House of Commons

Environment, Food and Rural Affairs Committee

Food security: Government response to the Committee's Second Report of Session 2014–15

Fourth Special Report of Session 2014–15

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Environment, Food and Rural Affairs Committee

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Committee reports are published on the Committee's website at Environment, Food and Rural Affairs Committee - UK Parliament and by The Stationary Office by Order of the House.

Evidence relating to this report is published on the Committee's website at Food Security - UK Parliament.

Committee staff

The current staff of the Committee are David Weir (Clerk), Anna Dickson (Second Clerk), Clementine Brown (Assistant Clerk), Sarah Coe (Senior Committee Specialist), Sara Priestley (Committee Specialist—Environment), Maria Prew (Senior Committee Assistant), Lisa Stead (Committee Assistant) and Hannah Pearce (Media Officer).

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Fourth Special Report

The Environment, Food and Rural Affairs Committee reported to the House on *Food security* in its Second Report of Session 2014–15, published on 1 July 2014 as HC 243. The Government's response to the Report was received on 5 September 2014.

Government response

Introduction

The Government welcomes the Environment, Food and Rural Affairs Committee's report on Food Security which is supportive of key elements of Government policy, including:

- UK food security built on access to a wide variety of markets including domestic, the EU and an open, rules-based world trading system;
- The importance of sustainable intensification;
- Making the most of our productivity potential through the Agri-Tech Strategy.

The Committee asked to ensure policy coherence on food security across Government, which ought to be led by Defra. The Government can assure the Committee that Defra is the lead Department for food security and takes responsibility for ensuring that it is a priority across all relevant policy areas throughout Government.

The Committee has also asked for a better understanding of the focus of the Government's research initiatives into food security. Recommendation 30 explains the work currently underway to map the research landscape in the UK and internationally. It also describes the Global Food Security Programme's recently refreshed mapping of research priorities across the major public sector funders, which brings coherence by aligning individual activities with shared goals.

Food and drink is the UK's biggest manufacturing industry, with gross value-added of £24.3 billion.

UK food security policy priorities

We have outlined the Government's general approach to food security in our written evidence to the Committee. The key things that we are doing to ensure continued food security in the UK are:

- Pursuing policies across Government to ensure continued economic growth and higher levels of income for all UK households;
- Removing barriers to competitiveness and enhancing the productivity of the agricultural and food sectors in the UK and globally, to help meet rising global demand;

- Pressing for reform of agricultural and trade policies, such as the Common Agricultural Policy, which distort markets both at home and abroad;
- Ensuring that the UK food sector continues to foster healthy competition and delivers real benefits for UK consumers.

The UK food system

1. In order to clarify the resourcing, commitment and prioritisation of food security across government we request that the Government set out the financial contributions and support of each department to the goals and delivery of the Government's food security strategy. The Government should identify Defra as the lead Department for food security and appoint a Food Security Coordinator within it to ensure policy coherence across Government departments. (Paragraph 11)

The Government agrees with the Committee's recommendation that Defra should be the lead Department, and is happy to confirm that it is.

Taking the Lead on Food Security

Defra is the lead Government Department for food security. The Food Policy Unit within Defra, under the direction of the Parliamentary Under Secretary of State for Farming, Food and Marine Environment, George Eustice, ensures that food security is a priority across the range of relevant policy areas within Government.

Across Government, food security issues relating to developing countries belong to the Department for International Development (DFID). The Agri-Tech Strategy is a joint Business, Innovation & Skills (BIS), Defra and DFID programme. Policy officials across Whitehall collaborate on policy priorities, and the evidence base, science and technological innovation which underpins this (delivered by Research Councils, Departments and industry) is coordinated through the Global Food Security Programme coordination group and the Food Research Partnership, which is chaired by Defra's Chief Scientific Advisor.

Financial Contributions of Government Departments to the Food Security Strategy

The Government invests £450m on food research (see Fig 1.) Additionally, the UK Strategy for Agricultural Technologies is supported by £160 million of Government investment to be matched by private sector funding.[1] Also, the UK will receive from the CAP, €25.1 billion in the form of direct payments and €2.6 billion in funding for our rural development programmes under Pillar 2, between 2014 and 2020.

1 This consists of: (i) £90m to establish Centres for Agricultural Innovation to support wide-scale adoption of innovation and technology across key sectors (ii) a £70m Agri-Tech Catalyst to help commercialise new agri technologies and innovations, co-funded with industry.

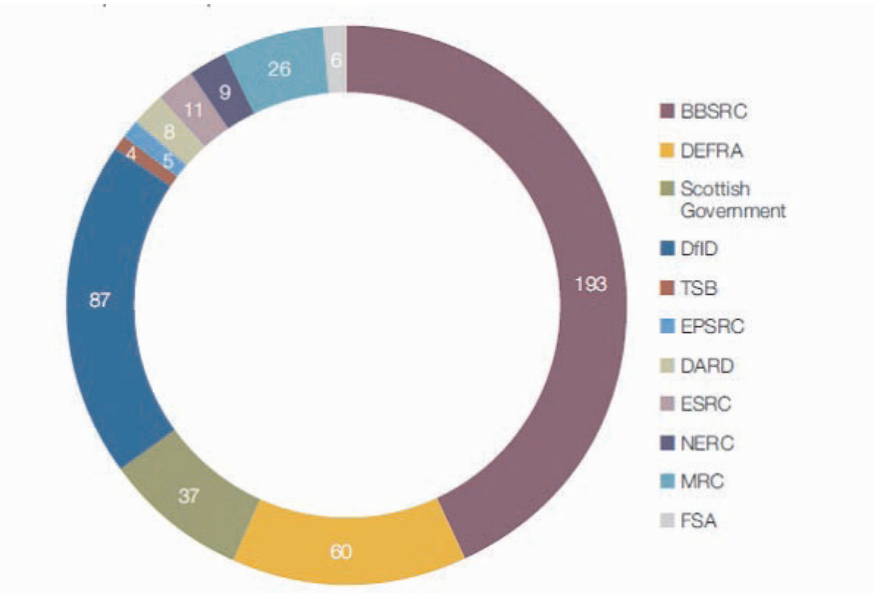

Fig 1 Breakdown of £450 million spend on R&D on agriculture and food by public sector bodies in 2011/12 (A UK Strategy for Agricultural Technologies, p.21)

Organisation	How Funding is Used
BBSRC	Bioscience research relating to food security
EPSRC	Engineering and physical sciences research relating to food security
ESRC	Economic and social research relating to food security
MRC	Medical research relating to food security
NERC	Environmental research relating to food security
Defra	Research relating to food security ensures its polices are based on a sound, comprehensive understanding of current evidence
Scottish Government	Research relating to food security plays an important role in shaping their policies
DFID	Research relating to food security is aimed at directly improving people's lives and outputs are available to those who can use it around the world
FSA	Research relating to food security is focused around food safety and ensures advice is based on the best and most up-to-date science
DH	Research relating to food security is focused around health and ensures a high-quality evidence base
DARD	Research relating to food security helps achieve strategic goals and objectives in the areas of agriculture, fisheries and food
TSB	Research relating to food security is aimed at accelerating economic growth by stimulating and supporting business-led innovation

2. Food security is not simply about becoming more self-sufficient in food production. A diversity of supply is an important safeguard against diseases, severe weather or other domestic disruptions. There are opportunities to extend the seasonal production of non-tree crop fresh fruits and vegetable products. We would like to see a more coordinated and positive approach by retailers, the Agricultural and Horticultural Development Board and local and central Government to examine ways to encourage greater domestic production in these sectors. (Paragraph 18)

The Government agrees with the Committee that food security is not about self-sufficiency alone but that an element of UK food security is instead built on access to a wide variety of markets including domestic, the EU and an open, rules-based world trading system.

