

Fields of Opportunity: Profitable Farming for a Green Transition

Sustainable Food Report,
July 2025

Report delivery partners



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Foreword

The green transition to an ecologically sustainable economy presents a significant opportunity for the UK, and agriculture, in partnership with the wider agrifood supply chain, is uniquely positioned to be the driving force.

Farm businesses are the unparalleled stewards of our environment. Their deep understanding of local soils, water, weather patterns and wildlife allows them to manage natural resources productively while safeguarding them for future generations. And with over 70% of the UK's landmass involved in farming, farm businesses are vital to achieving a myriad of our national ambitions for clean energy, green growth, environmental restoration, carbon neutrality, sustainable land use and national resilience.

A sustainable economy leans into green solutions to meet its needs. The conversion to clean energy and a more sustainable food system are both integral elements of a successful green transition. British farmers are already helping expand domestic clean energy supplies in addition to their traditional role feeding the nation. Further, increasing domestic production and taking a more considered approach to substitute goods of foreign origin enhance national security in a time of ephemeral international relationships.

The green transition, driven forward by farming and farmland, will improve our international competitiveness, build wellbeing within our

communities, boost our global standing and have a positive impact on public finances. Yet, realising the full potential of the agriculture industry to deliver a more sustainable UK requires a policy framework which gives business leaders the impetus to invest, targeted incentives for green actions and an operating environment which inspires confidence.

The reach of agriculture extends far beyond the industry's modest £11bn size. The equigenic power of the industry narrows socioeconomic and health inequalities. Its connection to the land can steer us towards environmental recovery. And it is the genesis of a £147bn food supply chain; the value of agriculture trickles out and multiplies across the entire economy.

This policy paper asks Parliamentarians to consider the strategic role of agriculture in accelerating a green transition that delivers for communities, economy and environment. And to review policy decisions in that light.

Katie Tucker
Executive Director, Rural Policy Group Ltd

The Value of Farming



£146.7bn

Agri-food contributes £146.7bn to the UK economy



£24.2bn

Ornamental horticulture and landscaping contribute £24.2bn to the UK economy



4.4 million

Farming employs 4.4m people with a further 100,000 students in education and training



£268bn

Unhealthy diets cost the UK £268bn annually in care costs and lost productivity



209,000

209,000 farms encompassing 17 million hectares of land



70%

70% of solar panel installations are located on agricultural land



56% fall

Farm income fell by 56% in 2023/24 to £45,300



Resources

Get more statistics on the value of the agrifood supply chain

Sources
Farm Business Income 2023/24, Defra
Agriculture in the United Kingdom 2023, Defra
The False Economy of Big Food, The Food, Farming and Countryside Commission, 2024

UN Natural Capital Accounts, Office of National Statistics, 2024
The Economic Impact of Ornamental Horticulture and Landscaping, RHS, 2018
Solar and land use in the UK: balancing energy and food security, PV Tech, 2023
Education statistics estimated using Landex figures for FE Colleges and indicative figures from specialist HE providers.



Climate Risk Reporting in Agriculture and Food

Significant UK businesses are required by law to include a non-financial information statement in their strategic report (The Companies Act 2006, from January 2019). This is overlaid by higher level regulations for main market and large entities in the United Kingdom. Those with European operations face further rules. Agriculture, food and farming businesses must be credible, even if there is no regulated mandate.

Businesses not mandated to include such a statement are at liberty to include one, and yet many do not. According to research from global accountancy practises a few years ago, of all global non-financial sectors, agriculture, food and forest products is recognised as having significant scope for improvement in terms of the coverage and quality of climate-related disclosures; surprising since its existence is so closely aligned to climate and nature.

Non-financial reporting should be high on the agenda of company boards as it directly impacts trust, governance and stakeholder accountability, as well as the way in which investors might view an organisation's investment viability. The political 'roll back' in 2025 may well be short lived – driven by business need and transparency.

Whilst there is evidence that non-financial statements are improving, a top-level review of filings registered with

Companies House, clearly demonstrates that many businesses are either not including non-financial statements or only providing the bare minimum data. The agriculture and food industry (excluding the main market listed multibillion businesses who are mandated to report at a higher level) are particularly noticeable; it undermines the very investment and engagement the sector needs to fulfil its true potential with regard not only to climate change mitigation but also to profitable business practice.

After all, the non-financial reporting regulations clearly state the contents should include 5 key components: consequences of decisions; employee interests; business relationships; community and environment; and member fairness.

The EU Directive that gave rise to the regulation allows greater flexibility in how non-financial information is reported compared to UK requirements - for example, the non-financial statement can be outside the annual report - but the purpose of both is clear: greater transparency, greater accountability, greater impact. Research suggests the industry demonstrated significant discrepancies across global regions with companies in the US, France and Japan amongst top performers, and the UK and Brazil ranked as good performers. Those global companies often attempt to



Read more about sustainability reporting and green actions in the agrifood value chain at ruralpolicygroup.com/resources

resource their ESG Team to deal with the global exposure of their operations and supply chains to transitional and physical risks.

At a higher reporting level, a FTSE 100 listing rule mandates that commercial listed companies (with equity shares) must include a statement in their annual financial reports regarding their climate-related disclosures, in line with the TCFD recommendations on governance, strategy, risk management and metrics & targeting. In addition, following a 2022 update to the Companies Act 2006, businesses in scope of the TCFD-aligned UK CFD (Climate-related Financial Disclosures) are required to disclose how climate risks and opportunities are identified, assessed, and managed, as well as the resilience of the business model and strategy to climate scenarios. We take a global dive.

