Time of Onset, Duration, and Location of Lameness in Beef Cattle in a Commercial Feedyard

T.M. Green[1]; D.U. Thomson[1], *DVM, PhD;* **S. Guillossou[1]**, *DVM, MS;* **B.W. Wileman[1]**, *DVM;* **P.T. Guichon[2]**, *DVM*
[1]*Department of Clinical Sciences, Kansas State University, Manhattan, KS 66506*
[2]*Guichon Veterinary Services, Okotoks, AB T1S 2C3*

Introduction

Bovine lameness from a variety of etiologies is a significant cause of feeder cattle morbidity. Cattle are susceptible to traumatic injuries during the marketing process. Inappropriate animal handling or improper facility design can lead to animals being injured with subsequent lameness such as a broken leg, toe abscess, or footrot. Newly arrived, high risk cattle are stressed and exposed to viral pathogens which can make them more susceptible to concurrent infections such as *Mycoplasma*, *Histophilus*, or *Arcanobacterium* which can cause clinical lameness. Localization of the source of the lameness can provide valuable information for treatment protocols, prognosis, and prevention strategies. The objective of this study was to determine the onset, location, and duration of lameness in newly arrived feeder cattle.

Materials and Methods

During the months of July and August 2009, a total of 3,243 feedlot steers in a commercial feedlot were observed for lameness prior to processing, post-processing, and 1, 2, and 3 weeks post-processing. Pre-processing observations were conducted immediately after calves were placed in a holding pen upon feedlot arrival. Post-processing observations took place after the calves were moved through the processing barn and placed in a home pen. Weekly observations followed as the calves remained in their home pens. At each observation, lameness was recorded as being front limb or hind limb, as well as proximal limb or distal limb. Cattle history (age, health risk, region of origin, state of origin, month placed on feed) was analyzed as possible predictors of lameness on arrival. Performance data was collected through the pre-harvest sort date. Lame and non-lame cattle performance was compared. A proportion comparison and confidence interval was then calculated using R version 2.10.1.

Results

The proportion of cattle observed lame pre-processing was 1.6% and was significantly less than the proportion of cattle observed lame after processing (2.5%, P=0.02). Lameness appeared to peak immediately post-processing (48 hd/3,243 hd, wk 0), yet nearly all (12 hd/3,243 hd, 99.63%) lameness cases were resolved by three weeks on feed. Cattle that were lame tended to have lower ADG than cattle that were not lame (3.41 vs 3.60 lb (1.55 vs 1.64 kg)/day; lame cattle vs non-lame cattle; P=0.11). Age, risk, region of origin, state of origin, month placed on feed were not significant in predicting prevalence of lameness (P>0.05).

Significance

This study indicates that the prevalence of feeder cattle lameness at arrival can be significantly increased due to processing activities at this feedyard. This is a key quality control area for all feedyards that veterinarians should examine and audit in regular feedyard visits to ensure safe facilities and proper animal handling. The majority of the clinical lameness cases in this study resolved by three weeks on feed, but still tended to influence cattle performance negatively. Further research to look at the effects of different handling strategies and facility designs on feeder cattle lameness is needed.