Curriculum vitae for Christian Friis Børsting

Education:
M.Sc. in animal nutrition 1986, Ph.D. in animal nutrition 1989, The Royal Veterinarian and Agricultural University, Copenhagen, Denmark

Employment:
2018 - : Senior advisor in animal production, and its climatic and environmental impact. Dept. of Animal and Veterinary Sciences, Aarhus University, Denmark

2015 – 2018: Head of Cattle Department at the farmers advisory company LMO

2014 – 2015: Senior advisor at AgroTech

2002 – 2014: Head of the Danish Cattle Research Center

1989 – 2002: Scientist/senior scientist at The Danish Inst. of Agic. Sci.

Research interests:. Research activities focus on reduced environmental and climatic impact of animal production in a broad perspective. I have a specific interest in improved utilization of nutrients in dairy cows, and in reducing emission of methane and losses of nutrients in manure. Within this field the interaction between rumen microbiome communities, feeding strategies, feed additives, and breed is of special interest. Quantification of methane production from individual cows housed under loose-housing systems in GreenFeed units is a promising technology, which I have taken part in implementing at the department. Responsible for the Danish Normative System for Animal Manure covering the content of N, P and K in animal manure. This system is upgraded annually with the newest data from commercial farms as well as from research.

Project leader for the project "Udvidelse af normtal for husdyrgødning med kulstof for at kunne modellere drivhusgasser fra husdyrene, stalde og lagre" with the aim to expand this system with carbon turnover in animals, barns and manure storage as well as the climate impact of different farm animal species. The values for carbon and green house gasses will be developed, so values for each individual farm can be put into a model, which can be reported to the authorities for the individual farm. The data should also be used in the national inventory for climate impact of Danish agriculture. I have a large interest in projects that can collect data, which can show the impact on the emission of methane and other greenhouse gasses due the differences in feeding strategy, use of feed additives, management, breed, genetics etc.

Teaching: One Bac. and two MSc. courses on the effect of animal production on climate and environment.

Other activities: Policy support for Danish Ministry of Food, Agriculture and Fisheries as well as Ministry of Environment of Denmark, regarding nutrient efficiency and the effect of animal production on climate and environment. Chair of the advisory committee for the continuous evaluation of the national standard values for loss of nutrients from farm animals.

Publications. During my 22 years as an active scientist, I have produced: Number of publications: 260. Number of peer-reviewed: 43. During the 12 years as Head of The Danish Cattle Research Centre, I was very active in publishing new knowledge to farmers, however, these publications are not included in the 260 publications mentioned above.

Recent publications

Børsting, C.F., Olijhoek, D.W, Hellwing, A.L.F, Moyes, K.M., Østergaard, S., Weisbjerg, M.R., Lund, P., Larsen, Larsen, M., Mogensen, L., Raun, B.M., Røjen, B.A. & N. B. Kristensen. 2023. Replacing silage with large amounts of concentrate and straw affects milk production, economics and climate differently in Holstein and Jersey cows. Livestock Sci.. https://doi.org/10.1016/j.livsci.2023.105293.

Børsting, C.F.; Brask, M.; Hellwing, A.L.F.; Weisbjerg, M.R. & Lund, P. 2020. Enteric methane emission and digestion in dairy cows fed wheat or molasses. J. Dairy Sci. 103, 1448 – 1462. **https://doi.org/10.3168/jds.2019-16655**

Brask-Pedersen, D. N., M. Lamminen, L. Mogensen, A.L.F. Hellwing, M. Johansen, P. Lund, M. Larsen, M. R. Weisbjerg, C.F. Børsting. 2023. Effect of substituting grass-clover silage with maize silage for dairy cows on nutrient digestibility, rumen metabolism, enteric methane emission and total carbon footprint. Livestock Sci.. https://doi.org/10.1016/j.livsci.2023.105273

Barret, K., Lange, L., Børsting, C.F., Olijhoek, D.W., Lund, P. & Meyer A. S. 2022. Changes in the metagenome-encoded CAZymes of the rumen microbiome are linked to feed induced reductions in methane emission from Holstein cows. Frontiers in Microbiology, May 2022. http://journal.frontiersin.org/article/10.3389/fmicb.2022.855590/full?&utm_source=Email_to_authors_&utm_medium=Email&utm_content=T1_11.5e1_author&utm_campaign=Email_publication&field=&journalName=Frontiers_in_Microbiology&id=855590

Lashkari, S., Weisbjerg, M. R., Foldager, L. & Børsting, C.F. 2024. Fat supplement for dairy cows during early lactation – potentials, challenges, and risks – a meta-analysis. 2024. J. Applied Anim. Research. 52:1. DOI: 10.1080/09712119.2024.2323625.

Lund, P., Børsting, C. F., Giagnoni, G., Kjeldsen, M. H., Larsen, M., Maigaard, M., Nielsen, M. O., Olijhoek, D., Thorsteinsson, M. M., Wang, W. & Weisbjerg, M. R. How to reduce enteric methane from dairy cows. 2024, *Book of Abstracts of the 75th Annual Meeting of the European Federation of Animal Science.* Wageningen Academic Publicers, Vol. 34. p. 409-409 1 p. Session 30. Announcement: Publication of the Book of Abstracts for the 75th EAAP Annual Meeting – EAAP.

Olijhoek, D.W., A. L. F. Hellwing, S. J. Noel, P. Lund, M. Larsen, M. R. Weisbjerg, & C. F. Børsting. 2022. Feeding up to 91% concentrate to Holstein and Jersey dairy cows: Effects on enteric methane emission, rumen fermentation and bacterial community, digestibility, production and feeding behavior. J. Dairy Sci. TBC:1–19 https://doi.org/10.3168/jds.2021-21676