The increasing demand of UK consumers for British food and drink is a huge opportunity. The Government is working with farmers, manufacturers and retailers to enable UK producers to grow and compete. This includes enabling consumers to select products through country of origin labelling, supporting industry to develop a skilled workforce and increase innovation, freeing farmers from red tape to help them seize economic opportunities that arise and improving public procurement of food and catering services so that it contributes to a competitive UK food and farming sector.

Encouraging domestic production in the fruit and vegetable sector

The UK's production to supply ratio[2] is 55% for fresh vegetables and 10% for fresh fruit. This rises slightly to 57% for indigenous vegetables, but more markedly for indigenous fruit to around 34%.

In 2010, the Fruit and Vegetable Taskforce Action plan was agreed by industry, the Agricultural and Horticultural Development Board (AHDB) and Government with specific actions aimed at removing barriers to increased productivity in the sector. We established a Grocery Code Adjudicator, streamlined the approval process for plant protection products, increased funding for reservoirs and otherwise clarified rules on water extraction, modernised planning rules, reduced waste.

The AHDB's work in horticulture, storage and soils has resulted in successfully extending growing seasons. Examples include strawberries, asparagus and cherries, due to both variety development and new production techniques. AHDB's cross-sector soils research and development platform is helping optimise availability at either end of the season, and best practice long term soil management allows land conversion from marginal to viable.

Thirty years ago, the UK strawberry season lasted for about six weeks. Now, due to modern growing practices, improved varieties and the use of polytunnels and glasshouses, domestically produced fruits are available from April until November (Fig 2). Since 2009, market share of home grown strawberries has been stable.

2 The 'production to supply ratio' measures domestic production (including exports) as a proportion of domestic consumption (including imports). At the product level (e.g. fruit, vegetables), this calculation is in volume terms.

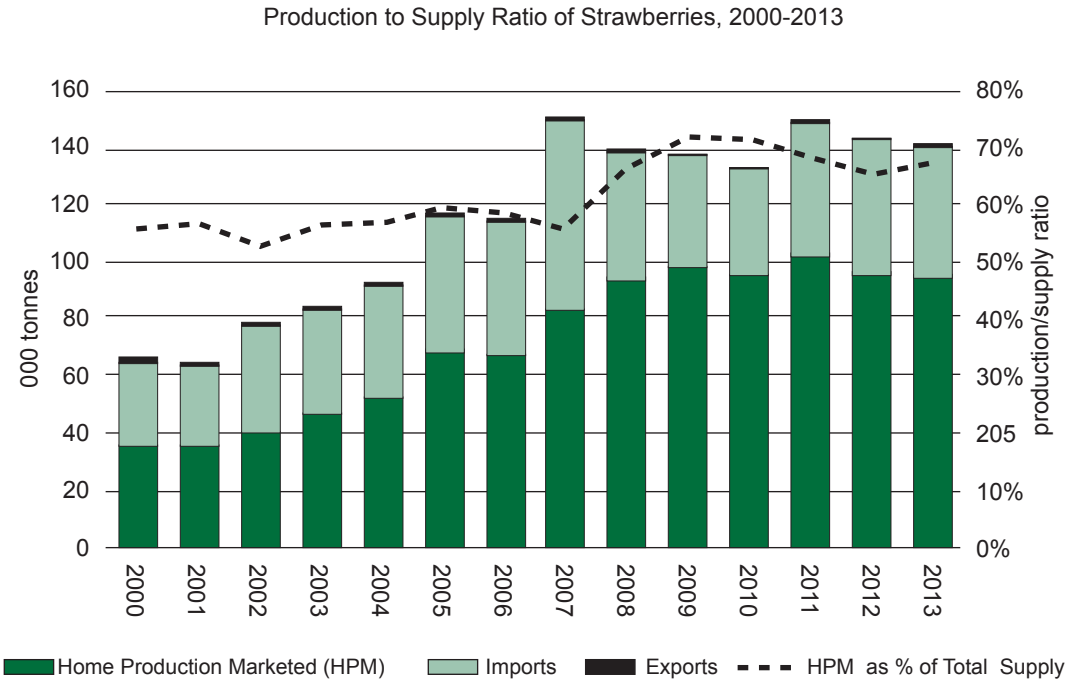

Fig 2: In the five year period 2008–2012, home production supply of strawberries was on average 69%, which compared to 58% in the five year period 2003–2008.

2014 saw the first substantial volume of British-grown apricots on the market, from a partnership between Tesco and fruit growers. Traditionally, the UK climate has not been suitable for growing apricots, but with the help of breeders and agronomists studying the climate changes and the varieties available, they launched major scale English apricot production with a growing season that extends to September (a time when no other country produces apricots.) This could result in demand from other countries including France, Spain and Portugal for the UK-grown fruit.

Research

Defra has funded research projects to address the issue of extending seasonal production of fruits and vegetables. The Vegetable Genetic Improvement Network and the Pulse Crop Genetic Improvement Network bring together academia, industry, farmers and end users to discover and characterise new sources of breeding material required to produce novel vegetable and pulse crop varieties. These are tailored to UK production requirements against the background of a changing climate and changing consumer demands.

3. We should also export, where possible, those products which are surplus to demand in the UK and can be produced competitively for export, as this will help boost our production. We are pleased that the Government is seeking to do this. The Government must redouble its efforts to negotiate the export of products such as pigmeat and cheese to China and demonstrate reciprocity in trade. (Paragraph 20)

The Government agrees that increasing food and drink exports is key to ensuring continued expansion of the sector. In 2013 UK exports of food and drink reached £18.9bn, an increase of £1.2bn since 2010. There is room to grow even further, particularly in emerging markets. This is why Defra and UKTI launched a refreshed food and drink Export Action Plan in October 2013, which aims to add £500m to the UK economy by October 2015 through a range of ambitious joint Government-industry targets.

We are already delivering on our commitments to increase exports. In 2013 Government reached 112 new market agreements for animals and animal products, helping increase exports outside the EU by £179m to £1.35bn. Government is also working hard to secure better deals for UK food and drink through EU Free Trade Agreement negotiations with the USA, Japan and Vietnam and elsewhere.

The UK gained access for pigmeat to China in 2012, and industry is already capitalising on this with exports totalling £20m in 2013. We are now focusing on extending the Chinese pork market to cover offal and pigs trotters and lifting their bans on British beef and lamb. Exports of cheese to China have resumed following the short temporary suspension imposed by the Chinese authorities earlier this year.

