



Challenging intersections: Securing sustainable food systems in turbulent times

Nordic-Baltic food systems conference and
policy forum 26-28.5.2025 Helsinki, Finland

Book of abstracts and program



NORDIC-BALTIC FOOD
SYSTEMS NETWORK



NORDIC-BALTIC FOOD
SYSTEMS NETWORK

Nordic-Baltic food systems network

Publisher Finnish Environment Institute, University of Helsinki

Editor: Minna Kaljonen

Funders: Nordic Joint Committee for Agricultural and Food Research, Strategic Research Council Finland, Lund University, Bioeconomy Graduate Research School, Finnish Food and Drink Industries' Federation, Federation of Finnish Learned Societies

Lay-out: Finnish Environment Institute

Cover image: Adobe Stock

The Abstract book will be published online after the NFN2025 conference

Publication year 2025

Seisto, A. et al. What kind of opportunities and future vision cellular agriculture could have for Finland?	225
Sell, M. & Ashkenazy-Garini, A. Food system labs as a method for transforming food systems through transdisciplinary research and action.....	229
Seppälä, T. et al. Incorporating relational domain into the food environment framework	232
Holm, L. et al. Why is the association between greenhouse gas emission and adherence to dietary guidelines so weak?	235
Stoddard, F. Can the Nordic-Baltic region be free of soy imports?	238
Tidåker, P. et al. Environmental and economic effects from intermediate crops in a cropping system in Sweden.....	240
Tienhaara, A. et al. Do public preferences for agriculture shift? Evidence from repeated choice experiments in Finland	243
Tiikkainen, A. A simple lifetime productivity indicator to assess milk's carbon footprint and support herd-level decisions	246
Tuomasjukka, S. & Tarkkio, A. In the mood for change? Can a single question predict proenvironmental food choice changes?	249
Valujeva, K. et al. Balancing agricultural and forestry land use: a practical approach to sustainable agroecosystem management	251
Vanhatalo, A. Perspectives on the role of animal-sourced foods in the future northern food system	253
Viira, A-H. Towards sustainable food systems – evolving concepts in policy agenda in Estonia	256
Virkkunen, H. et al. Framework for quantification of land use-based greenhouse gas emissions according to crop and farm type	258
Wanying, Y. et al. Nurturing sustainable food choice: information-based strategy to promote plant-based food in educational institutions	261

14 Poster abstracts..... 263

Bäck, S. et al. Gaps between adults' perceived and actual macronutrient intakes: self-assessment relative to nutrition recommendations is challenging	263
Beitane, I. et al. Sustainability in food service companies: the case of Latvia.....	264
Bell, Q. et al. Two peas in a pod: a digital twin for climate smart agriculture.....	265
Forsman, L. In search of business models for local and systemically sustainable food	266
Fu, Y. & Irz, X. Optimizing sustainable diets with mycoprotein in Finland.....	267
Gaiani, S. et al. Increasing resilience of Nordic food systems through agriculture	268
Järviö, N. et al. A Finnish database for biodiversity impacts of food items consumed in Finland	269
Kadulin, A. et al. Why farmers manage or abandon semi-natural grasslands: a systematic review of motivations and barriers.....	270
Kähkönen, K. et al. Transforming the food system for sustainability: the role of agri-food cluster in North Savo	271
Tănăvots, A. et al. Meat quality of forage-fed Hereford beef cattle in a coastal region on small-scale organic farm	272
Korhonen, K. et al. Perspectives on the potential of legume production and consumption from farm to fork	273
Kuoppala, K. et al. Resilience of the European dairy sector	274

Tānavots, A. et al. Meat quality of forage-fed Hereford beef cattle in a coastal region on small-scale organic farm

Alo Tānavots¹, Marek Tepper¹, Kristi Kerner¹

¹Estonian University Of Life Sciences

Beef cattle feed was derived mainly from natural coastal grasslands. In winter, the animals were kept in a barn with access to an outdoor walking area. Grain was excluded from the feed ration. The study aimed to monitor the effect of two sires on the quality of young bulls' m. semitendinosus (n=28) over 28 days of wet ageing. A linear model was used for data analysis in R, and the results are presented as least squares means $\pm$ sd.

Meat samples from the offspring of Sire 1 exhibited higher redness (a^*) values across all ageing periods compared to those of Sire 2 ($p < 0.05$). Exudate loss increased significantly with longer ageing periods in both sire groups, reaching the highest levels at 28 days (Sire 1: $5.00 \pm 2.03\%$, Sire 2: $4.04 \pm 2.92\%$, $p < 0.05$). WHC (filter paper method) decreased with ageing, with a significant reduction at 14 days for Sire 2 ($p < 0.05$). No significant sire or ageing effects were observed for WBSF, pH, or lightness (L^*). Bulls sired by Sire 1 tended to have a larger m. semitendinosus area ($78.23 \pm 11.39 \text{ cm}^2$) compared to those by Sire 2 ($72.91 \pm 11.37 \text{ cm}^2$, $p > 0.05$). Circumference and length of the muscles were not significantly influenced by sire. Fat, protein, ash, and moisture contents were similar between sires, indicating no substantial genetic influence on these traits.

In conclusion, sire influenced specific meat quality traits such as redness and colour stability, while ageing primarily affected water and exudate loss traits, highlighting the combined importance of genetics and post-slaughter handling in optimising meat quality.