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Animal Science E-Newsletter, January 2018

University of Arkansas, Fayetteville. Department of Animal Sciences

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Animal Science E-Newsletter

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

UNIVERSITY OF ARKANSAS
Dale Bumpers College of Agricultural, Food & Life Sciences

Research Highlight: *Animal Health*

Effect of injectable castration regimen on beef bull calves

Jase Ball, Elizabeth Kegley, Jeremy Powell, Paul Beck, Jason Apple, and Danny Cox

Husbandry practices in the beef industry that are associated with pain, discomfort, and distress include castration, dehorning, and branding. It has been estimated there are approximately 15 million castration procedures performed in the United States annually to reduce aggressiveness and sexual activity, prevent unwanted breeding, and improve the meat quality.

In Arkansas, only 17% of male calves sold in livestock auctions weighing between 300 and 550 pounds were already castrated; and of the bulls placed on feed in feedlots in 2008, roughly 91% were castrated, predominantly by band castration (64%) or surgical castration (19%).

Economically, castration post-weaning affects profitability by decreasing average daily gain and increasing susceptibility to bovine respiratory disease.

Currently, no commercially available injection sterilization method exists for beef cattle in the United States, although there has been a zinc solution utilized in other species. An injectable sterilization method could be an alternative castration method which could potentially reduce pain, stress, performance loss, and minimize the prevalence of bovine respiratory disease.

Therefore, this research project was designed to evaluate an injectable zinc solution at 3 dosage levels for the efficacy of castration in beef bull calves prior to weaning on weight gain, testosterone production, and testicle atrophy.

- There were no differences in growth performance between calves that remained bulls and calves surgically or chemically castrated.
- There were no differences in scrotal thickness, growth performance or testosterone concentrations regardless of the dosage concentration of zinc.
- The injectable castration method resulted in serum testosterone concentrations similar to those in calves that had been surgically castrated. }

2018 ASGSA Animal Science Shirts on Sale for $15 until February 1st!

Department Highlights

UA System Division of Agriculture and Bumpers College Agriculture Awards Luncheon was on January 12th at the Don Tyson Center for Agricultural Sciences. The annual event honors the outstanding work of division faculty and staff toward supporting and improving agricultural industries and life in Arkansas and beyond.


Janeal Yancey

Dr. Janeal Yancey received the Division of Agriculture Non-Classified Support Personnel Award. Yancey is a program technician III with a focus on meat science.


Paul Beck

Dr. Paul Beck received the John W. White Outstanding Research Award. Beck is currently serving as interim director of the Southwest Research and Extension Center.


Todd Coles

Todd Coles received the Agricultural Experiment Station Classified Support Personnel Award. Coles serves as the farm foreman of the Livestock and Forestry Research Station.


Charles Rosenkrans

Dr. Charles Rosenkrans has been selected as the new Director of the Bumpers College Honors Program. Rosenkrans helped to develop and implement the current Bumpers College honors program in 2001 and has been actively involved in the program as a mentor and board member since. }