Parliamentary and Scientific Committee

Sound policy-making for future foods

A meeting held in partnership with the National Government Laboratory at LGC

Our future foods are likely to be alternative and sustainable proteins, mostly plant-based, and either cultivated or the product of fermentation; the discussion meeting gave us an overview of developments in food safety, innovation, and regulation. Visitors were welcomed by Sam Carling MP, Chair of the P&SC, who introduced our expert speakers.

Speaking on 'The UK Government Chemist,' Dr Julian Braybrook, UK Government Chemist & Director, National Laboratories at LGC, described the origins of food law, the founding of the LGC in 1911 and the present role of the Government Chemist. Funded by the Department of Science, Innovation and Technology, current strategy concentrates on consumer protection, supporting business and government, building a resilient national skills base and maximising measurement expertise; their advisory function work was also explained. Jointly with the Food Standards Agency, Apps have been developed to assist business and regulatory bodies with horizon scanning, identifying new developments in food and feed law. Knowledge exchange activities include annual reviews for Parliament and Quarterly Reports, and consumer consultation involves aspects of food security and fraud, alternative proteins, contaminants, novel foods and skills development and training.

'Microbial foods – opportunities and challenges' was presented by Dr Sonja Billerbeck**,** Department of Bioengineering, Imperial College London. Speculating on the future of food, she reminded us current agricultural practices produce 20% of greenhouse gases, are impacted by climate change, and both expensive and inefficient. 'Microbial foods' refers to any product or ingredient produced via microbial intervention, including traditional fermentation (beer, dairy produce), biomass fermentation (Quorn, Vegemite) or precision fermentation (specific ingredients enhancing taste and nutrition). Opportunities include more sustainable agriculture, better nutrition, and more food security and resilience; challenges include cost, quality, and consumer acceptance. Successful experimental food fermentation is followed by scaling up from lab- to production; AI could assist this costly step, as unlike pharmaceuticals, food has to be cheap. In conclusion she described the work of the Imperial Bezos Centre and Microbial Food Hub

The Deputy Chief Scientific Advisor and Deputy Director of Science and Research, UK Food Standards Agency (FSA), Professor Rick Mumford, spoke on 'The role of innovation in future food policy-making'. The FSA is the national regulator of all food and feeds, working alongside Food Standards Scotland, ensuring our food is safe, healthy and sustainable. Using scientific evidence and research, the organisation balances industry's desire for new foods against food safety; it spends £9m pa in universities and other research laboratories. He described the new Regulatory Innovation Office (RIO) which seeks to remove regulatory barriers to investment, enabling faster commercialisation of new technologies, and the new UK Innovation Hub, providing pre-market authorisation for novel foods to protect UK consumers. These two innovative programmes aim to enhance existing capabilities and expertise in regulating innovative food technologies, improving regulatory transparency for industry, and understanding of future products. New approach methods and tools were described, and national and international engagement within the research community rated essential.

Starting the Q&A session, Sam Carling asked what the Government could do to assist. The FSA funding stream was described as excellent, helping recruitment, training and communication and development of standards, and the LGC is well supported, helping vital engagement with the community; Imperial continues to need research funding, support for scaling up from labs to commercial production, and for training PhDs.
Has Brexit helped? Our new freedom to make our own food rules, encourages future research in crops without EU controls; the down side is that new foods may not be saleable in the EU or attract investment. There should be agreement on international standards, and project results should be shared with other institutions in Europe.
It was felt that consumers need educating; the intention is not to replace but augment traditional foods. Novel foods offer options if traditional ones are unavailable, and are useful in times of disaster and famine.
The impact of ultra-processed foods (UPF) is not clear, some junk foods can contain unhelpful additives, and there may be links with poorer dietary health; more studies on processed foods generally are required.
AI applications were raised; it might speed up gathering of complex research information. We need authenticity tools to avoid food fraud and cheating, and clear discerning definitions for testing.

Sue Wharton/John Slater
P&SC Discussion Meeting 'Sound policy-making for future foods'
17th Nov 202