

# Herd-level risk factors for calf on-farm mortality in Estonian dairy herds

Kaari Reimus<sup>a</sup>, Karin Alvåsen<sup>b</sup>, Ulf Emanuelson<sup>b</sup>, Arvo Viltrop<sup>a</sup>, Kerli Mõtus<sup>a</sup>  
<sup>a</sup>Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Science, Tartu, Estonia  
<sup>b</sup>Department of Clinical Sciences, Swedish University of Agricultural Sciences, Uppsala, Sweden



## Background

On-farm mortality (unassisted death and euthanasia) reflects the health & welfare status of dairy cattle. Early loss of an animal causes financial loss

## Objectives

Determine herd characteristics & management practices associated with high dairy calf (<3 months of age) on-farm mortality

## Material & methods

### Questionnaire

- Farm & farming practices
- Calf management & keeping conditions

### Data

- Estonian Agricultural Registers and Information Board
- Estonian Livestock Performance Recording Ltd
- Herds with  $\geq 20$  cow-years

Calf (<3 months) within-herd mortality rates: 01.01.2015 to 31.12.2017

Multivariable negative binomial regression model

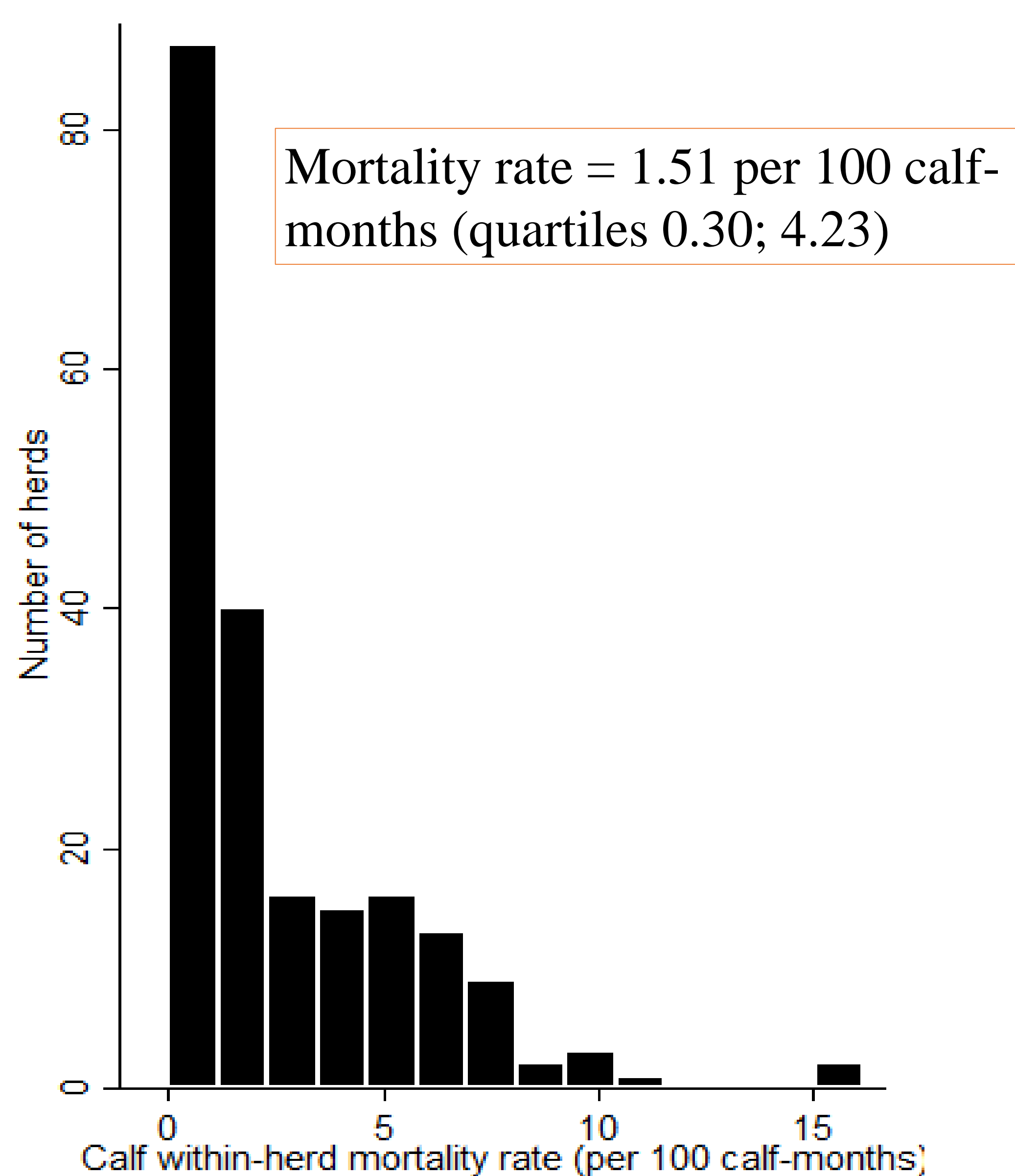


Figure 1. Distribution of calf within-herd mortality rates over years 2015 to 2017 in 204 responding herds in Estonia

