

DAY 2 – WORKSHOPS

1 The NZ Foundation dairy farm system – this is it!

10-year detailed economic analysis of farm systems.

Chaired by Paul Bird, DairyNZ



Mark Neal

Dairy Systems Specialist, DairyNZ

Mark Neal is a Dairy Systems Specialist with DairyNZ. He trained as an Agricultural Economist at the University of Sydney. He has worked with economic modelling and optimisation of farm systems, farm systems design, and quantifying the impact of environmental regulation on farm profit. He has also worked with the University of Sydney and University of Melbourne on research projects.

His family has two dairy farms in New South Wales, Australia, with 1100 milking cows in total, where he has previously managed operations. Mark has also managed operations of grazing-based dairy farms in Chile and the United States.



Laurence Shalloo

Teagasc, Moorepark Researcher dairy farm economics and sustainability

Laurence Shalloo is a Senior Research Officer in the Livestock Systems Research Department of the Animal and Grassland Research and Innovation Programme, and is based at Moorepark. Laurence graduated with a B. Agr. Sc (1st Hons.) from UCD in 1999, and with a PhD from UCD in 2004, funded through the Teagasc Walsh Fellowship Scheme where he developed the Moorepark Dairy Systems Model. Laurence commenced work at Teagasc Moorepark in 2004.

He is a research co-ordinator on a number of Research Stimulus funded projects involving diverse areas from developing models of the milk processing sector to developing a national sustainability assurance scheme. He is currently an SFI funded investigator. He is a research co-ordinator of a work package in the FP7 funded project AUTOGRASSMILK as well as significant involvement in (MULTISWARD, ANIMALCHANGE, GREENHOUSEMILK) projects.

Currently supervising six Ph.D. students registered at UCD, CIT and Massey University based at Moorepark and New Zealand. Laurence is responsible for the generation of the economic values for the Irish Dairy cow selection index (EBI). Laurence was instrumental in the development of the Pasture Profit Index as well as the development of PastureBaselreland (A national grassland recording system).

Profitable and resilient pasture-based dairy farm businesses

Mark Neal, John R. Roche and Laurence Shalloo

- Farms with higher operating return on assets (top 25%) over the last 12 years achieved 7-8% return compared 3-4% for other farmers. High return farmers harvested more pasture and crop (>1 tDM/ha), and produced more milk per hectare, but imported no more feed (including winter grazing).
 - High return farmers also had lower gross operating expenses, that when combined with greater milk production resulted in lower operating expenses per kg MS (approx. -\$0.80/kg MS). The difference in operating return on assets was a result of the large difference in operating profit per kg MS combined with lower levels of assets per ha for high return farmers.
 - Higher pasture and crop eaten was associated with higher profitability. This effect was consistent with Irish data, at about \$300/ha operating profit per tDM.
 - While more imported feed increases MS production per hectare, it does not lead to higher profitability per hectare of return on assets. This is due to the associated costs when feed is imported (\$1.50 to \$1.60 per tDM of imported feed).
 - Imported feed is associated with higher operating costs per kg MS (~\$0.40 to \$0.45 per tDM of imported feed per cow). Therefore, higher imported feeding levels feed are likely to impact a farms ability to pay for goods and services when milk prices are low, after accounting for an average farm which pays ~\$1.20 per kg MS in interest and rent.
 - In conclusion, high pasture harvest, with low reliance on supplementary feed and effective cost control, are key attributes of financially-robust dairy businesses.
-