



## DEBATE PACK

Number CDP 2019/0062, 7 March 2019

# Interdependence of modern farming and the environment

A 90-minute debate on the 'Interdependence of modern farming and the environment' has been scheduled for 2.30 pm on Tuesday 12 March 2019 in Westminster Hall. Colin Clark MP is the Member leading the debate.

This note provides some background to the issue, and compiles links to relevant Library briefings, Parliamentary debates and statements, and press coverage.

The House of Commons Library prepares a briefing in hard copy and/or online for most non-legislative debates in the Chamber and Westminster Hall other than half-hour debates. Debate Packs are produced quickly after the announcement of parliamentary business. They are intended to provide a summary or overview of the issue being debated and identify relevant briefings and useful documents, including press and parliamentary material. More detailed briefing can be prepared for Members on request to the Library.

By Sarah Coe  
Nikki Sutherland

## Contents

<b>1.</b>	<b>Interdependence of modern farming and the environment</b>	<b>2</b>
1.1	Sustainable agriculture	2
1.2	Key Parliamentary briefings	3
	Agriculture and the environment	3
	Air quality	4
	Water quality	4
	Climate change	4
	Pesticides	5
1.3	Other briefing	5
	Biodiversity and farming	5
<b>2.</b>	<b>News items</b>	<b>6</b>
<b>3.</b>	<b>Press releases</b>	<b>8</b>
<b>4.</b>	<b>Parliamentary material</b>	<b>17</b>
	Debates	17
	PQs	17

# 1. Interdependence of modern farming and the environment

## 1.1 Sustainable agriculture

A sustainable, productive farming sector is dependent on a healthy environment. Some [70% of the UK's land is used for agriculture](#),<sup>1</sup> and the way in which it is farmed can have environmental impacts - positive or negative. Modern technologies and methods can reduce air, water and land pollution and cut greenhouse gas emissions from farming. Government and farmers recognise the value to the sector of policies which harness new approaches to deliver fertile soils, thriving pollinator populations, clean air and water, and effective pest control.

The Secretary of State for the Environment, Food and Rural Affairs, Michael Gove MP told farmers in January 2019 that a “fourth agricultural revolution” was occurring:

The requirement to use less carbon, to limit the nitrous oxide entering our atmosphere and the nitrates entering our rivers, to improve the organic content and fertility of our soil, to renew, reuse and recycle finite natural resources and yet, at the same time, to also improve resource productivity as the human population grows, all these are the forces driving technological innovation. Science is thus both making us aware of why agriculture needs to change and also enabling that change to meet our needs.<sup>2</sup>

The National Farmers' Union (NFU) also considers that modern farming will have environmental benefits:

The adoption of new technology will help agriculture reduce its environmental burden through the ability to carry out operations more precisely and with less resources, further reducing its impact on the natural environment.<sup>3</sup>

The NFU publication [United by our environment, our food, our future](#) published in December 2018 sets out a vision for sustainable farming. It notes that:

Farming is integral to protecting, maintaining and enhancing our treasured habitats and wildlife, but also more common biodiversity, which is often overlooked and underplayed;

Good management of soil underpins our food production system and helps deliver a number of public benefits. But soil is a complex system and good quality data is needed to help farmers benchmark progress;

A clean reliable source of water is vital to all farms, but taking steps to manage flood risk and reduce agriculture's impact on

---

<sup>1</sup> Department for Environment, Food and Rural Affairs, Department of Agriculture, Environment and Rural Affairs (Northern Ireland), Welsh Assembly, The Department for Rural Affairs and Heritage, The Scottish Government, Rural and Environment Science and Analytical Services, [Agriculture in the UK 2017](#), 2018

<sup>2</sup> Michael Gove MP, [Speech to the Oxford farming conference](#), January 2019

<sup>3</sup> NFU, [The future of food 2040](#), February 2019, p11

water quality are also essential elements of the work that farmers do;

Agriculture is unique when it comes to dealing with the challenges of improving air quality and reducing greenhouse gas emissions because it can remove carbon dioxide from the atmosphere and store it in soil and vegetation, and generate low carbon renewable energy;

Industry-led initiatives like the Campaign for the Farmed Environment, Tried & Tested, the Greenhouse Gas Action Plan and the Voluntary Initiative have played, and will continue to play, a role in promoting good environmental practice on farm.

The Government is developing new policies for farm support after Brexit that will reward farmers for providing ‘public goods’ such as environmental improvements. It has published an [Agriculture Bill 2017-19](#) which completed its Committee Stage in the Commons on 20 November 2018. The devolved administrations are also developing farm policies for after Brexit. Further details are set out in the briefings listed below.

## 1.2 Key Parliamentary briefings

Listed below are Commons Library and POST briefings on overarching agriculture and environment issues as well as on specific environmental policy areas – air quality, water quality, climate change and pesticide use.

### Agriculture and the environment

The following briefings address overarching agricultural policy issues, including environmental aspects of farm policy after Brexit such as plans for farmers to receive subsidies under Environmental Land Management schemes.

- [Brexit: Future UK Agriculture Policy](#), Commons Briefing Paper 8218, 11 September 2018, outlines the context for future UK farm policy. It explains the current environmental aspects of the EU’s Common Agricultural Policy, such as the requirement for farmers to comply with ‘greening’ rules, and how the four nations are developing new approaches to farm support.
- [The Agriculture Bill 2017-19](#), Commons Briefing Paper 8405, October 2018. This briefing explains proposals for new powers for the Government to give farmers financial assistance for a range of environmental purposes, including land and water management; mitigating or adapting to climate change; protecting or improving the health of plants; and preventing, reducing or protecting from environmental hazards.

Briefings on the Government’s general environment policies also address agricultural issues, such as soil management and encouragement of farming that enhances the natural environment:

- [The 25 year Environment Plan](#), Commons Briefing Paper 8196, 17 January 2018

The Parliamentary Office of Science and Technology (POST) has produced the following POSTnotes which address technological

advances in farming, including the use of new techniques to minimise resource inputs such as fertilisers whilst maximising crop production:

- [Trends in Agriculture](#), POSTnote Number 589, November 2018
- [Precision Agriculture](#), POSTnote Number 505, September 2015

## Air quality

- [Air quality: cutting through the haze](#), Commons Library Insight, 27 November 2018. This Insight provides a general overview of recent and forthcoming proposals on air quality.