4. It is right that the Government keeps track of levels of self-sufficiency in indigenous products—which will vary from time to time. While the UK may be food secure at present, it would be unwise to allow a situation to arise in which we were almost entirely dependent on food imports given future challenges to food production arising from climate change and changing global demands. (Paragraph 20)

Increasing domestic production remains a priority for Defra. This may increase the production to supply ratio ("self-sufficiency")[3] whether the produce is consumed domestically or exported. Whilst we agree with the Committee that we should monitor self-sufficiency, we do not believe it should be regarded as a primary indicator of food security.

The UK's current production to supply ratio—73% for indigenous-type foods and 60% for all foods—is not low in the context of the last 150 years[4]—in the inter-war period, the rate was as low as 30–40%. "Self-sufficiency" in the 1980s and early 1990s was inflated through a version of the Common Agricultural Policy (CAP) which distorted markets at considerable cost to consumers and taxpayers. The self-sufficiency ratio has been relatively stable since this unwound. The following graph shows the post-war evolution in the ratio.

3 Depending on trends in consumption

4 Food Security and the UK: An Evidence and Analysis Paper (Defra, 2006). Available online at: http://archive.defra.gov.uk/evidence/economics/foodfarm/reports/documents/foodsecurity.pdf

Some further limited reform continues into the 2014–20 EU Multi Annual Financial Framework (MFF) period. For example, there was agreement to abolish from 2017 one of the last production controls, on sugar. However, Pillar 1 of the CAP still undermines the performance of the agricultural sector, at great cost, and is still in need of fundamental reform. Recent changes to the CAP have added complexity linked to conditions for receiving direct payments. Greening is a blunt environmental tool with limited potential for benefits, whilst direct payments will continue to slow the process of structural change in the agricultural industry. Such structural change is an important element of ensuring the long term productivity and competitiveness of European agriculture.

The Government continues to believe that expenditure on market price support and direct payments to farmers under Pillar 1 of the CAP represent very poor value for money. The Government's position is that the best value for money with regard to environmental benefit can be obtained in Pillar 2.

6. The UK Government must ensure a joined-up approach to food security within the EU across different policy areas, and particularly in relation to CAP, to ensure policy coherence. The Government should set out how it will use the flexibility provided by the new CAP agreement to help meet the objective of food security. (Paragraph 29)

The CAP as presently configured is not an effective tool for delivering food security. Indeed, given the negative impact of Pillar 1 on structural change, the CAP operates contrary to the food security interests of the UK, and the rest of the EU. Additionally in other areas, such as trade and biofuels, EU policies can push up the price of agricultural goods to the detriment of manufacturers and food consumers.

We recognise that there are challenges in securing policy coherence at an EU level where 28 Member States must agree collective measures. Respondents to Defra's recent Balance of Competences Review for Agriculture questioned the effectiveness of EU policy making processes. Many criticised the CAP for its cost to taxpayers and consumers and its unclear objectives.

The UK has argued for CAP reform to help deliver an efficient and responsive agricultural sector in the EU and globally, moving away from subsidies and market interventions. There is scope for using taxpayers' money to pay farmers for public goods that the market otherwise would not reward, such as protecting the natural environment and supporting biodiversity.

During the CAP reform negotiations we achieved greater CAP regionalisation, providing flexibility for the Devolved Administrations to implement the new CAP according to their own priorities.

In England, we have made the greening rules as flexible and simple as we can for farmers to meet, so farmers can concentrate on producing food and helping to grow the economy. To help farmers meet the EFA criteria, we are offering the inclusion of hedges towards their requirement. Within the Nitrogen-fixing crops option, we will allow the widest range of crop types.

We argued hard to ensure that crop diversification was more appropriate for UK conditions. We are exploring what further flexibility might be possible and will be seeking changes to the 3 crop rule when the opportunity arises in Brussels.

The UK, working with like-minded Member States, negotiated hard for a final outcome that was a significant improvement on the Commission's original proposals. However, it is still very disappointing and does not move CAP as far as we would have wanted in the direction of reform.

7. There is a significant challenge to feed a growing global population in a sustainable manner. The key question for us, is how the UK responds to that challenge—that is, what role it plays in global markets given that it is both a small part of the global food economy, and its agriculture is a relatively minor contributor to global GHG emissions. (Paragraph 37)

The Government agrees with the Committee that increases in global population and income will increase demand for food, and increase pressure on scarce inputs such as land, water and soil. The UK represents a small proportion (approximately 1%) of global food production and consumption.

However, we can demonstrate leadership through our strengths in agricultural research, our dynamic food and farming sector, our work internationally to promote transparent open global markets, and through reducing emissions and waste.

Agricultural Research

Through the Agri-Tech Strategy we are seeking to match our world-leading basic research capability with a renewed focus on applied research in order to bring innovations onto farms and raise productivity. Such applied research can help improve productivity in the UK and overseas.

Working Internationally

The UK is pushing for an ambitious set of new universal Sustainable Development Goals to take effect when the Millennium Development Goals expire in 2015. The UK is advocating for a dedicated goal on food security, nutrition and sustainable food systems, underpinned by a set of ambitious targets to drive delivery on the ground.

The UK Government collaborates with the Food and Agriculture Organization and other Rome-based UN agencies (IFAD and WFP) across a range of policy areas to ensure sustainable food security. We also engage on these issues in discussions in the G7/8 and G20.

The UK will chair the Agricultural Markets Information System (AMIS) group from October 2014. AMIS is an inter-agency platform agreed as part of the 2011 G20 Action Plan to help address food price volatility. It aims to enhance market transparency and improve policy coordination in response to market uncertainty.

Economic growth and poverty reduction alongside sustainable agricultural practices, robust supply chains and open, fair and well-functioning markets and trade policies are

essential to achieve long-term food security for all people. The UK directly supports developing countries to increase agricultural outputs in a sustainable way,[5] and is also engaged in the Climate Smart Agriculture Alliance of countries working together to share expertise and technologies to deliver a food secure world.

The UK is a leader in responding to the challenge of food waste. Working with industry under the voluntary Courtauld Commitment, we have reduced supply chain food and packaging waste, and total household food waste is down by 15% since 2007. In June 2012 an agreement with the hospitality and food service sector was launched to support the sector in preventing and recycling food and packaging waste.

Defra is co-ordinating work with key UK palm oil using sectors towards achieving 100% sourcing of credibly certified sustainable palm oil by the end of 2015.[6]

8. Consumers should be able to make informed choices about what and how much they consume, and health and resource impacts should play a part in these choices. There is an important role for protein from a variety of sources in our diet, and some of the animals we consume—for example, cattle and sheep—also play a vital role in ensuring our hillsides and upland farms remain viable. The production of protein, whether from animals or plants, must make efficient use of land and water, and discourage waste and reduce harmful emissions. (Paragraph 38)

Food security is dependent on access to a variety of affordable food of good nutritional quality, and meat is a valuable source of nutrients in a balanced diet. Through the Green Food Project Sustainable Consumption report, Defra brought together a wide range of stakeholders to engage in a debate across the food chain and civil society, about the role of diet and consumption in the sustainability of the food system, and the roles of different sectors in addressing consumption patterns.

