Supporting German dairy farmers: establishing a monitoring system based on health key indicators extracted from existing control systems

Sabrina Hachenberg\(^1\), Marie Au\(^1\), Jan Brinkmann\(^2\), Joachim Braunleider\(^3\), Salomé Carrasco\(^4\), Juergen Duda\(^4\), Doerte Doepfer\(^5\), Simone Gruber\(^6\), Helena Karatassios\(^7\), Matthias Kussin\(^7\), Rolf Mansfeld\(^6\), Solveig March\(^2\), Katharina May\(^3\), Katharina Friederike Stock\(^3\), Marlène Tremblay\(^5\), Folkert Onken\(^1\)

\(^1\)DLQ, German Association for Performance and Quality Testing, Bonn, Germany
\(^2\)Thuenen-Institute of Organic Farming, Federal Research Institute for Rural Areas, Forestry and Fisheries, Trethorst, Germany
\(^3\)vit, IT-Solutions for Animal Production, Verden, Germany
\(^4\)Landeskuratorium der Erzeugerringe für tierische Veredelung in Bayern e.V., Munich, Germany
\(^5\)University of Wisconsin, Madison, United States
\(^6\)Ludwig-Maximilians-Universitaet, Clinic for Ruminants with Ambulatory and Herd Health Services, Munich, Germany
\(^7\)Osnabrueck University of Applied Sciences, Faculty of Agricultural Sciences and Landscape Architecture, Osnabrueck, Germany

German farmers are required by law to regularly self-assess the welfare of their animals. The project Q Check is aiming at developing a system that will assist farmers to neutrally evaluate animal health in dairy cows. For this reason, a quarterly report will be compiled from animal-based key indicators to give an overview of the on-farm situation. The anonymised reports will also be used for the establishment of a national monitoring system: Continuous collection of the key indicators enables the summary and publication of the current animal health status and progressions at federal state and at national level.

Q Check is based on four data recording and analysis systems, which are already established and implemented on a national level. Out of these systems, the most suitable indicators to describe herd health have been selected by 215 experts within a two stage Delphi study. In addition, over 50 face-to-face interviews with stakeholders related to the German dairy sector have been performed in order to take into account the socio-scientific point of view.

To complete the process, the selected indicators are currently being checked against mass data and hence tested for plausibility. An automatic farm-specific animal health evaluation, based on verified indicators, will provide support to farmers in fulfilling their legal requirements and in analysing farm specific weak points. Additionally, a benchmarking system will be set up in order to compare the herd health status in the course of time or with similar farms. By facilitating a focused intervention and by supporting objectified management decisions, the dairy farmer benefits in several respects.

In the course of the project, new tools for determining the risk of ketosis in the scope of milk recording will also be validated and implemented at national level, in order to cover another major disease complex. Moreover, the results of these nationwide, neutral
investigations will contribute substantively to the objectification of the discussion regarding the welfare situation of our dairy cows. In order to maximize the benefit, this objective will be supported by communication experts.

Preliminary results will be presented in this contribution.

**Keywords**: animal health, key indicators, self-assessment, national monitoring system, german dairy sector