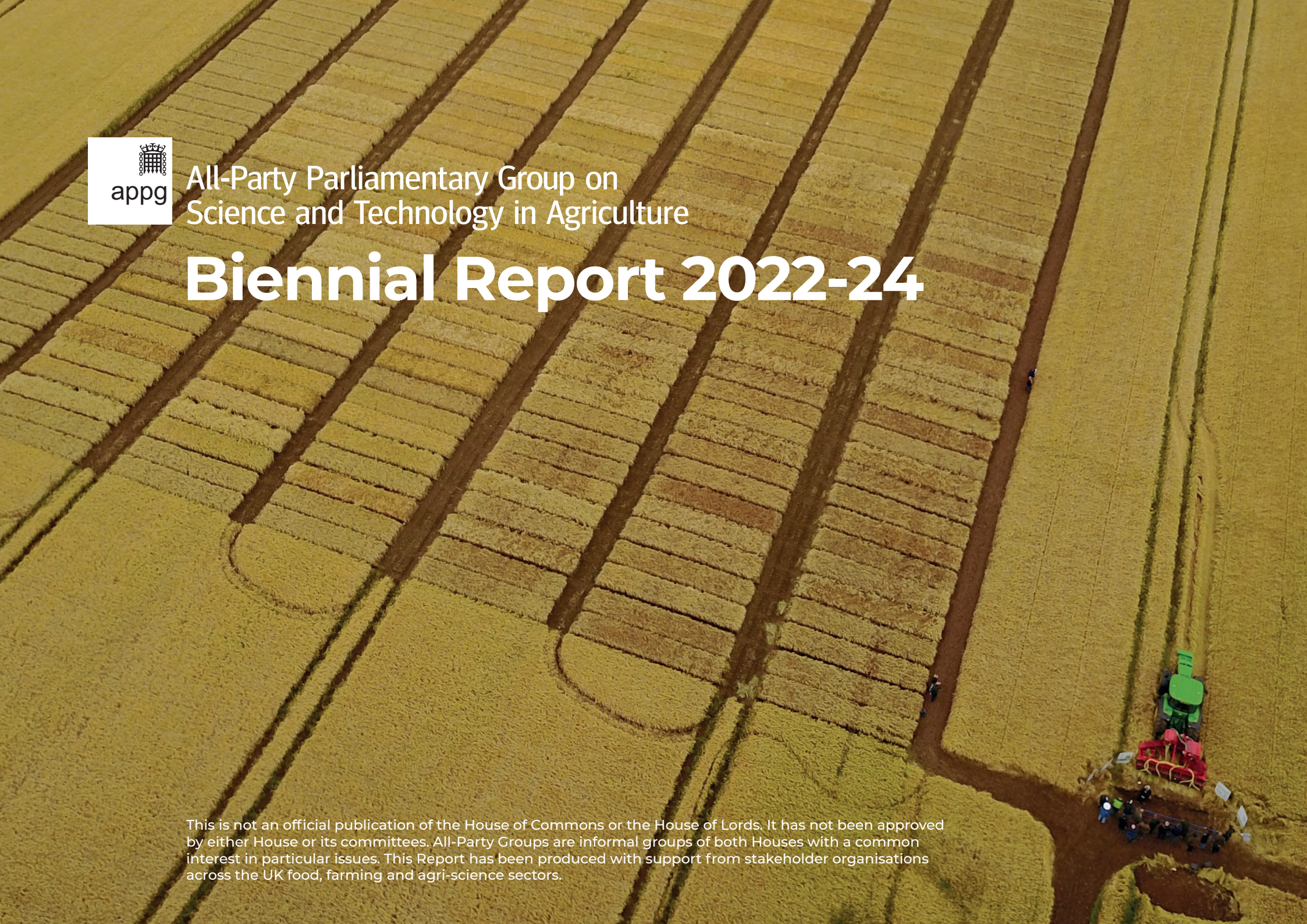

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All-Party Parliamentary Group on
Science and Technology in Agriculture

Biennial Report 2022-24

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Farming MP calls for agricultural innovation, not arbitrary bans, to lead the climate response

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Research reveals attitudes to precision farming technology in livestock

Cross-party group welcomes FSA plans for more proportionate regulatory approach on precision bred food and feed products

PRECISION ANIMAL BREEDING: How gene editing could revolutionise animal agriculture and disease control

Introduction

Now in its seventeenth year in Parliament, the APPG on Science and Technology in Agriculture provides a forum for Parliamentarians and stakeholders to debate and highlight the contribution of agricultural science and innovation in tackling urgent global challenges of climate change, food security and protection of natural resources.

