Guidelines for the validation and use of claw health data

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ABSTRACT

Several countries have recently started to record claw health status at claw trimming on a routine basis, and large amounts of information are now available for genetic evaluation and for herd management. In 2015, the ICAR Claw Health Atlas with description of 27 claw disorders was published in order to harmonize and standardize data recording from claw trimming and contribute to collection of comparable high quality data within and across countries. To further enhance international collaboration on improving claw health, guidelines and recommendations for validation and use of claw health data are valuable. The objective of this contribution is to present the work of the ICAR WGFT and international claw health experts on data validation and strategies to improve data quality and utilization of claw health data for herd management and monitoring of claw health. The data validation process depends on the purpose of use as well as the information sources e.g. herd management analysis requires a less strict editing process than benchmarks for monitoring claw health based on phenotypic information. The origin of the data (type of data, documentation, and recording system) has an impact on the frequency of disorders. Incidence rates based on veterinary diagnoses on claw health are normally much lower than comparable key figures based on claw trimming data. Monitoring of data quality according to its origin and use is essential to debug appropriately the data flow without having to delete unnecessarily large amounts of useful

information. Several editing criteria at different levels are discussed: at trimmer or veterinarian level, at farm level, at animal level and at record level. These include simple plausibility checks like correct animal-ID, correct codes of diagnoses etc. Validation at herd level checks whether data documentation and recording can be assumed reliable for a certain herd and time period. Measures to ensure and improve data quality are described as well. One simple measure is to provide fast feedback (e.g. herd management reports) to the farmer to foster the use of the data by technicians and farmers. By this, mistakes in data recording can be discovered and corrected. If valuable tools for improved herd management are available the motivation for recording these data will increase. A useful benchmarking report should be straightforward and concise, supported by clear and informative charts. Incidence and prevalence rates are key parameters that can be used for monitoring claw health and comparisons within farm over time and between farms. A major challenge in calculation of these key parameters is to correctly define the reference animals (i.e. control animals). Another important issue is the proper definition of a case, how to distinguish between already existing cases and new lesions. Guidelines and recommendations on data validation, benchmarks for monitoring of claw health and best practices for herd management reports will enhance quality and use of claw trimming data.

Key words: claw disorders, data validation, benchmarking