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Department of Food Science and Technology

18th Baltic Conference on Food Science and Technology

## "Baltics R&D For Future Food"

# FOODBALT 2025

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# ABSTRACT BOOK

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Kaunas University of Technology

Department of Food Science and Technology

**18th Baltic Conference on Food Science and Technology**
**“Baltics R&D For Future Food”**

# FoodBalt – 2025

Abstract Book

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**FOODBALT-2025**

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## Growth performance, carcass characteristics, and meat quality of Hereford bulls over two consecutive years on an organic farm

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The study was conducted at a family-owned organic farm in Estonia. The farm produces meat from Hereford beef cattle. Nineteen bulls were slaughtered in 2023 and 22 in 2024, from which 16 and 12, respectively, were randomly selected for meat analysis.
The aim of this research is to evaluate the effects of two consecutive years on growth performance, carcass characteristics, and meat quality traits, as well as the impact of a 28-day ageing period on the meat quality traits of the *M. semitendinosus* of Hereford bulls. The study investigated the effects of slaughtering year and ageing period on the meat quality traits.
Bulls slaughtered in 2024 demonstrated greater carcass weight and final live weight, but lower dressing proportions and smaller *M. semitendinosus* dimensions, highlighting year-to-year variability in carcass and muscle characteristics under organic farming conditions. Slaughtering year influenced key compositional and colour traits, with bulls from 2024 exhibiting higher protein, fat, and redness values. Ageing primarily impacted traits related to exudate loss and colour stability, emphasising the combined influence of production year and post-slaughter handling on meat quality. For Warner-Bratzler shear force, pH, and water-holding capacity, no significant differences were detected between slaughtering years or ageing periods ($p > 0.05$).
To summarise, the meat characteristics, slaughtering year influenced key compositional and colour traits, with bulls from 2024 exhibiting higher protein, fat, and redness values. Ageing primarily impacted traits related to exudate loss and colour stability, emphasising the combined influence of production year and post-slaughter handling on meat quality.

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Keywords: *beef, semitendinosus muscle, wet ageing*