This report reflects on the All-Party Group's activities over the past two years, which by any standards has been one of the busiest and most influential periods since the Group was established in March 2008.

This included the passing into law of the Genetic Technology (Precision Breeding) Act in March 2023, a landmark piece of legislation initially called for in 2020 by officers and members of this Group to free up the use of promising new breeding technologies such as gene editing.

It is a regulatory development the APPG has strongly supported throughout its development and passage through Parliament. It must be a priority for the new administration to introduce the detailed secondary legislation needed to implement the provisions set out in the Act.

Following a three-month inquiry, in July 2023 the All-Party Group also published a report into the farming technologies, innovations and practices which can help deliver on the UK's Net Zero commitment while supporting increased domestic food production and economic growth.

The APPG has continued to highlight the need for an evidence-based approach to policy development, for example calling on Defra to publish a full impact assessment of its farm support policies on agricultural productivity growth and domestic food self-sufficiency.

And the Group has hosted a full programme of meetings at Westminster covering a range of topics, from the innovations taking place in the UK cereals, livestock and animal feed sectors through to the launch of a major new report on GM crops from the Royal Society.

As ever, we are grateful to officers, members and stakeholders of the All-Party Group who have helped deliver such a full and effective programme over the past couple of years.

We also look forward to welcoming new members from both Houses of Parliament to join and engage with the Group in its ambition to highlight and support the strategic role of agricultural science and innovation.

Tom Bradshaw
President
NFU

APPGSTA priorities

The All-Party Parliamentary Group on Science and Technology in Agriculture exists to promote debate among politicians and other stakeholders on the value and role of scientific innovation in UK agriculture.

The following six priority themes have been agreed by Officers and Members to help frame the All-Party Group's work programme and activities:

Promote a strong UK policy focus on agricultural science and innovation as an economic driver and response to global food security and environmental challenges.

Ensure future UK regulation of agri-science innovation is evidence-based, proportionate and enabling.

Promote an effective and sustainable balance between the funding requirements of fundamental, applied and translational R&D – including knowledge exchange – in the agri-science sector to promote a rapid transition from discovery to application of innovation.

Champion the UK's role as a global agri-science hub, attracting inward investment and expertise and exporting technological solutions.

Seek clear and measurable targets for sustainable intensification in UK agriculture, applying developments in data science.

Promote more positive public engagement with agricultural science and technology and encourage the next generation of agricultural scientists.

Setting the agenda

Precision Breeding

Having first led calls for post-Brexit regulatory divergence on gene editing during the passage of the Agriculture Act 2020, members of the All-Party Group actively supported the successful passage of the Genetic Technology (Precision Breeding) Act through both Houses of Parliament from its introduction to the House of Commons in May 2022 until Royal Assent in March 2023.

The new Act represents a major milestone towards freeing up the use of gene editing technologies in plant and animal breeding, bringing our rules more into line with other countries such as Canada, USA, Japan and Australia. It will help accelerate the development of higher-yielding, more climate resilient crops requiring fewer inputs, and support more sustainable, high-welfare UK livestock research and production.

However, until more detailed implementing rules are in place, the Precision Breeding Act as it stands serves no functional purpose. Bringing forward the necessary secondary legislation to implement the Act must therefore be a top priority for the new administration.

Animal welfare statement

In November 2022, the All-Party Group co-ordinated an open statement, signed by leading organisations and individuals across the scientific, breeding, farming, veterinary and input supply sectors, to challenge misleading claims from some politicians and NGOs about poor and deteriorating standards of animal welfare on Britain's livestock farms, and the potential for precision breeding technologies such as gene editing to further intensify production.

The APPG-led statement provided evidence to demonstrate that the direction of travel for animal health and welfare on British farms is positive and improving, highlighting recent advances in areas such as stocking densities, antibiotic use, live transport, housing conditions, biosecurity and training,

It also pointed to the contribution of more balanced breeding programmes in supporting improvements in farm animal health and welfare, and the potential for new genetic technologies to provide solutions to previously intractable disease problems, such as PRRS in pigs, avian influenza in poultry and BVD in cattle.

Farm policy impact assessment

In November 2023, APPG chair Julian Sturdy called on Defra to publish a full impact assessment of its Environmental Land Management (ELM) and Sustainable Farming Incentive (SFI) policies on agricultural productivity growth, farm-level yields and domestic food security.