In January 2019 the Government published its [Clean Air Strategy \(CAS\)](#). The CAS sets out how the agriculture sector accounts for 88% of UK emissions of ammonia, which is emitted during storage and spreading of manures and slurries and from the application of inorganic fertilisers. That ammonia can damage sensitive natural habitats and contribute to particulate pollution in urban areas.<sup>4</sup> It sets out actions proposed to reduce emissions of ammonia against a 2005 baseline of 8% by 2020 and 16% by 2030. Support for farmers to reduce ammonia levels was summarised in a July 2018 PQ: [Agriculture: Ammonia: Written question - 164919](#).

## Water quality

Farming is one of the main sources of diffuse water pollution and contributes a range of pollutants into water bodies, including nutrients (such as nitrogen and phosphorus), sheep dip, pesticides and sediment.

- [Water quality](#), Commons Briefing Paper 7246, 26 July 2018 (see section 3.4). This briefing sets out rules for those in receipt of farm subsidies on water pollution and Government programmes to minimise agricultural impacts on water quality.

## Climate change

The Committee on Climate Change's 2018 Progress Report to Parliament *Reducing UK emissions* found that emissions for agriculture in 2016 were "flat" i.e. they had neither significantly increased or decreased.<sup>5</sup> The Committee identified agriculture as one of the key sectoral priority areas for an emissions reduction programme over the next decade. Detailed information and recommendations of reduction emissions from agriculture is set out in Chapter 6 of the Committee's Report.

- [UK Carbon Budgets](#), Commons Library Briefing 7555, 20 February 2019. This briefing sets out general information on UK domestic climate change targets, the Government's proposals for meeting those targets, and the progress made against those targets.
- [Limiting global warming to 1.5 degrees Celsius](#), POSTnote 594, February 2019. This note discusses impacts of a warming climate including on crop yield, food availability, quality, access and distribution.

---

<sup>4</sup> HM Government, [Clean Air Strategy 2019](#), January 2019, p11

<sup>5</sup> Committee on Climate Change, [Progress report to Parliament, Reducing UK emissions](#), July 2018, p.16

## Pesticides

Plant protection products play a key role in maintaining healthy and productive crops, but there is controversy over the use of some chemicals linked to concerns about impacts on pollinators and on human health. The following briefings (last updated in 2017) address concerns over 1) neonicotinoid pesticides, and 2) the herbicide, glyphosate.

- [Bees and neonicotinoids](#), Commons Library Briefing 06656, 20 July 2017. A number of studies yielded evidence that neonicotinoids can have harmful effects on bees. However, much of that evidence is contested and this briefing assesses the complicated and nuanced picture emerging from the numerous scientific studies on bees and insecticides.
- [Glyphosate: controversy around the EU's re-approval of the pesticide](#), Commons Library Briefing 08061, 27 June 2017 (updated November 2017). The herbicide glyphosate was re-approved for use in the EU in November 2017. This approval was subject to delay as a range of scientific evidence was considered regarding potential health risks with fierce debate over a number of years.

## 1.3 Other briefing

### Biodiversity and farming

The latest [UK Biodiversity Indicators](#), published in May 2018, include a number of indicators and their current status which are directly related to agriculture, such as:

- the amount of agricultural land in agri-environment schemes – deteriorating;
- surface water status – deteriorating;
- status of protected areas such as Sites of Special Scientific Interest (SSSIs) – previously improving, currently no change;
- farmland bird populations – deteriorating;
- status of pollinating insects – previously deteriorating, currently no change.

Full details are available in the [UK Biodiversity Indicators 2018](#) published by the Joint Nature Conservation Committee (JNCC)

## 2. News items

FT Special Report

### **Future of Food and Agriculture**

<https://www.ft.com/reports/future-food-agriculture>

Aberdeen Press and Journal

### **Production and biodiversity 'can work together'**

March 1, 2019

<https://www.pressandjournal.co.uk/fp/business/farming/1689638/production-and-biodiversity-can-work-together/>

Farming UK

### **Scheme looks to private markets for farmers to fund green services**

27 February 2019

[https://www.farminguk.com/News/Scheme-looks-to-private-markets-for-farmers-to-fund-green-services\\_51433.html](https://www.farminguk.com/News/Scheme-looks-to-private-markets-for-farmers-to-fund-green-services_51433.html)

FT [subscription]

### **Farm labs that grow crops indoors race to transform future of food**

22 February 2019

<https://www.ft.com/content/6a940bf6-35d4-11e9-bd3a-8b2a211d90d5>

Farmers' Weekly

### **Major survey finds worms are rare or absent in 40% of fields**

22 February 2019

<https://www.fwi.co.uk/arable/land-preparation/soils/major-survey-finds-worms-are-rare-or-absent-in-20-of-fields>

Independent

### **How small farms are leading the way towards sustainable agriculture**

21 February 2019

<https://www.independent.co.uk/news/science/small-farms-sustainable-agriculture-climate-change-africa-farming-a8786216.html>

FT [subscription]

**Farming and food groups warned of 'burping cow' risks**

Agriculture risks emissions backlash while alternative meat groups face labelling blocks

19 February 2019

<https://www.ft.com/content/8040991a-2fbc-11e9-8744-e7016697f225>

FT [subscription]

**Farmers wary of government's post-Brexit green push**

UK has a poor record in administering agri-environmental subsidy schemes

4 January 2019

<https://www.ft.com/content/629f1de4-ee50-11e8-89c8-d36339d835c0>

FT [subscription]

**Concerns intensify over food producers' impact on environment**

2 January 2019

<https://www.ft.com/content/b0688b84-038e-11e9-99df-6183d3002ee1>

Small Farm Future blog

**Waiting on amber: a note on regenerative agriculture and carbon farming**

19 March 2018

<https://smallfarmfuture.org.uk/2018/03/waiting-on-amber-a-note-on-regenerative-agriculture-and-carbon-farming/>

Guardian

**UK farmers to be given first ever targets on soil health**

13 March 2018

<https://www.theguardian.com/environment/2018/mar/13/uk-farmers-to-be-given-first-ever-targets-on-soil-health>

## 3. Press releases

### **Department for Environment, Food & Rural Affairs**

#### **Landmark Agriculture Bill to deliver a Green Brexit**

*Michael Gove sets out major post-Brexit policy to invest in the environment and take back control for farmers after almost 50 years under EU rules*

#### **12 September 2018**

Legislation to deliver a cleaner and healthier environment for future generations after nearly half a century under EU rules is being introduced into Parliament today (12 September).

