



MEDIA INFORMATION

Institute for Farm animal Biology

Dummerstorf, March 5, 2021

International research exchange for the cow Scientists publish handbook on experimental methods in nutritional and behavioural research on cattle

How do you measure the methane, a cow produces? What are the best ways to assess stress and Health in cattle? What should be considered in behavioural testing?

Researchers from ten nations have published a handbook as part of the EU SmartCow project, which gives an overview of a variety of experimental methods in nutritional and behavioural research on cattle for the first time.

The handbook is published online by PUBLISSO Cologne and is available to all interested scientists and livestock farmers. Publishers are the Partners of the EU SmartCow project.

"The German editors and authors are from the Research Institute for Farm Animal Biology (FBN) in Dummerstorf," explained PD Dr. Björn Kuhla, Workgroup leader at the Institute of Nutritional Physiology in Dummerstorf. "The main aim is to establish consistent minimum standards for the measurement of digestibilities, emissions, behaviour and much more throughout Europe. So far, this has often been done very inconsistently." Dr. Björn Kuhla underlined.

The authors from Spain, Denmark, the Netherlands, Great Britain, Ireland, Italy, Finland and New Zealand, as well as Germany, describe in detail the experimental principles in the field of nutritional and behavioural research on cattle in 19 chapters. One focus are various measurement methods for the recording of methane emissions from cattle, including respiration chambers, mobile measuring stations or the usage of tracer-assisted techniques in the barn and on pasture. This first compilation of research methods of this kind aims to enable especially young scientists to design their research more effectively and comparably on the base of standardized procedures and ethical principles. The publication is supported by the Open Access Fund of the Leibniz Association and the Open Access Fund of the FBN.

Background SmartCow

Three years ago, the European Union funded a joint project with top-level research institutes from seven European countries, including the Institute of Farm Animal Biology in Dummerstorf. Within this international consortium, these research institutes shared their experimental infrastructures and their know-how. Scientists from all European countries as well as business partners can use these Resources for their individual research activities. France is the lead coordinator of the project, which is funded with 5 million euros with the research focus on the European cattle sector. The FBN is currently working on three studies with scientists from Austria, Norway and Ireland. Further information at www.smartcow.eu

Methods in cattle physiology and behavior research - Recommendations from the SmartCow consortium, 2021

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Institute for Farm Animal Biology (FBN)

Director: Prof. Dr. Klaus Wimmers

T +49 38208-68 600

E wimmers@fbn-dummerstorf.de

Institute of Nutritional Physiology "Oskar Kellner"

Head: Prof. Dr. Cornelia C. Metges

T +49 38208-68 650

E metges@fbn-dummerstorf.de

SmartCow study leader PD Dr. Björn Kuhla

T +49 38208-68 695

E b.kuhla@fbn-dummerstorf.de

www.fbn-dummerstorf.de