Governance: research finds some level of information regarding boards' overall responsibility for climate-related issues and the governance of climate-related topics. However, the detail is not present (commercially sensitive?) The expectation of strong disclosure is robust oversight of climate-related topics as well as the interactions between governance structures and management.

Strategy and Risk: there is a willingness to disclosures such as detailed descriptions of risks and climate opportunities, and indicative time horizons for each. These should be integrated into a business, not just reported because it's required. Some companies still don't provide any description of the climate-related risks they are exposed to, their climate-related opportunities or their materiality process. Common themes among lower performing organisations are a failure to integrate and resource.

Targets: companies set out quantitative indicators, such as total greenhouse gas (GHG) emissions or energy consumption. Standard Scope 1 and 2 emissions are there, while Scope 3 emissions with clear boundaries and methodology remain a key challenge for value chain reporting.

The benefit of robust and transparent disclosure aligns with the unprecedented range of challenges, not least because it lies on the fine line between climate change contribution and climate change mitigation. There are two critical issues to face.

Firstly, a medium-term programme of investment and government policy improving resilience to climate change to secure a sustainable future. As an industry dependent on the natural environment, food and farming is exposed to the direct impacts of climate change and at high risk from shocks such as extreme or unseasonal weather.

Secondly, the industry holds a degree of responsibility for contributing to anthropogenic climate change. The global food system accounts for 21%-37% of the world's GHG emissions, although British farming contributes only 12% of British emissions. Despite this concern, we have seen little mention of the fact in the global COP series of meetings dedicated to bringing nations together to mitigate global warming and climate change.

There is, perhaps unsurprisingly, a caveat: robust action comes from robust data. The inconsistency of non-financial reporting means that businesses place themselves at a disadvantage when attempting to resolve the issues that face them.

Businesses must have a plan:

1. Gain a clear understanding of the ESG, climate change and sustainability risks facing the business.
2. Assess the potential impact of these risks on the business and create an impact hierarchy, recognising both positive and negative impacts.
3. Measure and manage. Data is your friend here. The broader and more granular the data, the better informed the business will be in terms of the impact on operations and the effective mitigating actions that might be taken.

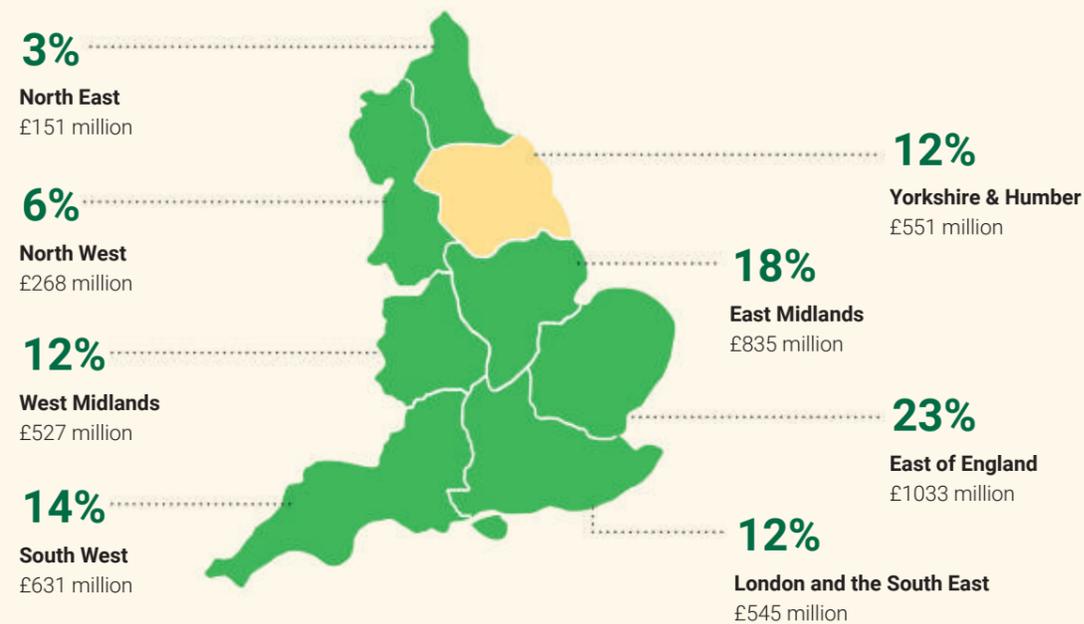
With greater collaboration through the supply chain and effective leadership, businesses can improve sustainability reporting to attract investment and tackle shared challenges such as food waste. There is a wealth of expertise and innovation in the industry which can be harnessed to improve the value chain's financial and environmental sustainability. We are at a planetary tipping point and the impacts of climate change will be with us for generations to come.

Now is the time to embrace change, take up voluntary non-financial reporting and grow the industry on the insights it can provide. In simple terms from a well-known food business, the industry must 'always deliver'.

Valuing the Yorkshire Food Powerhouse



Total Income From Farming



Source
Agricultural Facts: Summary, Defra, October 2024

Yorkshire's AgriFood Industry

Yorkshire is home to over 5.15m people (2021 census)¹ and contains three top 10 UK cities: Leeds; Sheffield; and Bradford, with a further three cities in the top 40 in the UK: Wakefield; Kingston Upon Hull; and York.