The Agriculture Bill sets out how farmers and land managers will in future be paid for “public goods”, such as better air and water quality, improved soil health, higher animal welfare standards, public access to the countryside and measures to reduce flooding.

This will replace the current subsidy system of Direct Payments, which is ineffective and pays farmers based on the total amount of land farmed. These payments are skewed towards the largest landowners and are not linked to any specific public benefits. The top 10% of recipients currently receive almost 50% of total payments, while the bottom 20% receive just 2%.

In its place, a new Environmental Land Management system will start from next year. The government will work together with farmers to design, develop and trial the new approach. Under the new system, farmers and land managers who provide the greatest environmental benefits will secure the largest rewards, laying the foundations for a Green Brexit.

The Bill will also be underpinned by measures to increase productivity and invest in (R&D).

For example, there will be funding available for farmers to come together to develop and get the research projects that they want and need, whether that be on soil health or sustainable livestock farming. This will lead to practical gains for farmers that help them become more profitable and reduce their environmental footprint.

The government will also be able to make payments during the seven year transition period for farmers to invest in new technologies and methods that boost productivity.

Environment Secretary Michael Gove said:

The introduction of the Agriculture Bill is an historic moment as we leave the EU and move towards a brighter future for farming.

After nearly 50 years of being tied to burdensome and outdated EU rules, we have an opportunity to deliver a Green Brexit.

This Bill will allow us to reward farmers who protect our environment, leaving the countryside in a cleaner, greener and healthier state for future generations.

Critically, we will also provide the smooth and gradual transition that farmers and land managers need to plan ahead.

Farmers will be supported over a seven year transition period as we leave the EU's Common Agricultural Policy (CAP).

For 2019, Direct Payments will be made on the same basis as now, subject to simplifications where possible. Direct Payments for 2020 will also be made in much the same way as now. Simplifications will be made as soon as possible, subject to the terms of the overall Brexit implementation period. There will then be an agricultural transition period in England between 2021 and 2027 as payments are gradually phased out.

During consultation, there was a widespread support for applying reductions to Direct Payments more widely. All farmers will therefore see some reduction to their payments from the start of the transition, although those who receive the highest payments will see bigger reductions initially. This will free up funds to invest in public goods.

To help new entrants get into the sector and give farmers flexibility to plan for the future, Direct Payments during the agricultural transition period up until 2027 will be "delinked" from the requirement to farm the land.

These payments, which may be calculated according to money received in previous years, can be used by farmers to invest in their business, diversify their activities or else retire from farming and give way for new people to enter.

The Bill also sets out how the government will strengthen transparency in the supply chain to help farmers get a better deal in the marketplace.

By collecting data from across the supply chain, the government will help food producers strengthen their negotiating position at the farm gate and seek a fairer return.

The introduction of the Agriculture Bill now means that all the necessary measures will be in place for the start of the agricultural transition in 2021, delivering a smooth transition to the new domestic policy.

## **Agriculture and Horticulture Development Board**

### **UK farmers at the forefront of precision farming**

**12 July 2018**

Farmers on a two-day study tour to Sweden found that they are ahead of the game when it comes to precision farming.

Seven arable farmers from across Scotland attended Sweden's prestigious cereals conference and agricultural show, Borgeby Faltdagar, with AHDB, in order to ascertain what they could learn from

Scandinavian farming practices – and the results weren't quite what they expected.

Gavin Dick, AHDB Knowledge Exchange Manager, said:

What we realised was that we are actually further ahead in our use of precision technology than some of our neighbours, which is great, but we aren't resting on our laurels.

The tour also reminded us that with precision tech, you get out what you put in. There are no off-the-shelf solutions. You need to take what is out there and adapt it to fit your own business needs.

One speaker at the event who epitomised that attitude was Dutch potato farmer Jacob van den Borne.

Jacob outlined his 14-step approach to precision farming, from mapping fields and soil scanning, to crop protection, variable rate fertilising and using drones to thermal image crops.

Jacob, who farms 600 ha of potatoes as well as 300 ha maize, firmly believes that success in precision farming is 90 per cent due to having the discipline to use the tech methodically, while just 10 per cent is down to having the necessary kit.

When he started with precision farming 10 years ago, Jacob found that the average overlap on his fields was 13 per cent. This was due their small size (on average 3 ha) and their odd shapes (most of the fields have six corners).

However, after investing 500,000 Euros in new kit, he was able to reduce that overlap to just two per cent, decreasing his inputs and costs, and enabling him to pay back his investment in just three years.

For Aberdeenshire-based farmer Peter Chapman, Jacob's approach to precision is spot on.

He said:

Jacob focused on areas where he could make a real difference and I think that's what I have taken home from our tour. I want to pay more attention to my yield maps and use them, along with electromagnetic soil scanning, to produce a map of our soil potential.

Then we can decide whether we should try and lift those consistently poorly performing areas, or whether we should consider putting them to another use entirely and focus our efforts on those better performing areas where we can make genuine improvements.

There was also some exciting technology at the show which stimulated discussion. One was the System Cameleon, a seed drill and inter row hoe, which can not only weed between rows after it drills, but also plant a second crop in between.

