

ABSTRACT

This study aimed at determining parasitic prevalence and probable haemato-biochemical changes that may occur from parasitic infections in marketed indigenous chickens in Kiambu County, Kenya. Thirty adult chickens were purchased and examined for ectoparasites, haemoparasites and haemato-biochemical changes. Post mortem was conducted to recover gastrointestinal parasites and fecal samples taken for egg/oocyst counts. Forty-seven percent (14/30) of chickens examined were in poor body condition, 43% (13/30) in fair and 10% (3/30) in good body condition. Ectoparasites infection prevalence was 66.7% (20/30). Four haemoparasites were isolated. Overall helminths prevalence was 86.6% (26/30), nematodes at 76.7% (23/30) and cestodes at 40% (12/30). After processing fecal samples, 30% (9/30) were positive for helminth eggs and 30% (9/30) had coccidial oocysts. Relative to normal values, total erythrocyte count was low and total leucocyte count with band cells high. Mean haematocrit and heterophil values were high ($p=0.0005$; $p=0.0061$). Mean lymphocyte count was low ($p=0.0128$) in chickens with ectoparasitic infestation. Eosinophils increased significantly ($p=0.0363$) although mean erythrocytes counts decreased ($p=0.0176$), in chickens with gastrointestinal parasites. Creatine phosphokinase and blood glucose levels were high, serum protein and albumin levels were low. Blood glucose level decreased significantly ($p=0.0239$) and total plasma protein increased ($p=0.045$) in chickens with *Haemoproteus* spp. infection. The study showed, ecto- and endo-parasites are prevalent and may contribute to alteration of haematobiochemical parameters of sub-clinically infected marketed indigenous chickens. These results are expected to contribute towards and encourage usage of clinico-pathological parameter testing as a measure of poultry health status for enhanced poultry disease diagnoses.