CHAPTER 1 INTRODUCTION

1.1 Research Background

Breeding is one of occupation for Bondowoso's people. Kind of animal developed by Bondowoso's people is cattle. This occupation is fairly profitable. The level of cattle production in 2015 reached 1,271,852 kg followed by broiler meat production of 838,393 kg in the same year.

Generally, cattle maintenance in Bondowoso is still traditional and need more attention about production factor in cattle breeding. Indonesia is a tropical region as a place that is very potential for the development of parasites, so that cases of parasitic infections in animal are quite high (Beriajaya and Suhardono, 1997). Traditional farm is characterized by ownership of cows for each farmer only 3-4 cows. The cows are grounded only at night, while during the day they are tied to the yard if they are not grazed in the grasslands. Some cases of disease in cattle, especially those caused by parasites, are still commonly found, including Fascioliasis.

The prevalence of Fascioliasis in Indonesia is about 40-90%. Recorded in Bondowoso, in 2016 and 2017 there were 3,915 and 3,827 cases. Fascioliasis in caused by trematode named *Fasciola gigantica*. Losses caused by Fascioliasis include weight loss, decreased resistance to bacterial and viral infections, decreased of milk production, increased production costs in the form of feed costs, labor, treatment, removal of damaged liver and death (Soulsby, 1986). Global economic losses due to liver worm infections in livestock are estimated at 36 billion per year.

Based on survey in several animal markets in Indonesia there are at least 90% of cattle that have worms, which one of them is *Fasciola hepatica* or better known as liver worms (Nofyan, 2010). *Fasciola hepatica* is commonly found in livestock imported into Indonesia, while the one that is endemic in Indonesia is *Fasciola gigantica* (Kusumamiharja, 1992). Climatic and geographical variables are known to be important in determining the risk of liver worms, because of their effect on the survival and rate of development of the parasite and intermediate host. Bondowoso has an ecology and topography that supports the spread of Fascioliasis.

1.2 Formulation of the Problem

Based on the background described above, the problem can formulated namely how is the economic impact on the cattle liver that has been rejected due to Fascioliasis infection in Bondowoso's abattoir?

1.3 Objective of the Study

The purpose of this study is to know how big the economic impact on the cattle liver that has been rejected due to Fascioliasis infection in Bondowoso's abattoir.

1.4 Benefit of the Study

The result of this study are expected to be able to provide data and information on economic losses in cattle liver that have been rejected due to Fascioliasis infection in Bondowoso's abattoir.

1.5 Theoretical Basis

Global economic losses due to liver worm infections in cattle are estimated at 35 billion rupiah per year. These losses can include death, weight loss, carcass

loss, liver damage, loss of labor, and costs incurred for treatment (Charlier, et al. 2008). The main economic losses are based on the wasting of the heart both partially and completely or fully (Kusumamiharja, 1992). From the Veterinary Public Health aspect, the presence of worm infestations in the liver causes food to be unworthy for consumption. The demand for beef needs in the community continues to increase along with the increase of population in Indonesia which is very fast. Given the potential for transmission to humans, early vigilance is needed to prevent the transmission of fascioliasis to humans.

1.6 Hypothesis

There is a quiet big amount of economic losses in cattle liver that have been rejected due to Fascioliasis infection in Bondowoso's abattoir.