There was also a fair bit of interest in BoMill, a recently launched grain sorter which can analyse individual grain kernels in terms of size, weight and quality.

For Highland Grain Chair, Black Isle farmer Donald Ross, the machine could – if scaled up – be very helpful for getting the best quality barley for the distilling industry.

He said:

The machine could potentially be calibrated to measure each individual grain for nitrogen content, which means we could filter grain in terms of quality for distilling which at the moment is far harder to judge.

## **NFU response to government's 'Health and Harmony' consultation**

**May 2018**

The NFU has published its vision for a sustainable, profitable and progressive future for farm businesses in response to Defra's consultation on future domestic agriculture policy which closed on 8 May.

[Read the NFU's full response to the government consultation here](#)

[You can also download a summary here](#)

The response makes the case for a policy that allows British people to enjoy more British food whatever their income. The NFU has said the foundation of this policy is a partnership between farmers and government – a partnership where farmers are empowered to design and deliver change.

The NFU has laid emphasis on the three cornerstones it believes should not only be central to the future of farm policy but any transition period also. Those cornerstones, as published in its vision report last year, are productivity, volatility and environment.

NFU President Minette Batters said:

We are now on the cusp of a pivotal moment, as we leave the Common Agricultural Policy and once again take sovereign control of our agricultural affairs.

I am clear on what success will look like. I want British farmers and growers to remain the number one supplier of choice to the UK market, and I want British people to be able to enjoy more sustainable, quality, affordable British food at a range of different prices that suit all incomes.

A future farm policy could uplift British farming's ability to produce food for the nation, giving us greater security in the supply of safe, traceable and quality British food that the public trust. The policy could further enhance our reputation for high-welfare British food, which delivers for the environment, across the world.

Caring for our iconic countryside and supporting investment and growth in rural areas is part of the unique and irreplaceable role that British farming plays in society. It's the bedrock of the UK's largest manufacturing sector, food and drink, which provides 3.8 million jobs and contributes £112 billion to the nation's economy.

We're making the case for a policy that respects the vital work of farmers as food producers, but also in delivering goods for wider society, and for this to be rewarded fairly. Without this, we cannot expect to enjoy the benefits that come from sustainable, profitable and progressive farm businesses.

## **Department for Environment, Food & Rural Affairs**

### **Once-in-a-generation opportunity to shape future farming policy**

*Reducing direct payments could free up £150 million for the environment and other public goods.*

**27 February 2018**

Farmers, landowners and food producers have a once-in-a-generation opportunity to shape the future of English farming and the environment, with a consultation launched today (27 February) by Environment Secretary Michael Gove.

The government's proposals will see money redirected from direct payments under the Common Agriculture Policy (CAP), which are based on the amount of land farmed, to a new system of paying farmers "public money for public goods" - principally their work to enhance the environment and invest in sustainable food production.

Other public goods which could be supported include investment in technology and skills to improve productivity, providing public access to farmland and the countryside, enhanced welfare standards for livestock and measures to support the resilience of rural and upland communities.

In line with its manifesto commitment, the government will continue to commit the same cash total in funds for farm support until the end of this Parliament in 2022.

It has today set out proposals for an 'agricultural transition' lasting a number of years beyond the implementation period during which direct payments would continue, providing stability and certainty for farmers as they prepare for the new system.

At the same time, however, reductions to direct payments to the largest landowners first could free up around £150 million in the first year of the agricultural transition period, which could be used to boost farmers delivering environmental enhancement and other public goods.

The Environment Secretary Michael Gove said:

As we leave the EU, we have a historic opportunity to deliver a farming policy which works for the whole industry. Today we are asking for the views of those who will be affected to make sure we get this right so any future schemes reflect the reality of life for farmers and food producers.

The proposals in this paper set out a range of possible paths to a brighter future for farming. They are the beginning of a

conversation, not a conclusion and we want everyone who cares about the food we eat and the environment around us to contribute.

As set out by the Secretary of State at the [NFU Conference](#) last week, the consultation is an opportunity for farmers to be more central to government thinking than any time for fifty years as the UK leaves the EU.

Among the range of proposals put forward by the government in today's consultation, '[Health and Harmony: The Future for Food, Farming and the Environment in a Green Brexit](#)', the Government is seeking views on:

- Options for how to gradually phase out direct payments, starting with the largest landowners, whilst developing a new environmental land management scheme.
- The range of public goods that could qualify for government funding under the new schemes, such as high animal welfare standards, wildlife protection, public access, and new technologies.
- Measures to move away from heavy handed enforcement which penalises farmers for minor errors, including a more efficient inspection regime to uphold important environmental and animal welfare standards.
- New business models and incentives for industry to invest in innovation and new technologies to increase their profitability.

The current system of support for farmers and landowners shaped by the CAP is inefficient and inequitable. It does not secure the public goods needed to enhance our environment such as resilient habitats, richer wildlife, healthier rivers and cleaner water.

Farm payments in 2019 will follow the existing model, and in the meantime, the government has pledged to simplify applications for farmers wishing to enter into existing schemes to provide environmental benefits such as Countryside Stewardship.

The consultation will run for ten weeks, closing on 8 May 2018.

## **NFU**

### **Our Vision for a Future of Farming**

**29 March 2017**

The NFU has today published the first of a series of reports setting out its [Vision for the Future of Farming](#). The paper covers the key issues that will impact on British farming and that must be addressed now the Government has triggered Article 50.

The report details the framework being proposed and consists of three 'cornerstones': Productivity measures and business

resilience; Volatility mitigation measures and management tools; Environmental measures. The vision explains what the NFU believes is needed for a thriving farming sector post Brexit and outlines the approach Government and industry must take to support UK agriculture once the UK has left the EU and no longer governed by the Common Agricultural Policy.

NFU President Meurig Raymond said:

The NFU and its members are very clear; we must use this opportunity to create the conditions for a productive, resilient and sustainable agricultural sector that meets the expectations of the UK public – producing safe and affordable food, looking after our environment and valued countryside, and contributing to productive and robust economic growth.

