

**THE EFFECT OF THE INTENSIVE AND EXTENSIVE REAR SYSTEMS
AGAINST BLOOD PROTOZOAN DISEASE ON PIGEONS (*Columba livia*)
IN SURABAYA**

Elmiawan Bachtiar

ABSTRACT

The purpose of this study is to determine the effect of the intensive rear system and extensive rear system against blood protozoan disease in pigeons (*Columba livia*) in Surabaya identified with a blood smear to find the blood protozoa. Pigeon taken from five regions of Surabaya namely North Surabaya, East Surabaya, West Surabaya, South Surabaya and Surabaya Center. Each region is taken as many as 20 pigeons consisted of 10 pigeons with intensive maintenance system and 10 pigeons with extensive rear system. So that the total overall sample is 100 pigeons. Smear blood made using glass object then mixed with a solution of Giemsa's staining. Identification using a microscope using 100x objective scale and 10x ocular scale to determine blood protozoa that was found. Data was analyzed using *Chi Square Test* statistical analysis. The results of this study are found 83 *Haemoproteus* sp. as blood protozoa. Consists of 37 from intensive rear system and 46 from extensive rear system. Results of *Chi Square Test* statistical analysis showed a p value of 0.017 ($p < 0.05$) which means significantly different. The results of risk analysis using the *Odds Ratio* (OR) values 3.25. These results have significantly different meanings and extensive rear systems are more at risk of 3.25 times infected by blood protozoa than intensive rear system.

Keywords: pigeon, blood smear, blood protozoa, intensive rear system, extensive rear system.