Whilst Yorkshire has many larger towns and cities, it remains at heart a rural region with large areas of farmland covering 1.02m hectares (2.52m acres). The agricultural sector is arguably the most diverse in the UK from significant areas of extensive upland grazing on the moors and Pennines, to large areas of arable and horticultural production in the East Riding, and lush pastures for meat and milk producers in river valleys. Whilst a smaller industry than in the past, the coast still retains an important fishing fleet, both in Hull and from a series of North Sea fishing villages.

2.52m
acres of agricultural land

Yorkshire's scale and diversity means it is important nationally for a wide range of farming products. It has England's largest pig herd, 38% of the national herd, 17% of the turkeys and 12% of egg layers and is therefore a UK leader in intensive livestock production. But, it also has over 14% of England's sheep and 10% of the cattle. In arable crops Yorkshire produces 13% of England's cereals, 35% of the peas and beans, 18% of potatoes and 14% of oilseed rape. It also has 13% of England's glasshouses and protected crops, and with outdoor production, over 10% of England's horticulture.

The raw materials produced by this depth and breadth of farm production has led to a large food processing and distribution sector. With nearly 16% of England's food and drink processing sector, employing nearly 58,000 people, it is important to the Yorkshire economy and UK food security.

¹ Explore Local Statistics, ONS, 2025

Whilst much of the agricultural and food processing sector focuses on large scale, commodity food and drink production for supermarkets and the food service or hospitality sector, Yorkshire has also developed many specialty food and drink products recognised across the UK and internationally.

The classic Yorkshire Pudding is world renowned and Wensleydale Cheese, the favoured cheese of Wallace and Gromit, is a clear success alongside Yorkshire hams and forced rhubarb from the 'Rhubarb Triangle' in West Yorkshire. Drinks are also well catered for, from multiple breweries including long established brands, some from the 19th Century such as Timothy Taylor, to many newer craft beer specialists who have helped lead the renaissance of UK brewing, including successful names like the Black Sheep brewery established in the early 90s, amongst many others.

But Yorkshire is also famous for non-alcoholic beverages with Yorkshire Tea a well-recognised brand linked with Bettys of Harrogate Tea Rooms, which bought Taylors of Harrogate and the Yorkshire Tea brand in the 1960s to form the Bettys and Taylor Group. This is a very successful tea, coffee and online business, with the linked hospitality division having 5 large tea rooms in Yorkshire, making the brand synonymous with Yorkshire.

All 4 combined authorities in Yorkshire have large agrifood businesses, including sites owned by some of the largest food and drink businesses globally, as well as UK leading companies. The other notable feature of larger agrifood businesses in Yorkshire is their diversity, from major fertiliser and agricultural input suppliers, to food and drink processors in products as diverse as fish, poultry, pigs, arable crops, oils, bakery, processed foods, confectionery, alcoholic and non-alcoholic beverages.

Yorkshire has multiple significant clusters of larger agrifood businesses including in the:

East Riding and Hull Combined Authority area

with company sites such as:

- International fertiliser supplier Yara's UK HQ in Pocklington



- UK leading greenhouse builder Cambridge HOK in Brough
- Cranswick (UK leading pork producer, food service and pet foods) and the William Jackson Food Group are both based in Hessle and William Jackson Food Group also have a bakery in Hull
- AAK International (vegetable oils) and AB Mauri bakery ingredients business (part of ABF Plc) both having major sites in Hull

West Yorkshire Mayoral Combined Authority area with company sites such as:

- Arla (dairy), Coca Cola (soft drinks), Timothy Taylor (brewery), AB Foods (bakery), Finlays (beverages), Mars (Birstall Pet Care factory), Allied Bakeries (bakery), Troy Foods (vegetables) all have large sites in Leeds. Endless LLP, a Leeds based private equity group owns Hovis
- 2 Sisters owned by Boparan Holdings (head office functions) and Coca Cola Enterprises (largest soft drinks plant in Europe by volume) are both in Wakefield
- Nestle in Halifax (confectionery)

South Yorkshire Mayoral Combined Authority area with company sites such as:

- Premier Foods Carlton Bakery, Coca Cola (beverages), Red Bull (beverages), Heineken (beers), Cadbury (Bassetts, ultimately part of Mondelez) and Grupo Bimbo (Mexican bakery and processed foods) all have bases in Sheffield
- Doncaster based Real Yorkshire Pudding Co (part of Compleat Food Group)

York and North Yorkshire Combined Authority with company sites such as:

- Heineken (beers) in Tadcaster
- Karro Foods in Malton (major pork processor)
- Bettys and Taylors Group (Yorkshire Tea) in Harrogate
- Heck Food Ltd (sausages and other processed meats) in Bedale

2 Nomis, ONS, 2025
 3 Regional gross value added (balanced) by industry: all ITL regions, ONS, 2025
 4 Structure of the agricultural industry in England and the UK at June, Defra, 2025

- Nestle UK (UK HQ, factory distribution centre and product technology centre), Rowntree and Terry's are all major chocolate manufacturers in York which have earned the city the nickname of 'the Chocolate City'

Economic Impact of the Yorkshire Agrifood Industry

In 2023, Yorkshire's total workforce was 2.42m people, or 8.6% of total employment in England (28.2m)². Yorkshire's total GVA across all industries was £155bn or 7.3% of total English GVA (£2,113bn), and 6.2% of UK GVA³. On virtually every metric, Yorkshire's share of agriculture and the food sector is higher than this, showing how important the agrifood sector is to the Yorkshire economy and the important role that Yorkshire plays in national food security.

