Global 24-hour calculation trends in automatic milking systems

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The ICAR Dairy Cattle Milk Recording WG finished its work on the new version of the ICAR Guidelines in February 2018, with the new version approved at the ICAR General Assembly in Auckland. Changes were made to general aspects of cattle milk recording. Over the short term, it was decided that priority be given to improving the 24-hour calculations section of the Guidelines: Procedure 1, Section 2 – Computing 24-Hour Yields. The work comprises several research projects, technical analyses and policy discussions. Central to these efforts, the ICAR Dairy Cattle Milk Recording WG is committed to engaging in discussion with various milk recording organisations and ICAR members working in this sector. To that end, the group is holding a milk recording workshop and technical session at ICAR 2019 in order to stimulate discussion on the types of changes needed in this field.

The ICAR Dairy Cattle Milk Recording WG (DCMRWG) is currently researching current practice toward improving the 24-hour calculations section of the Guidelines: Procedure 1, Section 2 – Computing 24-Hour Yields. Before any changes are made, however, it is vital that the current situation is assessed comprehensively, delving into key aspects related to methodologies, processes, trends and the opinions of milk recording organisations. The DCMRWG conducted a survey of relevant organisations to address these issues, shed light on the level of harmonisation among players, and set a future direction and strategy on

24-hour calculations for the cattle milk recording sector. One of the goals of the project is to strengthen communication and encourage the exchange of information between working groups and MROs alike. The survey consists of 90 questions and uses solely

aggregated data to reflect global practice. Data was obtained from 52 organisations worldwide, giving a representative example of different situations, needs and the specific problems faced.

This part of the project examines the use of automatic milking systems (milking robots) and gauges the general requirements and opinions of milk recording organisations in this area. It considers the impact of automatic milking systems on the milk recording sector, the different options available when milking herds, methodologies (particularly in related to those recommended in the Guidelines), calculation of fat and protein production, impacts of data quality indicators, sampling schemes, and milk yields from multiple numbers of days. The survey reveals how various organisations use their own factors and coefficients, providing information on how they are estimated. It provides information on data collection periods, how animals and herds are chosen for analysis, how are data edited and how organisations work with data before analysis, how factors are used in particular countries (are they unique or specific according to the region and/or breeds, comparison which is used for results, how results are evaluated from estimations or recalculations (method Z, M...) and which statistical indicators are used. A very important part of the project is to establish a future policy and set out practical recommendations for the future.

The results of the survey will prove invaluable when making changes to the ICAR Guidelines. The group wishes to thank all of the organisations that took part in the survey. Central to these efforts, the ICAR Dairy Cattle Milk Recording WG is committed to engaging in discussion with various milk recording organisations and ICAR members working in this sector. Crucially, however, before any changes are made to the Guidelines, the situation among ICAR members and non-members must be assessed. The group is now conducting a detailed overview on methodologies and practical trends in order to gauge opinion and identify the most pressing issues affecting milk recording organisations.