Combining milk recording and other on-farm data to streamline and improve greenhouse gas emissions

Cooke Andrew*[1], Smith Michael[1], Hope Caroline[2], McKenzie Ben[3]

[1] Map of Agriculture NZ, [2] Map of Agriculture UK, [3] Map of Ag Australia

Understanding farm-level emissions and scenarios for their reduction has become increasingly important. This may be due to national regulations and international market access agreements, brand claims of food businesses, or opportunities for farmers to benefit from industry or government incentives. A combination of animal registration and milk recording records and other farm data sources can dramatically reduce compliance effort for farmers and increase reliability of calculations.

Recognised greenhouse gas (GHG) emission calculations, particularly national-scale models, often have insufficient granularity to accurately represent dairy herd management practices, recognise improvements farmers are making, and provide farm-specific insight into mitigation options. Map of Agriculture gained farmer consent and used connected data from milk recording to populate mathematical calculators for GHG emissions, delivering insights to farmers and dairy processors.

This paper compares software, data capture, calculation, and insights activities undertaken for two dairy supply chains in the United Kingdom and Australia. Greater precision from connected data provides assurance for supply chains and can offer farmers insights into changes they may make while retaining profitability and productivity.