We are improving labelling, including introducing mandatory country of origin labelling for the first time for pork, poultry, sheep and goat meat from April 2015 in order to respond to consumer demand to know where their meat comes from.

We are committed to supporting and developing the UK livestock farming sector and sustainable food production is a priority. We are working with the farming industry to improve the productivity and competitiveness of food and farming businesses, with better environmental performance.

We agree with the Committee that well-managed livestock farming contributes significantly to preserving the landscape and biodiversity, particularly in the uplands and on permanent grazing less suited to other forms of agriculture.

The sustainable intensification platform aims to make the best use of land available while addressing environmental impacts.[7] Initiatives to reduce emissions are discussed under Recommendation 13.

5 For example, through supporting implementation of low carbon techniques by smallholder farmers in Brazil to increase yields and profits whilst reducing emissions and avoiding deforestation.

6 This is set out in the UK statement on the sustainable production of palm oil, published in October 2012.

7 This is discussed under Recommendation 17.

Fish and seafood constitute approximately 20% of the global supply of animal proteins and are an important and affordable source of protein. Living marine resources are globally important both from a food security as well as a nutritional perspective.

9. We are concerned about the potential impact of projected rising trends in global demand for animal protein on the price of animal feeds and the cost of production. The Government is aware of this issue and has funded some research in this area. (Paragraph 39)

10. In view of the significant strategic risk and cost the UK is exposed to in relation to its animal feed imports, we recommend that the Government give higher priority to research to enable us to source more of our animal feed from within the EU. The Government must promote the growth of more legumes which ensure greater output per hectare. Additionally, the Government should monitor the demand for soya and other animal feeds at the global level and ensure that there is a long term "Plan B" for animal proteins within the EU. (Paragraph 40)

The Government continues to monitor developments in agricultural global markets, including production and trade of animal feed. The UK uses a wide variety of ingredients for animal feed produced domestically and from abroad, worth £5.6bn. Cereals make up at least 40% of total feed used in the UK (mainly wheat), while soybean makes up around 10%. The UK is typically a net wheat exporter but is a net importer of animal feed, importing around £2.1 billion (with imports of soya cake and meal being the single largest category) in 2013.

Soya bean meal can make up around 15 to 25% of diets fed to young pigs and poultry, as it is a rich source of high-quality protein providing a balanced source of essential amino acids. Replacing soya with domestically-produced vegetable proteins without having negative impacts on animal productivity and economic performance represents a significant technical challenge. Nonetheless, industry is taking action, and there has been a drop in soya bean use in the pig sector due to increased use of alternative home produced proteins, such as rapeseed meal, increased use of synthetic amino acids and reductions in the protein content of pig diets.

Two major bioethanol production facilities have recently been established in the UK. Whilst the public policy debate around supporting biofuel consumption in the EU is still live, such facilities also produce high-quality animal feed protein in the form of distillers dried grains. Industry estimates indicate that the UK biofuels industry could reduce animal feed import dependency by around 1.5 million tonnes when operating at full capacity.

The Technology Strategy Board (TSB), in partnership with Defra, the Biotechnology and Biological Sciences Research Council (BBSRC) and the Scottish Government is investing £16m in industry-led collaborative R&D to address the challenges of sustainable protein production.

BBSRC provides long term strategic funding for research on crop genetics, genomics and germplasm at the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University, to inform breeding of new and improved varieties of forage grasses and legumes for cultivation in the UK.

The new greening requirement introduced as part of CAP reform from 2015 can be expected to result in an increase in domestic protein crop production. The new Crop Diversification requirements can be expected to drive a broader range of crops to be grown. In addition, the Ecological Focus Area requirements can be met by growing a nitrogen fixing crop (e.g., broad beans).

The challenge of climate change

11. Climate change will have significant implications for our agricultural production in the long run. While it may be that the UK climate becomes better suited to particular types of agriculture, farmers will need the know how to adapt their crops or livestock without productivity losses and in a sustainable manner. Farmers would be greatly assisted by having access to more reliable long range weather predictions so that they can be better prepared for extreme weather events and conditions. (Paragraph 50)

12. We urge the Government to explore the cost implication for farmers of access to more long term weather forecasts as a first line of defence against extreme weather. (Paragraph 51)

The Government recognises the impacts climate change will have on agricultural production and the resulting need for adaptation.

The demand to increase the accuracy of long-range weather forecasting is not peculiar to the farming industry. Doing so would have obvious benefits for the decision-making processes of numerous types of business, the public, and the government itself.

In the UK, the Met Office already runs the most detailed operational long-range forecasting system in the world. These seasonal and monthly predictions can provide useful guidance for decision makers, and recent progress in science and modelling means they can be expected to accurately predict seasonal weather patterns 60% of the time (the rate for short-term forecasts is closer to 90%[8]). However, uncertainties will always exist, and they will always be greater the longer the range of the forecast.

Given this, it is important to recognise that it is not enough to increase scientific capability and translate this into an operational service. That service must also be tailored to its audience. It is known that demand for improved longer-range forecasts is particularly pronounced among the farming community. That is why, through Defra's Farming Resilience Group, work is ongoing with farming stakeholders (including major industry bodies, charities, high street banks, and others) and the Met Office to improve the way in which forecasts are communicated to farmers.

The Met Office has already made significant improvements to its forecast services, as well as supporting the National Farmers Union in the creation of its online weather pages, and producing its own webpage (part of the "Get Ready" web campaign) focused specifically on providing advice and tips to the farming community on improving their resilience to weather. Discussions are taking place with a number of organisations about the development of bespoke services for the agricultural community, with the Met Office due

8 As at May 2014 90.6% of Met Office maximum temperature forecasts are accurate to within +/- 2°C on the next day (36-month average). http://www.metoffice.gov.uk/about-us/who/accuracy/forecasts

to host a working group. As a one off in response to the severe flooding experienced by many farmers over the winter of 2013/14, Defra also provided a £10 million Farming Recovery Fund to financially support farmers to recover from the floods and get their land back into production as quickly as possible.

13. Building on the Climate Change Evidence Plan, the Government must produce an up-to-date action plan for reducing UK emissions. This should draw on the conclusions of the latest IPCC Report and on the methodologies for risk assessment outlined in it. (Paragraph 52)

(Note: An action plan resulting from the Climate Change Evidence Plan would not be an action plan for reducing UK emissions. The focus of the evidence plan was on adaptation and ensuring mitigation activity is sustainable. In addition, the IPCC report advocated a risk-based approach to decision making in face of uncertainty, but it did not set out risk assessment methodologies.)

Under the Climate Change Act the whole UK economy must reduce its emissions by 80% by 2050, and agriculture must play its part. Not all sectors have equal capacity to reduce emissions. The Carbon Plan published in 2011, described how Government intends to meet its budgets in each sector. Government will set the fifth carbon budget in 2016 and will publish updated plans shortly afterwards.

