

CV – Peter Lund

Address:

Department of Animal and Veterinary Sciences, Aarhus University, AU Viborg Research Centre Foulum, Blichers Alle 20, 8830 Tjele, Denmark, Peter.Lund@anivet.au.dk, +45 40157673

Education:

2002 PhD in Animal Science, The Royal Veterinary and Agricultural University, Copenhagen.

Employment:

2022- Head of research unit, Ruminant Nutrition

2022- Part of department management team, Department of Animal and Veterinary Sciences

2018- Professor in Sustainable Dairy Production

Key areas:

Green transition of agriculture and sustainable livestock production with a key interest in inter-disciplinarily, i.e. the interplay between nutrition, rumen microbiome and genetics. The research area covers ruminant production with emphasis on improved utilisation of nutrients in dairy cows and reduced environmental impact of cattle production. More specifically feed additives and feeding strategies that can facilitate significant reductions in enteric methane and N-excretion. This information is used to model the effect of different interventions on production of enteric methane and N-utilization. The work is carried out in collaboration with industry partners as well as colleagues from numerous other departments within AU, from other Danish universities (DTU, KU, SDU), and from international universities (Wageningen WUR, INRAE, FBN, Reading, Teagasc, SRUC, IRTA, CSIC, NMBU etc.).

Current project management:

“OpMet”. Ministry grant on reducing emissions from young stock. “GHG-Græs”. Ministry grant on reducing methane during grazing. “Reduced climate-footprint on cow- and farm level”. Project funded by the Danish Milk Levy Fund aiming at reducing carbon footprint of Danish milk production. “Implementation of the use of Bovaer and other methane mitigating feed additives in the Danish National Inventories”. Ministry Grant/ Aarhus University Governmental support. Effect of addition of enzymes on enteric methane”. Private company (confidential). “Feeding and Phenotype of the climate efficient dairy cow”. Ministry Grant. Private company, feed additives (confidential). GreenCalf. GUDP project with SEGES, Danish Crown and DLG. Total project budget 2014-2024: +100 mio. DKR.

Supervision:

Has been responsible for 2 master courses and the course-portfolio on Animal Science/AgroBiology. Co-responsible for the Erasmus Mundus program “Sustainable Animal Nutrition and Feeding” (2012-2017). Has supervised 15 PhD-students and a number of MSc and BSc students.

Others:

Appointed member of the Danish Cattle Research Forum. Board member Cattle Levy Fund. Invited as part of the Denmark & California Memorandum of Understanding on collaboration within research in Sustainable Dairy Production. Part of START – Centre for Sustainable AgriFood Systems. Part of the Innomission AgriFoodTure scientific writing group. On PhD-evaluation boards in The Netherlands, Norway, Sweden, Belgium, Scotland, Italy, and Denmark. International evaluator of research proposals in USA, Australia, Ireland, New Zealand, Germany, Belgium, Canada, The Netherlands. Policy support for Danish Ministry of Food, Agriculture and Fisheries regarding nutrient efficiency and excretion and the effect of animal production on climate. Member of local committee on policy support. Member of the bilateral groups (Ministry/AU) on agricultural gas emissions and on animal nutrition. Member of steering groups for research projects with different funding bodies (GUDP, IFD). Danish representative in the Global Research Alliance on Agricultural Greenhouse gases (GRA Livestock) and in the Feed Evaluation Network. GRA comprises 49 member countries and 15 partners (e.g. EU, World Bank, World Farmers Organisation). Qualified as full professor (2018) at Norwegian University of Life Sciences, Norway. Established in 2020 the department theme-group on “Cattle nutrition, climate and environment”. Established in 2022 the national network on “Climate and Cattle production”.

Industry collaboration:

SEGES, ICOEL, Danish Crown, Arla, Naturmælk, Viking Genetics, Boehringer-Ingelheim, BioMar, Novozymes, DLG, DSM, Viborg Hospital, Rigshospitalet, KWS, Nordic Sugar, Foss, Cargill, Nestle, DLF, Danish Agro.

Publications:

ORCID: <https://orcid.org/0000-0002-9113-4500>

Total number: 466, Peer review: 159, h-index: 38 (32 since 2020), I10-index: 107 (78 since 2020), citations: 7316 (4433 since 2020).

5 Publications:

Dorca-Preda, T., Olijhoek, D. W., Mogensen, L., Lund, P., & Kristensen, T. (2024). Climate and environmental effects of nutritional mitigation options to reduce enteric methane in dairy cattle: A life cycle assessment. *Sustainable Production and Consumption*, 47, 528-543.

Kjeldsen, M. H., Weisbjerg, M. R., Larsen, M., Hojberg, O., Ohlsson, C., Walker, N., Hellwing, A. L. F., & Lund, P. (2024). Gas exchange, rumen hydrogen sinks, and nutrient digestibility and metabolism in lactating dairy cows fed 3-nitrooxypropanol and cracked rapeseed. *Journal of Dairy Science*, 107, 2047-2065.

Maigaard, M., Weisbjerg, M. R., Johansen, M., Walker, N., Ohlsson, C., & Lund, P. (2024). Effects of dietary fat, nitrate, and 3-NOP and their combinations on methane emission, feed intake and milk production in dairy cows. *Journal of Dairy Science*, 107, 220-241.

Maigaard, M., Weisbjerg, M. R., Nielsen, M. O., Hellwing, A. L. F., & Lund, P. (2024). Effects of dietary nitrate, fumaric acid, and methanotrophic bacteria supplementation on rumino-intestinal nutrient metabolism and enteric gas exchange in dairy cows. *Livestock Science*, 289, artikel 105572.

Sirinayake Lokuge, G. M., Larsen, M. K., Maigaard, M., Wiking, L., Larsen, L. B., Lund, P., & Poulsen, N. A. (2024). Effects of feeding whole-cracked rapeseeds, nitrate, and 3-nitrooxypropanol on protein composition, minerals, and vitamin B in milk from Danish Holstein cows. *Journal of Dairy Science*, 107, 5353-5365.