, requiring changes at all levels: from on-farm management practices, to incentives, investments, infrastructure, relationships and mindsets. *Growing our Future* seeks explicitly to contribute to a deeper transition for the system more broadly.

The regenerative agriculture movement is developing at an incredible pace, and given the urgency of the challenges we face, we need to develop the answers as we continue to move forward. If a silver bullet existed, it would have been found and deployed by now. The transition will require a clear vision of the future, an understanding of the components of the past that need to be replaced, and a clear roadmap for experimentation, learning, and collective efforts. The regenerative agriculture transition so far in the UK has been driven from a bottom-up approach, by farmers, and this should not be undervalued as momentum and change grow. We invite those within the food system in the UK who are committed to this transition to join us in catalysing change.



**GROWING OUR FUTURE:
JOIN THE REGENERATIVE
TRANSFORMATION**

WE ARE AT A PIVOTAL MOMENT TO SHAPE THE UK'S FOOD SYSTEM

The future of food and farming will need to encompass environmental, social and economic outcomes as well as redefined value and risk distribution if we are to create a future-fit food system that provides everyone with nutritious affordable food, while ensuring farmers can earn good livelihoods and the environment is regenerated rather than exploited.

Many of the challenges and barriers we face are both structural and cultural, so will need a great degree of collaboration and shared learning if solutions are to be found that work for all and can be catalysed quickly. We need to harness the momentum that regenerative agriculture has and ensure actors across the food system are collaborating and driving change together.

Contact us on info@forumforthefuture.org



APPENDIX

CASE STUDY: EXPLORING THE OPPORTUNITIES FOR AND BARRIERS TO THE ADOPTION OF REGENERATIVE FARMING PRACTICES IN THE M&S POTATO GROWER BASE



To Marks & Spencer (M&S), low impact farming means the adoption of farming practices that deliver increased biodiversity, increased resilience to climate change impacts and reduced carbon emissions in line with our net zero mission, in a way which ensures productive and profitable farming.

As part of M&S's commitment to supporting its British farmers to transition to low impact farming, the business introduced its 'Farming with Nature' Programme in 2021.

FARMING WITH NATURE

The M&S Farming with Nature programme covers 100% of M&S British Select Farm fresh produce growers and aims to support them to achieve biodiversity improvements on farm.

The programme has three pillars of activity:

1. **Standards:** M&S, in partnership with LEAF (Linking Environment and Farming), is delivering verified modules on biodiversity and integrated pest management across the British grower base. These modules aim to assist farmers to achieve outcomes beyond the LEAF Marque standard, which is their minimum sourcing requirement;
2. **On-farm advice:** M&S is providing funding to support groups such as the Farming & Wildlife Advisory Groups (FWAGs) and Wildlife Trusts (along with other independent consultants) to provide knowledge and enable knowledge sharing between growers;
3. **Indicator & Innovation Farms:** M&S has funded five such farms to trial carbon reduction and biodiversity improvement initiatives, with its partners, The Game & Wildlife Conservation Trust (GWCT) and Fera Science. These trials employ cutting-edge monitoring approaches and the results and learnings from these trials are shared through farm visits and communication to the M&S grower network.

SUPPORTING SHIFTS TOWARDS REGENERATIVE AGRICULTURE

M&S recognises the opportunities that regenerative agriculture offers in delivering positive outcomes across biodiversity, decarbonisation, and climate resilience; equally understanding the systemic barriers that farmers face in this transition and the supporting role retailers need to play.

To shape its approach and building on their Farming with Nature programme in the UK, M&S invested in two trials to explore the opportunities and challenges in the adoption of regenerative agriculture practices in its potato grower base, investigating ways M&S can provide support. This process was supported by trusted partner Forum for the Future as part of Forum's broader enquiry into how regenerative agriculture practices can be scaled in the food system. The trials were designed based on results of a grower survey, which indicated that a lack of trusted data around the financial, productivity and environmental impact of practice change, was a major barrier to change.

Project 1: A trial with a group of M&S potato growers, Forum for the Future and Soil Capital to explore how data and expert advice could be used to support and accelerate regenerative agriculture practice change.

Project 2: An on-farm Indicator and Innovation farm trial in partnership with A.H. Worth, an M&S potato grower, GWCT and Fera to measure the impact of regenerative farming practices.

