THESIS

PREVALENCE AND INFECTION DEGREE OF GASTROINTESTINAL TRACT PARASITE ON DUCK (*Anas platyrhynchos*) IN KUDUS, CENTRAL JAVA USING FECAL EXAMINATION

By

ANINTIYA YUNIAR MAHDAVITRI
SIN. 061711133100

FACULTY OF VETERINARY MEDICINE
AIRLANGGA UNIVERSITY
SURABAYA
2022

PREVALENCE AND INFECTION DEGREE OF GASTROINTESTINAL TRACT PARASITE ON DUCK (*Anas platyrhynchos*) IN KUDUS, CENTRAL JAVA USING FECAL EXAMINATION

Thesis

Submitted as partial fullfilment of the requirements for the degree of

Bachelor of Veterinary Medicine

at

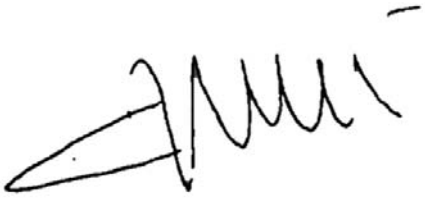
Faculty of Veterinary Medicine, Airlangga University

By

ANINTIYA YUNIAR MAHDAVITRI
SIN. 061711133100

Approving

Supervisor Commitee,



(Dr. Endang Suprihati MS., drh)
Supervisor

(Dian Ayu Permatasari, drh., M.Vet)
Co-Supervisor

DECLARATION

Hereby, I declare that the thesis entitled:

PREVALENCE AND INFECTION DEGREE OF GASTROINTESTINAL TRACT PARASITE ON DUCK (*Anas platyrhynchos*) IN KUDUS, CENTRAL JAVA USING FECAL EXAMINATION

No paperwork has been filed to obtain a bachelor's degree at the university and according to my knowledge, there is no paperwork or self-opinion that ever written or published by others, except those in writing referred to this paper mentioned in the bibliography.

Surabaya, July 18th 2022

Anintiya Yuniar Mahdavitri
SIN. 061711133100

Examination of Seminar Research Result

Date: July 1st, 2022

RESULT SEMINAR ASSESMENT COMMITTEE

Chairman	: Prof. Dr. Setiawan Koesdarto drh., M.Sc
Secretary	: Dr. Kusnoto M.Si., drh
Member	: Adiana Mutamsari Witaningrum, drh., M.Vet
Supervisor	: Dr. Endang Suprihati MS., drh
Co-Supervisor	: Dian Ayu Permatasari, drh., M.Vet

Examination of Thesis

Date: July 18th, 2022

THESIS ASSESMENT COMMITTEE

Chairman	: Prof. Dr. Setiawan Koesdarto drh., M.Sc
Secretary	: Dr. Kusnoto M.Si., drh
Member	: Adiana Mutamsari Witaningrum, drh., M.Vet
Supervisor	: Dr. Endang Suprihati MS., drh
Co-Supervisor	: Dian Ayu Permatasari, drh., M.Vet

Surabaya, July 18th, 2022

Faculty of Veterinary Medicine

Airlangga University

Dean,

Prof. Dr. Mirni Lamid, drh., MP.

NIP. 196201161992032001

SUMMARY

Duck is a part of poultry farm business that entrenched in Javanese society. It has a big role as the source of income and providing market needs in eggs and meat (Matitaputty, 2018). In Central Java province itself, there is around four millions duck population with the production rate of 3,603,429 kg. This amount is lower compared to the data from East Java province (Wariyanto, 2017).

Related to the small population, breeders may have experienced some problems related to duck health especially the diseases that caused by bacteria, parasite, and virus. The most common disease in poultry farm was influenced by the existence of parasite that can be helminth and protozoa, some of them may be zoonotic. All duck breed have the same opportunity to be infected (Rabbi et al, 2006).

Parasites in ducks mostly found in the gastrointestinal tract of the body and the purpose of this research is to determine the prevalence and infection degree of gastrointestinal parasite on duck in Kudus, Central Java. The simplest way to determine the infection is by fecal examination. In this research, there are two methods that are used in this research to examine the stool samples, those methods are sedimentation method which conducted by making a sediment from the feces solution and the flotation method by floating the eggs from the feces solution using saturated sugar solution.

Samples examined in this research are 65 samples from four different duck farms in Kudus, Central Java that was collected in January to February and was examined in the Laboratory of Animal Health, Semarang, Central Java. From the

examination found 31 out of 65 samples are positive for parasite infection. Those parasites came from two classes of helminth which are nematode and cestode and one protozoa species.

The result of prevalence rate of each species from nematode class are *Ascaridia galli* 9% (6/65), *Heterakis* sp. 17% (11/65), *Strongyloides* sp. 9% (6/65), *Amidostomum* sp. 3% (2/65), *Trichostrongylus* sp. 11% (11/65), *Capillaria* sp. 3% (2/65), and the prevalence rate from the class of cestode is *Choanotaenia* sp. 2%. While the only protozoa found in this research is *Eimeria* sp. with the prevalence rate is 20% (13/65). Since every species showed the EPG result less than 500 egg per gram feces, all species infection degree classified as mild infection.