The three cornerstones we are proposing all work together to enable farming to be competitive, profitable and progressive and an integral part of a dynamic UK food chain. They would enhance the productivity and competitiveness of farm businesses, recognise and reward the environmental goods that farmers deliver, and mitigate volatility where it impacts commercial viability.

However, the focus of the policy will be dependent on the deal the Government achieves with Brexit. If the Government secures a free trading arrangement with the EU, ensures UK farmers are not disadvantaged by future trade deals outside the EU, and ensures the industry's labour needs are met, then we can consider an ambitious new policy - one that is designed specifically for our domestic farming sector, involving a wide range of measures which focus on productive, resilient, sustainable and profitable farm businesses. If we get a bad deal for farming, then measures to manage volatility - such as direct payments - will remain vital to help farm businesses compete in an uncertain world.

Once we are no longer subject to the CAP, the Government has given assurances that farmers will continue to be supported after 2020. We believe that farming should maintain current levels of public investment through this new policy framework, but recognise that in the future this may be delivered in different ways, directly or indirectly to farmers, for instance through fiscal incentives, environmental schemes or ensuring farmers benefit from cutting edge developments in R&D.

Today's report outlining a new Domestic Agricultural Policy complements our objectives for the trade, labour and regulatory issues which together form the essentials of a successful farming sector. Over the coming weeks and months, as the Brexit negotiations get underway, we will set out our core principles and expectations of government for each.

British farming delivers on every level. In monetary value - for every £1 invested in farm support - farming delivers £7.40 back to the UK economy. Our industry is the bedrock for the country's largest manufacturing sector – food and drink – a sector worth £108 billion and one that employs nearly four million people.

We now need to shape a policy that promotes competitive, profitable and progressive farm businesses that can continue to produce adequate supplies of British food that the public enjoys and trusts.

Read the NFU's Vision for the Future of Farming [here](#).

## Commons Environmental Audit Committee

### More action required to protect UK soil health

02 June 2016

The Government's ambition to manage the UK's soil sustainably by 2030 will not be met unless further action is taken, the Environmental Audit Committee has warned in a report published today on the health of UK soil. Failing to prevent soil degradation could lead to increased flood risk, lower food security, and greater carbon emissions.

- [Report: Soil Health](#)
- [Report: Soil Health \(PDF 761KB\)](#)
- [Inquiry: Soil Health](#)
- [Environmental Audit Committee](#)

#### *Chair's comment*

Environmental Audit Committee Chair, Mary Creagh MP, said:

Soil is a Cinderella environmental issue. It doesn't receive as much attention as air pollution, water quality or climate change. But, whether we realise it or not, society relies on healthy soil for the food we eat, for flood prevention, and for storing carbon. The Government says it wants our soil to be managed sustainably by 2030, but there is no evidence that it is putting in place the policies to make this happen.

Around 300,000 hectares of UK soil are thought to be contaminated with toxic elements – such as cadmium, arsenic and lead - as a result of the UK's industrial past, but the Department for Environment, Food & Rural Affairs (Defra) has withdrawn capital grant funding for local authorities to clean up this contamination.

The inquiry heard that without this funding councils are now less able and less likely to proactively investigate potential contamination – despite the potential health threat this poses.

#### *Relationship between soil contamination and poor health*

Untreated contamination may harm public health and water quality. Some research has found a statistically significant relationship between soil contamination and poor health.

Defra appears complacent about the withdrawal of capital grant funding for contaminated land remediation, and risks undermining councils' ability to meet their statutory duties, according to the MPs. They are also calling on Defra to set new funding for contaminated land remediation at the level of the old scheme.

Mary Creagh MP said:

Our industrial heritage means that hundreds of thousands of sites across the country are contaminated by chemicals, heavy metals, tar, asbestos and landfill. Often materials were disposed of on site and buildings demolished without the environmental safety regulations we take for granted today.

Defra's complacent decision to withdraw contaminated land grants has undermined the ability of councils to identify and clean up polluted brownfield sites not dealt with through the planning system. This presents a real danger that contaminated sites are being left unidentified with consequential public health impacts.

Relying on the planning system to clean up contaminated land may be fine in areas with high land values, but it means that contamination in poorer areas will go untreated. Councils simply do not have the resources to investigate which sites are contaminated. Ministers must rethink their decision to phase out contamination clean up grants.

### *Soil degradation and climate change*

Soil is a massive carbon sink, storing three times as much carbon as the atmosphere. Soil degradation also leads to increased carbon emissions and could speed up climate change. The UK's arable soils have seen a worrying decline in carbon levels since 1978, with widespread and ongoing decline in peat soil carbon.

The Government must set out specific, measurable and time-limited plans to increase the amount of carbon retained in soil, to help us meet the plans it signed up to at the Paris climate summit. The Government should also take tough action to tackle land use practices which degrade peat, such as the burning of blanket bogs.

Mary Creagh MP said:

Soil degradation could mean that some of our most productive agricultural land becomes unprofitable within a generation. Every tonne of carbon we can retain in soil will help us meet our carbon budgets and slow climate change. The government wants to see all soils managed sustainably by 2030, but their current actions will not be enough to reach that goal.

### *Agricultural soil*

The Government relies on rules linked to farm subsidy payments to regulate agricultural soil health. But the MPs warn that these rules are too weak, too loosely enforced, and focus only on preventing further damage to soil rather than encouraging restoration and improvement.

Rules with greater scope, force and ambition are required in order to meet the Government's stated goal to manage soils sustainably by 2030.

### *Monitoring soil health*

Monitoring changes in soil health over time is key to developing effective policy. Defra's current ad hoc approach to conducting surveys of soil health is inadequate. The Government should introduce a rolling national-scale monitoring scheme for soil health to ensure that we have adequate information about the state of the nation's soil.

