



All-Party Parliamentary Group on Science and Technology in Agriculture

Notes of a Zoom Meeting held on Tuesday 20 October 2020

Hosted by NIAB, Cambridge

USDA Agricultural Innovation Agenda – Ted A. McKinney

In attendance:

Members:

Julian Sturdy MP (Chair)
Lord Taylor of Holbeach
Earl of Devon
Mark Logan MP
Fay Jones MP
Dr Robert Thomas (pp Rt Hon Owen Paterson MP)
Lord Inglewood

Stakeholders:

Angela Bowden, SCOPA; Ian Munnery, SESVanderHave; Paul Billings, Germinal; Prof Huw Jones, Aberystwyth Univ; Jack Ward, British Growers Assn; Catherine Barrett, AIC; Robert Sheasby, AIC; Hazel Doonan, AIC; Susan Twining, CLA; Judith Batchelar, Sainsburys; James Clarke, ADAS; Richard Harrison, NIAB; Prof Lin Field, Rothamsted Research; Helen Munday, FDF; Prof Richard Napier, Univ of Warwick; Prof Jane Langdale, Oxford Univ; Dr Geoff Mackey, BASF; Graham Brookes, PG Economics; Tom Allen-Stevens, Farmer; Mark Buckingham, Bayer CropScience; Dr Julian Little, JLC; Prof Chris Tapsell, KWS; Caroline Drummond, LEAF; Dr Tina Barsby, NIAB; Emma Green, British Sugar; Connie Burdge, Royal Society; Ian Cox, Innovate UK; Dave Ross, Agri-EpiCentre; Robin Wood, Elsoms Seeds; Mark Tinsley, CFG/Farmer; Norman Coward, CFG; Dr Julian South, MAGB; Bill Clark, NIAB; Jim Godfrey, NIAB; Ed Barker, AIC; Jonny Hazell, Royal Society; Prof Jonathan Jones, Sainsbury Laboratory; Steve Knight, US Embassy; Jennie Wilson, USDA; John Shropshire, G's; Keith Norman, Agronomy Consultant; Daniel Kindred, ADAS; Martin Emmett, NFU/AHDB; Tom Hart, Agility Ag; Sarah Evered, Defra; Jim Duncumb, Syngenta; Rachel Lambert, FCDO; Rob Hiles, Syngenta; Vicky Foster, BBRO; Prof Graham Jellis, ACFP; Neil Bragg, AHDB; Vladimir Nekrasov, Rothamsted Research; Paul Temple, AHDB; Rob Gladwin, BASF; Miruna Marchis, Syngenta; Prof Mark Stevens, BBRO; Richard Robinson, SESVanderHave; Martin Grantley-Smith, AHDB; Bill Parker, AHDB; Louise Courts, Defra; Cynthia Guven, USDA; Chariese Walton, USDA; Saquib Ahsan, USDA; Daniel Pearsall, Group Co-ordinator.

1. Welcome & Introduction

Julian Sturdy (JS) welcomed Members, stakeholders and guest speaker Ted McKinney to the APPG's third Zoom session.

JS briefly introduced the All-Party Group to Under-Secretary McKinney as one of the more active interest groups in the UK Parliament, bringing together like-minded MPs and Lords from all political parties, as well as interested stakeholders from across Government, the science base,

NGOs and the farming and food chain sectors, to provide a forum for Parliamentarians and others to debate and highlight the value of science and technology in agriculture.

JS explained that the Group had been instrumental in putting the case for a renewed policy focus on translational and applied agricultural research, resulting in the UK Government's Agri-Tech Strategy launched in 2013, and that recently the All-Party Group had succeeded in persuading Ministers to consult (later this autumn) on post-Brexit legislative changes to take simple gene editing techniques out of the scope of GM regulations, reversing the problematic European Court ruling of July 2018 which classified all such novel breeding methods as GM.

JS noted that the UK faced period of significant change and opportunity in terms of its food and farming policies. Leaving the EU would mean forging a new domestic agricultural policy for the first time in more than 40 years. It would also open up exciting opportunities to pursue a more science-based approach to agricultural innovation.

Meanwhile the devastating Covid-19 crisis had provided a timely reminder of the potential fragilities of our food system and the critical role of a productive and progressive domestic farm sector in safeguarding the nation's food supply.

Against that background, JS indicated that the All-Party Group was delighted to welcome Under-Secretary McKinney as guest speaker, and looked forward to hearing his thoughts about the role and significance of agricultural science and technology from a US Government perspective, and how USDA is supporting farmers and producers to help meet food, feed, fuel and fibre needs in the face of future challenges.

