



University of Zabol
Graduate School
Faculty of Veterinry
Department of Food hygiene

The Thesis Submitted for the Degree of M.Sc
(In the field of Veterinary)

Prevalence of Salmonella infection in traditionally maintained chickens in the Sistan region and determination of the tetracycline resistance genes in the Salmonella isolates.

Supervisors:

Dr. D. Saadati

Dr. M. Jahantigh

Advisor

Dr. S. Saadatjou

By:

Golnaz Boraie-Nezhad

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Abstract

Recently multi drug resistant *Salmonella* species have been emerged due to overuse of antibiotics in veterinary applications which has adverse consequences on human health. The present study was conducted with the aim of investigating the prevalence of *Salmonella* infection in traditional poultry farms in Sistan region and determining the antibiotic resistance in *salmonella* isolated from these poultry farms. In this study, 100 local chickens were randomly selected from five counties of Sistan region. A swab sample was taken from each bird by rotating the swab several times in the cloaca. In addition, in each case, some information such as: county, age, gender, breed, proximity to other birds, proximity to waterfowl, proximity to livestock, receipt of antibiotics, especially tetracycline, in the past month were obtained by a questionnaire. The samples were placed in a container in vicinity the ice and transported to the laboratory and cultured using by selective culture media for *Salmonella*. Then, DNA extraction and PCR were performed on the samples. Out of the total of 100 samples examined, 27 samples were confirmed to be infected with *Salmonella* by both culture and PCR methods. The results of the present study showed that proximity to waterfowl (OR = 0.273) significantly reduces the risk of *salmonella* infection. It was also found that the

percentage of *tet-A* and *tet-B* genes in semi susceptible and resistant isolates is high compared to the sensitive isolates, but this difference is not statistically significant.

Keywords: *Salmonella*, broilers, Tetracycline resistant, Sistan