Infection of Gastrointestinal Parasite on Goat (*Capra aegagrus hircus*) at Rajabasa Lama Village East Lampung District

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Abstract. In developing countries such as Indonesia, the health of small ruminants such asgoats is not given much attention because the medical costs are very high, it causing a farmer to prefer to sell their livestock, even though at relatively low prices if there are signs of infection, one of which is due to parasitic diseases. This research was carried out in the village of Rajabasa Lama. The study was conducted using a descriptive method by collecting feces from the goat pens in that area. Furthermore, the examination was carried out using a native test and fecal floating examination using a fluid sugar medium. The results of the examination of gastrointestinal tract parasites that were found included parasites from the protozoan *Entamoeba* sp. and *Eimeria* sp. and also parasites from the Trematoda family, the eggs of the worm *Fasciola* sp.. *Eimeria* sp. is a parasite that quite often infects ruminants, including goats.

1. Introduction

The goat is one of the biodiversity that has the potential to develop as one of the government's efforts to supply animal protein in Indonesia, one of which is a goat. In developing countries such as Indonesia, the health of small ruminants such as goats is not given much attention because the medical costs are quite high, causing livestock owners to tend to sell their livestock, even though at relatively low prices if there are signs of infection, one of which is due to parasitic diseases. Generally, parasitic diseases do not cause livestock deaths but can cause losses such as weight loss and decreased productivity in livestock [2].

2. Methods

This research was conducted in Rajabasa Lama Village, Labuhan Ratu District, East Lampung Regency. This village is one of the villages adjacent to the Way Kambas National Park, including access to the National Park area. The study was conducted using a descriptive method by collecting feces from goat pens in the area. Furthermore, the examination was carried out using a native test and a fecal floatation examination using a sugar medium. Native examination was carried out using a mixture of feces and formalin and then examined under a microscope. The floating examination using sugar media was carried out by mixing approximately 2 grams of feces into a test tube and centrifuging, then the supernatant was discarded twice, and the last one was given a saturated sugar solution and waited for a few minutes so that the parasites could float. The samples taken were 50 samples from farmers in the local area. Furthermore, the data that has been obtained is confirmed in the literature, starting from the size to the type of parasite according to the morphology found.

3. Results and Discussion

The results of the study were analyzed descriptively, and the data presenting in tabular form where the results obtained were as follows at Table 1.

Table 1. Parasitic infections in goats in Rajabasa Lama Village

Parasite	Number of samples	Number of Infected Livestock
Entamoeba sp.	50	30 ekor
Eimeria sp.	50	27 ekor
Telur Fasciola sp.	50	2 ekor

The research results conducted found various types of parasites ranging from trematode worm eggs to protozoan parasites. Raising livestock in the village of Rajabasa Lama still looks semi-traditional, with only forage feeding. On average, they are farmers who use goats as a source of investment or assets so that they can be sold when needed. Factors that influence parasite infection *Eimeria sp.* This is a community maintenance process that is still conventional with a cage system. The construction of the cage was made improvised due to the economic limitations of the breeders. And the cage is very rarely cleaned. Cattle can be infected with digestive tract parasites with a variety of different types of parasites. Cross- contamination between individual livestock can occur because sometimes they are very close together.

The results of the examination of digestive tract parasites that were found included parasites from the protozoan Entamoeba sp. and Eimeria sp. and also parasites from the Trematoda family, namely the eggs of the worm Fasciola sp. Eimeria sp. is a parasite that quite often infects ruminants, including goats. This is inseparable from the lifestyle of livestock as ruminant animals (browsers) in a fairly large area [1]. Coccidiosis in goats occurs worldwide with 7 *species, including E. aljevi, E. aspheronica, E. arloingi, E. caprina, E. caprovina, E. christenseni, E. Gilruthi, E. hirciee, E jolchijevi, and E. ninakohlyakimovae (highly pathogenic).* Several species of Eimeria sp infect cells in the small intestine and large intestine, which cause damage to the crypts of the large intestine and are very dangerous because cell turnover is very slow, and there is no repair effort from other cells in the digestive tract in some cases there is a decrease in water absorption, and there is bleeding in the mucosa. Colon due to loss of intestinal crypts [1].

Protozoa Entamoeba sp. are organisms of the genus Entamoeba that can adapt in the body and live as parasites or are commensals in the digestive tract of humans, mammals, birds, amphibians, fish, and reptiles [2]. The worm eggs identified were from the Trematoda Family, namely Fasciola sp. This type of egg is characterized by having an operculum on the anterior. Then another characteristic, eggs from the Trematoda family have a large size compared to worm eggs from other families. The incidence of parasitic infection is strongly influenced by the process of raising livestock. There are two livestock-rearing systems that are carried out, including semi-intensive systems that allow livestock to forage on their own (shepherd system) or not at all in cages (traditional system). In livestock that is kept intensively (cage system), the risk of infection can be reduced because animal feed is given in the cage and can be washed first and aerated [4].

Another factor that affects the spread of parasitic worms is sanitation and cleanliness of the cage. Dirt allowed to accumulate in the cage will attract flies and allow nematode larvae to develop in it. If the skin of the livestock comes into contact with the manure, then some worm larvae can enter the body of the livestock.

4. Conclusions

This study showed that goats in Rajabasa Lama Village had parasitic gastrointestinal infections, including Eimeria sp., Entamoeba sp., and eggs of worm Fasciola sp.

5. References

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