



Irish Journal of Agricultural and Food Research

Celebrating 60 years of the Irish Journal of Agricultural and Food Research

This special issue of the *Irish Journal of Agricultural and Food Research* (IJAfr) marks the journal's 60th anniversary. To celebrate this occasion, the Editorial Board has published a special print edition.

The objective of this special issue is to highlight scientific advancements made over the last 60 years. Then we look to the future to see how current knowledge, methods and tools can help us to meet the grand challenges facing the sector and wider society, as well as identifying gaps in knowledge that need to be filled by new research.

The IJAfr is a peer-reviewed, open access scientific journal published by Teagasc (Agriculture and Food Development Authority, Ireland). The journal was first published in October 1961 as the *Irish Journal of Agricultural Research*, evolving over the years to the current title, *Irish Journal of Agricultural and Food Research*, in 1992, which is an amalgamation of the *Irish Journal of Agricultural Research*, *Irish Journal of Agricultural Economics and Rural Sociology* and the *Irish Journal of Food Science and Technology*.

This special issue consists of 12 papers, compiled in 2021 – the journal's anniversary year, providing an overview of the wide range of research undertaken by Teagasc. These papers provide a great source of reference for those interested in Irish agricultural and food research. Topics include forestry, potato breeding and production, pig production, milk quality and processing, meat processing, ruminant nutrition, ruminant breeding, the Agricultural Catchments Programme, grassland, animal health and welfare, and the role of social science in agri food research.

Irish agriculture is in an ever-changing environment. Farmers and food processors are faced with challenges including climate change; pressure to reduce inputs including pesticides, fertiliser and antibiotics; increased animal welfare concerns; requirements to improve water quality, reduce methane emissions and increase biodiversity and carbon sequestration; as well as remaining profitable. Research that provides farmers and food processors with technical solutions to meet these challenges in a sustainable manner is as important as it ever was.

Cattle breeding in Ireland has evolved over the years. Now we have the Economic Breeding Index (EBI) for dairy, which allows farmers to select not just based on production but also on factors influencing the sustainability of our systems including health, longevity and fertility. Similar indexes have been developed for beef cattle and sheep.

Grazed grass is our cheapest feed source and is the foundation of the competitiveness of our ruminant livestock industries. Grassland also plays, and will continue to play, an important role in promoting and protecting biodiversity and in carbon sequestration.

Animal health and welfare are important areas of research across all the livestock enterprises, with research addressing important topics including antimicrobial resistance and welfare of livestock on farms.

In Ireland we produce world-class milk and meat, primarily from grassland. Product quality and safety are hugely important research areas to safeguard consumer health, maintain the reputation of Irish food and ensure market access internationally.

Social science research has an important role to play in understanding the food system and how its sustainability (in the broad sense of economic, environmental and social aspects) changes over time and the factors that influence it, monitoring the impact of key policies and trade relations, and adding rigour to systems-based research approaches through transdisciplinarity and the “multi-actor approach”.

We welcome you to delve into this rich source of knowledge on Irish agricultural and food research.

Professor Frank O'Mara
Director of Teagasc