Transdisciplinary Solutions to Meet the UK Food System Challenges
ProFSET Conference November 2023

This conference was convened by a group of 10 professional “Learned Societies” in the science, engineering and technology domains covering the agrifood sector, of which the SDT is one.

A copy of the slides is on our website in the Members Section, please note that they may be quoted only with attribution.

Its stated mission is to identify and propose actions in Science and Technology, to meet the future needs of an efficient UK Food Supply Chain in the rapidly changing global situation. In particular to provide:

1. A single, informed voice to influence and support government, media and the public
2. Opportunities for collaboration, knowledge sharing and cooperation across industry and academia
3. Promoting the industry as an exciting career path and supporting the development, education and training of professionals

The linking function was represented by the UKRI Sustainable Food System wheel:

Of 84 registrants about 50 were present, many from academia or consultancies. Pepsico and Mondelez were also noticeably present.
Two keynote speeches were given by Kate Halliwell, Chief Scientific Officer at The Food and Drink Federation and Prof Gideon Henderson, DEFRA Chief Scientific Adviser. Both focussed on UK and Global changes and the challenges these represented.

The SDT was first up thereafter and I presented both the Society and the changing world of dairy from farm to product between our Foundation in 1943 and 2023. Messages underlined the improvements in productivity on farm to the Healthy Living aspects of Dairy, from provision of vital nutrients to the high value protein fraction available from cows’ milk. The Food Group of the Institute of Physics discussed multidrying processes to deliver improved flavour in baked goods, soft matter physics applied to such processes and matching nutrient retention in long life products to those of “fresh cook”.

Applied Microbiology International then offered some interesting developments in the areas of agriculture • Soil health • Plant health • Disease suppression • Biological control • Reduce the reliance of inorganic fertilisers and pesticides; and On our plate • Fermentation • Probiotics • Food preservation • Gut health. Naturally the latter linked well with the SDT presentation.

IChemE’s Food and Drink Special interest Group reviewed to Profset aims and provided some member feedback, this was followed by the Institute of Mechanical Engineers reflections on decarbonising heat in the food sector.

The Institute of Agricultural Engineering looked at reductions in energy, water, and precise use of fertiliser and herbicides in order to produce more from a smaller agricultural footprint. IFST looked at thermal processing and waste reduction in pasteurised foods whilst the Food Interest Group of the Royal Society of Chemistry Promoted its range of publications, and activities bringing science and food structure, and sustainability to academia, industry and the general public.

Finally the Society for Chemical Industry presented development visions ranging from microencapsulation and membrane emulsification to electrostatic spray drying.

Dr Ian Gordon
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