Influence of Arrival Weight, Season and Calf Supplier on Survival in Holstein Beef Calves on a Calf Ranch

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Introduction

Large calf ranches rear neonatal cattle for veal or dairy beef. Dairy beef ranches purchase bull calves from multiple sources and with questionable colostrum intake histories. They need information to help with calf purchasing strategies and on-farm management practices to avoid losses. It was the purpose of this project to describe factors associated with mortality in neonatal calves raised on a large calf ranch.

Materials and Methods

Computerized records of 166,464 bull calves on one large calf ranch from January 1997 - November 1998 were used in a survival analysis for mortality in the first 30 days using Cox Proportional Hazards models.

Results and Conclusions

Risk factors for mortality within the first 30 days of arrival on the ranch included body weight on arrival, month of arrival, and the calf buyer, but these varied depending on the week after arrival. Overall, calves had the lowest survival during the second week on the ranch. The highest hazard ratios (>1.98) were observed in the lightest and heaviest weight classes. This kind of information can be used by the calf ranch to limit calf purchases to lower-risk animals or focus management to minimize the loss associated with specific groups of animals.

Ranch Management Factors Associated with Seroprevalence of *Neospora caninum* Beef Calves

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Introduction

A study was conducted with a retained-ownership population of Texas beef calves to determine ranch management practices associated with calf seroprevalence to *Neospora caninum.*

Materials and Methods

Seroprevalence for *N. caninum* was determined in the 1998-99 Texas A&M University Ranch-to-Rail calf population by obtaining serum samples from each calf upon arrival in the feedlot. Individual calf serostatus

was determined by use of a *Neospora* agglutination test. Data were collected by means of a mail-out questionnaire to the 92 Texas ranchers who consigned 1,009 calves to the Ranch-to-Rail Program. Questions concerning common ranch management practices, nutritional supplementation and grazing practices, seasonal calving management and herd reproductive practices for Texas ranches were included in the survey. Questionnaire information was analyzed by using a random effects logistic regression model.

Results and Conclusions

Questionnaires from 76 of the 92 consignments were returned representing a population of 749 calves. Ninety-nine of 749 (13.2%) calves were serologically positive to *N. caninum* and 59.2% of the ranches consigned at least one seropositive calf. Seroprevalence was associated with seasonal calving and cattle stocking density. The following ranch management practices were found to significantly increase the risk for calf seroprevalence: use of a round bale feeder; allowing wildlife access to the weaning supplement; and self-reared replacement heifers. The following ranch management practices reduced the risk of calf seroprevalence: use of a cattle-working dog; and use of a self-contained cattle feeder. Ranch management risk factors identified in this study suggested patterns of vertical and horizontal exposure to *N. caninum*. Modifying these risk factors may rreduce the exposure of beef cattle to *N. caninum*.