In the context of a Food Strategy commitment to maintain national food production at current levels, Mr Sturdy said it was important to understand the full implications of lower-yielding ELM and SFI options, such as paying farmers not to use approved insecticides, to reduce fertiliser use below optimum levels, or to plant wildflower meadows rather than food crops.

He also highlighted concerns over ELM policies which support the loss of productive farmland to rewilding or tree-planting, without a coherent land use strategy or a clear vision of how national food production would be maintained.

Meetings programme

The All-Party Group hosted a full programme of meetings at Westminster over the 2022-24 period. A high-calibre line-up of guest speakers and active participation by Parliamentarians and stakeholders from across the research, farming and food chain sectors provided a platform for lively and informed debate on key issues affecting the development, regulation and application of science and technology in agriculture.

Full meeting reports and copies of guest speakers' presentations are available to download via the meetings section of the Group's website at www.appg-agscience.org.uk.

Brewing for Growth: UK-led innovation in barley

November 2022

Guest speakers:
Dr Julian South, Maltsters' Association of Great Britain
Professor James Brosnan, Scotch Whisky Research Institute
Dr Joanne Russell, James Hutton Institute

Guest speakers underlined the importance of UK-led barley research and innovation in adding value and driving economic growth in the UK's malting, brewing and whisky distilling sectors.

The UK's brewing and distilling sectors support annual gross value added (GVA) in beer and pubs worth £26.2bn and whisky export sales worth £7.1bn to the UK economy.

Barley is the No. 1 cereal grown in Scotland, No. 2 in the UK and No. 4 globally. It is also the most versatile cereal, grown widely around the world and used in many different food and drink products. But as a crop it faces major challenges – especially as a result of climate change, highlighting the need for a coordinated approach to barley research.

The meeting included a progress update on the new International Barley Hub, based at the James Hutton Institute, Dundee, which covers research areas such as agronomy, genetic improvement, soil and data science, and new precision tools such as sensors and robotics.

It also highlighted the launch of the groundbreaking new BARIToNE programme (Barley Industrial Training Network), led by BBSRC and with collaboration from 18 industry partners, which will support 40 PhD studentships in barley research until 2029.

One hectare of malting barley can produce 87,000 pints of beer or 6,600 bottles of malt whisky

UK food security in a volatile world – the case for sustainable intensification in UK commodity crops

November 2022

Guest speakers:
Jonathan Halstead, Syngenta UK
Dr Chris Brown, ASDA
Andrew Crossley, Thurlow Estate Farms Ltd
Professor Richard Tiffin, Agrimetrics

Hosted in partnership with the UK Cereals Alliance, bringing together commercial operators across the cereal supply chain, guest speakers stressed that continued improvements in sustainable and efficient production, including access to new technology, would be critical for business success in the cereals sector.

Cereal production accounts for 68% of the UK's 4.5m ha arable area

Although cereal production forms the base of the UK arable economy, accounting for 68% of the cropped area, panellists indicated that the importance of maintaining a viable and competitive production chain for home-grown cereals did not always receive the prominence and attention it warranted.

Insights from different perspectives across the value chain – from primary production to retail – highlighted current challenges facing the cereals sector, including the impact of Brexit, climate change, cost increases and market volatility.

The importance of consistent, output-related metrics was highlighted in determining the impact of food production on natural capital factors such as soil, water and biodiversity, and in evaluating the sustainability of different farming systems given the increasingly diverse pressures on precious land resources.

Guest speakers also underlined the need for an enabling regulatory environment to support access to innovations that will help UK cereals growers compete internationally whilst also meeting sustainability goals – including gene edited crops, biologicals and precision application technology.

Report launch: Moovin' on up – (How) can we use new technologies to improve productivity on Britain's livestock farms?

January 2023

Guest speakers:
Aveek Bhattacharya, Social Market Foundation
Johnny Mackey, MSD Animal Health UK

The All-Party Group hosted the Parliamentary launch of a new report from Westminster think-tank The Social Market Foundation, sponsored by MSD Animal Health, exploring how new precision farming technologies can be used to deliver improvements in productivity, environmental impact and animal health on Britain's livestock farms.

The report sought to understand the benefits to farmers of using precision livestock farming technologies such as electronic ID tags, automated milking systems, smart weighing and feeding systems, monitoring collars and farm management apps, and how any barriers to adoption might be overcome.

Key findings from in-depth interviews with livestock farmers indicated that, on the whole, farmers – especially younger farmers – are open to using new technology and recognise its benefits in terms of improved management and resource use efficiency, reduced environmental footprint, as well as early detection and treatment of health or welfare issues.