## Conclusions

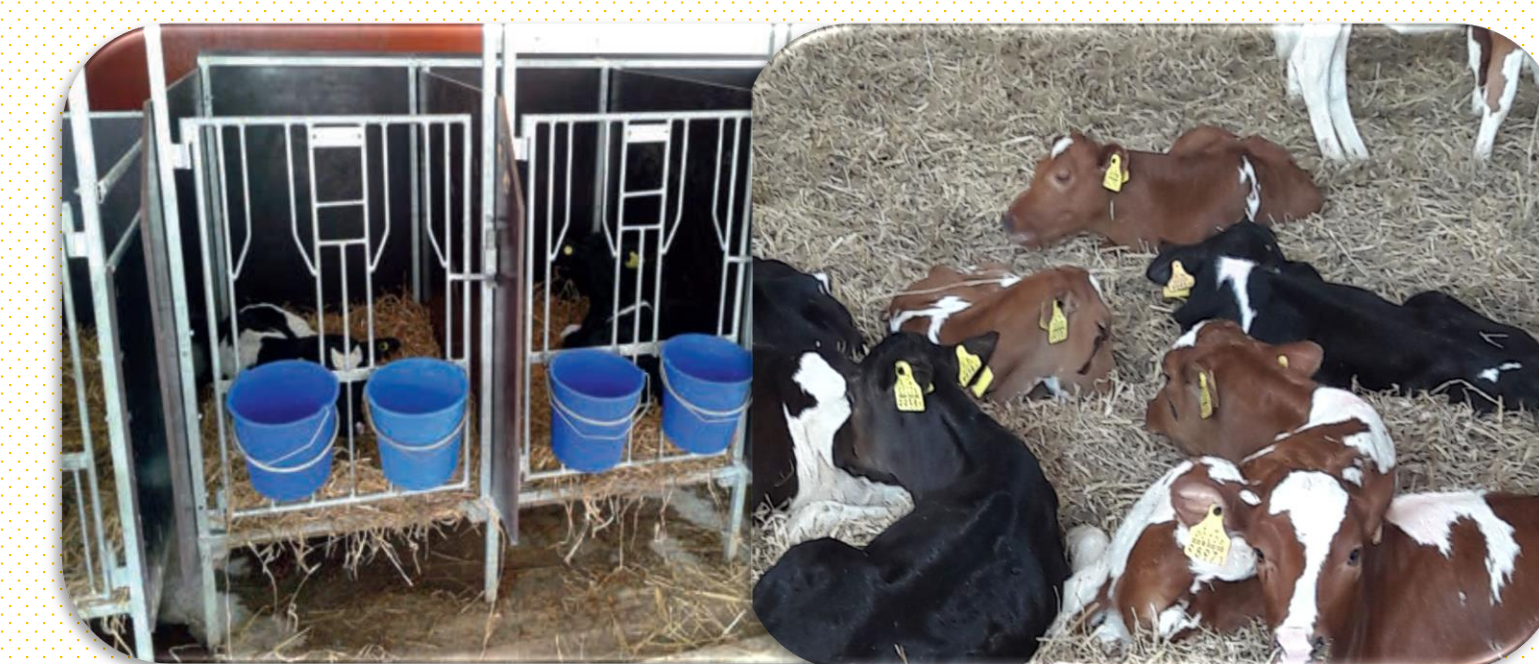
- High between-herd variability in on-farm calf mortality rates
- Herd size & housing conditions are important risk factors for mortality
- High-mortality herds use measures that are expected to lower the incidence of calfhood morbidity & mortality
- Higher incidence of infectious diseases are positively associated with herd calf mortality rates

## Risk factors



Smaller herds: administering antibiotics to calves with diarrhoea (IRR=1.80; 95% CI 1.17; 2.27)

Preweaned calves: housing in single & group pens vs housing in single pens (IRR=2.03; 95% CI 1.44; 2.87)



Feeding colostrum via oesophageal tube (IRR=1.65; 95% CI 1.22; 2.24)

Higher herd proportion of abortions (IRR=1.19; 95% CI 1.06; 1.34)



No outdoor access (IRR=1.66; 95% CI 1.17; 2.38)

Larger herds



\*Corresponding author: kaari.reimus@emu.ee

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