Automating the dairy farmer? Understanding the barriers to uptake and use of precision technology in dairy systems.

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Abstract

Rapid development in precision technology presents significant opportunity to revolutionise livestock management practices on farm. In addition, the wide biological, climatic and temporal variation which can occur on farm, the dairy industry remains a perfect application for this innovation.

Although the development of precision technologies suitable for use in the dairy sector continues at pace, the true value of these technologies is unlikely to be realised without significant social and economic change on farm. To assist farm businesses in achieving maximum return on investment when implementing new technologies, it is important to understand how farmers are currently using data provided by established precision technologies, understand the skill base required by these techniques, and consider how these findings can be integrated into the development process.

This paper will present the findings of a 2016 Nuffield scholarship which, through a range of interviews with industry, farmers and scientists will provide a global view of precision technology uptake in the dairy industry. This paper will discuss the socio-economic factors influencing uptake, and importantly, the true use of new technologies on dairy farms across the world. It will also evaluate the ability of the current skills base both on-farm and within industry to fully exploit the new developments in technology now available to dairy farmers. Finally, it will consider how farmers and industry currently evaluate the success of precision technology purchases. Recommendations for scientists, industry and farmers will be made to ensure the potential of precision technology is maximised within the dairy sector.

Keywords: precision technology, dairy, grassland, uptake