Milk sample carry over in the field – identifying and resolving the challenges.

***Justin Frankfort*[1]**

[1]National Milk Records, Fox Talbot House, Greenways Business Park, Chippenham, SN15 1BN, UK

Abstract

Obtaining an accurate milk sample from individual animals at a milk recording session is the point at which unique challenges are presented, on both the equipment and at the human levels. It is where the milk recording technician or milk sample collector becomes directly involved in the herd test. It is also the single most important role of a milk recording organization (MRO). While other event data may be captured by computers and milk yields estimated by milk meters, collection of a representative milk sample is critical for accurate results delivery by the MRO and delivery of effective management data for decisions by the herd owner.

Dairy producers demand more from MROs, as milk margins continue to tighten. In response to this demand, MROs have investigated and delivered other useful information for management that is contained in the milk sample. The net result in an increase the value of the milk sample, where investment in collection has been made, and consequently, increase the value of the services offered by the MRO.

Additional tests such as ELISA on preserved milk samples collected by MROs may have different tolerance levels to carry-over when compared to traditional infrared analysis. Further, these ELISA analyses have a larger impact on herd performance, where management decisions are immediately made on milk analysis results that include culling, breeding, and or administration of prescribed pharmaceuticals.

Milk pregnancy testing, through the ELISA pregnancy-associated glycoprotein (PAG) test, has a low tolerance to carry-over which may provide inaccurate results, including both false negatives and false positives, to a dairy producer. These inaccuracies in PAG testing have a high visibility in the marketplace, a significant effect on the bottom line of the producer, and subsequently damage the reputation of the MRO. Compared to traditional milk component testing, which includes multiple test events over the course of a lactation, where the net effect of carry-over is minimal and management decisions are not as finite (culling of cows), the impact of carry-over may in value-added milk testing is problematic.

Knowledge of and addressing potential carry-over in MRO-collected milk samples is key to delivering both qualified and accurate results to the dairy producer, and increasing the value of MRO services. MROs have a responsibility to address the challenge of carry-over through education, training, and implementation of best practices in their respective field operations.

Keywords: carry-over, milk recording organizations, best practices