

RESEARCH DIRECTIONS

Innovation in the Australian Dairy Industry

Associate Professor Jim Hourigan and Dr Linh Vu from the Centre for Plants and the Environment with Dr Rosalie Durham from the School of Natural Sciences have examined the latest in dairy product separation and process equipment technologies for the Australian dairy industry. This research has been funded by Dairy Innovation Australia Ltd.

'Milk isn't just something we can drink – it can become many different food products when separated out into its component parts,' says Associate Professor Hourigan. 'It is important for the Australian dairy industry to maximise the recovery of a variety of products from milk solids that can be separated and processed into a range of products such as whey powder, milk minerals and bioactive proteins, to name a few. Some milk products are still under-utilised or don't provide enough return to the producer and some of the technologies used to separate these products need improving so that unwanted concentrates aren't formed during the process. With the growing threat of climate change, the dairy industry must look at higher efficiencies in all its production processes to reap sustainable rewards from what is an ever more valuable resource. Keeping up-to-date with innovative technologies will help maintain the industry's position as one of the largest global traders in dairy products.'

The researchers have revisited research and patent developments from the last decade, looking in particular at membrane filtration, ion exchange, process chromatography, electro dialysis, crystallisation and separation technologies.



These developments along with investigations into the energy and water demands of new systems and technologies, and their impact on the nutritive value, palatability and shelf-life of dairy products will guide improvements in the efficiency and productivity of dairy processes. These technologies also enable novel approaches for the recovery of valuable dairy ingredients for the Australian dairy industry.

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