Agriculture and Horticulture

Yorkshire has 10-12% of England's farms, farmland area and workforce (2024) with 11,380 farm holdings encompassing over 1 million hectares and employing nearly 29,000 people⁴.

Yorkshire is amongst the most diverse farming counties in England with a range of landscapes and farm types and it has significant shares of all major land use types, in particular rough grazing, permanent pasture, arable land and horticulture. DEFRA data also shows that Yorkshire's share of crops is above average for peas and beans, potatoes, protected crops, oilseed rape and cereals.

The cattle herd in Yorkshire is broadly in line with its proportion of English farming, but this is biased towards beef cattle with a smaller dairy herd. The county has a higher proportion of the English sheep flock than its share of farming with nearly 2 million sheep, reflecting large areas of moor and upland rough grazing:

Intensive livestock production is also a key feature of the Yorkshire agricultural sector. Yorkshire is England's largest pig producer, concentrated towards fattening pigs in the East Riding, where almost 40% of the fattening herd is located. Yorkshire also has strengths in turkeys and the egg laying flock with 7.9% of the English poultry flock.

As shown below, in 2023 Yorkshire was responsible for 11.6% of total market output of English agriculture, almost £3 billion of farm output, and 10.8% of its GVA. This output was concentrated in the livestock sector where Yorkshire produced more than £1.5 billion of output. Yorkshire's farming profits were 10.3% of English farm profits at £469 million, indicating a profitability of output marginally below the English average, mainly due to lower levels of profitability in upland grazing livestock production.



Metric	Yorkshire (£million current prices) ^{5,6}	Yorkshire % of English
Total crop output	£1,055	10.6%
Total livestock output	£1,531	12.3%
Output at market prices	£2,897	11.6%
Total intermediate consumption	£1,821	12.1%
Gross value added at market prices	£1,076	10.8%
Total income from farming (TIFF)	£469	10.3%

2 Nomis, ONS, 2025
 3 Regional gross value added (balanced) by industry: all ITL regions, ONS, 2025
 4 Structure of the agricultural industry in England and the UK at June, Defra, 2025
 5 Total income from farming for the regions of England, Defra, 2024
 6 Total income from farming in England, Defra, 2024

Fishing

In 2024, Yorkshire's fisheries sector employed 315 staff⁷, or 10.5% of England's total. Yorkshire ports landed c.5,000 tonnes of fish worth almost £30 million, including more than 3,400 tonnes of shellfish worth £15 million⁸. Yorkshire therefore landed 5.7% of the English catch by volume, but 12.8% by value, demonstrating the high value of Yorkshire fisheries, and higher productivity per worker. The Yorkshire catch was particularly strong for demersal⁹ and shellfish species, with Yorkshire catching more than 16% of the English value of demersal fish in 2024. Across all three main fish categories: demersal; pelagic¹⁰; and shellfish, Yorkshire's catch had a higher value per kilo landed.

Food Processing and Added Value

Yorkshire has a very well-developed food processing and added-value industry with high shares of English jobs and GVA¹¹. Food and drink manufacturing employment was 57,925¹² (2023), or 15.7% of the English total, primarily in food processing. Despite large drink producers, Yorkshire has a lower proportion of sector jobs, 8.5% in drink manufacturing than the English average. Yorkshire's particular strengths include more than a quarter of English employment in (% share of English total):

- 100% of the manufacture of margarine and edible fats;
- 48% of the manufacture of macaroni and similar farinaceous products;
- 37% of the processing and preserving of meat;
- 29% of cocoa, chocolate and sugar confectionery manufacturing;
- 28% of ice cream;
- 28% of tea and coffee (reflecting the internationally known Yorkshire Tea brand);
- 26% of the manufacture of oils and fats.

⁷ Nomis, ONS, 2025

⁸ 2024 UK and foreign vessels landings by UK port and UK vessel landings abroad: provisional data, GOV.UK, 2025

⁹ Hake, Monks or Anglers, Sole, Pollack (Lythe), Turbot, Bass, Brill, Cod, Conger Eels, Dabs, Dogfish, Floundres, Gurnard, Haddock, Lemon Sole, Ling, Megrin, Plaice, Saithe, Sand Eels, Skates and Rays, Whiting, Witch

¹⁰ Sardines, Mackerel, Herring, Horse Mackerel, Tuna, others

¹¹ Regional gross value added (balanced) by industry: all ITL regions, ONS, 2025

¹² Nomis, ONS, 2025

58,000

employed in food and drink manufacturing



There are also multiple nationally important food and drink processing clusters¹³ in Yorkshire, including (% share of English total):

- 48% of macaroni and similar farinaceous products in Leeds;
- 20% of ice cream, 17% of tea and coffee and 10% of meat processing in North Yorkshire;
- 17% of the manufacture of oils and fats in Hull;
- 11% of meat processing, and 10% of cocoa, chocolate and sugar confectionery in Wakefield;
- 11% of meat processing in the East Riding;
- 7% of cocoa, chocolate and sugar confectionery in York.

This strong food and drink processing sector, in particular meat processing, corresponds to the agricultural clusters in Yorkshire with its high shares of pig, poultry, beef and sheep production.

