

**SURVEY FOR *BRUCELLA* ANTIBODIES IN GOATS AND FARMERS'
KNOWLEDGE AND PRACTICES TOWARDS BRUCELLOSIS IN GIWA
LOCAL GOVERNMENT AREA OF KADUNA STATE, NIGERIA**

BY

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ABSTRACT

Brucellosis is a zoonotic disease that results in great economic losses to farmers due to abortion and infertility leading to low productivity. To determine the prevalence of *Brucella* antibodies in Giwa Local Government Area of Kaduna State, 280 serum and 113 milk samples were collected from goats in six Districts. Rose Bengal Plate Test (RBPT), Competitive ELISA (cELISA) and Milk Ring Test (MRT) were used to detect *Brucella* antibodies in the samples. Out of the 280 sera, 23 (8.2%) and 7 (2.5%) were positive for *Brucella* antibodies by RBPT and cELISA respectively; while out of the 113 milk samples, 43 (38.1%) were positive for *Brucella* antibodies. Females had higher prevalence (8.3%) than the males (8.0%), West African Dwarf and Kano brown breeds had the highest positive reactors (12.5% each) than the red Sokoto (7.8%) breed, while goats above 36 months of age showed higher rate of *Brucella* antibodies than the younger goats sampled. There was no statistically significant associations between breed, sex and age of the goats sampled and prevalence of *Brucella* antibodies ($P>0.337$), but there was a significant association ($P<0.037$) between location of sample collection and prevalence of *Brucella* antibodies in milk. Forty-one questionnaires were used to assess farmers' knowledge on *Brucella* infection and their practices. The prevalence of *Brucella* antibodies was high (10.9%) in goats from households where the farmers had no knowledge of the disease than those who had knowledge of the disease (5.9%). Those with abortion history had a lower prevalence (6.3%) as compared to those without incidence of abortion in their flock (12.5%). Detection of *Brucella* antibodies was highest (13.8%) in flocks that recorded abortion during the late gestation period than the early (5.0%) and mid (12.3%) gestation periods. The association between the prevalence of *Brucella* antibodies and farmers' knowledge of the disease, source of goats, abortion history and cases of retained placenta was not statistically

significant ($P>0.05$). Sixteen (39%) of these farmers wore polythene bags on their hands as protective covering when handling aborted foetuses and other vaginal discharges, while 23 (56.1%) of them discarded aborted materials freely into the environment. This study showed that goats in Giwa LGA had antibodies to *Brucella* irrespective of their age, sex and breed. The prevalence of *Brucella* antibodies in goats was high in households where the farmers had no knowledge of the disease and also where little or no hygiene practices were employed in handling of goats. This is of public health importance. Therefore, Public health education/campaign should be embarked upon in order to enlighten the farmers on the zoonotic implication of the disease and government should enact policies that can help to curb this disease from animal populations through vaccination programs and active surveillance system to monitor animal movements.