

Research Summaries 1

Association of floor type on health parameters of cattle fed indoors during the finishing phase

R.D. Dewell, DVM, MS¹; G.A. Dewell, DVM, MS, PhD²; R.M. Euken, MS³; L.J. Sadler, MS, PhD⁴; C. Wang, PhD^{2,5}

¹Center for Food Security and Public Health, Iowa State University, Ames, IA 50011

²Department of Veterinary and Diagnostic Production Animal Medicine, Iowa State University, Ames, IA 50011

³Iowa State University Extension and Outreach, Agriculture and Natural Resources, Ames, IA 50011

⁴Department of Animal Sciences, Iowa State University, Ames, IA 50011

⁵Department of Statistics, Iowa State University, Ames, IA 50011

Introduction

The use of indoor confinement concrete slatted floor feeding facilities has grown in the US to comply with increasing environmental regulations and decreasing land availability. Rubber mats manufactured to be installed on top of concrete slats are being promoted to increase comfort and improve welfare and performance. There are limited published data on the association of rubber mats with bovine health and performance in a North American production setting. The objective of this project was to evaluate potential health differences associated with various types of slatted flooring in confined beef operations during the finishing phase of production.

Materials and Methods

A cohort study was conducted using the following groups: Kraiburg slatted flooring mats, Animat rubber flooring, Easy Fix Slat Rubber Solutions for Beef flooring mats, and concrete-only slatted floor pens. For statistical purposes, data were grouped and assessed as mats vs concrete. Feeder calves were sourced through normal channels by the feedlot's cattle buyer. Calves were individually assessed for general health and existing lameness prior to enrollment. Cattle were

evaluated individually and then data were assessed at the pen level. Pen-level morbidity and mortality were assessed; locomotion scores were assessed at enrollment and within 7 days of slaughter. Descriptive statistics were generated for health and performance outcomes for individual animals and also on a pen basis. ANOVA statistics were used to determine differences in health and performance parameters between the 2 groups.

Results

Twelve concrete-only pens and 23 mat pens were included. Compared to cattle on rubber mats, cattle on concrete-only tended to have higher morbidity (17.7% vs 6.6%; $P=0.07$), more lameness (3.1% vs 1.1%; $P=0.02$), and higher mortality (1.9% vs 0.7%; $P=0.03$). This study demonstrated increased health benefits for rubber mats.

Significance

This study demonstrated increased health benefits for rubber mats. Evaluating the impact of various slatted flooring with health and performance among confined beef cattle in a production setting is important to ensure both the well-being of fed cattle and economic viability of cattle feeders.

Using serology to investigate reproductive failure due to *Neospora caninum* in beef herds

R. F. Daly, DVM, MS, DACVPM

Department of Veterinary and Biomedical Sciences, South Dakota State University, Brookings, SD 57007

Introduction

In late November 2013, a diagnosis of abortion due to *Neospora caninum* was made in a fetus aborted from a coming

second-calf cow in a north-central South Dakota beef herd. The cow was 1 of 81 bred cows purchased at a sale earlier that month. Following the abortion, the purchased group was re-examined for pregnancy and 21/81 cows previously