

All-Party Parliamentary Group on Science & Technology in Agriculture

Notes of a meeting held on Tuesday 10 September 2013, Committee Room 12, Palace of Westminster

Implementing the UK Agri-Tech Strategy

Present:

Members

George Freeman MP
Lord Selborne
Andrew George MP
Sir Jim Paice MP
Lord Lindsay

Guest Speakers:

Lord de Mauley, Parliamentary Under-Secretary of State, Defra
Judith Batchelar, Director of Sainsbury's Brand & Industry Co-Chair, Agri-Tech Leadership Council

Stakeholders

James Hallett, British Growers Association; Rosana Verza, Brazilian Embassy; Mark Buckingham, Monsanto; Rob Simpson, BASIS; John Bingham, former wheat breeder; Nigel Kerby, Mylnefield Research Services; James Clarke, ADAS; Vicky Foster, HGCA; Mark Tatchell, Horticulture Innovation Partnership; Professor Richard Tiffin, Reading University; Dougal Goodman, Foundation for Science & Technology; Richard Cooksley, BCFTA; Caroline O'Leary, nabim; Martin Savage, nabim; Gordon Jamieson, John Innes Centre; Rosemary Collier, Warwick Crop Centre; Richard Wheeler, LaSalle Investments; Mike Bushell, Syngenta; Graham Jellis, Folia Partners; John Hutchins, NIAB; Prof Chris Atkinson, Natural Resources Institute; Prof Mike Bevan, John Innes Centre; Clare Wenner, British Sugar; Duncan Barker, DfID; Penny Maplestone, BSPB; Calum Murray, Technology Strategy Board; Paul Biscoe, AFCP; James Wallace, Daltons Seeds; Nick Major, BOCM Pauls; John Ford, Frontier Agriculture; Andy Richardson, Volac; Prof Keith Goulding, Rothamsted Research; Susan Woodhead, Horticulture Consultant; Prof David Pink, Harper Adams UC; Paul Rooke, AIC; Darryl Shailes, Hutchinsons; Jennie Wilson, USDA; Chris Warkup, Biosciences KTN; Liz Quigley, AB Agri; Andrew Kuyk, FDF; Neil Hipps, Horticulture Consultant; Heather Jenkins, Waitrose; John Gregson, Waitrose; Angus Hearmon, Fera; Andy Mayer, BASF; Andrew Marshall, abc; Faye Jones, NFU; Simon Howes, Parliamentary Research Unit; Morvah George, Kew Millennium Project; Sarah Armstrong, Syngenta; Shradha Singh, Syngenta; Luke Gibbs, Syngenta; Daniel Pearsall, Group Co-ordinator

1. Welcome & Introduction

George Freeman MP (GF) welcomed Members, guest speakers and stakeholders to the Parliamentary launch of the Government's long-awaited Agri-Tech Strategy, which had been officially announced at East Mallory over the summer. GF noted that the Strategy had been developed as a partnership between BIS and Defra, and that Science Minister David Willetts had addressed the All-Party Group back in January to set out the thinking behind the Strategy within BIS. It was therefore a great privilege to welcome Lord de Mauley, lead Minister within Defra, and Judith Batchelar, Brand Director at Sainsbury's and industry co-chair on the Agri-Tech Leadership Council, to update the Group on the Strategy's progress and to discuss its implementation.

By way of background to the Agri-Tech Strategy, GF highlighted firstly the deep commitment within Government to the appliance of science as a key part of the global race to find more sustainable models of economic growth; secondly the notion that there was nothing contradictory or incompatible about environmental sustainability and economic growth - it was in everyone's interests to consume fewer resources and to increase production more efficiently; and thirdly the critical role of new partnerships between public and private sector in accelerating the uptake and impact of taxpayer funded research.

2. Guest speakers

Lord de Mauley, Parliamentary Under-Secretary of State, Defra

Welcoming the meeting as a key opportunity to sound out the views of Parliamentarians and wider stakeholders on the Agri-Tech Strategy, Lord de Mauley (LdM) highlighted the UK's strong tradition as a global leader in agricultural productivity and innovation, but acknowledged that over the past 20-30 years Britain had fallen behind major competitors.

LdM noted that the key ingredients were still there – a world-class research base, a strong farming industry and a dynamic food supply chain. But a gap had emerged between the excellent basic science taking place in UK research institutes and universities and its commercial application. This was what the Agri-Tech Strategy was seeking to address by building closer links between academia and industry and by focusing investment on applied research and its translation onto farm.

