Wednesday, March 6, 2024

Abstract Submission Form

Title (Mr./Mrs/Dr./Prof.) Dr.

Presenting author Lorenzo Pascarella

Institute

Institute/company: AIA

Adress: via XXIV Maggio 44

ZIP/Postal code: 00187 City: Rome

Country: Italy

Insert all authors and institutions

Pascarella L. (1,2), Melilli C. (1), Luisi F. (1,2), Fioretti M. (1), Negrini R. (1,2)

(1) Associazione Italiana Allevatori, via XXIV Maggio 44, Rome, Italy
(2) Dipartimento di Scienze animali, della nutrizione e degli alimenti, Università Cattolica del Sacro Cuore, Via E. Parmense, Piacenza, Italy

Preferred presentation Oral

Preferred session Session 1: WG Animal Data Exchange – Decision Support Tools of the Future – Promoting Sustainability Farm Management

Email of corresponding author pascarella.l@aia.it

Title of your paper SiallSCM: a nation-wide tool for milking monitoring to enhance efficiency and welfare

Insert ABSTRACT text

Today, milking precision technologies and devices efficiently generate massive and accurate information on milking systems and animals. However, establishing consensus methods for recording, organizing, and normalising such amount of data to extract meaningful and ready-to-use information for farmers and technicians is a major challenge.
Toward this objective, AIA recently launched a new web app (SiallSCM) to gather data from dry and wet milking tests. The uploaded dry and wet milking data are synchronized in real-time with central AIA' Data Base and merged with the DHI data after passing two tiers of normalization.
The first tier requires data gathering according with ISO standards (ISO 5707:2007 and ISO 6690:2007) and collected through milking sensors and devices officially calibrated, at least, yearly. The second tier is applied once the data is uploaded and employs a set of algorithms to identify and flag aberrant or outlier data entries.
The current dataset comprises information of 4.217 milking wet test performed between September 2022 and January 2024 by 105 technicians of Milking Control Service of AIA (SCM) equipped with 70 VaDia kit

and 180 Lactocorders. Information included 18 dynamic milking parameters such us: pulsation rate and ratio, working vacuum, MPC vacuum, overmilking time, milking flows, bimodality, and milking phases duration that generate approximately 8 billion of milking data.
Furthermore, we acquired data from milking system set-up and dry test were performed in about 16.000 farms resulting in information on more than 500.000 milking machines configuration and setting parameters.
SiallSCM App generates dynamic easy-to-read farm reports displaying the principal information on milking setting parameters such as effective vacuum reserve, pulsation suitability, vacuum fluctuation, equipment status and milkmeter calibration according to ICAR guidelines.
Additional information on milking effectiveness and a “synthetic milking efficiency score” are under construction.
This wealth of data and reports empowers AIA’s technicians to perform an “integrated monitoring” of milking performances and provide a decision-making system to enhance both milk production and animal health.

Enter keywords

Milking system, milking efficiency, data collection, animal health, decision support tool