

All-Party Parliamentary Group on Science & Technology in Agriculture

**Notes of Inaugural Meeting held on Monday 6 July 2015,
Committee Room 9, Palace of Westminster**

Delivering the UK Agri-Tech Strategy

Present:

Members

Mark Spencer MP
Earl of Lindsay
Lord Cameron of Dillington
Lord Curry of Kirkharle
Angela Smith MP
Rebecca Pow MP
Jo Churchill MP
Jake Foote (representing Lord Deben)

Guest Speakers

Dr Stephen Axford, Head of Agri-Tech, BIS
Dr Paul Burrows, Director, Corporate Policy and Strategy, BBSRC
Sara Eppel, Head of Innovative and Sustainable Farming, Defra

Stakeholders

Mark Tinsley, Greater Lincolnshire LEP; Ian Munnery, SESVanDerHave; Jonathan Clarke, John Innes Centre; John Peck, BASF; Rob Clayton, AHDB Potatoes; Peter Redman, AFCP; David Leaver, RABDF; Chris Warkup, Biosciences KTN; Belinda Clarke, Agri-Tech East; Graham Jellis AFCP; Charlotte Maddocks, Tesco; Abigail Wood, nabim; Martin Savage, nabim; Calum Murray, Innovate UK; James Wallace, IAR Agri Ltd; Paul Rooke, AIC; Mimi Tanimoto, UK Plant Sciences Federation; Stefana Ailioaie, Bayer CropScience; Martin Emmett, AHDB Horticulture; Chris Atkinson, NRI; Neil Hipps, University of Kent; Greg Smith, Royal Norfolk Agricultural Association; Allan Wilkinson, HSBC; Paul Temple, AHDB Cereals & Oilseeds; Jack Ward, British Growers Association; Dominic Goudie, FDF; Rosemary Collier, Warwick Crop Centre; Martin Collison, Collison Associates; Andy Mayer, BASF; Rpsana Verza, Brazilian Embassy; Chelsea Snell, Sense About Science; Zoe Lederman, Which?; Daniel Pearsall, Group Co-ordinator

INAUGURAL MEETING

1. Election of Chair and Officers

All Members present agreed that the Group should continue to exist and operate as an approved All-Party Group within Parliament.

The nomination of Mark Spencer MP to serve as Chair of the Group was approved by all Members present.

Nominations for Huw Irranca-Davies MP, the Earl of Selborne, Lord Haskins and the Earl of Lindsay to serve as Vice-Chairs of the Group were approved with the agreement of all Members present.

2. Welcome & Introduction

Mark Spencer (MS) welcomed Members and stakeholders to the meeting, briefly introducing the topic for the meeting '*Delivery the UK Agri-Tech Strategy*'. MS noted that the All-Party Group had played a significant role in making the case for, and helping to shape, the Agri-Tech Strategy prior to its launch as part of the UK Government's Industrial Strategy in July 2013. Two years on it was therefore timely to review the Strategy's progress in unlocking the economic potential of the UK's agricultural science base.

MS also presented the All-Party Group's 2014/15 Annual Report, recording another busy and productive year for the Group. In realising the potential of the Agri-Tech Strategy and other developments in agricultural science and technology, MS highlighted the need to build public support for UK agri-science - a key theme for the Group's meetings over the past year. MS also emphasised that without science-based regulation of agricultural innovation – particularly at EU level – key opportunities for the UK agri-food sector could be lost. These would continue to be priority themes for the All-Party Group and the wider agri-tech sector.

3. Guest speakers

Dr Stephen Axford, Head of Agri-Tech, Department for Business, Innovation & Skills (BIS)

Stephen Axford (SA) described the Agri-Tech Strategy in the context of the Government's broader Industrial Strategy, inspired by former Business Secretary Vince Cable. The Strategy focused on two key objectives: firstly at a global level to ensure the UK played its part in feeding a world population set to reach 11bn by the end of the century in the face of emerging challenges such as water scarcity and climate change; and secondly as a platform to drive new opportunities for growth in the UK economy.