In Yorkshire, food and drink processing contributed more than £3.6 billion to the economy in 2023, or more than 12.8% of the total food and drink processing GVA in England in 2023. However, Yorkshire's food and drink manufacturing sector's share of English sector GVA is smaller than its share of employment, due to a lower GVA per worker than the English average at £62,426 per worker, compared to an English average of £76,649. This suggests that there may be room to invest in productivity improvement or higher value forms of processing in parts of the sector.

More broadly, Yorkshire has also been in the vanguard of the bioeconomy with a focus on adding value to agrifood products for non-food uses. Notably this has included the UK's largest biofuels producer, Vivergo Fuels in Hull¹⁴, although recent changes to tariffs on US biofuels entering the UK, with the rate reduced to 0%, is putting this site at risk.

Supply Chain

Yorkshire's agrifood production industry supports a large number of jobs in input supply, marketing and distribution of food. Estimated employment in the ancillary agrifood supply chain including vets, agronomists, professional services, wholesaling, machinery, transport, storage and the manufacture of fertilizers stands at 45,500.

Food Production and Distribution

The end-to-end food production and commercial food distribution supply chain in Yorkshire is estimated to employ just over 132,000 employees and generate a GVA of nearly £7.5billion.

This means the sector directly employs 5.5% of Yorkshire's workforce (2.42m), compared to 3.3% at UK level¹⁵.

£7.5bn

GVA from food production and distribution in Yorkshire

132,000

employed in food production and distribution

The sector accounts for 4.8% of Yorkshire's total economy (£155bn), compared to 2.8% at UK level¹⁶. This analysis does not include the consumer end of the food chain, i.e. food retail and catering services, which nationally account for more jobs and GVA than the food production part of the food chain. It also does not include, due to lack of reliable data, an estimate of the number of staff employed by employment agencies and other sources of temporary worker supplies who work in the industry.

¹³ All percentages are of the total of English employment within these 4-digit SIC code industries in 2023. Source: Nomis, ONS, 2025

¹⁴ Vivergo Fuels website, 2025

¹⁵ 33.17m employed in 2023, with 1.09m of these in the agrifood supply chain

¹⁶ GVA of £2,257bn in 2023

¹⁷ CS, ES and SFI option uptake data 2025, Defra, 2025

Case Study: BioYorkshire

BioYorkshire is a partnership to accelerate the translation of research into commercial biotechnology. Run by a partnership of the University of York, Biorenewables Development Centre, Fera Science, Askham Bryan College and a range of private sector partners, it aims to build on the unique capabilities of York and North Yorkshire to create a leading bioeconomy cluster. It uses the region's world-class science base to develop bio-based chemicals, materials and fuel production, as well as productive food, feed, farming and wider land-use practices to support net zero goals.

The Green Transition

Yorkshire has had a large focus on the green transition in agriculture for the last 20 years, with multiple programmes and initiatives to deliver change, led by local partners and supported by national programmes and investment.

Yorkshire has seen good take up of Countryside Stewardship (CS), Environmental Stewardship (ES) and the Sustainable Farming Incentive (SFI) in both the 2023 and 2024 programmes. Across these programmes, the agreements in Yorkshire account for between 8.8% to 11.7% of all the agreements in England¹⁷, broadly in line with its share of farms (11.1%). In 2024 Yorkshire farm businesses signed 1,450 SFI agreements, 2,850 with the Countryside Stewardship scheme and a further 580 Environmental Stewardship contracts.

Yorkshire has major agricultural challenges on peatland restoration, biodiversity, carbon and water management, which will impact its agrifood sector. The county is being proactive in tackling these challenges, led by strong partnership working between the agricultural industry, research partners and wider business and public sector groups. This has led to the area being at the forefront of the bioeconomy in the UK.

Case Study: Alder BioInsights

Yorkshire was the home of the National Non Food Crops Centre (NNFCC) when it was established with government support in 2003. It later became NNFCC Ltd and is now rebranded as Alder BioInsights.

Supporting the AgriFood Industry

The scale of the Yorkshire agricultural and food sector means that the region also has a large range of support, research and educational organisations and facilities to help the industry grow. This includes large business groups, such as Yorkshire Agricultural Society, to a wide range of universities, colleges and research centres to support an innovation-led sector. A key theme of all these programmes is to support industry growth and diversification at the same time as sustainability

Yorkshire Agricultural Society (YAS):

One of the UK's leading agricultural societies, YAS runs England's largest agricultural show, the Great Yorkshire Show, over 4 days each year in July which attracted 140,000 visitors in 2024. Whilst the Great Yorkshire Show is the Society's showcase event, it only forms one part of the work the Society undertakes to support the agricultural and rural community. The showground hosts multiple other events during the year and also has an exemplar food hall, Fodders, to promote food and drink from Yorkshire on their showground in Harrogate.

The Society is also very active in promoting education about agriculture and the food sector, whether introducing the industry to the next generation by working with schools, or helping early and mid-career future leaders develop their knowledge and skills through a Nuffield Scholarship. It is also part of the Yorkshire Rural Support Network, working alongside multiple partners to provide help to the farming and rural communities.

The York AgriFood Knowledge and Innovation Cluster:

York and its immediate vicinity has a cluster of agricultural and food chain education, training, research and innovation facilities which together form a focal point for the region, but with a clear national role as well. The cluster includes:

- The new UK Agri-Tech Centre in Heslington, which was formed in 2023 when CHAP, CIEL and AgriEPI Centre merged. It is working with the industry and government to drive the agritech sector's future role in supporting the industry by building partnerships, promoting agritech and supporting innovation.