But barriers to the adoption of new technology by livestock farmers include the upfront cost of investment and uncertainty about future farm policy.

The report included a number of recommendations to improve prospects for the adoption of precision livestock farming, including re-direction of farm subsidies towards supporting uptake of such technologies, investment in a better knowledge exchange and data-sharing infrastructure, and using regulation to drive positive change, such as requiring electronic ID tags for cattle.

The UK animal feed sector – innovation, sustainability and Net Zero

March 2023

Guest speakers:
James McCulloch, Agricultural Industries Confederation
Nick Major, ForFarmers
Keiran Whitaker, Entocycle
John Knight, SugaRich

Focusing on the UK animal feed sector and its economic significance not only in providing the high-quality nutrition to support efficient livestock production, but also as a major consumer of home-grown arable crops, guest speakers highlighted the innovation taking place in the industry to improve sustainability.

Key areas included the continued development of responsible sourcing initiatives for commodities such as soybean meal and palm oil; the use of co-products from food and biofuel processing; the use of former food products; the use of feed additives such as enzymes and methane inhibitors; and the potential role of novel, low-carbon protein streams such as insect meal and algae.

The importance of proportionate, risk-based regulation was highlighted in the drive for Net Zero, particularly in areas such as the use of insect meal and processed animal proteins, and the approval of methane-reducing feed additives.

Looking further ahead, prospects for sustainable innovation in the UK feed sector included using green energy for feed production, introducing blockchain systems, robotics and AI to improve efficiency, as well as using electric vehicles for transport and distribution of animal feed ingredients and products.

In addition, the feed industry's globally leading position in using consistent Life Cycle Analysis data and metrics to measure and report the feed sector's impacts was highlighted.

Applying genetic innovation to increase fruit and vegetable consumption

May 2023

Guest speakers:
Haven Baker, Pairwise
Dan Jenkins, Pairwise

The All-Party Group's Annual General Meeting in May 2023 was joined by guest speakers from US gene editing firm Pairwise, who described the company's focus on using gene editing technologies to promote healthier eating by improving the flavour and convenience of fresh vegetables and berry fruits.

This included the recent approval and launch in the North American foodservice sector of nutrient-rich mustard greens, marketed as Conscious™ Greens, which had been gene edited for reduced bitterness and improved flavour.

The presentation included details of consumer research conducted among more than 6,000 members of the public in three US cities, where the overwhelming response to the gene edited mustard greens was positive.

Pairwise also described other gene editing products in the pipeline to encourage increased fruit and vegetable consumption, including seedless blackberries and stoneless cherries, with future innovations focused on traits such as improved nutrition and better flavour, as well as changing plant architecture, for example by turning trees into bushes, or developing thornless berry plants.

Gene editing developments in Canada

June 2023

Guest speakers:
Greg MacDonald, Agriculture Counsellor to WTO
Krista Thomas, Canada Grains Council
Jodi Souter, University of British Colombia

A timely opportunity, as more detailed plans were being developed to implement the provisions set out in the Genetic Technology (Precision Breeding) Act in England, to hear from government officials and practitioners in Canada, whose regulatory authorities had recently confirmed that gene edited products would be treated in the same way as conventionally bred.

Guest speakers explained that the Canadian approach was based on a detailed scientific opinion published by Health Canada, which concluded that gene editing technologies do not pose any unique risks to food or environmental safety compared with other breeding techniques.

From a plant breeding perspective, gene editing allows for an accelerated development cycle, potentially achieving in just 2 years what currently takes 3-6 years or even longer. But this faster timescale does not change the rigorous assessment applied to all new crop varieties through field testing, seed multiplication and official variety registration, a six-year process for most crop types which underpins the Canadian plant breeding industry's track record of due diligence and delivery of safe products to market.

In the context of a global trading environment, the meeting also highlighted the need for harmonised international regulations, emphasising that the demand for more sustainable agriculture with reduced climate impac and less consumption of natural resources is not country-specific, but a common objective shared by all nations.

Report launch: Enabling genetic technologies for food security

October 2023

Guest speakers:
George Freeman MP, Minister of State, DSIT
Professor Jonathan Jones FRS, The Sainsbury Laboratory
Jonny Hazell, The Royal Society

The All-Party Group hosted the launch of a new report on GM crops from The Royal Society which, while welcoming the recent move towards more proportionate regulation of precision breeding techniques such as gene editing, made the case for similar regulatory reform in relation to GM crops.