SA described agri-tech as a complex sector which, despite the UK's world-leading agri-science base, had not done enough to exploit that knowledge and expertise to create economic opportunities for jobs, exports, inward investment and product innovation.

Launched in July 2013, SA explained that the Agri-Tech Strategy was a cross-cutting initiative, spanning lead departments BIS, Defra and DfiD and drawing on resources from UK Trade and Investment, Innovate UK and the Research Councils. The period from 2013 through to 2015 had seen the establishment of a new sector council to provide leadership and direction, and the construction of a programme to deliver both the short and long-term aims of the strategy. These included more effective collaboration and new ways of working between the science base and industry leading to improved translation and exploitation of research, greater innovation throughout the agri-food supply chain, growth in exports and inward investment, and sustainable increases in agricultural productivity.

In October 2013, the programme launched an Agri-Tech Catalyst to support joint industry-academic research and development, and mirroring a similar approach in the biomedical sector. SA suggested that the catalyst programme had been extremely successful not only in the quality of bids and innovative projects supported, but also in attracting a broad range of applicants in terms of geography and business size.

The Agri-Tech Strategy was now on course with plans to establish a small number of UK-wide Centres for Agricultural Innovation, and it was hoped to announce the first Centre, focused on Agri-informatics and Sustainability Metrics, within the coming weeks.

SA concluded that a great deal had been achieved to date through the Agri-Tech Strategy in laying the foundations for the UK agri-food sector to play a leading role in addressing the challenges of food security, climate change and economic growth. Nor should agri-tech be

seen in isolation but as part of a much wider food and bioscience economy offering major opportunities for growth and innovation.

Dr Paul Burrows, Director, Corporate Policy and Strategy, Biotechnology and Biological Sciences Research Council (BBSRC)

Paul Burrows (PB) opened by emphasising the strength of the UK science base, boasting four of the world's top 10 universities alongside leading agri-science research institutes such as John Innes, Rothamsted, Roslin and Pirbright. UK research teams were partners of choice in international programmes of research.

But PB warned that the UK's global lead was increasingly fragile since the UK ranked towards the bottom third worldwide in terms of science investment as a proportion of GDP.

It was therefore important for the Agri-Tech Strategy to succeed, particularly in its central objective to support the translation of the UK's excellent science base into valuable commercial products and technologies. The Strategy had sent a powerful signal of the need for improved collaboration between scientists and industry. This was already happening through the Agri-Tech Catalyst, and the planned Centres for Innovation offered the potential to plug an important gap in the R&D landscape for translation, application and demonstration.

Looking ahead to the research agenda to deliver food security and sustainable intensification, PB noted that the world needed to produce as much food over the next 40 years as it has over the past 10,000 years.

He highlighted three key research areas which he believed would play a key role in meeting that goal:

- (i) Precision farming – combining advances in biological science with engineering applications such as sensors, robotics and imaging to improve efficiency and accuracy of input use, automation and new applications such as robotic weeding. This area offered particular opportunities for SMEs and start-up tech companies to apply their new technologies in the agri-tech sector.
- (ii) Combating plant and animal diseases – the impact of climate change and the effects of living in an increasingly interconnected world meant that diseases were increasing their range. This challenge was exacerbated by increasing restrictions on crop protection products and the build up of resistance to existing molecules. This would require increased research focus on improved sources genetic resistance, as well as the development of new active ingredients.
- (iii) Breeding the next generation of crops and livestock – to improve yield and resource use efficiency, and to develop greater resilience to climate extremes such as drought and flooding. Such traits were extremely complex and rarely dependent on single gene changes.

PB concluded that these scientific challenges would require access to every available research tool, and that no technologies could afford to be ruled out without any valid scientific reason. This was particularly the case for the new suite of gene-editing techniques with the potential to improve the speed, accuracy and effectiveness of genetic improvement in both crop and livestock breeding.

Sara Eppel, Head of Innovative and Sustainable Farming, Department for Environment, Food and Rural Affairs (Defra)

Alongside the Agri-Tech Strategy, Sara Eppel (SE) updated the Group on Defra's initiative to develop a 25 year food and farming plan, with stakeholder consultation set to begin in the coming weeks to establish key objectives for the agri-food sector to 2040, and the specific challenges to be addressed over the next five years.