Defra is working with industry to achieve cost-effective reductions in emissions from agriculture by 3Mt CO_2e by 2022 in line with the Industry GHG Action Plan. A Defra-led review of the action plan in 2012 concluded that the industry aspirations were reasonable and achievable.[9] Defra will review the action plan again in 2016.

The Government is working with the food and drink sector (along with seven other industry sectors) to develop a roadmap for carbon emissions reduction out to 2050. Lead trade associations and major businesses have also developed sustainability strategies which tackle emissions reduction.[10]

The ambitious GHG Inventory Research and Development Platform, valued in excess of £12m over five years, aims to improve our understanding of UK agriculture's contribution to climate change, and to identify ways of reducing this.

Through the Sustainable Intensification Research Platform, Defra is continuing to support industry efforts to reduce agriculture's contribution to climate change. This work will include climate change mitigation and adaptation as part of an integrated approach to increasing food production whilst improving the economic, social, and environmental performance of UK agriculture.

Defra is currently developing the next Rural Development Programme for 2014-20. This will be a major opportunity to invest in the rural environment and farming competitiveness and has climate change adaptation and mitigation embedded as a cross-cutting theme.

9 https://www.gov.uk/government/publications/2012-review-of-progress-in-reducing-greenhouse-gas-emissions-from-english-agriculture.

10 For example, the British Retail Consortium's 'A Better Retailing Climate', and the Food and Drink Federation's 'Five-fold Environmental Ambition' both include industry targets for reducing emissions.

14. We were impressed with the range of practical research we saw at Rothamsted Research Institute. There is an important role for ruminant livestock on less intensively-farmed and environmentally valuable hills and uplands in the UK where a significant reduction in livestock numbers would have negative consequences for these environments. (Paragraph 57)

The new Rothamsted Research, North Wyke farm platform provides unique research capabilities for the UK which help to address some of agriculture's most pressing challenges.

Hill farming is an important contributor to the national livestock industry by providing breeding and finishing stock to lowland farming systems. Through appropriate land management practices, it can also contribute to a wide range of public benefits including uplands landscapes, ecosystem services, biodiversity, and cultural and natural resources.

The Government recognises these benefits and through its Uplands Policy Review gave a clear message of support for England's hill farmers who are highly dependent on livestock.

15. The bulk of our meat and dairy however is produced on lowlands, and if this is to continue, there is a need for greater research effort and funding directed at reducing emissions from more intensive beef, sheep and dairy farming systems. Given the limited projected progress made in reducing emissions from the agricultural sector as a whole, the Government should identify, as a priority, specific actions which will ensure the sector can meet national greenhouse gas reduction targets. (Paragraph 58)

Within the overarching framework set by the Climate Change Act, the Government is committed to taking a whole-government approach. Tackling climate change and demonstrating leadership through action is the responsibility of every part of government, central and local, and the wider public sector. DECC is responsible for coordinating overall compliance with carbon budgets, and Defra is responsible for mitigation of emissions from waste, agriculture, and fluorinated greenhouse gases.

As discussed under Recommendation 13, there are no specific national GHG emissions reductions targets for the agricultural sector as yet, but Defra is working with industry to achieve cost-effective reductions in agricultural GHG emissions in line with the Industry GHG Action Plan.

Research into reducing emissions

Under the Government's UK Agricultural GHG R&D Platform,[11] researchers have been measuring methane emissions from ruminant livestock. The results will help to identify ways of reducing GHG emissions and climate change mitigation.

Defra is funding a major £3.5m project to explore if protein intake can be reduced in high-yielding dairy cows to reduce GHG and other emissions, but without having negative impacts on milk productivity and the economic sustainability of the UK dairy industry.

11 This is jointly funded by Defra and the Devolved Administrations of Scotland and Northern Ireland.

The Sustainable Intensification Platform is examining how production can be increased while simultaneously reducing GHG emissions and enhancing the environment under a variety of agricultural systems, including lowland grazing.

The environmental performance of agriculture would be significantly improved by reducing the incidence of common (endemic) diseases, enabling production with lower GHG emissions per unit of output, or the same total output to be obtained from fewer animals. BBSRC supports research to counter the effects of widespread animal diseases that undermine animal health and the efficiency and sustainability of livestock production in the UK.

Under the Livestock Research Group of the Global Research Alliance, the UK is leading an international network on Animal Health and Greenhouse Gas Emissions Intensity, which brings together researchers to investigate links between efforts to reduce livestock disease and GHG emissions intensity reductions.

Defra is supportive of and keeps under review the roadmaps developed by the dairy, and sheep and beef industries which are helping them to develop a more efficient and profitable livestock sector whilst reducing GHG emissions. For example, a large body of evidence is being transferred from Defra's applied Sustainable and Competitive Farming research programme, which includes the UK Agricultural GHG Research Platform and provides evidence to show that improvements in the efficiency of production from lowland grazing systems can be made through (i) more resource-efficient fertiliser and feeding regimes and (ii) improved genetics. These can have a significant impact on reducing emissions per unit of product as well as increasing productivity.

Sustainability and sustainable intensification

16. We need to increase agriculture output without increasing the amount of land used. It is clear that in some key crops this is not happening and yield levels have stagnated. We also need to ensure our agricultural production systems preserve the soil on which these crops are grown and ensure it retains key nutrients. (Paragraph 66)

17. Sustainable intensification in relation to key UK cereal crops has made limited progress. The plateauing of yield levels in wheat must be addressed as a matter of urgency. As part of its efforts towards sustainable intensification, we recommend the Government also direct greater funding to research on maintaining and improving soil quality. (Paragraph 67)

Defra's statistics suggest that average wheat yield has not increased in the past decade and on some measures may have fallen.[12]

Defra directly funds or co-funds a number of projects aimed at improving cereal yields, both through increasing genetic potential and reaching existing yield maximum. The flagship project is the Wheat Genetic Improvement Network (WGIN). This is a wide network of stakeholders (UK plant breeders, farmers, agri-food industry) to provide a 'platform' supporting applied pre-breeding genetics research to increase yield, nitrogen and

12 This is particularly important when, although the aggregate land use for agriculture has increased over recent years, the FAO estimate that per capita agriculture land will continue a downward trend due to pressure on land for other uses, e.g. urbanisation. Fig 1, ftp://ftp.fao.org/agl/aglw/docs/ResourceOutlookto2050.pdf

water use efficiency, and pest and disease resistance in wheat. WGIN together with Wheat 2020, carried out by Rothamsted Research, are looking at increasing the genetic potential of wheat and making improved varieties available to growers.

BBSRC has led the development of the recently launched International Wheat Yield Partnership[13] which aims to increase the genetic yield potential of wheat by up to 50% in 20 years. IWYP will support both core infrastructure and facilitate transnational open calls for research, all targeted at raising the yield potential of wheat.

BBSRC has also led a £7M research industry club, Crop Improvement Research Club[14], to improve productivity and resource use efficiency. Research is already delivering tools to enable better trait selection for improved yields.

The Sustainable Intensification Platform is investing £4.5m over three years to establish collaborations between researchers from multiple disciplines and institutions to identify ways to increase farm productivity, reduce environmental impacts, and enhance ecosystem services.