LdM also highlighted an international dimension to the Strategy, not only in attracting inward investment but also exporting UK agri-science expertise, including in the field of international development.

LdM referenced the cancer-fighting Beneforte broccoli developed at the UK's Institute of Food Research as an example of the potential consumer benefits on offer from renewed investment in applied agricultural science and technology. He highlighted promising research into nitrogen fixing crops by scientists at Nottingham University to illustrate how UK science could be used to improve the sustainability of modern crop production. Advances in precision farming, satellite imaging and navigation, remote sensing and robotics were also key examples of technologies in which the UK had the potential to drive the pace of global innovation.

Against a background of climate change, population growth and pressure on finite natural resources, LdM noted that the key challenge was to increase productivity while reducing agriculture's impact on the environment.

In terms of specifics, the Strategy was making available £160m of additional taxpayer investment, of which £90m would be allocated to the development of a national network of centres for agricultural innovation, with the Government's investment matched by contributions from the private sector. These centres – which could be virtual coalitions of existing expertise - would provide a national focus in key areas such as applied research, training, skills development and knowledge transfer onto farm. The specific themes to be addressed by these innovation centres were not pre-determined, but would be decided through consultation with industry.

In terms of timing, LdM announced that some 200 expressions of interest in the innovation centres had been received following the Strategy's official launch. BIS would be hosting an event on 21 October bringing industry and academia together to progress the development of this component of the Agri-Tech Strategy.

The remaining £70m allocated to the Agri-Tech Strategy would be allocated to a new Catalyst Fund to help small to medium-sized businesses progress the development and application of new agricultural technologies. Based on the successful biomedical catalyst model which was helping to de-risk early stage investment in taking developments from the laboratory to market, the £70m available included £10m provided by DfID to support initiatives of specific relevance to improving developing world agriculture.

LdM announced that the Agri-Tech Catalyst Fund would be launched and proposals invited following the next meeting of the Leadership Council on 23 September.

LdM added that the Government's commitment to working in partnership with industry and the science base was demonstrated by the make-up of the Leadership Council, and he urged stakeholders to get involved in delivering the Strategy's vision:

'Our vision is that the United Kingdom becomes a world leader in agricultural technology, innovation and sustainability, exploits opportunities to develop and adopt new and existing technologies, products and services to increase productivity, and thereby to contribute to global food security and international development.'

Judith Batchelar, Director of Sainsbury's Brand & Industry Co-Chair, Agri-Tech Leadership Council

Judith Batchelar (JB) opened by emphasising the Agri-Tech Strategy's significance not only for agriculture but for the entire food supply chain. The Strategy was rich in content, with very few areas of activity not covered, from training and skills development to applied research and translation. This meant that it had a huge potential audience, and part of the challenge facing the Leadership Council was to communicate the breadth and scope of the Strategy to all potential stakeholders.

JB noted that the Strategy was already beginning to encourage new collaborations and partnerships in this space. Indeed new thinking and new supply chain models would be critical because the global food system in its current shape was probably not fit to feed a global population set to reach 9 billion people by 2050, and to do so using fewer natural resources and against the background of climate change. Highlighting the scale of the global food security challenge, JB noted that already 1 billion people go to bed hungry, and that malnutrition kills more people than disease.

At the same time, JB noted that customers expect food to be tasty, nutritious and affordable, and to have been sourced ethically and sustainably – it was therefore vital to understand the dynamics of the value chain and how to put effective partnerships together.

On behalf of the Leadership Council, JB welcomed the additional Government funding of £160m allocated to support the Strategy's implementation. She expressed confidence in the prospects for success because so many exciting projects were already happening, for example through DfID, TSB and BBSRC initiatives. The new money would help move that agenda further forward.

JB also highlighted the significance of the £10m already committed to support a new centre for agricultural informatics as the basis for sharing, collating and analysing good quality data across the industry to share and inform best practice. According to JB, harnessing the power of big data offered the potential to drive greater performance improvements throughout the supply chain than any single technology or innovation, and would allow future R&D investment to be prioritised most effectively.

In conclusion, JB emphasised the need to ensure new investment through the Agri-Tech Strategy was directed where it would deliver the greatest impact. She urged all stakeholders to engage with the process, noting that if in five years time the Government was able to point to the Strategy's success in terms of driving economic growth, jobs and exports within the agri-food sector, then the Leadership Council would have done its job.

