

# **Prevalence of ectoparasites infestation in indigenous free-ranging village chickens in different agroecological zones in Kenya**

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## **Abstract**

Ectoparasitism is an important factor associated with poor production of village indigenous chickens. A cross-sectional study was carried out to determine the prevalence of ectoparasites in free ranging indigenous chicken from two different agro-ecological zones: Lower highland 1 (LH1) in Embu District and Lower midland 5 (LM5) in Mbeere District, Kenya. A total of 144 chickens of matched age (chicks, growers and adults) and sex groups were examined for the presence of ectoparasites. Of these, 138 (95.8%) had one or more types of ectoparasites, namely; lice, mites, fleas and soft ticks. One thirty one birds had lice, 107 mites, 42 sticktight fleas and 8 had soft ticks. Of the 138 infested birds, 25 had single while 113 had mixed infestations. Lice were the most prevalent parasites. The study documents *Epidermoptes* species, *Laminosioptes cysticola* and *Megninia* species for the first time in Africa as well as *Lipeurus caponis* and *Goniodes gigas* in Kenya. All adult birds were infected with ectoparasites followed by 97.7% grower and 89.6% chicks. Both male and female birds had same prevalence (95.8%) of ectoparasites. Lower midland 5 had a slightly higher prevalence of ectoparasites (98.6%) compared to LH1 (93.1%) though not statistically significant. Parasite intensity was significantly different among age groups of chicken and between agro-ecological zones ( $p < 0.05$ ), but not between sexes of birds ( $p > 0.05$ ). Because of the high prevalence of ectoparasites revealed by this study, it is imperative that integrated control strategies need to be put in place to improve chicken productivity and enhance smallholder livelihood in these areas.