Guest speakers noted that almost 30 years since the technology was first commercialised, GM crops are now grown on more than 200 million hectares globally each year. There are no substantiated reports of harm to human or animal health or the environment arising from the commercial cultivation and consumption of approved GM crops, and the technology has delivered significant economic and environmental benefits. And yet it continues to be subject to time-consuming, costly and restrictive rules inherited from the EU.

The Royal Society report proposed an alternative mechanism for interaction between regulator and applicant based on plausible, science-based hypothesis of risk, as well as regulatory experience elsewhere of the crop/trait combination, rather than assuming that all GM crops are inherently risky.

According to the report, a more proportionate approach to GMO regulation, based on the characteristics of the end-product rather than the use of a particular technology, could pave the way to unlocking innovation from public sector research organisations as well as encouraging greater access and commercial activity among start-ups and SMEs, focused on tackling urgent global challenges of food security, climate change and sustainable development.

Harnessing the power of farm-level data

February 2024

Guest speakers:
George Freeman MP
Professor Tina Barsby OBE, Farm Data Principles Ltd
Dr Helen Ferrier, NFU
Andrew Loftus, Loftus Farms
David Webster, LEAF

The All-Party Group hosted the launch of a new certification scheme, developed by Farm Data Principles Ltd (FDP), aimed at giving farmers the confidence to share their data.

More effective use of farm-level data and metrics holds the key to driving sustainable gains in agricultural productivity, assessing the impact of farm support policies, and providing meaningful information to consumers about the sustainability impact of different food choices.

However, the potential value of farm-level data is not being realised in the UK because current approaches to data use are fragmented and non-standardised, with little or no safeguards. As a result, many within the agri-food sector are wary of data sharing and participation due to concerns over trust and confidentiality.

Guest speakers explained that the ultimate goal of the new, voluntary certification scheme was to build trust in digital agriculture, based on an understanding of the work done in farm data governance nationally and internationally. This included establishing key principles for good farm data governance, through a series of clear statements relating to the ownership use, and accessibility of farm data.

Gene edited strawberries and potatoes heading for England

March 2024

Guest speaker:
Muffy Koch, Simplot Plant Sciences

Simplot Plant Sciences, part of the US food group J.R Simplot Company, presented and discussed their plans to bring gene edited strawberries and baby potatoes to the market in England, following the introduction of the Genetic Technology (Precision Breeding) Act 2023.

Simplot has already commercialised GM potatoes in the US, with traits including non-browning, low-acrylamide potential, low sugars for improved storage, and resistance to late blight and Potato Virus Y. Sustainability benefits of these innovations range from reduced inputs and higher marketable yields to reduced waste and improved quality at all points in the production, processing and distribution chain.

Using gene editing, rapid improvement of vegetatively propagated crops such as potato and strawberry has enabled Simplot to develop desirable traits in already popular commercial varieties. These include high tuber set in baby potatoes – enabling the same yield to be achieved on a third of the land area used previously – and longer flowering strawberries which produce fruit earlier and for up to three times longer than their conventional equivalents.

Simplot outlined short-term plans to run line selection trials in England of its longer-fruiting, higher-yielding gene edited strawberries, including storage and taste trials, engagement with the value chain and ultimately leading to variety registration and commercial production.

Feeding the nation: how innovation in the UK poultry meat industry is delivering sustainable British food

March 2024

Guest speakers:
Andrew Griffith MP, Minister of State for Science, Research and Innovation
Chi Onwurah, Shadow Minister for Science, Research and Innovation
Dr Santiago Avendaño, Aviagen Group
Dr Anne Richmond, Moy Park
Nick Davies, 2 Sisters Food Group

For the first time, the APPG welcomed both a Government Minister for Science and a Shadow Minister for Science as guest speakers, as the All-Party Group joined forces with the British Poultry Council (BPC) to showcase the role of science and innovation in advancing animal welfare, sustainability and business productivity in the UK poultry meat industry. BPC members from across the supply chain described how they are using science and technology to reduce their environmental impact:

- Aviagen UK Ltd has been able to reduce the carbon footprint of broiler chickens by 1% year on year through breeding improvements;
- Moy Park has unveiled its net zero Farm of the Future, reducing energy-related GHG emissions by 100% through innovations such as ground source heat pumps and heat exchanger systems, rainwater harvesting and solar technology;
- 2 Sisters Food Group are using new camera technology to link bird welfare indicators with innovation and sustainability in a new and cohesive way.