SE suggested that access to R&D and innovation would be a significant component in securing a sustainable UK food and farming sector, noting that the Agri-Tech Strategy was focused on stimulating new thinking and partnerships between the research base and industry through innovative programmes such as the catalyst fund.

But SE questioned whether UK farmers were really seeking out and taking the opportunities available from markets and new technology. A key issue was how to drive best practice onto farms – many farmers did not have documented business plans to move their businesses forward or exploit new market opportunities, eg exports.

There was a wider challenge to improve training and skills across the entire food and farming sector, while issues such as tenancy policy could also affect opportunities for new entrants and the scope to bring people with bright ideas into the industry.

SE noted Defra's role in allocating the £3.5bn CAP budget to farmers including £0.5bn directed towards environmental stewardship. She highlighted the importance of maintaining a balance between productivity and sustainability, and also emphasised the role of CAP support in influencing farm practice.

4. Questions and discussion

The following key points arose during discussion:

The need to connect the promising outputs of UK-based research teams with potential partners or investors in the private sector, otherwise British innovation may be lost to overseas competitors. Lord Cameron noted that the robotics team at Harper Adams was now looking to Chinese investors after failing to secure investment from UK partners. Establishing links between research teams and potential investors was identified as a key role for Innovate UK, which was developing a major focus on the precision engineering and satellite technology area.

Prof David Leaver noted that the UK's position as a global leader in science was not translating into productivity improvement at the farm level, which was falling behind other parts of the world. This situation had not changed in over a decade. SE responded that identifying gaps in translation and on-farm application was a key focus of the Agri-Tech Strategy, although it was still early days since the Centres for Innovation had not yet been launched. However other factors were also at play, she noted, citing Defra economists who viewed CAP support for agriculture as a drag on productivity by providing a safety net not available to other small businesses. This made farmers less innovative and hungry for change, and at a global level it was the countries not subsidising their farmers whose agricultural sectors were showing the most growth in productivity and innovation, she suggested.

Jo Churchill MP echoed the suggestion that CAP subsidies suppressed farmers' entrepreneurial spirit, although she added that access to training and skills development was a major challenge within the agriculture sector, where the apprenticeship model did not

appear to work. SE confirmed that skills and training would be a major focus for Defra's 25 year plan, adding that discussions were taking place with UK agricultural colleges through Landex on proposals for a national college to support skills and professional development within the agri-food sector.

Mark Tinsley highlighted the need for a strategy dealing with the food chain as a whole, not just up to the farm-gate, because primary producers needed vibrant customers on the doorstep as part of a thriving agri-food industry. He also expressed concern that the horticulture sector was too often seen as a poor relation to the rest of agriculture, and that growers could not always be expected to fill the gap between basic and applied science. SA agreed that an integrated, whole chain approach was needed, and suggested that the Centres of Innovation marked a step in the right direction by engaging directly with the rest of the food industry – retailers and processors – to draw in investment and research activity in response to market needs.

Prof Chris Atkinson expressed concern at the low level of UK investment in R&D relative to other countries, noting that BBSRC had recently warned of likely cuts in the science budget.

Jonathan Clarke considered that the Agri-Tech Strategy was profoundly different from previous R&D programmes, opening up new opportunities for dialogue between scientists and industry and attracting interest from new funding sources such as angel investors. Government policy on R&D tax credits was also increasingly recognised as a positive mechanism for agri-tech companies to invest in this area. He asked about DfID's involvement in the Agri-Tech Strategy and how the sector could seek to capitalise on the international development aspects of the programme. SA indicated that DfID's £10m contribution within the Agri-Tech Catalyst was to date significantly under-utilised.

Paul Temple asked whether the UK would be better equipped to exploit the Agri-Tech Strategy inside or outside the EU. Speakers considered that it would make little difference given the UK's continuing need trade with Europe, while the development of technologies such as GM crops would still depend on public acceptance.

Concluding the meeting, Mark Spencer MP thanked speakers and attendees for their contribution to a lively and informative session.