Sustainable intensification in agriculture goes beyond increasing output per hectare, and the Rural Development Programme for England targets important measures such as labour productivity through investments in farmer education and skills, and encouraging uptake of best practice through demonstration farms, discussion groups and benchmarking exercises. We are also concerned with the overall ratio of outputs to inputs, known as total factor productivity, and will work with farmers, the AHDB and the agri-tech industry to improve this by linking farmers more closely with agricultural research.

Soil

The Government continues to work with the Research Councils to increase levels of funding for soil research. Defra has a soils research programme, to improve soil protection, enhance quality and minimise environmental consequences of soil erosion, such as flooding. Last year, the Global Food Security Programme brought together BBSRC and NERC to create the joint Soil and Rhizosphere Interactions for Sustainable Agri-ecosystems call, a £5M programme to provide an improved understanding of agricultural soil and rhizosphere interactions to underpin the development of agricultural ecosystems. A second £5M Soil Security Call is currently being developed by NERC in collaboration with BBSRC and Defra.

BBSRC and NERC have also launched the £10M Sustainable Agriculture and Innovation Club[15], successfully engaging with a broad range of industry to address water and nutrient related challenges to deliver resilient and robust crop and livestock production systems.

18. Organic production uses fewer pesticides and inorganic fertilisers and, in so doing, makes an important contribution to environmental stewardship. We believe organic production also has a place in the market in adding to consumer choice. However, organic yields—certainly for extensive crops such as cereals and also for potatoes and

13 http://iwyp.org/

14 http://www.bbsrc.ac.uk/circ

15 http://www.bbsrc.ac.uk/saric

some fruit—are generally lower than those for conventional agriculture. (Paragraph 73)

The Government agrees that organic yields are generally lower than those for conventional agriculture, and notes the conclusion of the 2011 Foresight report that organic agriculture could not be adopted as the main strategy to achieve sustainable and equitable global food security[16].

We also agree that organic farming delivers a wide range of environmental benefits, including water quality, soil improvement, reduced nitrate and pesticide pollution, and nutrient balance. Organic farming also offers greater consumer choice and certified animal welfare standards. Organic conversion and maintenance is supported through the Organic Entry Level Stewardship scheme (OELS). Support under the scheme was maintained for the 2014 transition year and around 14,000ha of land will convert to organic under Agreements struck this year. Organic conversion and maintenance will also be supported in the new Rural Development Programme, and specific agri-environment options will be available for organic farmers in the successor scheme to environmental stewardship.

Supply Chain Resilience

19. Shorter supply chains minimise the threat of disruption and therefore help food security. As we said in our Report on Food Contamination, we are concerned about the length of supply chains, particularly for processed and frozen meat products, and we welcome the efforts made by some retailers to shorten these. As a result of horsemeat contamination in 2013 the Government commissioned a review of supply chain resilience. We look forward to the final report on this matter, and to receiving any evidence that supply chains in general are becoming shorter. (Paragraph 84)

All food businesses are responsible for ensuring that the food they sell meets the required standards and that there is effective traceability throughout the supply chain. Last year's horsemeat fraud highlighted the need to review food supply systems which is why the Government asked Professor Chris Elliott to lead a Review into the integrity and assurance of food supply networks. The final report of the Review was published on 4th September 2014.

The Review examines the strengths and weaknesses of food supply networks in the UK. It recognises that current systems for safeguarding food safety and public health in this country are robust and that UK consumers have access to some of the safest food in the world.

The review highlights the complexity of the food chain that gives consumers access to all kinds of seasonal and unseasonal products and identifies ways to help make systems providing assurance about food integrity as robust as those for food safety.

The Government agrees that audit and assurance regimes should be strengthened to remove duplication and to cover food fraud prevention.

16 The Future of Food and Farming: Challenges and Choices for Global Sustainability Final Project Report, Government Office for Science, Jan 2011. Page 82

Professor Elliott reports a concerted effort by industry to simplify supply chains where possible. We will continue to support the actions being taken by the British Retail Consortium (BRC) to review the BRC Audit Standard to provide an additional food fraud module, and to encourage an approach by its members to reduce the overall number of supply chain audits whilst increasing their effectiveness in addressing potential food fraud. One suggested mechanism promoted by Professor Elliott is shifting the balance towards unannounced audits and including food sampling as part of the process.

We will also support the work of the Food and Drink Federation and the British Hospitality Association to update guidance to the manufacturing, food service and catering sectors on protecting themselves against food fraud in recognition of the large proportion of SMEs operating in the sector.

We will look for further opportunities to reduce regulatory burden on food businesses by building on the benefits of the Primary Authority Partnership Scheme which reduces the need for regulatory inspections and by expanding earned recognition across the sector for businesses which can demonstrate a good compliance and audit record.

Co-funded by Defra and FSA, the British Standards Institute will be publishing an updated version of Publicly Available Specification (PAS) 96 (Defending Food and Drink) which will provide guidance and advice to food and drink industry sectors about defending supply chains against malicious attack. This incorporates an "all-threats" approach to include economically motivated adulteration and cyber threat as well as the traditional focus on deliberate contamination with intent to cause harm to human health. The updated PAS will be freely available via a link on the FSA website which will make it easily accessible for small and medium sized businesses.

20. We want to ensure that the role of the Grocery Code Adjudicator works for farmers and buyers, and therefore ultimately the consumer, so that the farming industry remains both sustainable and efficient. If farm incomes are squeezed unduly, farmers are unlikely to make the necessary investments in sustainable production. The creation of the role is welcome and must be properly resourced as part of a wider effort to promote security. (Paragraph 91)

The Government agrees farming must be sustainable and efficient but the GCA has no role in relation to prices or farm incomes. Its role is to ensure the large supermarkets act fairly towards direct suppliers.

The Government agrees that the GCA Office must be sufficiently resourced and understands this is now the case.

21. We recognise that assessing "fairness" in relation to producer and consumer prices is fraught with difficulty, not least those of determining whether markets are working efficiently and transparently. However, we fully support the role of the Adjudicator in assessing whether contractual and other commercial practices may be unfair within the supply chain, or prejudicial to farmers and the longer run visibility of their businesses, and whether there is evidence of abuse of market power in the supply chain. (Paragraph 92)

The Government agrees that it is difficult to assess fairness in relation to producer and consumer prices. However, food prices do not fall within the GCA remit. Although the GCA is not directly concerned with farmers unless they directly supply the large retailers, the GCA is required to act on evidence of market power abuse brought to its attention. Some of the actions the Adjudicator has taken over the past year are set out in the response to Recommendation 22 below.

22. We request an update on progress made and outcomes achieved to date from the Office of the Grocery Code Adjudicator. We suggest that it would be better if the Office had the power to initiate an investigation. (Paragraph 93)

In its first Annual Report issued on 23 June 2014, the GCA set out the progress it had made since June 2013.[17]

Regarding the power to initiate investigations, the GCA is governed by the GCA Act 2013 which makes no provision for a GCA investigation without a formal complaint, which can be anonymous. Changes to this procedure require a change to the GCA Act.

