

ABSTRACT

Stock raising sector contributes high amount of ammonia emission to the atmosphere. Ammonia may potentially pollute the environment and cause health problems. Based on this reason, livestock workers (especially those who are working on chicken coop) are facing high risk of experiencing health problems caused by ammonia emission exposure.

The aim of this study is to analyze the effect of ammonia concentration in the ambient air and urine on health problems experienced by chicken coop workers in UD Jatinom Indah, Selopuro District, Blitar Regency.

In this study, the writer implemented observational analytic method and applying cross-sectional study design. NH_3 concentration on chicken coop ambient air examination was conducted by using spectrophotometer nessler at 440 nm wavelength. Meanwhile, NH_3 concentration on chicken coop workers urine was measured by using nessler at 425 nm wavelength. Data on health problems experienced by chicken coop workers were collected through questionnaire asked to 30 chicken coop workers as sample on this study chosen based on simple random sampling method.

The findings of this study indicate that the maximum ammonia concentration on chicken coop ambient air is 27.067 ppm. This value was much higher than Threshold Limit Value (TLV). Ammonia concentration on chicken coop workers urine still meets the standards (2-3 μg). The variables of Ammonia concentration in the ambient air and ammonia concentration in chicken coop workers urine shows significance value (p value) 0.574 which is higher than α value (0.05). Based on these findings, ammonia concentrations on ambient air and in chicken coop workers did not affect health problems experienced by chicken coop workers. This may be caused by many factors which are not analyzed in this study, such as host, agent, and environmental factors. The distribution of workers in different parts of chicken coop (as regulated by company policy through rolling system) and difficulty experienced by the writer in gathering the workers and asking them to answer the questionnaire have caused some biases in the results of this study.

The results of this study leads to a conclusion that health problems experienced by chicken coop workers in UD Jatinom Indah, Selopuro District, Blitar Regency is not affected by ammonia concentrations in the ambient air and urine of the workers. The writer recommends that the company shall provide counseling for chicken coop workers about the danger of zoonosis diseases and the importance of wearing Personal Protective Equipment (PPE) during work. The company shall also provide Personal Protective Equipment (PPE), such as working gloves and glasses for the workers.

Keywords: UD Jatinom Indah chicken farm, ammonia concentration in the ambient air and urine of chicken coop workers, health problems