THESIS

THE EFFECT OF FERMENTED CATTLE'S RUMEN CONTENT IN FEED ON ORGANOLEPTIC CHARACTER OF QUAIL EGG *(Coturnix coturnix japonica)*

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Approval of

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Co-Supervisor

DECLARATION

Hereby, I declare that in this thesis entitled :

THE EFFECT OF FERMENTED CATTLE'S RUMEN CONTENT IN FEED ON ORGANOLEPTIC CHARACTER OF QUAIL EGG *(Coturnix coturnix japonica)*

There is no other work ever published to obtain a college degree in a certain college, and according to my knowledge there is also no work or opinion ever written or published by others, except those in writing referred to this paper and mentioned in the reference

Surabaya, 24 August 2020

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Research Result Seminar Assesment

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SUMMARY

Tsania Ridha Firdausi, research with title "THE EFFECT OF FERMENTED CATTLE'S RUMEN CONTENT IN FEED ON ORGANOLEPTIC CHARACTER OF QUAIL EGG *(Coturnix coturnix japonica)*" under the supervision of Dr.Widya Paramita Lokapirnasari, drh.,MP. As the first supervisor and Dr. Thomas V. Widiyatno, drh., M.Si. as the co-supervisor.

One crucial factor that determines food acceptance but is usually ignored by producers is consumers prefer foods they like (Murang, 2018). The quality of eggs, such as bad taste and fishy aroma, can reduce the level of consumer preference for eggs. One of the factors that affect the flavor and aroma of the egg is from feeding (Leke *et al.,* 2015). The cattle's rumen contents in terms of nutrients contain high crude fiber, also contains essential amino acids (Heryani *et al.,* 2015). Crude fiber is a part of carbohydrate consisting of cellulose and hemicellulose, which, if in the general degradation, glucose used as a source of energy from livestock. In the rumen, microbial communities are consisting of bacteria, protozoa, and fungi. The microbes contained in the rumen contents function to degrade cellulose from the rumen content that has not finished degraded utterly.

This research aims to find out whether a quail feed formulation using the cattle's rumen content in the feed can affect the organoleptic of quail eggs. This study was used 96 adult female quails as experimental animals aged 40 - 45 days.

A total of 96 quails divided into four feed treatments and six replications, each containing for quails. The treatment of this experiment are T0 or as known as a control treatment, contained 0% fermented rumen content, T1 contained 5% fermented rumen content, T2 contained 10% fermented rumen content, and T3 contained 15% fermented rumen content. Next, an organoleptic test was carried out by 30 panelists of women aged 20-23 years. The analysis continued with the Kruskal Wallis test, and the Mann Whitney test performed if significant differences found.

Based on the results of the analysis of organoleptic tests on quail eggs with the addition of fermented rumen content in the ration showed a significant difference ($P > 0.05$) between the treatment of the results of the aroma and taste of quail eggs. This is presumably due to the high crude fiber content in the fermented rumen content so that it affects the final result of protein and fat content in the egg, which can ultimately affect the taste and aroma of quail eggs.

However, the results did not show any significant difference between the treatment of consumer preference levels for quail eggs ($P < 0.05$). This is allegedly due to the subjectivity of tastes between each consumer so that no real difference results found.

Based on the results obtained from research on the provision of fermented rumen content in quail rations (*Coturnix coturnix japonica*) can affect the organoleptic character of egg. The addition of fermented rumen content to quail ration can affect the aroma of quail eggs. The best result for aroma is quail egg from T2 contain 10% rumen content in the feed and T3 contained 15% fermented

content. The addition of fermented rumen content to quail ration can affect the taste of quail eggs. The best result for flavor is quail egg from T0 or control containing 0% rumen content in the feed and T1 with 5% fermented rumen content in feed. T3 contained 15% fermented rumen content have a bit savoury taste. But, the addition of fermented rumen content to quail ration did not affect the level of consumer preference for quail eggs.