3. Questions and Discussion

The following key points arose during discussion:

David Leaver welcomed the Agri-Tech Strategy as a refreshing change from the past 15-20 years which had seen a widening gap between investment in basic science and its reduction to practice. But he suggested that this may bring fresh challenges in terms of the capacity available within the UK to carry out applied research given the scale of disinvestment over recent decades. He asked how the success of the Strategy would be measured.

JB indicated that the development of success measures was a key task for the Leadership Council to address at its next meeting on 23 September. It would comprise a combination of softer measures – ie have we engaged the sector, is the process transparent, are the funding mechanisms simple and easy to navigate – together with the more traditional economic metrics such as impact on agricultural productivity, return on investment, jobs created, unlocking industry investment and accelerating the transfer of innovation to market.

Andrew Kuyk highlighted the importance of the Strategy in forging new pre-competitive partnerships and collaborations along the entire food supply chain, asking how FDF members who were not so well acquainted with funding mechanisms in the agri-tech sector might ensure they were not left behind or left out. JB emphasised the importance of communication and engagement with all relevant sectors of industry – LdM offered himself as a point of contact if necessary.

Chris Warkup asked about mechanisms for sharing best practice between the various industrial Leadership Councils, of which there were now a considerable number, expressing concern that the Agri-Tech Leadership Council seemed more like a steering group overseeing the spend than a forum of industry leadership. JB acknowledged that governance of the LC and how to benchmark outcomes and progress were critical, and therefore any lessons to be learned from established Leadership Councils would be welcome. LdM suggested that David Willetts was the answer to sharing best practice as the common denominator behind all Leadership Councils.

John Bingham highlighted the vital contribution of plant breeding to agricultural productivity and sustainability, suggesting that the absence of a plant breeding representative from the Leadership Council was a serious omission. LdM acknowledged the importance of plant breeding to delivering the Agri-Tech Strategy's objectives, noting that Dr Tina Barsby of NIAB was on the LC at least as a representative of breeding-related research. While Mr Bingham was not alone in thinking a particular sector under-represented, LdM emphasised that members of the LC had not been selected to represent their own businesses or organisations but to act in a personal capacity for the greater good of the Agri-Tech Strategy.

Mike Bevan asked how co-ordination of the different activities of the multiple innovation centres would be managed, and whether this was a role for industry. LdM acknowledged the importance of co-ordination, for example in signposting foreign interest and investment. GF suggested that the agri informatics centre may itself have a pivotal role to play in providing a

knowledge hub to inform and drive the direction and prioritisation of research taking place at the different centres.

Chris Atkinson expressed concern over the complexity of sustainability metrics and benchmarking given the regional variations on issues such as water availability which was basically irrelevant in areas such as Scotland and Wales but critical for crop-growing regions such as East Anglia. How would such variations be accounted for in making the system fair and relevant? JB acknowledged the complexities and imperfections of any system of metrics which meant that trade-offs and compromises were inevitable, but suggested that the process of collecting and analysing data was critical to improving understanding and asking the right questions.

While welcoming the Agri-Tech Strategy's aim to attract industry co-funding of the innovation centres, Mark Tatchell suggested this in itself created a challenge of how benefits would be derived by investors without those benefits becoming exclusive and so preventing the sharing of excellence across the industry.

LdM acknowledged that commercial investors would want to see a return on that investment, which may be structured in a different way for different centres, but until specific proposals were received and their terms considered and negotiated it was difficult to give a clear answer at this stage – the good news was that plenty of expressions of interest had been received from prospective commercial investors.

Nigel Kerby asked whether the LC was considering any special initiatives to support the translation of science to industry through a centralised portal covering all sectors, so facilitating the licensing of technology as well as marketing to overseas investors.

JB suggested that communication and knowledge transfer were critical to the translation of science and its uptake by industry, highlighting the development by Sainsbury's of concept fruit farms seven years ago using the most sophisticated precision growing techniques. The new system yielded 60-70 tonnes/ha compared with the traditional 20-30 t/ha, but there were still growers not adopting the new growing techniques – how to drive positive change in existing management practices was a key challenge for the Strategy.

The other approach to translation involved forging new collaborations to take new ideas from concept through to commercial application, and JB highlighted work involving Sainsbury's acting as brokers between Kew's Millennium Seed Bank and smallholder coffee growers in eastern Africa to help improve uptake of the most suitable varieties in terms of drought tolerance and climate resilience.

GF noted that the term 'translation' covered a wide range of different applications, from the commercialisation of innovative ideas into marketable products through to the extension and dissemination of best practice onto farm.