APPGSTA publications and reports

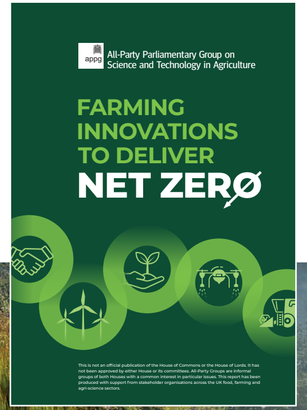
Farming innovations to deliver Net Zero

Gene editing of crops and livestock, methane inhibitors, green fertilisers and novel proteins such as insect meal are just some of the farming innovations with the potential to transform British agriculture's climate impact, according to a report issued by the All-Party Group in July 2023. *Farming innovations to deliver Net Zero* summarised the findings of an inquiry conducted by the Group, bringing together both written and oral evidence to explore the potential to tackle climate change by encouraging new green technologies and scientific innovations, rather than by imposing measures which might harm economic growth or reduce food production.

The report's starting point was that the narrative around climate change and agriculture is often negative in tone, particularly in relation to livestock farming, and that this diverts attention from the enormous opportunities for agricultural science and innovation to contribute positively to the climate agenda.

The report identified many examples of how advances in areas such as plant and animal breeding, precision agriculture, alternative proteins, feed additives, indoor farming and other sectors can support sustainable increases in domestic food production and economic growth while delivering on the Net Zero agenda for British agriculture. The report also highlighted the regulatory, policy and R&D actions needed to unlock the full potential of these innovations, including:

- the need for prompt implementation of the recently adopted Genetic Technology (Precision Breeding) Act 2023;
- the need to adopt consistent, outcome-related sustainability metrics in agriculture;
- the need for a more strategic, long-term Crop Genetic Innovation Research Fund to ensure early-stage genetic discoveries have a clear translational pathway into improved crops & products;
- the need for regulatory action to support the development of novel and alternative proteins, ensuring the UK is not left behind the EU and other countries;
- the need for a co-ordinated, end-to-end R&D strategy for home-grown pulses; and
- the need to fast-track Food Standards Agency approvals for methane-reducing feed additives already approved for use in the EU and elsewhere.



Key areas of farming innovation with the potential to transform British agriculture's climate impact

Genetic innovation in crop breeding
- Increased crop yields and resource use efficiency
- More climate resilient crop varieties
- Nitrogen fixation and improved photosynthetic efficiency

Precision farming technologies
- Improved productivity and input use efficiency
- Enhanced monitoring and decision-making tools
- Natural resource conservation, eg water for irrigation

Genetic innovation / Improved control of endemic disease in livestock
- Improved productivity and disease resistance, reduced morbidity and mortality
- Improved feed use efficiency and reduced methane emissions
- Climate resilience traits in livestock

Vertical farming and controlled environment agriculture
- Increased food output per land area
- Significant potential to reduce pesticide, fertiliser and water use
- Reduced transport emissions and food waste

Novel protein sources for animal feed (eg insect meal)
- Low carbon, high protein feed source
- Reduced food and agricultural waste
- Source of low carbon, high value fertiliser (insect frass)

Green fertilisers and controlled release fertilisers
- Reduced carbon footprint in N fertiliser manufacture using renewable energy
- Development of alternative fertilisers using industrial and agri-food waste streams
- Reduced nitrous oxide emissions

Strategic development of home-grown protein crops
- Reduce N fertiliser use in UK arable rotations
- Home-grown alternative to imported proteins (eg soybean)
- Additional healthy-eating, soil health, economic benefits

Methane reducing feedstuffs and feed additives
- Reduced methane emissions in ruminant livestock
- Potential to reduce overall feed intake

Co-existence of precision bred and other crops in England

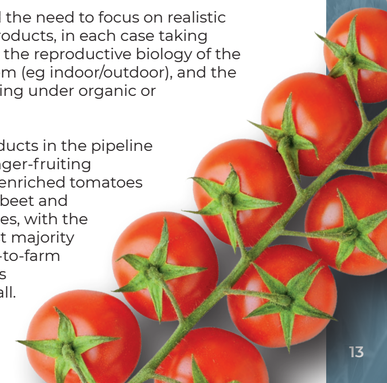
In May 2024, the All-Party Group published a policy paper focusing on the issue of farm-level co-existence between new precision bred (PB) and other crops in England. This followed the passing into law of the Genetic Technology (Precision Breeding) Act 2023 and the likelihood that, in the coming years, farmers in England will have the choice to grow crop varieties developed using precision breeding techniques such as CRISPR gene editing.

