

PENGARUH PENAMBAHAN ASAM SITRAT DAN ZEOLITE PADA LITTER TERHADAP KARAKTERISTIK LITTER AYAM BROILER DI KANDANG CLOSED HOUSE

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INTISARI

Kualitas *litter* pada kandang merupakan salah satu aspek untuk menunjang keberhasilan pemeliharaan ayam *broiler*. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan asam sitrat dan *zeolite* pada *litter* terhadap karakteristik *litter* ayam *broiler* di kandang *closed house*. *Day Old Chick* (DOC) sebanyak 486 ekor dipelihara selama 28 hari dan dibagi secara acak menjadi 3 perlakuan. Setiap kelompok perlakuan dilakukan pengulangan sebanyak 6 kali dengan jumlah ayam masing-masing pengulangan sebanyak 27 ekor. Perlakuan dalam penelitian ini adalah menempatkan ayam pada alas *litter* sekam padi yang telah ditambah dengan asam sitrat dan *zeolite*. Tiga perlakuan yang diterapkan adalah PS : sekam padi tanpa tambahan, PAS : sekam padi yang di tambahkan dengan 0,24 Kg/m³ asam sitrat, PZ : sekam padi yang di tambahkan dengan 1,2 Kg/m³ *zeolite*. Data yang diamati dari penelitian ini yaitu, kadar air, amonia, dan pH *litter*. Data yang diperoleh dari penelitian ini dilakukan analisis dengan metode ANOVA (analisis variansi) berdasarkan Rancangan Acak Lengkap Pola Searah dan apabila terdapat perbedaan antar perlakuan dilanjutkan dengan uji beda *mean* menggunakan *Least Significance Different* (LSD). Hasil penelitian menunjukkan bahwa rerata kadar air *litter* PS, PAS, dan PZ berturut-turut 25,00, 25,23, dan 24,99%. Hasil penelitian menunjukkan bahwa rerata amonia *litter* PS, PAS, dan PZ berturut-turut 3,10, 3,27, dan 3,06 ppm. Hasil penelitian menunjukkan bahwa rerata pH *litter* PS, PAS, dan PZ berturut-turut 8,17, 7,56, dan 8,35. Hasil penelitian penambahan asam sitrat pada *litter* ayam *broiler* di kandang *closed house* dapat berpengaruh ($P < 0,05$) untuk menurunkan pH *litter*, namun tidak berpengaruh terhadap kadar air dan amonia *litter* ($P > 0,05$). Penelitian ini dapat disimpulkan bahwa penambahan asam sitrat dan *zeolite* dapat menurunkan pH *litter*, namun tidak dapat menurunkan kadar air dan amonia *litter*.

Kata Kunci: *Litter*, karakteristik *litter*, *Zeolite*, Asam Sitrat

THE EFFECT OF ADDITION CITRIC ACID AND ZEOLITE IN LITTER CHARACTERISTICS OF BROILER CHICKENS LITTER IN CLOSED HOUSE

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ABSTRACT

The quality of litter in the closed house is one aspect to support the success of broiler rearing. The objective of this study was to investigate the effect of adding citric acid and zeolite in litter characteristics of broiler chickens litter in closed house. Day Old Chick (DOC) as many as 486 chickens were raised for 28 days and randomly divided into 3 treatments. Each treatment group was repeated 6 times with the number of chickens for each repetition of 27 chickens. The treatment in this study was to place the chickens on a rice husk litter that had been added with citric acid and zeolite. The three treatments applied were PS: rice husk without addition, PAS: rice husk added with 0,24 Kg citric acid/m³, PZ: rice husk added with 1,2 Kg zeolite/m³. Data observed from this study were litter moisture content, litter ammonia, and litter pH. The data obtained from this study were analyzed by ANOVA (analysis of variance) method based on a Completely Randomized Design of Unidirectional Pattern and if there were differences between treatments, it was continued with a mean difference test using Least Significance Different (LSD). The results showed that the average moisture content of PS, PAS, and PZ litter was 25,00, 25,23, and 24,99%, respectively. The results showed that the average ammonia content of PS, PAS, and PZ litter was 3,10, 3,27, and 3,06 ppm, respectively. The results showed that the mean pH of PS, PAS, and PZ litter was 8,17, 7,56, and 8,35, respectively. The results of the study of the addition of citric acid to broiler litter in closed house cages can have an effect ($p < 0.05$) to reduce the pH of the litter, but has no effect on the moisture content and ammonia of the litter. this study can be concluded that the addition of citric acid in this study can reduce the pH of the litter, but cannot reduce the moisture content and ammonia of the litter.

Keywords: litter, litter characteristics, zeolite, citric acid