

A field study to investigate the effect of Zuprevo administered alone or in combination with Banamine Transdermal on the health and well-being of transported feedlot calves on arrival at the feedlot

M.S. Martin, MS¹; **M. Kleinhenz**, DVM, PhD¹; **K. Kleinhenz**, DVM, MS²; **E. Reppert**, DVM¹; **T. Parks**, DVM³; **A. Baysinger**, DVM, MS³

¹Department of Anatomy and Physiology, Kansas State University College of Veterinary Medicine, Manhattan, KS 66506

²Department of Clinical Sciences, Kansas State University College of Veterinary Medicine, Manhattan, KS 66506

³Merck Animal Health, De Soto, KS 66018

Introduction

Long distance transportation can be a significant source of stress to cattle and is associated with increased risk of bovine respiratory disease (BRD). The administration of a nonsteroidal anti-inflammatory drug (NSAID) has been shown to reduce stress following long distance transport. The objective of this study was to compare production parameters, morbidity, and mortality between calves receiving either tildipirosin alone or in combination with transdermal flunixin on arrival at the feedlot.

Materials and Methods

A herd of 384 polled, Continental x English and English crossbred bulls and steers were enrolled into 1 of 2 treatments: 1) tildipirosin only (PLBO) or 2) tildipirosin in combination with transdermal flunixin (FTD). Outcomes measured were performance parameters, dry matter intake and feed efficiency, morbidity and mortality, pen pulls and treatments, a daily visual analog scale (VAS) assessment, and accelerometer data.

Results

There were no significant differences in average lot weights between treatment groups ($P = 0.415$). There were no treatment effects on the determined dry matter intake ($P = 0.510$). There were no significant differences observed in morbidity and mortality between groups ($P = 0.292$). VAS pain assessment showed significant differences for time ($P < 0.0001$) and time by treatment interaction ($P < 0.0001$), with FTD calves having lower (VAS) scores. There were no significant differences between treatments for the acceleration data ($P = 0.190$).

Significance

Calves administered transdermal flunixin had lower VAS scores, indicating less pain the first 36 hours after drug application. Over the 63-day feeding period, no advantages in performance were observed following FTD administration.