Harnessing technology

23. We support the Agri-Tech Strategy as a bold and innovative response to the need to ensure our agricultural production methods are modern and sustainable. The Government must ensure that it creates new partnerships between academia and those involved in developing technology. It should identify alternative funding mechanisms with the Technology Strategy Board in case adequate industry co-funding is not forthcoming, particularly where technology can deliver significant public benefit. We also recommend that the Government monitor the early competitive rounds of catalyst funding to assess whether there could be justification for expanding the funding base. (Paragraph 99)

We welcome the Committee's support for the Agri-Tech Strategy. We believe that the funding available under the Agri-Tech Strategy can leverage private investment which will make the UK farming and agri-tech sectors more competitive.

As the Committee recommends, we are monitoring uptake of the Agri-Tech Catalyst. Awards have been made under the first round. Applications received under the second round are currently being assessed. The response to date has been high, both in terms of numbers and quality.

We are also monitoring the success of the catalyst as it relates to other funding streams, such as the TSB's Sustainable Agriculture and Food Innovation Platform (SAF-IP), and work funded through the Research Councils, to ensure that there is a range of funding available for basic and applied research in this area.

24. We were impressed by some of the possibilities provided by precision technology to make farming easier and more efficient. There are, for example, already sensor technologies which have the potential for development in a range of engineering and

17 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322415/10143-GCA-Annual_Report_2014.pdf

other precision farming applications where quick-wins could be achieved for UK farming. (Paragraph 105)

25. As the Government's new Agri-Tech Strategy addresses technological developments that are close to being brought to commercial reality, research funding bodies should place additional emphasis on pre-commercial and multidisciplinary applied research into precision farming technologies. (Paragraph 106)

The possibilities of precision agriculture are firmly embedded in the delivery of the Agri Tech Strategy. Successful projects in the first round of the Agri Tech Catalyst included several on sensor and other engineering solutions. This builds on the success of the sensor and engineering calls run through the TSB over the last couple of years.

The Agri-Tech Strategy's prospectus on Centres for Agricultural Innovation highlighted the possibilities for bringing together public and private sector funding to address issues in a range of farming systems. The Centres will link into publicly funded pre-competitive work, such as that which we are supporting through our involvement with the Europe-wide Joint Programming Initiative on Food Security, Agriculture and Climate Change.[18]

BBSRC also runs a stand-alone LINK scheme which supports pre-competitive research with industry.[19] Research that is strategically important to industry is also supported under the BBSRC research and technology clubs.[20]

26. UK agriculture must embrace new technologies which are consistent with the principles of evidence and balanced risk-based assessment whilst meeting criteria of both economic and environmental sustainability, if it is to meet the challenges to food security in the future. (Paragraph 111)

27. Given the evident concern about the way in which the EU regulatory framework operates and its potential implications for the future productivity and competitiveness of our agricultural sector, the Government should tell us what conclusions it has drawn regarding its scope for unilateral action on the EU regulatory regime for crop protection and GM crop approval as part of its wider review of the Balance of Competences between the UK and EU. (Paragraph 112)

The Government agrees that it is vital for UK farmers to be able to adopt new technologies, and that there are instances where EU regulations are failing to operate appropriately, in particular for pesticides and GM crops. This is prejudicing the ability of our farmers to remain competitive and achieve sustainable increases in production. The Government will continue to argue for the EU to take a risk rather than hazard-based approach to regulation, firmly grounded on the scientific evidence. The aim must be to allow predictable and timely access to the market for safe and beneficial products.

The Government's thinking on the EU regime for GM crops is given in response to Recommendation 29, below. Regarding pesticides, the EU regulation on plant protection products includes a requirement for the Commission to report to the European Parliament

18 https://www.faccejpi.com/Strategic-Research-Agenda/First-Biennial-Implementation-Plan-2014-2015

19 A number of relevant case studies can be found here: www.bbsrc.ac.uk/business/collaborative-research/stand-alone-link.aspx.

20 www.bbsrc.ac.uk/business/collaborative-research/industry-clubs/industry-clubs-index.aspx

and Council by the end of 2014 on the functioning of several key aspects of the regime. The Government believes that this review should be assigned a high priority. All parties need a clear and evidence-based picture of the regime's impact, to ensure that it supports a competitive and productive agriculture sector, while protecting human health and the environment. The review should also look closely at the impact of current legislation on the future availability of pesticides for EU farmers.

The Review of the Balance of Competences provides an informed and objective analysis of where the EU helps and where it hampers. It is not designed to make specific policy recommendations or draw conclusions, although it will set out some of the challenges and policy options that will face future decision-makers.

Genetically modified food

28. The technology involved in the production of genetically modified crops generates public concern. In particular there are concerns that there may be unknown implications of this technology. In relation to the consumption of GM foods many people in other countries, and a large percentage of our poultry and livestock, consume GM products with no known or documented ill-effects. This should offer some reassurance to the wary. In terms of concerns about the production of GM crops, the EU process for approval of such crops is, as noted, extremely rigorous, and appropriate regulations can be put in place to guard against cross-contamination. (Paragraph 131)

As the Committee suggests, there is no reliable evidence that existing GM foods or animal feeds pose a serious health risk. The independent and science-based EU assessment procedures for GM products are robust, and the Government is confident that this offers sound assurance that they will only be authorised for use if it is clear that safety will not be compromised. In this context, the potential for cross-contamination from GM crops should not be seen as a safety issue, but the Government recognises that measures will be needed to segregate GM and non-GM production to facilitate choice and protect economic interests. Defra will ensure that pragmatic and proportionate 'coexistence' measures are in place before GM crops are grown commercially in England.

29. The Government should do more to inform the public about the potential beneficial impacts of growing GM crops in the UK. It should encourage an evidence-led public debate about GM crops and also counter food safety fears about the consumption of GM. In order to give consumers the opportunity to make informed choices, GM foods should be labelled as such, in the same way as organic produce. The Government must continue to work within the EU to argue for a system which is more flexible for those member states that wish to take advantage of GM technology, while still ensuring that all EU consumers are protected, in the same way it does with non-GM technologies. Progress towards this objective must be research and science-led. The Government must also ensure that any GM products grown legitimately in any member state may be freely traded across the EU. (Paragraph 132)

A fair appraisal of the evidence supports the view that responsible use of GM technology can help alongside other options to make agriculture more efficient and sustainable. This is the conclusion reached by the European Academies of Science Advisory Council, representing national science academies of EU Member States and by the Council for

Science and Technology who advise the Prime Minister. The Government is clear that given the challenges ahead on food security, this technology is not something we can afford to ignore. Ministers have spoken out to highlight the potential benefits of GM crops and the robustness of the safety controls. The Government will continue to encourage a more informed, evidence-led debate, although everyone has a role to play in this, including farmers, scientists, NGOs, the media and the general public.

It is already an EU requirement for any food or feed made from an approved GM crop to be clearly labelled, so that consumers can decide for themselves whether or not to buy them.

