



## **Prevalence of gastrointestinal helminths of native hen in Iran: Meta-analysis from 2007 to 2020**

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**Objective:** Gastrointestinal helminths due to establishing a parasite relationship and, as a result, reducing the food conversion factor reduces the weight gain of broiler chickens, leading to reduce the percentage of weight gain of broiler chickens, reducing the age of laying and reducing the number of eggs laid by laying hens. Since chicken meat provides a significant percentage of the protein consumed by society, the prevalence of these parasites harms the poultry industry, the economy, and the welfare of society. Our goal in conducting this meta-analysis study is to investigate the prevalence of gastrointestinal helminth parasites in native Iranian hens. According to the results of this article, these parasitic infections can be controlled and prevented with more precise planning.

**Method and Materials:** In this study, 25 articles on the prevalence and types of native hens' gastrointestinal helminths in Iran were collected from three databases (Google Scholar and Scopus PubMed) from 2005 to 2020. The data obtained from different regions of the country with different climates, including Mashhad, Gorgan, Urmia, Isfahan, and Kerman, were analyzed with artificial intelligence software R version 4.2.1. The confidence interval in this article is 95%.

**Results and conclusion:** The meta-analysis of the data on the prevalence of gastrointestinal helminths showed us that *Ascaridaegalli* parasites, with an average prevalence of 34%, and *Heterakis gallinarum*, with an average prevalence of 31%, had the highest percentage of prevalence among other gastrointestinal helminths. It is worth mentioning that for the humid climate in the north of the country, the prevalence of parasites is higher than in other parts of the country, and the prevalence of *Heterakis gallinarum* is significantly higher than *Ascaridae galli*. Therefore, more attention should be paid to histomoniasis in the northern regions. In addition, considering the negative impact these two parasites have on the reduction of production efficiency and productivity of the poultry industry and community welfare, veterinarians and breeders should plan for control, prevention, and treatment with new methods.

**Keywords:** Prevalence, Gastrointestinal helminths, Poultry, Iran, Meta-analysis