## 4. Parliamentary material

### Debates

#### **Agriculture Bill – Commons Second Reading**

**HC Deb 10 October 2018 | Volume 647 c150-**

<http://bit.ly/2OIG4d2>

#### **Agriculture Bill 2017-19 – links to all Committee sittings to date**

<https://services.parliament.uk/Bills/2017-19/agriculture/stages.html>

### PQs

#### *[Agriculture](#)*

#### **Asked by: Lord Taylor of Warwick**

To ask Her Majesty's Government what steps they are taking to help boost growth in the UK agriculture and farming sector; and whether they anticipate that there will be a slowdown in growth in those industries in the event of a no-deal Brexit.

#### **Answering member: Lord Gardiner of Kimble | Department: Department for Environment, Food and Rural Affairs**

As we leave the EU and move into the future farming policy, we will help our farmers take advantage of the new opportunities that will become available.

Our future policies will support farmers to provide more home grown, healthy produce made to high environmental and animal welfare standards. We will use powers in the Agriculture Bill to provide support for farmers to invest in equipment, technology and infrastructure to improve their productivity. We will work with industry and other partners to develop new approaches to research and development that build on investments such as the AgriTech Strategy and the £90 million Industrial Strategy Challenge Fund Transforming Food Production initiative. We will explore how we can work with local authorities and other landowners to create more opportunities for new entrant farmers to get into the industry. We will improve access to data, so that farmers have the information that they need to benchmark their performance and track and manage the risks to their business. We will also introduce statutory codes of practice to improve fairness in the agricultural goods supply chain and protect producers from unfair trading practices.

The Agriculture Bill creates new powers to improve how the supply chain functions, to support farmers through extreme market disturbance, safeguard producer organisations and provide diverse new

sources of income for farming business. We are in new discussions about how to go further to support the sustainability of food production and protect our high food standards that are integral to supporting a competitive trading environment.

Agriculture is devolved, and future policy in Scotland, Wales and Northern Ireland is a matter for the respective administrations. The devolved administrations do however benefit from UK wide investment such as through the 2013 AgriTech Strategy and the Industrial Strategy.

Whilst preparing for all outcomes, as any responsible Government would, we are also preparing for the possibility of no deal. As such, we are working to understand and anticipate the effects of a no deal for the UK's agriculture and farming sector, and extensive work is underway to ensure the country continues to operate as smoothly as possible from the day we leave.

**HL Deb 05 March 2019 | PQ HL13940**

[Agriculture: Land](#)

**Asked by: Cooper, Rosie**

To ask the Secretary of State for Environment, Food and Rural Affairs, what assessment he has made of the need (a) for more and (b) to use more existing Grade 1 agricultural land for agricultural purposes in the event that the UK leaves the EU without a deal.

**Answering member: George Eustice | Department: Department for Environment, Food and Rural Affairs**

The Best and Most Versatile (BMV) agricultural land is classed as grade 3b and above. Most arable and vegetable crops can be grown on grade 3 soils and above. Top fruit crops tend to require grade 1 or grade 2 land. Most grade 1 land in the UK is already under agricultural production.

The UK gets its food from different sources including strong domestic production and imports from the EU and beyond. We will still have a high level of food security whether we leave the EU with or without a deal and our future agriculture policy will allow farmers to continue providing a supply of healthy, home-grown produce made to high environmental and animal welfare standards.

**HC Deb 21 February 2019 | PQ 222677**

[Leaving the EU: Farming](#)

**Asked by: Hall, Luke; Alex Burghart**

What plans he has for farming policy after the UK leaves the EU.

**Answering member: The Minister for Agriculture, Fisheries and Food (George Eustice) | Department: Environment, Food and Rural Affairs**

Our plans for future farming policy are set out in the Agriculture Bill. At the heart of our new policy in England will be a system that pays public money for public goods, rewarding farmers for enhancing animal welfare, improving soil health and creating habitats for wildlife. We are also introducing measures to support investment in farm productivity and to improve fairness in the supply chain.

**HC Deb 21 February 2019 | Vol 654 c1587**

[Environmental Stewardship Scheme](#)

**Asked by: Dunne, Mr Philip**

To ask the Secretary of State for Environment, Food and Rural Affairs, what steps his Department is taking to improve farmer confidence in the Countryside Stewardship scheme.

To ask the Secretary of State for Environment, Food and Rural Affairs, whether his Department plans to provide additional resources to the Rural Payments Agency to improve the IT system required to deliver Countryside Stewardship payments.

To ask the Secretary of State for Environment, Food and Rural Affairs, what additional (a) funding and (b) staff resource has been provided to the Rural Payments Agency to deliver Countryside Stewardship payments; and whether his Department plans to provide any additional resources.

**Answering member: George Eustice | Department: Department for Environment, Food and Rural Affairs**

The Rural Payments Agency (RPA) took on the administration of Countryside Stewardship from Natural England in October 2018, along with identified operational resources. Using customer feedback to improve the application process, Defra is supporting the RPA's efforts to simplify the administration and speed up processing of the scheme as far as possible under the current EU system by streamlining processes and improving IT.

Having all Common Agricultural Policy schemes under one agency offers a more joined up approach and improves service, such as by having one point of contact.

The RPA is already beginning to deliver much needed changes, such as technical updates to systems and improving internal processes. We are offering more ways to apply online, providing clearer guidance and reducing the evidence burden on applicants.

We have also committed to making annual revenue payments to 95% of 2018 Countryside Stewardship customers by March 31, and will be making bridging payments in early April so no eligible recipient will wait beyond early April to receive a payment.

**HC Deb 21 February 2019 | PQ 221643; PQ 221642; PQ 221641**

[Environment Protection: Education](#)

**Asked by: Phillipson, Bridget**

To ask the Secretary of State for Environment, Food and Rural Affairs, what steps his Department is taking through the 25 Year Environment Plan to promote learning on the environment and sustainability for children in schools with low levels of access to natural spaces.

**Answering member: Dr Thérèse Coffey | Department:  
Department for Environment, Food and Rural Affairs**

The 25 Year Environment Plan, published in January 2018, sets out the government's ambition to improve the environment within a generation. A key commitment is to encourage children to be close to nature, in and out of school. The government announced £10 million funding for the Children and Nature Programme which aims to support children from disadvantaged backgrounds to have better access to the natural environment. The programme has been designed to make it possible for schools to undertake a range of activities in natural spaces, including learning about nature and how to care for the natural environment.