Keith Goulding noted that Rothamsted's work for Defra in reviewing the UK fertiliser recommendations, working in collaboration with the major fertiliser companies, demonstrated that it was possible to forge partnerships with commercial businesses to share data and conduct joint research even in a competitive environment.

James Clarke asked whether the Catalyst Fund applied only to SMEs, and how to ensure the whole of the supply chain derived a benefit from taxpayer investment.

GF emphasised that criteria the Catalyst Fund would be shaped by industry but a key priority was to keep it simple to encourage applications from people developing agri-tech innovation with a commercial application in mind and with some proprietary value that could be put to

use for the benefit of the UK. Calum Murray from the Technology Strategy Board added that while the Biomed Catalyst Fund was directed at SMEs, it was likely that a relatively open mind would be taken on the application of the Agri-Tech Catalyst Fund bearing in mind that the industry structure and route to market in the agri-tech sector would often require the involvement of large companies as well as SMEs.

Richard Tiffin asked why the only innovation centre mentioned in the Agri-Tech Strategy related to big data and informatics, expressing concern that this centre should not be commissioned over-hastily given the different disciplines involved. The challenge was to bring a wide range of different datasets and data analysis communities together and it was likely that the expertise to do this lay outside the agri-science sector.

LdM acknowledged the concern, but indicated that the clear view of the Leadership Council was that a centre for agricultural informatics would have a pivotal role to play in shaping and influencing the development and direction of the other centres.

Martin Savage asked whether there was a potential conflict of interest between the influence and involvement of large corporations such as multiple food retailers or multinational agribusinesses and the interests of the smallest of SMEs, ie individual farms.

JB acknowledged that a major challenge in delivering the Strategy's objectives would be to bring unlikely partnerships together and to ensure that in future the supply chain worked as a unit rather than as separate silos of activity. It would also require a new level of financial creativity to ensure the investments taking place throughout the chain delivered benefit and value to all members of the chain.

Barry Hackett emphasised the critical importance of the Strategy's engagement at the farm-gate in delivering its objectives. JB agreed that there was a risk of a two-tier farming community in which more progressive producers aligned to and collaborating with larger companies gained an advantage. The objective of the Strategy, including the sharing of data across the industry, should be to ensure benefit could be derived at all levels and by all participants in the chain.

Sir Jim Paice MP asked about the role of the levy boards in delivering the Agri-Tech Strategy, suggesting that AHDB should be central to ensuring information was effectively collected and disseminated at the farm-gate level.

LdM agreed that the involvement of AHDB was critically important.

Rosemary Collier asked how the new centres would be sustained in the long term given their reliance on commercial co-funders whose priorities or ability to invest could be subject to change. LdM suggested that some of the centres may be based on institutions already in existence. JB responded that a key question for the centres would be whether they were creating and adding value within the supply chain – if not they would perish.

Mark Tatchell asked about the status of the levy boards as industry funders under state aid rules. LdM responded that legal advice was still being sought on this issue.

Nick von Westenholz asked how the Leadership Council planned to tackle the regulatory environment at an EU level since this was a major block to agricultural innovation within the UK. LdM indicated that the UK Government would continue to engage and put its case actively within Europe. JB added that the excesses of the EU regulatory environment also created problems when sourcing from non-EU countries such as South Africa, whose producers had a choice of where to export their produce.

Andy Richardson asked about the balance within the Strategy between directly addressing UK interests and meeting the challenge of global food security.

LdM highlighted the international role of the Strategy not only in terms of international development but also as a platform to develop export opportunities and inward investment. JB added that true capacity building within the UK in terms of translational and applied science could play a key role in improving productivity and efficiency on UK farms as well as opening up huge opportunities on a global basis – influencing global food security by default by establishing the UK as an international centre of excellence.

GF also highlighted the strong involvement of DfID and Justine Greening in supporting the development of the Strategy, with a vision to export UK agri-science expertise not only to combat hunger in sub-Saharan Africa but also to support agricultural innovation in many of the oil-rich nations in need of help to develop their own food production systems.

Concluding the meeting, GF noted that while a huge amount had been achieved in getting the Strategy this far, Government now needed industry and stakeholders from across the sector to respond and engage with the vision set out. It was also vital to bring public opinion with the development of Strategy and to demonstrate not only that Britain could once again lead the world in agricultural innovation, but also that advances in science and technology would be key to addressing both the economic and environmental challenges ahead.