2. Guest speaker

Ted A. McKinney, USDA Under-Secretary for Trade and Foreign Agricultural Affairs

Under-Secretary McKinney (TM) opened by highlighting the strong ties between the US and UK, and his own personal passion not only for Britain and its history, but also for the topic under discussion – agricultural innovation.

He explained that much of his knowledge in this area was based on personal experience growing up on the family farm north of Indianapolis, and in his professional career prior to entering politics, working within the US agchem, biotech and veterinary medicines sectors.

Highlighting his frustration with the current EU position on agricultural technology and innovation, he declared himself an 'unabashed fan' of the direction the UK was taking, and looked forward to having Britain as a G7 country back with its own voice in fora such as Codex Alimentarius to support a more science-based discussion on these issues. He expressed a strong desire for the US to partner with the UK in that context, and for the trade agreement between the two countries to work.

TM suggested that the suspicion, precaution and risk aversion in Europe surrounding agricultural science and technology began with 'mad cow disease' in the UK. It had been on a downhill slide ever since.

Meanwhile countries adopting new agricultural technologies had benefited. TM observed that on his own family farm many of the sustainability objectives set out in the EU Farm to Fork Strategy had already been achieved through innovation, not by turning back the clock.

TM emphasised the United States' willingness to work with other countries, but suggested that the EU's interpretation of the precautionary principle – ie seeking to avoid all hazard or exposure – was 'off the chart nuts', and would certainly not contribute to feeding a hungry world by 2050.

Focusing on the EU Farm to Fork Strategy, he acknowledged the positive direction of some of its objectives, eg in relation to soil health, cover crops, soil management and reduced run-off. These mirrored the practical experiences of US farmers, who had also made progress in reducing their use of agchem and fertiliser inputs – but as the result of efficiency cost-savings and adopting new technologies, not by banning them.

TM was deeply critical of Farm to Fork's mandated, draconian bans, which experience of dealing with the EU had shown would also be applied to imports to ensure a level playing field for Europe's farmers. But TM noted that in a crisis situation those same EU farmers would also enjoy emergency derogations to use banned products, eg neonics on French sugar beet, which were not granted to imports.

TM emphasised that concerns about the impact of Farm to Fork on standards and practices elsewhere were shared by Governments and producers around the world, from Africa and the Middle East to Asia and the Pacific Rim.

To illustrate how new technology could help deliver the Farm to Fork objectives, TM referred to first-hand experience on his own family farm, where planting GMO corn had eliminated the use of insecticides, even in tough years of Fall Army Worm infestation.

By contrast the non-GMO corn planted on his farm could not return an income without the use of insecticides to control insect pests. According to TM, this simply underlined the irony of the EU policy approach in view of the current rejection of GMO cultivation.

TM also explained that his family farm had reduced fertiliser use by a third through regular soil sampling and by adopting new precision application machinery and satellite imaging technology. Again, these objectives had been achieved through innovation, not a ban.

In contrast to the EU's approach, TM explained that the US Agricultural Innovation Agenda provided a platform to help US farmers understand and adopt innovative new technologies and practices to improve their productivity and sustainability.

He stressed that the US would not seek to accommodate the Farm to Fork principles, but would be pushing back on the EU bans and would not allow US products to be shut out.

In relation to animal welfare, TM suggested that more people from Europe needed to visit US farms before drawing comparisons, suggesting that US welfare standards would equally meet those in Europe. He insisted that hardly any chlorine-based washes are used to control E-coli or salmonella in US poultry today, describing media reports of chlorinated chicken as a 'big fat myth'.

TM also referred to a recent WHO study which found that US livestock products had less food-borne pathogen problems than those produced in the EU.

He added his own family farm's experience of switching from pasture raised cattle to a controlled indoor housing system, which helped reduce mortality rates by 15%.

Citing US industry statistics on animal welfare, TM reported that 85% of US cattle producers operate under the joint Government/industry based Beef Quality Assurance Guidelines, 95% of pig producers comply with the Sow Packers and 99% with the Market Hog Packers requirements of the Pork Quality Assurance Program, and 95% of US poultry producers work to the animal welfare requirements of the National Chicken Council.

TM underlined the objectives of the US Agricultural Innovation Agenda, on top of the significant achievements already made, to increase US agricultural production by 40% by 2050 while reducing environmental footprint by 50%.

In relation to climate change and what he described as the myths surrounding the Paris Climate Accord, TM highlighted the contribution of new technologies such as GMO crops in supporting minimum and no-tillage farming systems in US agriculture, which were much more widely used in the US than in Europe. Reduced tillage resulted in half the GHG emissions from US crop production compared with the EU, with additional soil quality and reduced run-off benefits, he suggested.

