



Report of ICAR Working Group on Lactation Calculation Methods

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ICAR Lactation Working Group


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- Sophie Mattalia, France
- Zengting Liu, Germany
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- Filippo Miglior, Canada
Chair



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Activities


- Organization of Symposium at ADSA-ASAS 2007
- Interaction with Sub-Committee of Recording Devices
- Participation to Working Party for On-farm Milk Analysis (OMA-WP)
- Analysis of methods proposed by UK for am/pm milk recording
- Guidelines for milk recording with Electronic Milk Meters (EMM)


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Symposium at ADSA-ASAS *San Antonio, Texas, July 2007*

- Organized together with Dr. Marj Faust, ABS Global, USA
- “New Challenges and Opportunities From Automation of Animal Data Recording”
 - Current and near term technologies for automated recording of animal data for precision dairy farming (*Katz et al., Afimilk, Israel*)
 - Thriving in a declining market – the new service paradigm for DHI’s (*Petreny, CanWest DHI, Canada*)
 - Harnessing automatic data collection to enhance genetic improvement programs (*Wiggans et al., USDA, USA*)
 - Harnessing automatic data collection to enhance profitability of dairy farms (*Thomson, TMC, USA*)

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Support to Recording Devices SC

- Email exchange with Uffe Lauritsen, Chair of RD-SC
- Live meeting in East Lansing, Michigan, in October 2007
 - Improvements to add integrity in regard to:
 - Test day/multi-day volume measurement
 - Sample/vial ID
 - Cow ID policy established by member organizations
 - Write-up of examples of good practices (in integration of recording and ID)
 - Update and re-define milk meter categories
 - Standalone approval for milk meters and respectively samplers
 - Integration of new technologies -particularly multi-day milk meters (MDM)



Working Party of On-farm Milk Analysis

- Representatives from different technical groups of ICAR
- Olivier Leray, Chair of OMA-WP
- The focus of this working party is to provide some background policies with different aspect related to milk analysis in the farm for milk recording purposes
- Live meeting in Rome, Italy, in November 2007
- Email exchange with drafting of preliminary guidelines
- Lactation WG not yet fully involved as data are needed to perform proper research

Estimating Daily Yield from AM/PM Milk Recording Schemes (NMR, UK)

- Study evaluated various statistical models for estimating daily yield from AM/PM testing schemes
 - herds milked twice daily (2x) and three-times daily (3x)
 - using UK data provided by National Milk Records (NMR)
- Wiggans factors (derived from US data) resulted in reasonable predictions when applied to UK data
- Weights are now available to enable single test records to be properly included in a test day model or the current records-in-progress procedure
- Differences in milking interval among individual cows within herd cannot be taken into account, but advances in electronic identification might make this possible in future
- The inability to account for individual cow differences in milking interval is likely to limit the further improvement in accuracy of models to predict daily yield from single measured milkings

Guidelines for milk recording with Electronic Milk Meters (1)

- 24-hour milk yield
 - Based on research by Hand et al. (2006) presented at ICAR meeting in Kuopio, Finland
 - Multiple day averages provided by EMM software can be used
 - Better accuracy of the estimation of the true performance than a performance estimated on a 24h basis only
 - No differences in accuracy for 3 to 7 days averages
- 24-hour fat and protein yields
 - They should be determined from the 24 hr yield on the day of sampling, and not the averaged value

Guidelines for milk recording with Electronic Milk Meters (2)

- Extension of Test Interval Method for lactation calculation
 - Based on research by Wirtz et al. (2006) presented at ICAR meeting in Kuopio, Finland
 - A more accurate calculation of the lactation performance can be carried out using an average 24 hour milk yield of each test interval calculated from automatically collected single milk weights on the farm
 - A stable and reliable on farm recording system for milk yields and milking intervals is required for using this method
 - This method is very flexible as it can change between standard and detailed test interval methods

Summary

- New guidelines for milk recording with electronic milk meters have been drafted
- Future focus is on performing research with on-farm milk analyzers

