Snapshot Report

Meat Science Toward 2030

Meat Science Toward 2030: An International Forum for the Development of Strategic Objectives

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Project Description

This project seeks to assemble an imminent group of Meat Scientists from a number of countries and disciplines to seek a consensus on the key science issues that are fundamental to industry development over the next 5 to 10+ years. This will provide a frank appraisal of the current knowledge and capability, and provide recommended strategies to align and encourage Meat Science activity that addresses the core imperatives. The outcomes will include potential strategic approaches to encourage collaborative application of global resources and development of research talent together with an acceleration of knowledge transfer through enhanced industry and research interaction.

Project Content

The Australian red meat industry remains a global leader in innovation, pioneering new technology and product marketing to a diverse range of domestic and international markets. Industry investment has delivered best in class shelf life, promising objective yield technologies and guaranteed individual cut eating quality specification. These advancements over decades have been supported by high level science and effective industry collaboration to deliver practical application.

The traditional science base has however considerably declined over the past decade or two which is also reflected globally with the downsizing or breakup of many traditionally strong meat focussed groups including the CSIRO Cannon Hill Group, MIRINZ in New Zealand, the Bristol group in England and many others including a marked reduction in the USA and in Europe. Meat science is not considered an attractive career path and the current extremely vocal anti-meat activism provides an extremely challenging environment with social and environmental issues equal in importance to the traditional human nutrition and muscle biology base. The critical need for solid multidisciplinary scientific expertise has never been greater while the traditional resource base is rapidly declining.

Project Outcome

The project aimed to evaluate the broad issues at a global level by engaging industry, science leaders and interested parties in a broad discussion to firstly seek a consensus on the key science issues that are fundamental to industry development over the next 5 to 10 years, to provide a frank appraisal of the current knowledge and capability, and then to recommend strategies to align and encourage Meat Science activity that addresses the core imperatives. A discussion paper was developed and circulated widely with responses sought to two core questions:

- What are the key challenges and opportunities for meat science toward 2030 and
- How do we harness meat science and related expertise into the future?

The paper was also published within the French peer reviewed Meat Science journal, Viandes & Produits Carnés (2018) facilitating wider circulation and discussion. Sixty-three written responses were received in addition to those from multiple discussion sessions conducted at research centres.

Key themes and sub-themes were identified from the responses within each of the core questions and relative rankings calculated. A detailed report was produced under Milestone 2 and both the report and raw responses circulated to an expert Meat Science group selected on the basis of scientific reputation and industry engagement. Membership was drawn from the USA, Europe and Australia.

This group met on multiple occasions via Zoom to discuss the report and consider how to best engage the scientific community, industry and governments in addressing the serious problems identified. An important action was to have the issues discussed in three important scientific forums: The USA Reciprocal Meat Conference (RMC) held in Reno, Nevada on August 15th 2021, The Meat Standards Australia (MSA) Pathways meeting via Zoom on August 16th 2021 and the International Congress of Meat Science and Technology (ICoMST) held in Krakow, Poland on

August 24th 2021. These forums were extremely effective with considerable interaction at each and between the events.

There was a strong commitment from all parties to actively address the issues with a major international summit proposed and now planned for October 2022. It was agreed that the Summit needed to be high level and have strong engagement at senior industry level in conjunction with the scientific community and government policy makers.

A further outcome has been the development of multiple resources to more readily access peer reviewed science across all meat related areas and regular interaction between various groups across countries. The United Nations Food System Summit (UNFSS) and COP26 events also provided impetus and a sense of urgency to unifying the animal food-based industries. In Australia, the Animal Sustainable Protein Production (ASAPP) group was formed to coordinate industry engagement with the Department of Agriculture, Water and Environment (DAWE) and established an extensive SharePoint site in which over 1,000 peer reviewed papers and reports, including key anti-meat reports and published papers, was established together with short and detailed summaries. The AMSA is also seeking to build a similar assessable facility and Frederic Leroy and others have established the ALEPH website with strong interaction between all parties. Further groups have engaged with the USA Protein Pact and European Livestock Voice together with the World Farmers Organisation and extensive global networking by the Global Meat Alliance (GMA).

Benefit for Industry

Each event served to broaden engagement to a much wider cross disciplinary field with an important outcome being the acknowledgement that “Meat Science” could not operate in an isolated silo but should actively seek collaboration as a core component with medicine, nutrition, food science, engineering and environmental science disciplines.

The project has successfully identified key concerns and challenges for the meat industry and for effective collaboration with the scientific community to ensure that critical global human nutrition and environmental challenges can be addressed from a factual evidence base. The problem is far from solved but there is now a consensus for action and an active global engagement that can potentially deliver mutual benefit to the meat industry, scientific community and society. It is recommended that AMPC continue to support collaborative activity in this area including engaging the Australian industry and Government in the planned summit and in fostering Australian structures and activity.

An industry roadmap containing 12 recommendations within 3 core themes: changing the societal narrative, a new approach to teach and deliver meat science and continued expanded collaboration is presented for AMPC consideration (Figure 1).

Useful resources

ASAPP SharePoint Site – contact holly.cuthbertson1@gmail.com for access
https://birkenwood.sharepoint.com/

ALEPH Blog Site - https://aleph-2020.blogspot.com/

Figure 1. Recommended Meat Science Towards 2030 Roadmap