In the context of ongoing UK-US trade negotiations, TM expressed the sincere hope that an agreement and a way forward could be found which would be positive for agricultural innovation and trading success in both directions, but warned that the US would be equally adept at protecting its interests if unscientific bans or restrictions were imposed on its producers.

3. Questions and discussion

The following key points arose during questions and discussion:

TM welcomed the opportunity and potential for future research collaboration between the US and UK – at all levels – particularly in areas such as gene editing if the UK were to diverge from restrictive EU rules classifying such techniques as GM.

He suggested that the opportunities presented by gene editing technology to improve human, animal and crop health offered the potential to rival any new agricultural technology, including the development of F1 hybrids in seeds, rural electrification, crop protection chemistry and big data.

TM added that Europe's hostile stance towards agricultural research and technology had resulted in a loss of research capability in the UK which could be restored through strong collaboration with the US in Government, university and private sector contexts.

TM also highlighted the successful development by a US start-up company of African Swine Fever (ASF) resistance traits in pigs using CRISPR gene editing technology as a major opportunity for R&D collaboration given the potential threat of ASF already affecting countries in Europe including Poland and Germany.

In response to a specific question about phytosanitary barriers to UK operators seeking to export fresh produce to the US, TM undertook to investigate further but suggested that any restrictions encountered by EU exporters to the US were dwarfed by problems in the other direction. He added that issues such as this would be less likely in the event of a positive and progressive trade deal between the US and UK based on sound science.

In the context of the recent approval of a drought resistant GM wheat by Argentina, already opposed by Brazilian millers, TM was asked what could be done to improve acceptance of new technologies. TM observed that the benefits of these technologies spoke for themselves if allowed to be applied, and suggested an important step the UK could take once out of the EU would be to say 'yes'.

In relation to the GM wheat, TM indicated that the US enjoyed good bilateral relations with Brazil on promoting innovative farm technologies such as GM and gene editing in other crops, and that he would need to understand more about the specific issues involved in this context. But TM added that the US wheat industry, whose productivity and performance had flatlined in recent years and lost acres to other crops, would be crying out for access to biotech advances today.

Asked about net-zero carbon targets for agriculture, TM indicated that US agriculture had already made very significant progress in this area but perhaps had not publicised it as much as it might. One of the reasons the US had pulled out of the Paris Climate Agreement was the prospect of shouldering the burden of climate change action when many other countries were lagging so woefully behind. But pulling out of the accord in no way meant that US farmers were not continuing to use technology to drive further GHG emissions, eg uptake of digesters, no till farming systems etc. But he warned against setting unreasonable long-term targets which would never be realised and result in back-tracking, preferring instead to secure step-wise progress in 'bite-sized morsels'. He also added that US advances in this area would continue to be based on innovation, not bans.

Asked about the EU position on gene editing, TM warned against repeating the mistakes with GMOs and biotech, technologies which had unequivocally proven to be safe and beneficial. He urged the UK to align itself with the US in supporting the Argentinian-led position on proportionate, science-based regulation of gene editing, insisting that these technologies were the source of solutions, not part of the problem, and could be applied to support major advances across human, animal and plant health.

Asked about the more negative issues dominating the current discussion of farm standards and trade, TM pointed to the international Codex Alimentarius organisation as an existing source of science-based consensus on food safety and human health, strongly suggesting that food safety standards should not be allowed to become a point of competition in relation to trade.

Asked about EU prejudice against large-scale, 'intensive' agriculture, TM suggested that modern technologies such as no-till and precision application allowed farming practices to be less invasive and more environmentally sustainable. He noted that such innovations are not size-dependent, and that to this day 95% of farms in the US are family farms.

Asked about the organisation of applied agricultural research and innovation in the US, TM indicated that it started at farm-level with farmers trialling new seeds and machinery, often in collaboration with individual companies, while federal Government grants were available for a range of research applications through the National Institute of Food and Agriculture (NIFA). He added that alongside private industry activity in this space, venture capital was also becoming an increasingly significant source of funding in the US agri-tech sector.

Asked about the most significant factor driving improvements in the productivity and sustainability of US agriculture, TM summed it up in the simple tenet – 'leave the land better than you found it' – suggesting that in observing this principle farmers and ranchers were the original environmentalists. Alongside that was simple cost-efficiency – adopting technologies to make savings on inputs and labour.

He also praised the Nature Conservancy for its work and approach in the US, described by TM as an NGO which is strongly committed to promoting good environmental practice but which does not campaign for bans like Greenpeace, instead working collaboratively with farmers.

Concluding the meeting, JS thanked Under-Secretary McKinney for his contribution to a stimulating and thought-provoking session, noting the very significant opportunities ahead for agricultural innovation based on collaboration and partnership between the UK and US.

