



University of Zabol

Graduate School

Faculty of Veterinary

Department of Food hygiene

The Thesis Submitted for the Degree of M.Sc

(In the field of Veterinary)

Title:

Comparison of serological and PCR methods in diagnosis of brucellosis in primiparus or multiparus cows in Gonabad.

Supervisors:

Dr. D. Saadati

Advisor

Dr. M. Najimi

Dr.A.Zarifmanesh

By:

Zeynab Bidel

Summer 2022

Abstract

Brucellosis is one of the most important and widespread infectious zoonotic diseases in the world, which is considered a health and economic problem for many governments. This study examines the prevalence of brucellosis serum and compares serological and PCR methods in single or multiparous cows of Gonabad city. In this study, blood was taken from the vein of 100 primiparous or multiparous cows, and at the same time, a questionnaire was carried out for each sample including: age, breed, body condition score, number of births, history of abortion, history of placental abruption, pregnancy status, Cattle maintenance with sheep and goats and the introduction of new cattle into the herd. The blood samples were taken and after separating the serum, the samples were kept at -20 for further tests. Each sample was tested with the Rose Bengal test and PCR, out of 100 samples, all the samples were negative with the Rose Bengal test and 55 samples (55 %) were positive by PCR. It was found that the PCR technique is an accurate and sensitive method with high specificity in the diagnosis of brucellosis. Due to the importance of brucellosis disease in the public health and economy of the ranchers, it is necessary to implement appropriate control, prevention and eradication programs to prevent the widespread epidemic of brucellosis in the livestock and human population.

Keywords: Brucella, cattle, serology tests, PCR, Gonabad