

## Prevalence of Internal parasites in municipal Chicken in Western Villages in Al-Anbar Province (Iraq)

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### Abstract

Eighty two non-descriptive breed hens of 1-2 years old were examined and found that (64) (78.04%) hens were infected with various species of metazoan and protozoan parasites of the (8) helminthes species was recorded, *Subulora suctorica (brompti)* was the most common nematode, while *Ascaridia galli*, *Heterakis gallinarum*, *Raillietina tetragona*, *R. echinobothrida*, *R. cesticillus*, *Hymenoleis carioca* and *Choanotaenia infundibulum* were also frequently found. *Eimeria* oocysts were seen in the intestinal contents of (9) hens 10.97%.

الكشف عن الطفيليات الداخلية في الدجاج المحلي في قرى غرب محافظة الأنبار (العراق)

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### الخلاصة

تضمن البحث دراسة نسبة الخمج بالأنواع المختلفة من الطفيليات الداخلية التي تصيب الجهاز الهضمي للدجاج المحلي في قرى غرب العراق حيث أشارت النتائج إلى وجود تسعة أنواع من الطفيليات الداخلية وقد كانت نسبة الخمج الكلي (78.04%) في الدجاج المفحوص وإن أكثر الأنواع شيوعاً كان النوع *Subulora suctorica* (47.56%) من الديدان الاسطوانية والنوع *Raillietina tetragona* (30.48%) من الديدان الشريطية. وقد دلت النتائج على أن نسبة الإصابة بأكياس البيض لأنواع مختلفة من جنس *Eimeria* كانت 10.97%.

### Introduction

The infection with Internal parasites are a major world wide importance in commercially produced poultry, contributing significantly to economic losses poultry production due to high mortality rate caused by the infection with deferent types of these parasites. Importance of Internal parasites infections are increased in egg-laying poultry. It has been reported that *A. galli* is the most common nematode among poultry in Iraq (1). *H. gallinarum* has been also recorded in egg-laying hens in Mosul and middle Iraq (2,3). Al-Khateeb et al. (3) recorded 5 species of *Eimeria* (*E. tenella*) in 325 birds.

The present study was carried out to show the incidence of variable internal parasites which includes nematodes, cestodes, trematodes & protozoa among municipal egg-laying hens were slaughtered during 2009.

## Material and Methods

A total of (83) hens of (1-2) years of local breeds were brought from 9 villages of western Al-Anbar province includes (Saada, Al-Rayhana, Barwana, Al-Buhayat, Alous, Jobba, Abo shbour, Al-Mohammedy & Zikhykha) at various seasons of the year. The digestive tract of each hen was collected separately at the time when slaughtered and the intestinal contents were examined for internal parasites according to Al-Hubaity (2). Species identification was made using the criteria applied by (4,5). The *Eimeria* oocysts were measured and their morphology was studied.

## Results

The results of this study are presented in (Table 1). It was found that (64) hens (78.04%) were infected with various species of parasites. There were 3 species of nematodes, 5 species of cestodes and *Eimeria spp.* The highest rate of infection with metazoan parasites was with *S. suctorica* (47.56%) and the lowest rate was with *H. carioeca* (8.53%). It was also found that, only (12) hens (14.63%) carried single infection, while (17) hens (20.73%) carried double infection and (43) hens (52.43%) carried multiple infection. *Eimeria* oocysts were seen in the intestinal contents of (9) hens (10.97%). The oocysts in (3) hens were located in the intestinal caeca. Gross examination of the caeca revealed peticheal hemorrhages in the mucosa and stained with blood.

## Discussion

The results of the resent study indicated that (78.04%) egg-laying hens were infected with various internal parasites. *S. sectorica* was the most common helminthes parasites present in the (82) hens examined. This is in agreement with the findings of (2). (1) indicated the presence of *A. galli* and (6) indicated the presence of *A. galli* and *H. gallinarum* only in the hens they examined. These variations of in the results could be due to the variation in the time of the work undertaken. The importance of these helminthes is related to their pathogenicity. *A. galli* and to their role in transmission of *Histomonas meleagridis* which the causative agent of enterohepatitis by *H. gallinarum* (7, 8). *A. galli* causes sever weight loss, anemia, intestinal blockage, depression in egg production and high mortality rate among the infected birds (4). All of the cestodes recorded in the present work were also recorded by (2), except *H. carioeca*. However, he did not mention the rate of infection with each species of these cestodes. It was found that (30.48%) of these hens were infected with *R. tetragona*. This is the second most pathogenic cestodes in the poultry (9). The other cestodes are also harmful (10).

Although the *Eimeria* oocysts in size and characteristically similar to various *Eimeria spp.*, the oocysts seen in the caeca were associated with pathological changes only. This probably is due to the immunity they have developed, due to previous exposure to subclinical infection; this is in agreement with the findings of (11, 12, 13). The hens were however, raised in the open yard. It is possible that they were exposed to previous subclinical infections that protected them from clinical form of the disease in spite of the presence of the oocysts.

**Table (1) Prevalence of internal parasites in chicken in Western Villages in Al-Anbar Province**

parasites	No. of infected chicken	Percent (%)	No. of parasites (mean)
<b>Nematodes</b>			
<i>S. suitoria</i>	39	47.56	147
<i>H. gallinarum</i>	14	17.07	217
<i>A. galli</i>	27	32.92	12
<b>Cestodes</b>			
<i>R. tetragona</i>	25	30.48	3
<i>R. echinobothrida</i>	9	10.97	5
<i>R. cesticillus</i>	7	8.53	3
<i>C. infundibulum</i>	23	28.04	5
<i>H. carioca</i>	7	8.53	17
<b>Protozoa</b>			
<i>Eimeria spp.</i>	9	10.97	*N.C.

\* N.C. = Number not counted.

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