Prevalence of Parasitic Nematodes Infection in local chickens, in northeast of Iran

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Objectives: Local chickens prevail in rural areas play an important role in the life of smallholders and in the agricultural practice. In addition, local chickens are a source of meat and eggs for rural families. Helminthosis is one of the most common diseases that affect scavenging chickens. Free-range scavenging chickens are in direct contact with parasite vectors, soil and feces. On the other hand, inadequate hygiene and the physical environment (e.g. rainfall, humidity, and ambient temperature) provide optimum conditions to maintain helminthes populations.

Materials & Methods: We conducted a cross-sectional study from December 2010 to August 2011. The study aimed to determine the prevalence of gastrointestinal helminths among local chickens in Khorasan Razavi province in northeast of Iran. A total of 100 male and female local scavenging chickens were selected randomly. We examined the gastrointestinal tract of each bird for the presence of helminthes. The gastrointestinal tract was opened in a longitudinal section; the mucosa was scraped in order to collect the helminthes embedded in the mucosal layer. All nematodes collected were fixed and identified. Then isolated helminthes were preserved in 70% ethanol. The helminth species were identified by morphological characters according to souls by.

Results & Conclusion: Three nematode species were diagnosed. Seventy two birds (72%) were infected. The prevalence of different species were as follows: *Ascaridia galli* 29%, *Heterakis gallinarum* 23%, *Heterakis isolonch* 9%, *Subulora brompti* 3% . Finding of the present study indicate that the majority of scavenging chickens in the country are parasitized throughout the year with two or more species of gastrointestinal helminthes and thus may be a cause of tremendous economic loss to Iranian chicken farmers. Also, evidence of association of the bacteria with the nematode eggs was further substantiated by establishing Salmonella infection in day-old chicks after dosing them with eggs harvested from parasitic worms infected in vitro with Salmonella.

Keywords: Nematode infection, Chicken, Khorasan Razavi, Iran