As announced by the Environment Secretary on 31 January, grants have recently been awarded to projects in the Children and Nature programme. Resilience through Nature, a consortium of The Wildlife Trusts, YoungMinds, Groundwork, the Sensory Trust and Field Studies Council, have been appointed to the Nature Friendly Schools project which will help deliver greener grounds and pupil visits to green spaces for schools with the highest proportion of disadvantaged pupils. Social Farms and Gardens, working with Thrive, will deliver the Growing Care Farming project which aims to achieve a transformational change in the scale, scope and uptake of care farming services in England for children and adults with a defined health, education or social need particularly those from disadvantaged areas. Funding for the Community Forests and Woodland Outreach project is yet to be awarded.

The announcement on 31 January marked the beginning of the 2019 Year of Green Action. Over the next 12 months government will work with businesses and communities to create ways for people from all backgrounds to connect with nature, protect our environment, and contribute to restoring our natural world.

As part of the 2019 Year of Green Action, the nationwide [#iwill4nature](#) initiative, led by charity Step Up To Serve and backed by government will support a series of activities for young people to connect with, protect and enhance nature.

**HC Deb 13 February 2019 | PQ 218811**

[Farming: Carbon Emissions](#)**Asked by: Baroness Jones of Moulsecoomb**

To ask Her Majesty's Government what plans they have to achieve net zero carbon emissions in farming.

**The Parliamentary Under-Secretary of State, Department for Environment, Food and Rural Affairs (Lord Gardiner of Kimble)**

My Lords, I declare my farming interests as set out in the register. Agricultural emission statistics are calculated by a team led by Rothamsted Research. Since 1990, emissions from agriculture have fallen by 16% and overall by more than 40%. We need to go further. The clean growth strategy, 25-year environment plan and the clean air strategy set out specific commitments to reduce emissions. We are working on an emissions reduction plan for agriculture as part of our long-term vision for a lower-emissions agricultural sector.

**Baroness Jones of Moulsecoomb (GP)**

My Lords, I thank the Minister for his reply, and I am very glad to know that work is happening. However, the NFU website states that the challenges of Brexit are as a "drop in the ocean" compared with the climate emergency which is unfolding on our planet and that agriculture is still a large producer of greenhouse gases. Farmers are going to find it very expensive to move over to any sort of zero emissions. What sort of financial incentives are the Government going to offer them?

**Lord Gardiner of Kimble**

My Lords, in the context of our own emissions, agriculture is about 10%. We clearly need to work with the farming industry on its production of food and its maintenance of the countryside. There are so many reasons why we need to work with the farming community. With the environment Bill and the Agriculture Bill, we will bring forward an environmental land management scheme where mitigation of and adaptation to climate change are going to be so important. Therefore, public money for public good is part of what we are providing, along with specific schemes to reduce, for instance, ammonia.

**Viscount Hailsham (Con)**

My Lords, while I welcome what the Minister has said, does he agree that it is very important not to impose on British farmers obligations that are not met in competitor countries? Life is going to be hard enough post Brexit for the British farmer. I declare my interest as in the register.

**Lord Gardiner of Kimble**

My Lords, clearly we believe that the production of high-quality food and enhancing the environment are eminently compatible. I absolutely understand what my noble friend has said. It is essential that, in all that we want to do, we work with farmers because they look after 70% of the land and we want them to help us produce food and enhance the environment.

**Lord Grantchester (Lab)**

My Lords, the whole food supply chain needs a partnership approach with research to relate to practical outcomes, on a similar model to that undertaken by the 10 sustainable farming groups set up by Tesco to build long-term relationships with farmers. What steps are the Government taking to ensure that the UK's agricultural research is directly connected and translates to on-farm operations, with ambitious climate change measures, enabling farmers and the wider rural economy to benefit?

**Lord Gardiner of Kimble**

My Lords, research is essential, whether it is agritech or research into tackling endemic disease, which obviously affects livestock. For instance, we want to deal with bovine viral diarrhoea and salmonella in poultry and pigs. All the research will help us to reduce emissions, whether it is through low-emission fertilisers or whatever. In all that, we need to collaborate strongly.

**Lord Teverson (LD)**

My Lords, just as, in the energy sector, energy efficiency is the best way to reduce emissions, surely in agriculture one of the best ways to reduce emissions is by reducing food waste. What action are the Government taking to reduce the one-third of food waste there is in the supply chain, particularly when in this country we have food banks looking for food, for all the reasons that we know?

**Lord Gardiner of Kimble**

The noble Lord is absolutely right about another key strand of work, which is reducing the extraordinarily high amount of food waste produced by many households. That is happening with retailers through WRAP and the Courtauld commitment, but we need to change how we conduct ourselves and reduce food waste, because it is highly inefficient unnecessarily to produce food.

**Lord Krebs (CB)**

My Lords, the Minister will be aware of the climate change committee's 2018 progress report to Parliament, in which it states that not enough progress has been made in reducing emission from agriculture and land use in comparison with other sectors of the economy. It particularly highlights the failure of voluntary measures to achieve reductions. Does he therefore agree that in future, if we are to move towards net zero in agriculture, there will have to be more mandatory legislation to encourage farmers to comply?

**Lord Gardiner of Kimble**

My Lords, clearly we want to work in partnership with the farming community, and we have supported the industry-led *Greenhouse Gas Action Plan*, but we are waiting to hear from the Committee on Climate Change's advice, including setting a net zero target beyond our 2050 target. We will clearly need to work with the industry, but it is essential that we reduce emissions from agriculture.

**The Lord Bishop of St Albans**

My Lords, one point that the NFU made is that our wonderful British beef farmers are already two and a half times more efficient than the world average and four times more efficient compared with the beef from South America, so surely one of the most important things that Her Majesty's Government could do is to put their weight behind British beef farming. What plans do they have for that sector post Brexit?

