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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 breed4green – Recording of new phenotypes for methane emission and feed efficiency in Austrian dairy cattle

Insert ABSTRACT text

Climate change and the rising and fluctuating costs for energy and concentrated feed are major challenges for the livestock sector. The breed4green project focuses on researching strategies to reduce methane emissions and enhance feed efficiency within the Austrian cattle industry. Measurements of methane and CO2 emissions are currently being conducted on both experimental and commercial farms using the GreenFeed system. The aim of the project is to collect methane and CO2 measurements of approximately 1,000 Fleckvieh and 200 Brown Swiss cows. In addition, various phenotypes such as health, body weight, BCS, metabolism, energy intake and milk mid infrared (MIR) spectra are recorded. Data on feed intake from experimental farms are also available for validation. The genetic potential of direct traits like methane, CO2 and feed efficiency, along with their correlations to health and other traits, will be analyzed. The project also includes the development and validation of MIR equations for emitted methane and energy balance. The focus will be on investigating the use of these indirect traits to reduce methane

emissions and improve feed efficiency in breeding programs to pave the way for genomic selection. The results will also be used to optimize herd management. Furthermore, the environmental impact of relevant dairy and beef production systems in Austria will be investigated.

Enter keywords

GreenFeed, methane emission, feed efficiency, mid infrared, dairy cattle;