



**University of Zabol
Graduate School
Faculty of Veterinary Medicine
Department of Clinical Science**

**The Thesis Submitted for the Degree of MSc
(in the field of Veterinary Medicine)**

**Evaluation of Reproductive Indices of Sistani Cows in Zahak Research
Station**

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Abstract:

Sistani cow is a breed of *Bos Indicus* beef cattle that is native to Sistan region and has adapted to the climatic conditions of this province. So far, the reproductive indices of this valuable breed have not been studied. The aim of this study was to investigate the status of herd reproduction indices in Zahak's Sistani Cattle Research Station as the only Sistani cattle farm whose reproduction data has been recorded for many years. Recorded data include date of birth, Estrus date, mating, sex of born calves and type of calving, from 1989 to the end of the first quarter of 2020 were in the form of an Excel file. These data included 1787 calving records. From these data, calculations of calving interval, days open, duration of postpartum anestrus, age at puberty and age at first calving, calving rate and number of matings per gestation and gestation length were calculated. Then, using SPSS software version 26, the factors affecting these indices and statistical correlations between them, according to the type of variables, Spearman correlation tests, t-test and one-way ANOVA were used and the level of Significance was assessed to be 0.05. According to the results of this study, the mean gestation length in Sistani cow was 287.1 days, the mean calving interval was 433.8(\pm 101.41) days, the average days open was 147(\pm 100.65) days, the mean duration of postpartum anestrus was 126.4(\pm 90.11) days, mean age of puberty 771(\pm 197.04) days, mean age at first calving 1081(\pm 203.22) days and number of matings per calf born Was calculated to be 1.29. The duration of postpartum anestrus in this herd was long, which leads to an increase in days open and calving intervals, which, in turn, will ultimately reduce the herd's reproductive efficiency.