

Public Abstract

First Name: Brian

Middle Name: McMillan

Last Name: Shoemaker

Adviser's First Name: Brian

Adviser's Last Name: Vander Ley

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term: SP 2017

Department: Veterinary Medicine and Surgery

Degree: MS

Title: The Use of Sodium Iodide for the Management of Bovine Respiratory Disease

Objective: The purpose of these studies was to (1) determine the effect of a single dose of oral sodium iodide on weaned beef calves and (2) determine the outcome of clinical application of a single dose of oral sodium iodide as an on arrival procedure.

Animals: (1) 16 healthy, weaned beef calves and (2) 629, 300 pound high risk beef calves.

Procedures: (1) A single dose of oral sodium iodide was administered at 70 mg/kg once. Serum and nasal iodine concentrations were collected. (2) A single dose of oral sodium iodide and/or meloxicam was administered on arrival to a backgrounding operation. Morbidity and mortality results were recorded and analyzed.

Results: (1) Serum and nasal fluid iodine concentrations were significantly different from control animals.

(2) The control animals had the lowest mortality of the experimental groups.

Conclusions: (1) Healthy, weaned beef calves can secrete iodine into their airway surface liquid/secretions to effective antimicrobial concentrations. (2) The administration of oral sodium iodide as an on arrival procedure did not significantly reduce mortality due to BRD. At this time, the use of sodium iodide as a preventative to BRD cannot be advocated.