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COMPARISON OF ENDOPARASITE INFESTATION IN SEMI COMMERCIAL AND SCAVENGING VILLAGE CHICKEN

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COMPARISON OF ENDOPARASITE INFESTATION IN SEMI COMMERCIAL AND SCAVENGING VILLAGE CHICKEN

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CERTIFICATION

It is hereby certified that I have read this project paper entitled "Comparison of Endoparasite Infestation in Semi commercial And Scavenging Village Chicken", by Nurul Suhada binti Razali and in my opinion it is satisfactory in terms of scope, quality, and presentation as partial fulfillment of the requirement for the course VPD 4999 – Project

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DEDICATIONS

This project paper is dedicated to the One Almighty God, who had created me and made all things possible,

To my family,

Father

Mother

Brother, Sister

Lecturers

&

And to all my friends who have committed themselves towards this project

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ABSTRAK

Abstrak daripada kertas projek yang dikemukakan kepada Fakulti Perubatan Veterinar untuk memenuhi sebahagian daripada keperluan kursus VPD 4999 – Projek

PERBANDINGAN SERANGAN ENDOPARASIT DALAM AYAM KAMPUNG SEPARA KOMERSIAL DAN PEBANGKAI

Oleh

Nurul Suhada binti Razali

2016

Penyelia: Dr. Lokman Hakim Idris

Abstrak

Tahap serangan endoparasit bagi ayam kampung semi komersial dan ayam kampung pebangkai di sebuah kampung yang terletak di Simpang Renggam, Kluang, Johor Perbandingan dibuat diantara 6 sampel tinja rawak diambil dari ayam kampung separa komersial dari lading Aqil Aqilah dan 6 sampel tinja rawak diambil dari kawasan sekeliling kampung. Berdasarkan ujian makmal yang telah dilakukan untuk mengetahui kuantiti parasit menunjukkan, tiada telur cacing didalam kesemua sampel. Walau bagaimanapun, *oocysts* koksidia didapati dalam sesetengah sampel. 1 sampel dari ayam kampung separa komersial menunjukkan bilangan 0 *oocsyts* per gram, 3 sampel menunjukkan bilangan 50 *oocysts* per gram, 1 sampel menunjukkan bilangan 150 *oocysts* per gram dan satu lagi sampel menunjukkan bilangan 1000 *oocysts* per gram.

Bagi ayam kampung pebangkai, keputusan makmal menunjukkan 4 sampel dengan bilangan 0 oocyst, 1 sampel menunjukkan bilangan 150 oocysts per gram dan satu lagi sampel menunjukkan bilangan 250 *oocysts* per gram. Berdasarkan keputusan yang telah diperolehi, tiada perbezaan ketara dalam serangan koksidia di antara ayam kampung separa komersial dan ayam kampung pebangkai berdasarkan 'chi-square test' ($P>0.05$).

Kata kunci: serangan endoparasit, ayam kampung, telur cacing, oocsyts koksidia

ABSTRACT

Abstract of the project paper presented to the Faculty of Veterinary Medicine in partial requirement for the course VPD 4999 - Project

COMPARISON OF ENDOPARASITE INFESTATION IN SEMI COMMERCIAL AND SCAVENGING VILLAGE CHICKEN

By

Nurul Suhada binti Razali

2016

Supervisor:Dr. Lokman Hakim Idris

ABSTRACT

The level of endoparasitic infestation in semi commercial village chicken and scavenging village chicken in a village located in Simpang Renggam Kluang, Johor were compared. 6 random chicken feces samples were obtained from semi commercial village chicken from Aqil Aqilah farm and 6 random chicken feces samples were obtained from the surrounding area within the village. From the laboratory test done to detect the quantity of the parasite, it revealed that there was absence of helminths ova in all samples obtained. However, coccidial oocysts were detected in some of the samples. There is 1 sample from the semi commercial chicken with count of 0 oocysts per gram,

3 samples from the semi commercial chicken with count of 50 oocysts per gram, 1 sample from the semi commercial chicken with count of 150 oocysts per gram and another 1 sample from the semi commercial chicken with count of 1000 oocysts per gram. For scavenging village chicken, the result revealed there are 4 samples with count of 0 oocysts per gram, 1 sample with 150 oocysts per gram and another 1 with count of 250 oocysts per gram. From the result obtained, there was no significant difference in the coccidial level in semi commercial village chicken and scavenging village chicken based on chi-square test ($P>0.05$).

Keyword: endoparasitic infestation, village chicken, helminths ova, coccidial oocysts

1.0 INTRODUCTION

Poultry is one of the most intensively reared of the domesticated species and one of the most developed and profitable animal production enterprises. The Poultry industry had occupies an important position in the provision of animal protein. Poultry meat is the staple protein source for all ethnic groups in the population in Malaysia and is a dominant meat offered in all food service outlets (World Poultry, 2014).

According to World Poultry (2014), almost 90% of chicken production occurs in Peninsular Malaysia. In term of birds number, commercial bred broiler chicken comprises of 67%, 25% of layer chicken and breeder chicken make up another 8% of the total number.

1.1 Study background

Village chickens (*Gallus domesticus*) are chickens that are medium sized fowl with small heads, large bodies and bare, scaled legs. They often have fleshy protrusions from the face, called wattles and combs. They have small beaks and relatively short wings for their body weight. The colors are varies from breed to breed. They were first domesticated from a wild form chicken named red jungle fowl (*Gallus gallus*), a bird that present in most of southeast Asia and is likely to hybridized with the grey jungle fowl (*Gallus sonneratii*) that occurred probably about 8,000 years ago (Kris, 2014). Some researchers suggest there may have been originated from distinct areas of South and Southeast Asia, including North and South China, Thailand, Burma and India (Kris, 2014).

There are two important types of production in poultry industry in Malaysia which are commercial sector and village-based system. Commercial sector of poultry industry is characterized by its use of highly intensive units and had been developed over the past two decades (Aini, 2009). It is also done in large scale and are well mechanised. Village-based production system are present in many villages nearly all rural and peri-urban areas where small flock of poultry is kept and left with little or no care.Village-based poultry production systems may be divided into at least three different categories which are traditional free-range, improved free-range and small-scale confined rearing systems (Riise *et. al.*, 2004).

1.2 Justification

In most rural villages of Malaysia, poultry are often left to scavenge around housing compounds during daytime to obtain any kind of feed that can be found in the environment including insects, seeds and leftover from kitchen. Free range and scavenging habits in village-based poultry system lead to high contact with soil and insects. Malaysian soils, especially when humid and warm, may serve as an important reservoir and transmission site for external larval stages of helminthes (Abdul *et. al.*, 2009). Similarly, any insects or arthropods that may act as vectors for helminthes are also favored by the same climatic conditions. The chickens may have higher opportunity to encounter infective eggs, larvae and intermediate hosts of parasites that can cause serious infestations. On the other hand, inadequate hygiene and the physical

environment such as rainfall, humidity, and ambient temperature provide optimum conditions to maintain helminthes populations.

Apart from that, no report about the endoparasite infestation in the village chicken had been done in the study area. The farmer did not practice herd health program including deworming in the semi-commercial village chicken. This may result in low diseaseresistance.

1.3 Study objectives

- To identify different genus of helminthes present in semi-commercial village chicken and scavenging village chicken.
- To determine the level of coccidial infestation in semi-commercial village chicken and scavenging village chicken.

1.4 Hypothesis

- The scavenging village chicken has higher level of endoparasitic infestation compare to semi-commercial village chicken.

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