Produced with input from experts along the UK crop production and processing chain, the APPG policy paper is intended to support informed discussion of the legal and practical considerations involved, and to mitigate often exaggerated concerns over potential problems with co-existence.

It highlighted many examples of farmers and supply chains already successfully managing co-existence to meet both statutory and commercial specifications, for example in the production of high purity certified seed, the segregation of food grade and non-food crops, and the delivery of variety-specific consignments to meet customer requirements.

The paper also underlined the need to focus on realistic case studies of early PB products, in each case taking account of factors such as the reproductive biology of the crop, the production system (eg indoor/outdoor), and the anticipated scale of cropping under organic or 'non-PB' production.

Eight examples of PB products in the pipeline were considered, from longer-fruiting strawberries and vitamin-enriched tomatoes to disease resistant sugar beet and high-yielding baby potatoes, with the conclusion that, in the vast majority of cases, PB-specific farm-to-farm co-existence requirements would not be required at all.



APPGSTA officers 2022-24

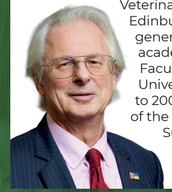
In line with new APPG rules limiting the number of officers for each approved All-Party Group to four, the Earl of Lindsay and Lord Cameron of Dillington stood down as officers in March 2024. As longstanding vice-chairs of the All-Party Group, both are now recognised as honorary patrons. The remaining officers of the Group over the 2022-24 period are listed below.

Chair – Julian Sturdy

Julian Sturdy has served as chair of the All-Party Group since July 2016. Conservative MP for York Outer since May 2010, he has been a regular contributor on farming and rural issues in Parliament, and a member of the House of Commons EFRA Committee since 2017. Julian grew up in Yorkshire and has farmed in the area all his working life, having studied agriculture at Harper Adams University.

Vice-chair – Professor Lord Trees

Lord "Sandy" Trees is Emeritus Professor of Veterinary Parasitology, University of Liverpool and a Cross-Bench Peer since 2012. He is the only veterinarian in the House of Lords. He qualified as a vet at the Royal (Dick) School of Veterinary Studies, University of Edinburgh, and has worked in general practice, industry and academia. He was Dean of the Faculty of Veterinary Science, University of Liverpool from 2001 to 2008, and served as President of the Royal College of Veterinary Surgeons from 2009 to 2010. He is also co-chair of the APPG for Animal Welfare.



Patron – Lord Cameron of Dillington

Lord Ewen Cameron was elected as a vice-chair of the All-Party Group in July 2017. A farmer and landowner, he was CLA President from 1995 to 1997. He chaired the Countryside Agency from 1999 to 2004 and was the Government's rural advocate for England from 2000 to 2004. He has also chaired the Steering Board of the Government's Global Food Security Research Programme and the Centre for Ecology and Hydrology (CEH).

Vice-chair – Sir Robert Goodwill

Sir Robert Goodwill was elected as a vice-chair of the All-Party Group in February 2020. Conservative MP for Scarborough and Whitby since 2005, he was previously MEP for Yorkshire and the Humber. Sir Robert has served as Minister of State at the Home Office, the Department for Education and the Department for Environment, Food and Rural Affairs. He was elected chair of the EFRA Committee in May 2022. He is a farmer on the 250-acre family farm near Malton in North Yorkshire where the family have farmed since 1850. He studied agriculture at Newcastle University.

Vice-chair – Rt Hon Lord Grantchester

Lord Grantchester has served as a Labour member of the House of Lords since 1995. He was appointed Shadow Minister for Environment, Food and Rural Affairs in July 2014. Lord Grantchester runs a dairy farm in Cheshire, and has served as chairman of the South West Cheshire Dairy Association, and as a Council Member of both the Cheshire Agricultural Society and the Royal Agricultural Society of England (RASE).

Patron – Earl of Lindsay

Lord Jamie Lindsay has served as a vice-chair of the All-Party Group since January 2015. A farmer and landowner in Fife, he has held a number of Government advisory and Ministerial posts relating to agriculture and the environment. A former chair of Assured British Meat and Scotland's Rural College (SRUC), Lord Lindsay has also chaired the UK Accreditation Service (UKAS) and served as President of the National Trust for Scotland.

