



1. Animal Welfare Workshop

Title presentation

Development of a Tail Scoring as Health Indicator for Dairy Cows

Author(s)

S. Meier, K. Abel & P.V. Kremer-Rücker

Institution for which the first author of this abstract is working

Animal breeding and husbandry, Department of Agriculture, Food, and Nutrition, Hochschule Weihenstephan-Triesdorf, Markgrafenstr. 16, 91746 Weidenbach, Germany

Abstract

Research investigating necrotic tail tips in dairy cows resulting in necrotic tissues is scarce. However, there is evidence that tail tip necroses exist with high prevalences in dairy cattle. In piglets, the latest research described tail and ear necroses not as a direct result of tail and ear biting, but because of swine inflammation and necrosis syndrome. Besides tails and ears, the syndrome includes inflammation of claws, heels, and teats. Also in cattle tail tip necroses are described, mainly in fattening bulls. As known so far, these findings are often discussed related to slatted flooring in intensive housing systems and management strategies. However, an association with subacute rumen acidosis and laminitis was described.

In order to investigate what kind of and how often tail tip alterations can be found in dairy cattle, we collected data of 87 German Holstein dairy cows over a period of 12 months. All cows were evaluated for tail tip alterations, body condition score (BCS) and locomotion score (LS) every two weeks. In addition, milk yield data resulting from performance testing were included. Thermographic pictures of the tails were taken once. First, all kind of tail tip alterations were described and collected. After 6 months, we categorized the observed alterations and developed a tail scoring system. The scoring for each specified trait (tail tip, tail ring, and anomalies) ranged from 0 to 4.

Cows affected by an increased average tail tip scoring, showed higher locomotion scores compared to others ($P = 0.015$). Regarding the BCS lighter cows tend to have a higher tail ring score compared to heavier cows ($P = 0.014$). The most occurring anomalies of the tail were sports or scurf (21.6%), followed by verruca-like mass (10.2%), swelling (8.4%), and thinning (4.3%).

The results and especially the method of scoring can serve as a template for further studies with larger samples sizes, to investigate incidences for tail necroses and anomalies in dairy cows. It can be hypothesized, that there is also an inflammatory condition in dairy cows showing up in necrotic tail tips or rings, which can be in a relationship with an inflammation in the claws indicated by lameness. As a result, the tail tip score of a cow can be used as a health indicator to evaluate the health status under intensive dairy production systems.