- FERA Science located just outside York, at Sand Hutton is a national facility with over 100 years' experience in supporting agricultural, food and environmental industries. It undertakes research with 600 active projects, analyses over 100,000 samples per year and works in partnership in the UK and internationally with over 1,000 partners. Originally part of government, it is now independent but still works on contract research for government.
- The University of York has a long history of supporting the agricultural sector and works across many areas including novel agricultural products Centre for Novel Agricultural Products - Centre for Novel Agricultural Products, University of York, robotics and autonomy Agriculture - Centre for Assuring Autonomy, University of York, the FarmPEP knowledge exchange platform for farmers, and a wide range of agrifood research.
- The University also works with regional and national partners in the Fix our Food programme which is focusing on how to deliver a regenerative food system in Yorkshire.
- Askham Bryan College in York is a long established agricultural college with five campuses, including the headquarters in York, as well as Middlesbrough, Saltaire and Wakefield in Yorkshire, and Gateshead in Tyne and Wear.
- The BioYorkshire programme is a public-private partnership which includes the University of York, Biorenewables Development Centre, Fera Science, Askham Byran College and a range of business partners. It aims to harness the capabilities of the York and North Yorkshire region to create a leading bioeconomy cluster.

Yorkshire Agricultural Science and Technology Base

As well as the York cluster, Yorkshire has other important educational and research assets including:

- Bishop Burton College based near Beverley with nearly 3,100 students studying mainly agrifood and land-based subjects in 2024, making it a UK leading provider. With strong FE provision it also offers HE and courses for industry, with its campus in Beverley complimented by another campus near Lincoln at Riseholme College.
- The University of Leeds focuses on global food security and sustainable food production, with a University farm and wide range of research on food policy, production and sustainability supporting its teaching at both undergraduate and postgraduate level.
- Sheffield University has a wide range of agritech and food related provision, but is also well known for its work on food chain sustainability through the Institute for Sustainable Food.
- Sheffield Hallam University is very active in food chain engineering with the Advanced Food Innovation Centre (AFIC) committed to problem-led, collaborative research, innovation, and knowledge exchange, to deliver solutions for sustainable and healthier food systems in purpose built facilities opened in 2019.
- The University of Hull includes the Faculty of Science and Engineering which works on industry challenges including R&D on biofuels, bio-based materials and bio-refining. The University aims to support the shift to second and third generation non edible, bio-organic component biofuels and biomaterials which don't compete with land for food.

Want to know more? Find the details behind the headlines, get tabulated data, explore our sources and get more information about the Yorkshire organisations supporting the UK's food supply chain at ruralpolicygroup.com/resources





The Importance of Farming and Farmland to the Green Transition

Critical to a Sustainable Food System

The UK's food supply chain has made notable progress in enhancing environmental sustainability across agriculture, processing, logistics, and retail. While challenges remain, continued investment, innovation, and collaboration will be key to achieving a resilient, sustainable, and environmentally friendly food system.

For example, UK agriculture has increasingly adopted regenerative and precision farming methods, focusing on soil health, biodiversity, and reduced chemical inputs. The food processing and manufacturing sector has made commendable efforts to reduce its environmental footprint through investment in energy-efficient technologies and waste reduction strategies such as closed-loop systems to minimize water usage and waste.

Emissions in logistics are being reduced through a growing emphasis on local sourcing, shorter supply chains and just-in-time deliveries while solutions are being sought for fuel dependency and infrastructure improvements. Retailers are promoting sustainable practices with their supply chain partners; collaborating with suppliers to move towards low-carbon and carbon-neutral products, redesigning packaging to reduce waste, supporting environmental and wildlife charities and improving energy efficiency with initiatives such as Morrisons trial of higher freezer temperatures.

Despite these efforts, agriculture is at a pivotal juncture and addressing remaining challenges, such as those around waste, GHG emissions and agricultural runoff, requires continued investment in sustainable practices and technologies. In turn, investment requires profitability, business viability and a degree of certainty around policy decisions.

Government support for the green transition in the agriculture industry, such as the development of harmonised methodologies to help farm businesses calculate and reduce their emissions, financial incentives for adopting environmentally friendly practices and investment in research to support the development, dissemination and adoption of emission reduction strategies is very welcome. This role as an industry-wide co-ordinator and facilitator cannot be replicated elsewhere. However, food production needs to be a financially viable business to keep farmers farming and to encourage investment in sustainable practices.

Critical to the Clean Energy Strategy

Agriculture is driving the green transition beyond the food system. Farmland plays a crucial and multifaceted role in the UK's clean energy strategy. In short, the country could not meet its goal for clean power by 2030 and net zero GHG emissions by 2050 without the use of farmland. It serves as both a platform for renewable energy generation and as an important consumer.

“Private farms need to be viewed as public assets”.
Mark Lumsdon-Taylor
Rural Policy Group President

According to the National Farmers' Union (NFU), up to 10% of UK agricultural land could be allocated for renewable energy production, including solar farms and bioenergy crops, as part of the sector's commitment to achieving net-zero emissions by 2040. This shift is supported by the government's Land Use Framework, which aims to balance food production with the need for clean energy and nature restoration. The framework encourages the use of lower-grade agricultural land for renewable energy projects, thereby preserving prime farmland for food production.

Innovative approaches like agrivoltaics - integrating solar panels with crop production – are gaining traction with farm businesses. Studies suggest that this method can enhance land-use efficiency by allowing simultaneous food and energy production. This dual-use strategy not only contributes to the UK's renewable energy targets but also provides farmers with additional income streams, enhancing the resilience of rural economies.