APPGSTA stakeholders

The activities of the All-Party Parliamentary Group on Science & Technology in Agriculture are supported by a number of food, farming and research organisations:

The Agricultural Industries Confederation is the leading trade association in the UK agri-supply industry.
www.agindustries.org.uk

The Agricultural Biotechnology Council is the umbrella group for the agricultural biotechnology industry in the UK.
www.abccropscience.co.uk

The British Society of Plant Breeders is the representative organisation for the UK plant breeding industry.
www.bspb.co.uk

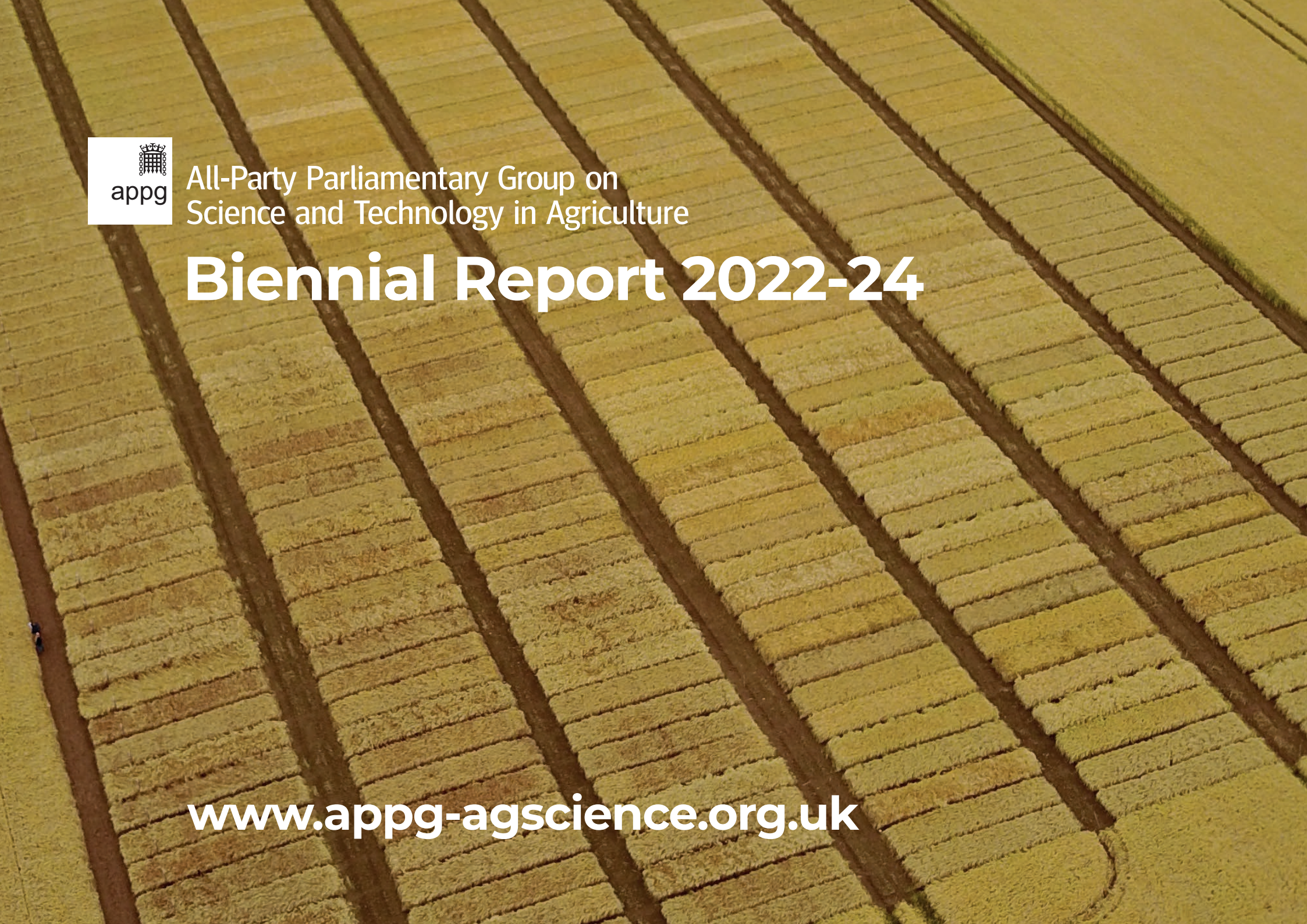
CropLife UK is the voice of the UK plant science industry.
www.croplife.uk

The National Farmers' Union represents farmers and growers in England and Wales.
www.nfuonline.com

UK Flour Millers is the representative organisation for the UK flour milling industry.
www.ukflourmillers.org

The Maltsters' Association of Great Britain is the representative body for the UK malting industry.
www.ukmalt.com

NIAB is a leading UK centre of plant research, crop evaluation, agronomy and knowledge transfer.
www.niab.com



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www.appg-agscience.org.uk