

The grazing dairy cow of 2030 – what will she need to do and what do we need to do to help her achieve it?

Breeding for the future & breeding the cow to suit the system.

Chaired by Malcolm Ellis, GM NZ Markets, LIC



Donagh Berry

Teagasc Moorepark Researcher, Dairy Genetics and Breeding

Donagh Berry is a geneticist at Teagasc, Moorepark, Ireland and holds professorship appointment at several (inter)national institutes; he is also director of the VistaMilk Research Centre. Following his bachelor degree in Agricultural Science, he undertook a PhD in dairy cattle genetics in the Netherlands. In his Teagasc capacity, he is responsible for the research on genetics in dairy cattle and is responsible for the development and implementation of genomic evaluations in dairy cattle, beef cattle and sheep in Ireland. As Director of VistaMilk, he leads a team of >200 scientists in the development and deployment of digital technologies in precision dairy production.



Dr Jeremy Bryant

NZAEL Manager at DairyNZ

Dr Jeremy Bryant, NZAEL Manager at DairyNZ, is a senior data scientist and farm systems researcher with considerable experience in projects and leading teams that develop and provide farm decision support tools, business intelligence, information and predictive services and solutions. Examples include transforming and analysing raw data to predict the most profitable dairy cattle; on farm trials, biological modelling to estimate outputs of animals based on inputs and known characteristics; finding trends and patterns in data using numerous statistical techniques including linear and non-linear modelling, data mining, image analysis, best linear unbiased prediction, genomic prediction and genome wide association studies. Personally developed and designed a number of information and decision support tools. Managed budgets for information service projects up to \$3 million per annum.

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Globally, agriculture is undergoing seismic disruptions arising from the competing challenges of food security, the environment, and societal needs. The dairy sector is not exempt from this disruption as it faces a confluence of challenges including the rapidly expanding global demand for dairy products, the growing concern over the impact of cattle production on climate change, and the long-term volatility of global dairy markets. Fortunately, the solutions to these challenges are emerging from a parallel revolution in genetics and DNA technologies. Key characteristics of the dairy cow of the future include (1) production of a large quantity of high-value output (i.e. milk and meat), (2) good reproductive performance, (3) good health status, (4) good longevity, (5) no requirement for a large quantity of feed, yet being able to eat sufficient feed to meet its requirements, (6) easy to manage (i.e. easy calving, docile), (7) good conformation (over and above reflective of health, reproductive performance and longevity), (8) low environmental footprint, and (9) resilience to external perturbations. In this interactive session, we will particularly focus on what needs to happen if such cow credentials are to be achieved. Workshop participants will then devise their top priorities for a cow in 2030 and the relative importance of the steps needed.