

Abstract for Paper to be presented at WHFF 2023, Puy du Fou, France

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Session 2: The Holstein Cow - all set for tomorrow: feed efficiency, sustainability, low methane emissions

Title: Feed efficiency

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Feed remains the most expensive variable cost in dairy farming regardless of farming system. Thus, it is entirely logical that dairy farmers strive for feed efficiency in their breeding programs. Initially feed efficiency was included in breeding objectives through increasing production per unit of live weight, however genomic selection has transformed the way we breed for many traits and feed efficiency has benefited from this technology. As the world's dominant dairy breed Holsteins now have genomic reference populations designed to measure residual feed intake in many countries. Residual feed intake is the difference between actual and predicted feed intake where predicted feed intake is estimated from a cow's milk production and maintenance requirements. Many countries around the world now use Feed Saved for their breeding values; this approach combines residual feed intake with maintenance requirements and enables breeders to identify the most efficient converters of feed. The method was developed in Australia and we released the first Feed Saved breeding values to our dairy industry in 2015., it is very flattering to see the approach being replicated worldwide. Most real feed intake data comes from research herds with the next iteration of innovation being measuring feed intake in cheaply in commercial farms, with cameras and sensor devices helping to transform the way we measure this important trait.