The UK government recognises the importance of farmland in its clean energy ambitions. Policies are being developed to ensure that renewable energy projects align with food security goals. For instance, the Renewable Energy Planning Database is being expanded to monitor the type of land used for solar projects, ensuring that high-quality agricultural land is protected.

Furthermore, the Environmental Land Management schemes offer incentives for farmers to adopt sustainable practices, including renewable energy generation, thereby integrating climate goals with agricultural productivity.

While the integration of renewable energy into farmland presents opportunities, it also raises concerns about potential impacts on food production. Critics argue that large-scale solar projects could reduce the availability of land for agriculture. However, proponents highlight that using lower-grade land and adopting dual-use practices like agrivoltaics can mitigate these concerns.

The government's Land Use Framework seeks to address these challenges by promoting a balanced approach that supports clean energy development without compromising food security. However, the typical return per acre is 10x higher for solar energy than for traditional agricultural activity. This is a considerable financial incentive, perhaps necessary, for farm businesses to divert even good quality land into solar. Returns on food production need to be competitive to attract and retain land.

The use of lower grade land to supply clean energy comes up against the exponentially more profitable sale of land for housing development. The APR and BPR reforms coming into effect in April 2026 will force a mass redeployment of land through farm sales and the need to generate profit to pay the tax. In cases where land sales are necessitated, land will be lost and the agriculture industry's capacity to drive forward the green transition will be curtailed.

If we exclude farmland from the green energy equation, the UK would face grid constraints arising from the need to access more urban and brownfield sites which are limited in number and often face higher costs and regulatory hurdles, and greater reliance on offshore wind which is slower to be deployed than land-based sites. The impact: higher costs, slower rollout and delays reaching net zero by 2050.

Farmland is also a means of achieving broader sustainability goals. It is central to carbon sequestration via hedgerows, rewilding and soil carbon storage, meaning any loss of land would undermine both the reduction and removal of emissions.

Threats to the Green Transition



Agricultural Property Relief (APR) and Business Property Relief (BPR)

Proposals to reform Agricultural Property Relief (APR) in April 2026 by introducing a 20% inheritance tax on agricultural land risk destabilising farm businesses across the UK. The vast majority of farms are asset-rich and income-poor, meaning that land, rather than liquid capital, constitutes the majority of their value. Imposing a significant tax liability on the transfer of farmland and business assets (BPR) through succession could force the sale of land to meet tax obligations. This would disrupt the continuity of farming concerns, fragment land holdings, and undermine long-term business planning.

At a time when government is asking farmers to take a multi-decade view towards investing in soil health, tree planting, and biodiversity, penalising generational transfer is counterproductive. Without confidence that their businesses can pass sustainably between generations, many farmers will opt out of long-term environmental schemes altogether. Further, the expected concentration of land ownership into more corporate farming structures will reduce participation in long-term sustainability measures such as regenerative agriculture, agroforestry and peatland restoration which require patient capital as directors pursue more immediate yields to recoup their investment.

APR reform, if not handled carefully, could become a structural barrier to the green transition in land use and food production.

Low Profit Margins in the Food Supply Chain

Minimal – and often negative – returns on investment are a persistent and systemic issue for primary producers. While input costs have risen dramatically in recent years, from fuel and fertiliser to labour and energy, the prices paid to producers have not kept pace. The resulting financial squeeze leaves little room for investments in green tech, animal welfare, soil health, or emissions reduction.

Current levels of profitability not only put farm businesses at risk of closure, it also makes it nearly impossible for them to transition to more sustainable methods of production. Practices that improve soil health, reduce emissions, or increase biodiversity often require upfront investment and a period of lower returns before benefits are realised. When margins are razor thin, such transitions become financially unviable. If government wants farmers to lead on sustainability, it must first ensure that farming is economically viable.

The APR reforms compound low levels of profitability as the tax adds to the cost of production. 100% tax relief of agricultural property was also the trade-off farmers used to offset poor returns; its loss has galvanised the industry to seek improvement in margins. If these are not forthcoming, we will see ever more exits and loss of food production capacity as land is sold or redeployed.

“Farms need to be in the green to go green”.

Katie Tucker
Executive Director,
Rural Policy Group

Low Food Prices

According to the OECD and World Bank, the UK consistently ranks among the countries with the lowest food costs as a percentage of household income, only behind the US in some years. On average, British households spend 8–10% of their income on food, compared to 13–17% in many EU countries. While this may seem like a success story, it comes with a heavy cost to the agricultural sector.

The consumer expectation of cheap food perpetuates the profitability problem. This pricing model creates a structural disincentive for sustainable farming. When food is undervalued, so too is the work that goes into producing it, from labour and animal welfare to environmental protections. Farm businesses are left absorbing the cost of meeting regulatory standards without seeing their extra effort and expense rewarded in farm gate prices. The latest figures indicate the median return on capital employed for farms was -0.8% in 2023/24 indicating they are not generating a positive return, a decline from 0.5 in 2022/23.

Unless food pricing reflects the true cost of sustainable production, including its environmental and social value, UK farming will remain locked into a race to the bottom. While some green actions and the resulting data are a valued and valuable commodity, other investments are frequently out of reach. Beyond limiting the ability to fund investments, the market discourages would-be investors by signalling that it rewards cheap, high-volume production. Businesses are also less resilient to the uncertainty and risk which comes from introducing new technologies and practices. Profitability is key to creating an economic environment which incentivises, facilitates and rewards investment in sustainability.

