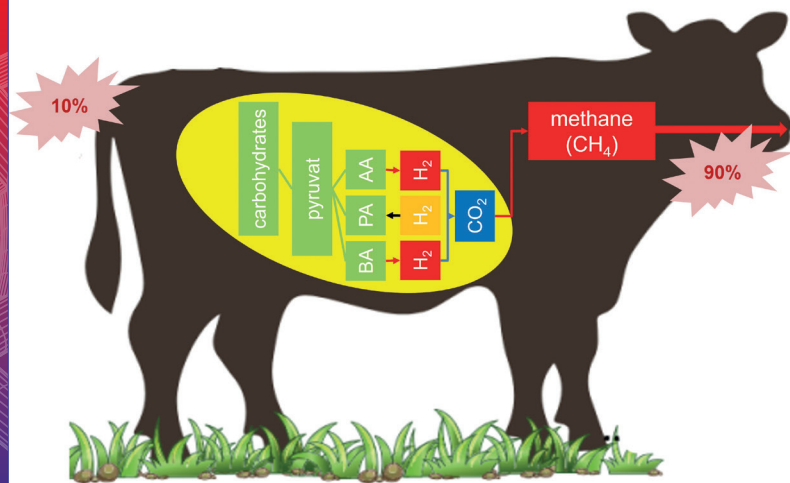


Sustainable animal farming



Methane Emissions from Suckler Cows

Background

Methane is a greenhouse gas, with up to 11% of anthropogenic methane originating from livestock production. Beef cattle production is attributed the largest share worldwide (PICKERING et al., 2015). Under German conditions, methane emissions can be reduced in two ways: [1] by reducing livestock populations or [2] by lowering methane emissions per animal per unit of time. As a direct emission from agricultural operations (Scope 1), these emissions must be accounted for and optimized, which has been the approach in recent years.

Results

Measurements in recent years have always been taken using a methane detector. To identify areas for operational optimization, a suckler cow herd was selected that undergoes a 3-month dry period, is then kept under winter feeding conditions (TMR diet) for 4 months, and grazes on pasture from May through September (5 months). Between the various phases of reproduction, daily methane emissions are classified as low (Figure 1).

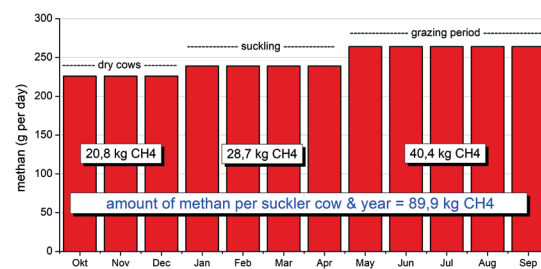


Figure 1: Methane emissions from suckler cows during the three phases of reproduction within an annual cycle

In total, this indicates a methane emission of approximately 90 kg per cow per year. The next step is to examine various levels of grassland extensification and their effects on methane emissions from suckler cows. Ultimately, this will allow for the development of farm-level strategies or approaches to reduce these emissions.

Contact

Prof. Dr. Heiko Scholz

Department Agriculture, Ecotrophology and Landscape Development

✉ heiko.scholz@hs-anhalt.de

☎ +49 3471 355 11 78

🌐 www.hs-anhalt.de

In cooperation with



Professor Heidegger Institut e.V.
an der Hochschule Anhalt
Strenzfelder Allee 26
06066 Bernburg
Tel.: 03471-355-4206



MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG
Schafft Wissen. Seit 1502.



SACHSEN-ANHALT
Landesanstalt für
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