

Abstract Submission Form

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Preferred presentation

Poster

Preferred session

Session 8: Global challenges in measuring methane in ruminants

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Title of your paper

A holistic approach for monitoring the environmental sustainability of the Italian Holstein cattle population

Insert ABSTRACT text

This work aims to describe the holistic approach for monitoring the environmental sustainability that the Italian Holstein, Brown, and Jersey Breeders Association (ANAFIBJ) is implementing. Since 2015, ANAFIBJ has been setting up a wide range of environmental strategies to record data and to develop tools that meet community and farmer needs on mitigation climate change. In 2018, ANAFIBJ started collecting

innovative data for each young calf housed at the experimental farm of ANAFIBJ. Several phenotypes, for over 200 young bulls, were recorded using advanced technologies, including the GreenFeed system (C-Lock Inc., Rapid City, SD, USA) and the Roughage Intake Control system (Hokofarm Group, Marknesse, The Netherlands). A new pipeline was developed to incorporate these new traits into the routine database maintained by ANAFIBJ, which is updated daily. At the population level, the Association formed a Consortium with various stakeholders, including University Experimental Farms, Commercial Farms, Universities, and Private Companies for recording routine environmental traits recorded on the Holstein female population. Methane emission records, from the GreenFeed system and the Sniffer type systems, milk-spectral records, from mid-infrared spectroscopy of milk labs, ruminal content, and microbiota composition, collected from key individuals on the population, will feed into the central ANAFIBJ data flow system. This will allow in the near future to set-up a genetic evaluation for these innovative traits and build up stronger cooperation at the international level. The Life Cycle Assessment (LCA) has been applied to several dairy herds enrolled in the national herd book. Now, LCA predictions can be made for all national dairy herds using the routinely recorded data in the ANAFIBJ national database. More herds are expected to have LCA recorded scores in the future. Further, an innovative report, named the “green passport”, was generated to summarize the methane emissions and feed and water intake records of each bull housed in the experimental farm managed by ANAFIBJ. Each tool plays a pivotal role in allowing farmers across the country to assess the environmental impact of their herd and inform decisions regarding herd management.

Enter keywords

methane emissions, greenfeed, sniffer, italy,dairy