CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
Grace F. Tobias

Project Number
J0234

Project Title
The Effect of Centrifugation on Standard Fecal Flotation Procedures in the Recovery of Parasitic Ova in Beef Cattle

Abstract

Objectives/Goals
My objective is to determine if adding a centrifugation step to a standard fecal floatation procedure will result in an increase in the number of parasitic ova recovered from fecal specimens obtained from beef cattle.

Methods/Materials
Fresh fecal samples were collected from 6 beef calves. These 6 month old calves weighing approximately 450 pounds were unweaned and had not been previously treated for parasites. Equal aliquots of each sample were tested in triplicate using standard fecal floatation procedure and a fecal floatation procedure using a centrifuged specimen. The number of ova recovered in each test was counted and recorded.

Results
In 5 of the 6 samples (83%), the centrifuged sample recovered greater numbers of ova.

Conclusions/Discussion
I conclude from this data that the addition of a centrifugation step to a standard fecal floatation procedure increases the likelihood that parasitic ova will be recovered in greater numbers. The addition of the centrifugation step decreases the probability of false negative test results especially in specimens with low total ova counts.

Summary Statement
My project is about improving the reliability of fecal examination for parasites.

Help Received
I used lab equipment at my father's veterinary practice. My mother helped in identifiying parasitic ova.