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## Prevalence/worm Load of Cestodes & Nematodes in Rural Chicken in the Northern Region, Ghana

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### Abstract

Rural chicken production is an important agricultural enterprise in rural communities in Ghana. Chickens are kept for purposes of providing nutrition to the family and for their socio-cultural and economic benefits. Generally, rural chickens are kept under extensive or at best semi-intensive production systems that is characterised by low productivity of birds due to poor housing and nutrition, and infections. Parasitic infection is a major problem in rural chicken production where they cause economic losses as a result of low feed intake, reduced growth rate, low eggs production, weight loss and treatment cost. We investigated the prevalence and worm load in rural chicken in the Northern Region of Ghana. A total of 22 healthy-looking rural chicks aged 5 – 8 weeks were sampled in April 2021. The birds were killed and the GIT dissected longitudinally: oesophagus-cloaca. dissected GIT was visually inspected and worms were isolated, washed in normal saline and fixed in ethanol. Worms collected were broadly grouped into cestodes and nematodes. Prevalence values of the two groups were: cestodes 77.3 %, nematodes 59.1 % and mixed cestode/nematode infections was 45.5 %. A total of 329 cestode and 72 nematode worms were recovered which translated into mean worm load of  $x = 19$  worms (range = 2–69 worms) and  $x = 6$  worms (range = 1–46 worms), respectively. In the 10 birds that suffered cestodes/nematodes mixed infections, worm load varied between 4–73. This data revealed the importance of parasitic cestode and nematodes in rural chicken production in northern Ghana. These birds would have suffered suboptimal growth rate under the high parasitic worm load seen here. We attributed the high prevalence values to the extensive production system under which the chicks were raised whereby birds feed/scavenge on contaminated feed resources or on arthropods, worms and insects that serve as intermediate hosts for various poultry worms. The cestode and nematode species involved are yet to be identified and/or characterised for good appraisal of their diversity.

**Keywords:** Cestodes, nematodes, northern Ghana, rural chicken