



**EFFECT OF BRUCELLOSIS ON REPRODUCTION
CONDITIONS OF FEMALE BREEDING RUMINANTS
IN EGYPT AND ETHIOPIA**

A Thesis

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By

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SUMMARY

Brucellosis is one of the most important diseases which affect animals and man in most countries of the world. Employing serological tests for Assessment of antibody response play a major role in the routine diagnosis of brucellosis. The diagnostic serological tests used in the present study were (BAPAT) and (RBPT) as a qualitative screening test, (SAT) as a standard quantitative test, beside (MRT) on milk derived from some lactating animals as a confirmatory test along with (Rivanol Test) which was applied on positive serum samples to SAT for accurate diagnosis. The rate of brucellosis in cows reached 6.1%, 6.7%, 2.8%, 4.2%, 2.7 and 5.3% respectively in Giza, Fayoum, Benisweif, Assuit, Sohag and the Total, using SAT. Moreover, the rate of brucellosis among buffaloes in Giza, Fayoum, Benisweif, Assuit, Sohag and the total reached 3.2%, 3.1%, 2.5%, 3%, 1.1% and 2.7% respectively, furthermore, using the same test on the sera derived from sheep and goats revealed that brucellosis reached 8.9%, 12.9%, 9.9%, 11.3%, 6.9% & 9.7% % in sheep but 5.6%, 8.2%, 7.4%, 9.4%, 9.7% & 8.2% in goats maintained in flocks belonging to Giza, Fayoum, Benisweif, Assuit, Sohag and the last percentage showed the Total, while the percentage of brucellosis reached 6.7%, 0% & 0% in Giza, Assuit, Sohag & Total among the examined camels. From the obtained results the prevalence of brucellosis was higher in large ruminants in Fayoum, Giza and Benisweif. This may be attributed to rearing without periodical investigation and elimination of the positive reactors. Moreover there was a great shortage in the sanitary measures including isolation of the diseased animals, burning of placenta, disinfection and eradication of stray dogs and rodents.

The sero-prevalence of bovine brucellosis at individual animal level was higher in non-pregnant than pregnant and lactating than non-lactating

animals. Abortion, retained placenta and infertility were the principle guide accompanying infection with brucellosis. On the other hand, animals which were seropositive and had no history of reproductive disorders constitute the major source of infection and control failure.

Efforts to control brucellosis in Egypt are still ineffective. Small-scale family farming is the fundamental animal husbandry in Egypt. Brucellosis seroprevalence in the flocks distributed by charity society organizations and these organizations' role in Brucellosis control in Egypt wasn't studied before. This study aims to assess the impact of Fair compensation and veterinary outreach on cattle and buffalo householders' Knowledge attitude and practices (KAPs) and Animal brucellosis seroprevalence in a village of Upper Egypt, trying to find a successful example for brucellosis control. Blood samples were collected from a total number of (772) animals of them (434) cattle and (338) buffalos after dividing households in four groups for the purpose of the study in a village of Upper Egypt in 2018. Samples were examined serologically by Buffered Plate Antigen Test (BPAT), Rose Bengal Test (RBT) and Complement Fixation Test (CFT). Data about knowledge, attitude and practices (KAPs) of animal householders (n = 774) was collected in two questionnaires with interval one year in between. Veterinary Outreach about Brucellosis was given to the only targeted two groups all over the year. Seroprevalence was significantly lower in the two groups subjected to fair compensation. They were (1%, 1%, 1%) and (1.8%, 0.9 %, 0%) versus (3.8%, 3.8%, 1.9%) and (2.7%, 2.7%, 2.7%) in the other two groups by BPAT, RBT and CFT consequently. Seroprevalence was significantly lower in the two groups subjected to veterinary outreach than corresponding two groups. KAPs especially notification about

positive animals changed positively due to Fair compensation and veterinary out reach.

Continuous brucellosis serosurveillance campaigns, providing adequate funding for fair compensation and financial studies are effective tools in control of brucellosis in Egypt. Nongovernmental organizations must share in control plan of brucellosis.