-0.8% ROCE

the average farm is not generating a positive return

International Trade

Brexit has cost British producers dearly and recent trade agreements have increased competition in their domestic market too. The UK is importing substitute goods from countries with lower environmental, welfare, and labour standards, placing British farmers at a disadvantage as their higher standards (and costs) are not valued. These deals create an uneven playing field. UK producers who meet high standards, and are being encouraged to go further, now find themselves undercut by cheaper imports produced under weaker regulations.

This undermines the achievability of the government's own green transition agenda. Farmers are unlikely to invest in higher standards if doing so means pricing themselves out of the market. Without stronger safeguards in trade policy, such as mandatory equivalence of standards, there is a real risk that the UK will outsource both emissions and environmental degradation to other countries, while domestic producers are driven out of business. To build a sustainable food system, trade must support, not undermine, domestic ambition.

In Conclusion

A struggling agriculture industry characterised by the challenges outlined here: resists change out of necessity; underinvests in innovation; loses skilled people and erodes natural capital; becomes a cost centre rather than an engine of growth.

Conversely, a profitable farming industry doesn't just adapt to green change, it drives it: it is an early adopter of new practices and tech; it unlocks private capital for natural capital restoration; it models and mainstreams sustainability through real, working examples; it makes sustainable nutritious food more affordable; it powers the transition to clean energy and fuels; it restores ecosystems; it supports circular economies and provides quality employment in rural communities around the UK.

Source
Balance sheet analysis and farming performance, England 2023/24 - statistics notice, Defra, May 2025

Calls to Action

The green transition requires stable, profitable, and environmentally conscious farming to deliver a more sustainable food system and clean energy. Yet, profitability pressures are pushing farmers in the other direction. Parliamentary policymakers are uniquely positioned to de-risk change, reward public goods, and create the conditions for private capital to flow into nature-positive land use.

How?

- 1 Strengthen food security ambitions to make the UK 70% self-sufficient in food production by 2030.
- 2 Improve supply chain fairness through strengthened supply chain regulation and more collaboration between trading partners to foster fair pricing, increase transparency on costs and margins and refine contract terms.
- 3 Provide financial certainty and stability with predictable, multi-year policies spanning 10 years or more.
- 4 Implement Agricultural Property Relief (APR) reforms sensitively and in consultation with farm businesses to protect the public benefits from farming and farmland.

Source
Datacity.com, June 2025

- 5 Create standardised baselines and verification systems for environmental metrics so that private investors such as banks, corporates, insurers and farmers themselves can confidently fund nature-based solutions.
- 6 Use public funds to co-invest with the private sector in a public-private partnership: offer government guarantees or match-funding for green investments; create blended finance funds that combine public grants, concessional loans, and private capital to reduce risk and crowd in investment.
- 7 Pursue trade deals that uphold equivalent environmental, employment and animal welfare standards.

Why?

A more profitable farming industry would be a powerful engine for delivering a faster, fairer green transition for the UK's economy, environment, and communities. The profitability would advance the low-carbon infrastructure, energise the domestic market for the UK's £12bn agritech industry (the agritech industry shrank last year in response to disinvestment in farming in recent years), create good jobs with fairer salaries in rural locations, reduce dependence on public funds, enable investment in ecosystem services and much more.

Unlock the benefits of Rural Policy Group

Join us on our shared mission

Rural Policy Group was founded on 2019 to support the financial and environmental sustainability of the agrifood supply chain. This central tenet is underpinned by:

- Fair value in the food supply chain
- Food security grounded in self-sufficiency and a considered approach to imports
- Sustainable accounting as standard
- Stimulating investment and profitability in farms and other food businesses
- Recognition of green actions as a valued and valuable commodity

Why become part of the community?

Together with our members, Rural Policy Group creates dialogue and stimulates impactful change to better the environment for Britain's food businesses, from fertilizer to fork to framework. We believe vertical collaboration and uniting businesses at all stages of the agrifood supply chain, its professional partners and allied industries is the best way to achieve thriving businesses and a more sustainable food system.

- > **CONNECT** Bringing people together and creating space for conversation
- > **INSPIRE** Cultivating a forum for inspiration, business development and reciprocity
- > **INFLUENCE** Inform policy to create a better operating environment for food businesses
- > **LEARN** Supporting business to understand and adapt to policy changes



Join Rural Policy Group

Rural Policy Group provides a range of tailored memberships to align with your individual and business needs.

Find your match at ruralpolicygroup.com/membership-join



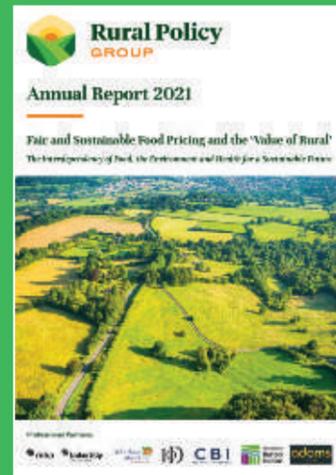
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Rural Policy Group serves to enhance the financial and environmental sustainability of the agrifood supply chain.

We bring together inspirational partners spanning the triple helix of education, politics and industry to help businesses adapt to changing policy frameworks and market conditions. And we further dialogue with policy decision-makers to shape the business environment for farms and food businesses.

Learn more about what we do, our impacts and future initiatives for our members and the wider agrifood industry.