

Retrospective analysis on timing of non-infectious heart disease deaths during feeding period in US fed cattle

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Introduction

Non-infectious heart disease sporadically affects fed cattle and is commonly thought to cause death late in the feeding period. Data relating days on feed to heart disease deaths in US feedyards are limited. The study objective was to evaluate days on feed when heart deaths occurred during the feeding period, and potential effects of cohort demographics related to heart disease death timing.

Materials and Methods

Individual mortality observations (n=3,296) and cohort data of non-infectious heart deaths were collected from 19 commercial feedyards in the United States. A generalized linear mixed model was used to evaluate the effects between days on feed at time of death and cohort level factors: head received, arrival quarter, gender, average arrival weight, and arrival year. A random intercept was included to account for the lack of independence of cohorts within feedyards.

Results

Mean and median heart deaths occurred at 110 d with an interquartile range of 64 to 153 days on feed. Days on feed at death tended to decrease as arrival weight increased; however, this effect was modified by year and quarter of arrival. Sex of cattle placed was associated ($P < 0.05$) with time of death, in that steers that died of a heart disease died later (113 d, ± 6.28 d) compared to heifers (101 d, ± 6.44 d).

Significance

This study provided better understanding of the timing of non-infectious heart disease deaths, as well as cohort level factors' effect with the corresponding timing of heart disease death throughout the feeding phase.