Global 24-hour calculation trends in classical milk recording systems


1France Genetique Elevage, Paris, France
2Czech Moravian Breeders’ Corporation, Inc., Hradistko, Czech Republic
3VIT (Vereinigte Informationssysteme Tierhaltung w.V) IT-Solutions for Animal Production, Verden, Germany
4Mtech Digital Solutions (ProAgria Group), Vantaa, Finland
5Polish Federation of Cattle Breeders and Dairy Farmers, Warsaw, Poland
6Israeli Cattle Breeders’ Association, -, Israel
7Minnesota DHIA, Buffalo, United States
8Milk recording consultant, -, Chile
9NorthStar Cooperative, Lansing, United States
10LKV Austria Gemeinnützige GmbH, Wien, Austria
11Ontario Genomics, Toronto, Canada
12ANABLE, Aveiro, Portugal
13CanWest DHI, -, Canada
14TINE SA, Oslo, Norway
15Icelandic Agricultural Advisory Centre, Selfoss, Iceland
16Växa Sverige, Uppsala, Sweden
17 Breeding Services of the Slovak Republic, S. E., Bratislava, Slovakia
18 Asociacion Colombiana De Criadores De Ganado Simmental Simbrah Y Sus Cruces – Asosimmental Simbrah, Bogota, Colombia
19 Instituto Nacional para el Control y el Mejoramiento Lechero, -, Uruguay
20 Lancaster Dairy Herd Improvement Association, Manheim, United States
21 Royal Jersey Agricultural & Horticultural Society, Royal Jersey, United Kingdom
22 CONVIS S.C., Ettelbruck, Luxembourg
23 ASR-Switzerland, Zollikofen, Switzerland
24 RYK, Aarhus, Denmark
25 IDELE, Paris, France
26 Spanish Holstein Confederation, Pinto, Spain
27 Embrapa Dairy Cattle, Juiz de Fora, Brazil
28 Associação Paranaense de Criadores de Bovinos da Raça Holandesa, Curitiba – Paraná, Brazil
29 Regional IT Centre for Dairy Cattle Breeding in the Leningrad Region, Plinor, Saint-Petersburg, Tyarlevo, Russian Federation
30 Plinor, Ltd., -, Russian Federation
31 CRV B.V., Arnhem, Netherlands
32 ICBF, -, Ireland
33 Association wallonne de l’élevage asbl, Ciney, Belgium
34 Associazione Italiana Allevatori (A.I.A.), Rome, Italy
35 BAIM, Development Research Foundation, Uruli Kanchan, India
36 Valacta, Sainte-Anne-de-Bellevue, Canada
37 University of Ljubljana, Domzale, Slovenia
38 Agricultural Data Centre, Riga, Latvia
39 AgSource, -, United States
40 ACHA. Asociación Criadores de Holando Argentino, Ciudad Autónoma de Buenos Aires, Argentina
41 Állattenyésztesi Teljesítményvizsgáló Kft (Livestock Performance Testing Ltd.), Gödöllő, Hungary
42 Asociación Nacional de Criadores de Ganado Vacuno Selecto de Raza Parda, León, Spain
43 Cattle Breeders’ Association, Baltata Romaneasca Simmental Type,, Harman, Romania
The ICAR Dairy Cattle Milk Recording WG (DCMRWG) is currently rolling out changes to the dairy cattle milk recording section of the ICAR Guidelines, which were approved in Auckland at the beginning of 2018. The core activities of the group are to improve 24-hour calculations used in classical milk recording and automatic milking systems. It was decided that preparations would be given over in the short term to improving the 24-hour calculations section of the Guidelines: Procedure 1, Section 2 – Computing 24-Hour Yields. Before any changes in the Guidelines, is necessary to monitor and analyse current situation in milk recording organisation, their needs and problems. The DCMRWG invited various organisations from around the world to take part in a survey. Data was obtained from 52 organisations in total. The survey consisted of 90 questions. The survey presents an overview of the current situation and is the basis for all planned changes. As well as monitoring the current situation, the survey aims to establish a future policy and set out recommendations as a way of harmonising practice worldwide. It is also hoped that the survey will serve as a springboard for instigating discussion among milk recording organisations and assessing needs. This was one of the main goals of the project is to strengthen communication and encourage the exchange of information between working groups and MROs alike. As the survey will deliver aggregated data, practice will be benchmarked for respective organisations to reflect common practice in this field worldwide.

The first part of the study consists of several sections: a general overview, practical experiences with methods recommended in the ICAR Guidelines, problem areas MROs wish to address, priorities and needs, and processes used to estimate coefficients and factors. Some organisations estimate their own factors and coefficients and survey gave an overview on the following areas: number of...
organisations which estimate own factors and coefficients, problems with estimations, number of animals and herds used for estimations (different indicators used), time period between estimations or recalculations, how cows and herds are chosen, criteria used for selecting herds and cows, data editing and criteria for data exclusion, factors and coefficients used nationally or differences between breeds and regions, estimations and recalculations of conventional methods (not from AMS), what comparisons are used, results from estimations or recalculations (am/pm, method $Z$, etc.) and the types of statistical indicators used.

The results of the survey should prove invaluable when making changes to the ICAR Guidelines and for benchmarking MROs in a global context, adapting methodologies among organisations where relevant.

**Acknowledgements:** The ICAR Dairy Cattle Milk Recording WG wishes to thank all of the organisations that took part in the survey.