PREVALENCE AND INFECTION DEGREE OF GASTROINTESTINAL TRACT PARASITE ON DUCK (*Anas platyrhynchos*) IN KUDUS, CENTRAL JAVA USING FECAL EXAMINATION

Anintiya Yuniar Mahdavitri

ABSTRACT

The aim of this research was to determine the prevalence and infection degree of gastrointestinal parasite both helminth and protozoa in duck. The research was conducted by using fecal examination sedimentation and flotation method. The examination result showed overall prevalence by the existence of parasite is 48% (31/65). The stool samples examined were infected by six species of nematodes which are *Ascaridia galli* 9% (6/65), *Heterakis* sp. 17% (11/65), *Strongyloides* sp. 9% (6/65), *Amidostomum* sp. 3% (2/65), *Trichostrongylus* sp. 11% (11/65), *Capillaria* sp. 3% (2/65), one species of cestode which is *Choanotaenia* sp. 2% (1/65), and one species of protozoa which is *Eimeria* sp. 20% (13/65). All the species examined showed the result of mild infection degree (0-500 EPG).

Keywords: duck, gastrointestinal, parasite, prevalence, infection degree.

ACKNOWLEDGEMENT

First and foremost, all praises to Almighty God for the health, knowledge, opportunities, strength, and countless blessing that have been showered on me to finish this thesis entitled **PREVALENCE AND INFECTION DEGREE OF GASTROINTESTINAL TRACT PARASITE ON DUCK (*Anas platyrhynchos*) IN KUDUS, CENTRAL JAVA USING FECAL EXAMINATION**.

Apart from the efforts of the author throughout the process of arranging this thesis, I would like to take this opportunity to express my gratitude to the people who have been involved in the successful completion of this thesis. In this occasion, the author would like to express her sincere gratitude to:

Dean of Faculty Veterinary Medicine, Airlangga University, Prof. Dr. Mirni Lamid, drh., MP., DVM for the privilege and chance that was given to the author to study at Faculty of Veterinary Medicine, Airlangga University.

Dr. Endang Suprihati MS., drh as the supervisor and Dian Ayu Permatasari, drh., M.Vet as the cos-supervisor for giving a lot of encouragement, motivations, and guidance to the author to finish the thesis. It's an honor to the author to have them as the author's supervisors.

Prof. Dr. Setiawan Koesdarto drh., M.Sc as the chairman of the examiner committee, Dr. Kusnoto M.Si., drh as the secretary of the examiner committee, and drh. Adiana Mutamsari Witaningrum., M.Vet as a member of the examiner committee who also guided, gave helpful advices to the author for the thesis completion.

Yeni Dhamayanti, drh., M.Kes as author's academic adviser, all the lecturers and academic staffs in the faculty. Thank you for all the kindness in guiding the author during all those years studying in Faculty of Veterinary Medicine, Airlangga University.

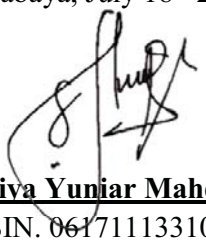
All the staff and laboratory worker of Laboratorium Kesehatan Hewan Semarang for giving the author chance to run the research in the Parasitology Laboratory and all the guidance that helps the author to finish the research for completing the thesis. Also thanks to Mbah Sutar and the other duck breeders for giving the author permission to collect the samples from the breeding cages.

Special thanks to the author's parents, Kasiyan Mu'ammar Qosim and Hetty Purwanti, all beloved brothers Ito, Onnel, Yanuar, Hiero, and extended families for the unstoppable support and wishing the best for the author's academic year. Thanks to author's best friend Baghdevi Ratu Shakila for continuously showering the author motivation and mental support through the author's life journey. Also, to all Indonesian and Malaysian classmates, batchmates, seniors, juniors during author's academic journey in Faculty of Veterinary Medicine, Airlangga University.

Last but not least, best gratitude for the existence of Chittaphon Leechaiyapornkul who always sending the author motivations on every dream the author wishes to pursue, keeping the author on track whenever and whatever situation the author has to overcome. Big thanks for keeping the author being a lively and joyful person.

The author acknowledges this thesis is far from perfection. However, the author hopes this research will be useful for the advancement of science especially in the veterinary medicine field and may give a good contribution to the society.

Surabaya, July 18th 2022



Anintiya Yuniar Mahdavitri
SIN. 061711133100

TABLE OF CONTENT

Page

LIST OF FIGURES

Figure **Page**

LIST OF TABLES

LIST OF APPENDICES

Appendix **Page**

ABREVATIONS AND SYMBOLS

%	: Percentage
°	: Degree
±	: Plus minus
C	: Celcius
cm	: Centimeter
et al.	: et alli
Ha	: Hectare
kg	: Kilogram
km	: Kilometer
ml	: Mililiter
mm	: Milimeter
µm	: Micrometer
EPG	: Egg Per Gram Feces
rpm	: Rotation Per Minute
RPIJM	: Rencana Program Investasi Jangka Menengah
sp./spp.	: Species