**Lord Gardiner of Kimble**

My Lords, the right reverend Prelate is absolutely right about our impressive productivity. For example, in pork, there are 36% fewer emissions; in dairy, 7% fewer. We will continue to work with industry on breeding programmes to improve the efficiency of feed conversion in beef. Clearly, all that and the £90 million investment in the transforming food production challenge is about finding better techniques to ensure that we have great products at home and abroad.

**Baroness Byford (Con)**

My Lords, going back to the original Question, what strategies are the Government using to move this issue forward? Will it go out to consultation? If so, what is the timetable for that? Secondly, I remind the Minister of the great benefit of grass-grazing animals in this country. There is a double bonus there.

**Lord Gardiner of Kimble**

My Lords, that is undoubtedly true. I have already declared my interest as a farmer. Having grass on the farm is a great way to have diversity in our countryside and produce food. As I said, we need to work with the farming industry to ensure that we can achieve the low emissions we all need and that farms continue producing food. For instance, under the farming ammonia reduction grant scheme, the funding of slurry store covers will reduce emissions during storage by up to 80%, so there is a lot we want to do with farmers.

**HL Deb 12 February 2019 | Volume 795 c1735-**

[Food](#)

**Asked by: Offord, Dr Matthew**

To ask the Secretary of State for Environment, Food and Rural Affairs, if he will consider establishing a national food policy.

**Answering member: David Rutley | Department: Department for Environment, Food and Rural Affairs**

While the immediate priority for the department is planning for No Deal, the Government is committed to publishing a National Food Strategy once we leave the EU.

This work is being led by Henry Dimbleby, Defra's lead Non-Executive Director. He is still in the early scoping stage but we expect it to cover the entire food system, from farm to fork.

As the Secretary of State outlined in his letter to Neil Parish on 30 October (<https://www.parliament.uk/documents/commons-committees/environment-food-rural-affairs/correspondence/181030-Secretary-of-State-toChair-Food-strategy.pdf>), it will build on the work already underway in the Agriculture Bill, the Environment Bill and the Fisheries Bill, ensuring that our food system delivers healthy and affordable food for all people and is built upon a resilient and sustainable agriculture sector.

I expect the role of farming with respect to food security, providing healthy diets, the use of new technology and protecting the environment will be covered.

**HC Deb 12 February 2019 | PQ 216317**

[Leaving the EU: Farming Policy](#)

**Asked by: Craig Tracey**

I welcome the Agriculture Bill, because for nearly 50 years our farmers have been tied to a fundamentally flawed common agricultural policy where payments are skewed towards the largest landowners. Can the Minister provide further detail on the public goods that will be rewarded under the new scheme?

**Answering member: George Eustice | Department: Environment, Food and Rural Affairs**

I thank my hon. Friend for the sterling work he did on the Agriculture Bill Committee and as a member of the DEFRA team until recently. As he says, we are completely changing the focus of our agricultural support for the delivery of public goods. That could include improving habitats, water quality and soil health, promoting biodiversity, advancing animal welfare and allowing public access.

**HC Deb 17 January 2019 | Vol 652 c1301**

[Environment Plan](#)

**Baroness Jones of Whitchurch**

To ask Her Majesty's Government whether their 25-year environment plan will be underpinned by legally binding targets.

**The Parliamentary Under-Secretary of State, Department for Environment, Food and Rural Affairs (Lord Gardiner of Kimble) (Con)**

My Lords, as announced in July, we will bring forward an ambitious environment Bill early in the second parliamentary Session, building on the vision of the 25-year environment plan. We are exploring possible wider legislative measures which could be included in that Bill. Furthermore, the Bill will establish a new independent statutory environment body to hold government to account on environmental

standards. Draft legislation on environmental principles and governance will be published before Christmas.

**Baroness Jones of Whitchurch**

I thank the Minister for that reply. However, can he explain the difference between the draft indicator framework—a horribly technical term—which currently seems to be being developed, and which seems to be about monitoring the current status of the environment, and, on the other hand, legally enforceable targets? Those are the only way to guarantee improvements in areas such as air and water quality, soil health, biodiversity gain and resource efficiency, which the plan indeed promises. Is there any truth in the press reports that, once again, the Treasury is blocking Michael Gove’s attempts to make those targets legally binding?

**Answered by: Lord Gardiner of Kimble**

My Lords, the noble Baroness indicates the work that is going on with 100 experts from Defra and arm’s-length bodies on the framework, including the Natural Capital Committee, so that we have indicators from the plan that ensure both transparency and accountability. This will come forward as draft legislation, and I cannot pre-empt that, but there will obviously be pre-legislative scrutiny, and I very much hope that noble Lords will engage in that. That is precisely what we should be doing, because we want to advance the environment—the whole basis of the 25-year environment plan—and put it on a statutory basis.

**HL Deb 29 November 2018 | Vol 794 c724**

## About the Library

The House of Commons Library research service provides MPs and their staff with the impartial briefing and evidence base they need to do their work in scrutinising Government, proposing legislation, and supporting constituents.

As well as providing MPs with a confidential service we publish open briefing papers, which are available on the Parliament website.

Every effort is made to ensure that the information contained in these publically available research briefings is correct at the time of publication. Readers should be aware however that briefings are not necessarily updated or otherwise amended to reflect subsequent changes.

If you have any comments on our briefings please email [papers@parliament.uk](mailto:papers@parliament.uk). Authors are available to discuss the content of this briefing only with Members and their staff.

If you have any general questions about the work of the House of Commons you can email [hcinfo@parliament.uk](mailto:hcinfo@parliament.uk).

## Disclaimer

This information is provided to Members of Parliament in support of their parliamentary duties. It is a general briefing only and should not be relied on as a substitute for specific advice. The House of Commons or the author(s) shall not be liable for any errors or omissions, or for any loss or damage of any kind arising from its use, and may remove, vary or amend any information at any time without prior notice.

The House of Commons accepts no responsibility for any references or links to, or the content of, information maintained by third parties. This information is provided subject to the [conditions of the Open Parliament Licence](#).