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Benefits of milk pregnancy testing for a DHI organization

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The assessment of pregnancy status is vital in the management of beef and dairy herds and this service is provided on-farm by veterinarians and technicians or by using laboratory based test methods. Pregnancy diagnosis plays an important part of the producer's reproductive management and can have a direct impact on economic performance. In one model a one day increase in calving interval in a herd with average reproductive performance cost € 0.57 per cow per day (Inchaisri 2010). Others have found similar economic losses calculated per days open to reach as high as \$3 USD per additional day open (Groenendaal 2004).

Direct methods of immediate pregnancy evaluation are available for the diagnosis of pregnancy including rectal palpation and transrectal ultrasound (Fricke 2016). Both methods require significant training and results are dependent on operator experience and in the case of ultrasound, the equipment can be costly and vary in quality-(Racewicz 2016).

The use of an indirect marker for pregnancy in cattle, pregnancy associated glycoproteins (PAG) can provide an alternative to direct methods (Fricke 2016). PAG testing is provided by multiple commercial companies worldwide. The most common assay type is an ELISA, which may require automated laboratory equipment and has been adapted for use on serum, plasma, and milk samples. The accuracy of these tests has been compared to transrectal ultrasound and been found to be an accurate and reliable means of pregnancy evaluation (Lawson 2014, Commun 2016, Ricci 2015, Mayo 2016).

The Milk Pregnancy test offers a simple, hassle free solution for dairy producers, particularly when testing routine herd recording samples since this does not require cows to be handled in order to obtain a pregnancy result. Pregnancy testing services from milk samples are offered by more than 100 DHI laboratories worldwide, with over 5 million milk samples tested annually. Additional analyses from milk samples have become a key service for many laboratories and offer additional value to DHI customers, maximising the use of routine milk samples. Several different approaches have been implemented worldwide, from automatic testing of dairy cows post breeding to individual samples taken at an optimal date throughout gestation.

This session will provide the audience with experiences from milk pregnancy service providers and detailed examples of the additional benefits the service brings to laboratories and farmers. Examples of how to develop the market as well as the latest research on the use of PAGs from reproduction experts globally will also be presented.

Keywords: milk pregnancy testing, diagnostics, DHI, herd recording, milk sample, additional testing