Potatoes were chosen as an area of focus as an important product for M&S; its potato growers are facing increasing pressure from climate change impacts, and soil loss and degradation are a threat to future production. Potato production is associated with a high level of soil disturbance, so functional, fertile soils are critical for continued production of high-quality potato crops and to reduce the environmental impact of M&S potatoes. The potato crop also faces specific barriers in practice change, for example, the potential for increasing the risk of pests and disease when introducing cover crops or reducing cultivations, which need to be understood and addressed.



Project 1: M&S pilot with Forum for the Future and Soil Capital to explore how data and expert advice could be used to support and accelerate regenerative agriculture practice change.

Based on survey insight, Forum for the Future facilitated a partnership with Soil Capital, an independent agronomy firm. M&S funded Soil Capital to deliver mySoilCapital assessments, custom reports and facilitated discussions with 15 potato growers, including A.H. Worth, an M&S Indicator and Innovation farm. The work was funded by the John Ellerman Foundation, People's Postcode Lottery and M&S.

mySoilCapital benchmarking tool

mySoilCapital is a farm-based financial and environmental benchmarking tool which provides growers with insights on their performance on parameters such as carbon, nitrogen efficiency, yields, cost of inputs and other operational expenditure. The tool provides visibility and comparisons of the financial and environmental consequences of using different farming practices, while also providing farmers with insights into the health of their soils. Soil Capital created an anonymised benchmark report, allowing growers to understand how they were performing compared to their peers.

Key findings from the mySoilCapital benchmark report:

- The 'best sequestering' farms are using significant quantities of additional organic matter (mainly digestate and imported farmyard manures and slurries from neighbouring livestock units) in combination with cover cropping and minimum tillage.
- Many farmers reduced their cultivation practices with both zero and minimum tillage with different crops, aiding their greenhouse gas balance – typically potato farmers rely on heavy cultivation.
- Three of the farms at whole farm level were reported to be net sequestering carbon, and four of them at potato crop level reported to be net sequestering.
- The assessment showed no yield penalty between the average farm yield, and the 25% best performing farms in terms of GHG balance.



Project 2: M&S Indicator and Innovation farm project with A.H.Worth to measure the impacts of regenerative farming practices on-farm.

A.H. Worth is a 2,326-hectare farm in Lincolnshire and has been an important supplier of potatoes to M&S for more than 30 years. A.H. Worth has adapted regenerative agriculture-based planting and cultivation techniques to drive productivity, enhance biodiversity and reduce carbon; the farm aims to become carbon negative by achieving levels of carbon sequestration that are in excess of the carbon footprint of the business. The M&S Indicator and Innovation project aims to give the farm management team a clear understanding of how these regenerative agriculture practices are impacting soil microbial activity, organic matter levels and the sequestration potential of their soil and assess the wider benefits of adopting a regenerative agriculture approach. Learnings and insights are being shared with the wider M&S grower base.

A trial area of 350ha was identified and a range of regenerative agriculture practices applied to that area, including:

- No ploughing
- Reduced spring tillage
- Cover cropping over winter
- Use of digestate as a fertiliser (generated from the on-farm anaerobic digester)

Expected outcomes and benefits:

1. A reduction in spring cultivation requirements and nitrogen inputs required, as a payback for the utilisation of a cover crop;
2. Enhanced soil microbial activity through the development of an in-soil fungal community that supports stronger, more disease- and insect-resistant crops that reduce the levels of fungicide and insecticide required;
3. Reduced negative influence from soil pests through enhanced nematode and microbial soil communities.

Soil assessment and baseline measurement

Detailed soil assessments were completed in 2021 in seven of the trial fields. The samples were representative of different points in the rotation. The soil assessments established baselines of:

1. **Soil organic matter** – for each trial field and soil type. This was mapped using TerraMap, a high definition, gamma-ray detection mapping technology. Changes in soil organic matter can be tracked and quantified at the end of the trial;

2. **Soil microbial respiration** – indicating immediate benefits of cover crops to soil microbial communities;
3. **Nematode populations**. Nematodes are ubiquitous, worm-like, microscopic invertebrates. They act as a useful indicator of soil health and biodiversity. Reduced soil disturbance creates more balanced populations of nematodes – they can be both beneficial and a pest of concern in agroecosystems. The assessment found 12 new records of nematode species and one undescribed species.

The trial is still in early stages; the next step is to conduct follow-up soil assessments to track how changes in farming practices affect these indicators of soil health.