In June EU Environment Ministers reached political agreement on a proposal that would give Member States more power to decide whether to accept commercial GM cultivation in their own territory, whilst retaining the existing EU-level safety assessment and decision-making process. This proposal should make it easier to reach EU decisions to authorise GM cultivation, allowing it to take place in those Member States or regions that are open to this possibility. It would not affect the free trade of authorised GM products throughout the EU single market. The proposal still has to be agreed with the European Parliament, which means that it may not be finally adopted until late this year or next year. The Government will continue to support these negotiations, and more generally for the EU to follow a proportionate and science-led approach to GM regulation.

Securing food for the future

30. We recommend that the Government, through its Global Food Security Programme, undertake a themed mapping of the current scientific research programmes, projects and reports that are directed specifically towards enhancing our food security either publically funded or co-funded, and of those which might exert a potentially important indirect impact on food security. This would provide a first line of co-ordinated communication of research to potential users, and indicate more transparently where current priorities lie. (Paragraph 136)

The Global Food Security (GFS) programme coordinate food-related research and innovation across major public sector funders through its high-level strategy. The programme builds on partners' existing activities, and helps to ensure alignment of activities with shared goals, providing a platform for partnership working nationally and internationally.

The programme's refreshed themes represent a high-level mapping of priorities across the major public sector funders, based on those set out in the UK Cross-Government Food Research and Innovation Strategy.[21] The priority research themes for the programme are (i) resilience (ii) sustainable production and supply and (iii) nutrition, health and wellbeing.

GFS has undertaken two '100 questions' activities, building on the 2010 Foresight Report's challenges to help funders and stakeholders develop research priorities on food security in

21 https://www.gov.uk/government/publications/food-research-and-innovation-strategy

terms of the future of global agriculture,[22] and research priorities for the UK food system.[23] These exercises were used to develop the GFS Strategy refresh and GFS activity.

More broadly, the UK has agreed to lead a review of international research priorities in sustainable agriculture at the recent Meeting of Chief Agricultural Scientists, and the GFSP will coordinate this work for the UK.

The RCUK Gateway to Research portal also enables any interested party to search Research Council funded projects for publications, people, organisations and outcomes.[24]

31. UK research councils should encourage the research-intensive universities and institutes which they fund to explore opportunities to extend the scope for farm-level research through greater co-operation with specialist land-based sector universities and colleges, thereby bringing the scientific research closer to application and the farming community, and ensuring best use of scarce and expensive resources. The Government should recognise the contribution made by our universities and research institutes and ensure the long term security of their funding. (Paragraph 139)

Research Councils encourage universities and institutes to maximise the impact of their research by working with relevant partners, including those in specialist land-based sectors.

In 2012, Rothamsted Research North Wyke launched the BBSRC-funded Farm Platform to bring together scientists from across disciplines and countries to spark new ideas to meet the food security challenge. Three farmlets will compare the benefits of different production systems.

BBSRC also funds research utilising research farms in the HEI sector and field-based studies at BBSRC strategically funded research institutes. It also runs the BBSRC Advanced Training Partnership scheme to provide a range of specialist high level training to meet industry needs in partnership with the higher and further education sectors.

32. There are gaps in the co-ordination and flow of knowledge from research institutes to the farmers who would use and benefit from it. We recommend that the Government develop an integrated knowledge transfer strategy and action plan, which can be delivered and co-ordinated within the present funding frameworks, to ensure engagement between researchers and the relevant end users. (Paragraph 147)

The flow of knowledge from research to farmers is a key component in driving sustainability and growth in the agricultural sector. We know from the Farm Business Survey that there are differences among farmers and between farm-types in the degree to which they access advice through technical services, discussion groups and demonstrations.

The investment in the Centres for Agricultural Innovation through the Agri-tech Strategy is designed to be part of the solution to this issue. Each centre is expected to have a programme of outreach to farmers to allow information to flow between them and the

22 www.tandfonline.com/doi/abs/10.3763/ijas.2010.0534#.U4c5VfldXz4

23 http://link.springer.com/article/10.1007%2Fs12571-013-0294-4

24 http://gtr.rcuk.ac.uk/

research base (as there are benefits to be gained from knowledge transfer in both directions.)

The Government will also be supporting the European Innovation Partnership for agricultural productivity and sustainability (EIP-Agri) in the next Rural Development Programme from 2015. The EIP-Agri is a new European Commission initiative which will boost innovation. It is intended to foster a resource-efficient, productive and low-emission agricultural industry by bringing together researchers and farmers to apply technologies on farm and exchange knowledge. RDP funds will support the setting up and running of Operational Groups to conduct projects. The topic will be chosen by Group participants, mainly farmers.

This will be integrated with support for knowledge transfer, advice and skills in the next RDP, and will build on the results of the implementation of the Agri-tech strategy.

Previous work on advice and incentives to farmers has shown this to be a complex landscape and one where peer to peer information exchange is one of the most effective methods of knowledge transfer. Based on this, our approach to providing such advice is to simplify the landscape of advice to farmers, and make sure that Government communicates only on issues where it will have most impact, working with other partners, especially in the private sector, to provide advice and enable knowledge transfer on other topic.

We do not feel that a Government Strategy and action plan on knowledge transfer would add value to the initiatives we already have in place. However, we are closely monitoring the impact of the Agri Tech Strategy over the next five years and into the long term. We will use this information and direct feedback from the industry via the Agri Tech Leadership Council to understand the reasons behind any areas of the industry where the uptake of new technologies is not as high as anticipated, so that we can base any further initiatives on robust evidence of barriers to uptake.

33. Our food security depends on a vibrant, innovative and professional UK farming sector. This in turn requires a regular inflow of new entrants to the sector. Farming in the UK does not have this and efforts must be made to encourage new entrants who are willing and able to take advantage of new technologies in order to ensure the sector is modern and competitive. We are pleased that the Government is examining ways to do this in conjunction with the industry which can also help with the costs associated with entry into farming. (Paragraph 152)

34. We recommend that the Government update us on its efforts and on the likely actions that will emerge from the Future of Farming Review. It should also clarify whether any Rural Development Programme funding will be made available to support the implementation of the recommendations arising from the Future of Farming Review. (Paragraph 153)

The industry-led Future of Farming Review published its findings in July 2013, which centred on the themes of skills and professionalism in the industry, flexible routes into farming professions, affordable housing, succession planning and access to finance. These actions were for both industry and Government to address, in some cases working jointly, and we have begun to do so.

For example, Defra is reviewing all agri-tenancy legislation to modernise and simplify the legislative framework between landlords and tenants, through a Red Tape Challenge process. We are supporting the National Federation of Young Farmers Clubs through a grant of £60,000 to develop training programmes and promote awareness of careers opportunities. Government has also transformed apprenticeships to make them more rigorous and responsive to the needs of employers. Employer-led Trailblazers are leading the way in piloting the changes and one of the Trailblazers is developing the standard for a Land-based Engineering Technician.

We are considering the design of the new Rural Development Programme so that the younger generation of farmers can access support, training and advice to innovate and become more competitive. We are also considering how to encourage robust business and succession planning, and effective investment during the early years of business operation. This will complement the new CAP Pillar 1 arrangements which enable us to make a top up to the basic payment for new entrant young farmers aged 40 or under.