INSIGHTS FROM M&S GROWER FEEDBACK AND DISCUSSION ON BOTH PROJECTS

A.H. Worth hosted an M&S grower day in late 2022, enabling discussion and knowledge sharing between farmers about the opportunities and challenges faced on decarbonisation and the wider profitability agenda. Insights from the A.H. Worth regenerative agriculture trial and the results of mySoilCapital benchmark trial were shared with the M&S potato grower group.

GROWER DISCUSSION AND FEEDBACK THEMES

1. Scope to adopt regenerative agriculture practices depends on farm context

Regenerative farming practices were already being implemented across the M&S grower group, with strong engagement amongst farmers and appetite for information. The ability to adopt practices however varied depending on context, for example:

- Grower readiness to take on potential risks to productivity and crop quality varied depending on whether they owned land, the length of their tenure, or how much land they had available;
- Growers' ability to apply organic fertilisers depended on whether they had access to animal manures based on their geography, or whether there was existing infrastructure such as anaerobic digestion plants to apply digestate;
- Different soil types will perform differently with practice change, for example some lend themselves to reduced cultivations more than others.

- Sourcing and specification requirements of retail customers are also relevant, putting constraints on farmers to adopt new approaches.

2. There are numerous areas where M&S can unlock opportunities and support regenerative agriculture uptake

Including:

- Improve access to technologies and organic waste products;
- Review policies such as manure application restrictions whilst upholding high quality and food safety standards to facilitate farmers to implement changes;
- Support farmers to address specific issues such as pest and disease resistance in potatoes;
- Support, and strong supply chain relationships, improve grower confidence to invest in change - an important factor in grower decision making.





3. Consistency of on-farm carbon measurement and holistic soil monitoring

- Growers expressed concern about the range of different farm carbon calculators being used that deliver results that are not comparable. The lack of standardised approaches to measuring carbon emissions and sequestration on farm eroded confidence;
- Growers expressed a need to better understand their carbon footprint at whole-farm level to meet the needs of their customers and the wider industry's net zero ambition. A whole-farm approach would include, for example, the energy consumption and emissions associated with cold storage. The mySoilCapital assessment focused on measuring carbon within the boundaries of a particular field;
- M&S and partners have a role to play in working with the wider industry and government agencies to drive consistent approaches for capturing better-quality primary carbon data to better inform growers' decision making;
- The microbial and nematode soil analysis collated by Fera for A.H. Worth reflected the potential of measuring soil biology to understand soil organic matter and carbon, but also the resilience of the soil to manage pests and disease. It is important to develop a more holistic approach to measurement beyond carbon to drive sustainability and resilience, and maximise natural capital opportunities for farmers.

4. Farmers need a clear business case for change

- There was strong interest in the concept of natural capital, and belief that farm carbon both held a value and that proven and sustained reductions delivered public benefit;
- As cost of production has increased, farmers are highly motivated by practice change where it could lead to reduced costs such as lower nitrogen fertiliser use;
- The mySoilCapital assessment reflected those farmers who were embracing regenerative approaches and weren't forfeiting yield. However, decarbonisation overall comes at a cost and can introduce risk into the farming system and so both investment and reward are needed to incentivise farmers to make the change;
- M&S has a role to play in creating market demand for high quality, low carbon and regeneratively farmed products and supporting farmers' transition to low impact farming through long-term partnerships and collaboration.

LOOKING FORWARD

The learnings from these projects and M&S's partnerships with its potato suppliers and growers have shaped M&S's low impact farming and net zero strategy. M&S recognises that this is a long-term project and findings will continue to emerge over time.

As a result, M&S will:

- Support further on-farm trials and access to independent advisors to provide tailored advice to help farmers adapt context-specific regenerative agriculture practices.
- Widen their scope of support to include other whole-farm carbon hotspot areas such as cold storage.
- Continue to support learning events for growers to share best practices and insights from regenerative agriculture trials.
- Continue to support the development of a carbon reduction roadmap for M&S potatoes in partnership with the M&S potato supplier, communicating clear asks and guidance for growers on net zero, providing improved product footprint data.
- Explore further opportunities for collaboration on carbon reduction and explore financing opportunities for innovation in the supply base.
- Review and update its farm standards and sourcing approaches to incorporate regenerative practices.
- Lobby the UK government to deliver agricultural policy in the UK to give farmers confidence to make change and reward them for delivery.
- Work with the wider industry on an aligned approach to farm carbon measurement and accounting.



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