PENGARUH PENAMBAHAN ZEOLIT, KAPUR DAN SERBUK ARANG PADA *LITTER* TERHADAP PRODUKSI KARKAS DAN PERTUMBUHAN TULANG *FEMUR* AYAM BROILER

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan zeolit, kapur, serbuk arang dan campuran ketiganya pada *litter* terhadap produksi karkas dan pertumbuhan tulang broiler. Sebanyak 120 ekor ayam broiler strain *Lohmann Indian River* dibagi dalam lima kelompok perlakuan *litter*, setiap perlakuan terdiri atas delapan ekor ayam dengan tiga ulangan dan litter disusun dari bahan sekam padi dan serbuk gergaji. Perlakuan litter yaitu kandang tanpa penambahan zeolit, serbuk arang, kapur dan ketiganya pada *litter*nya (KO), kandang *litter* dengan penambahan zeolit (Z), kandang *litter* dengan penambahan kapur (K), kandang *litter* dengan penambahan serbuk arang (A), dan kandang *litter* dengan penambahan campuran ketiganya (ZKA). Variabel yang diamati meliputi berat potong, berat karkas, berat lemak abdominal, panjang tulang *femur* dan berat tulang *femur*. Analisis data menggunakan analisis variansi rancangan acak lengkap pola searah dan dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT). Hasil analisis statistik menunjukkan terdapat perbedaan yang tidak nyata pada berat karkas untuk KO, Z, K, A dan ZKA berturut-turut 1610 g/ekor/42 hari; 1770 g/ekor/42 hari; 1660 g/ekor/42 hari; 1740 g/ekor/42 hari; 1670 g/ekor/42 hari, berat lemak abdominal untuk KO, Z, K, A, ZKA berturut-turut 66,00±11,27 g/ekor/42 hari; 54,00±13,75 g/ekor/42 hari; 65,00±16,10 g/ekor/42 hari; 50,33±11,15 g/ekor/42 hari; 51,67±11,24 g/ekor/42 hari dan panjang *femur* untuk KO, Z, K, A, ZKA 8,72±0,65 cm; 8,37±1,05 cm; 7,41±0,20 cm; 8,15±0,60 cm; 8,02±0,25 cm sedangkan berat *femur* untuk KO, Z, K, A, ZKA 11,33±1,53 g; 13,33±0,58 g; 11,00±1,00 g; 14,00±1,00 g; 12,00±1,00 g menunjukkan perbedaan yang nyata ($P<0,05$). Dari penelitian ini dapat disimpulkan bahwa penambahan zeolit, kapur, serbuk arang, dan campuran ketiganya pada *litter* tidak menurunkan berat karkas, lemak abdominal dan panjang *fémur,* tetapi dapat meningkatkan berat tulang *femur*nya.

(Kata kunci : Ayam broiler, Zeolit, Kapur, Serbuk arang, Karkas, Tulang *femur*)

THE EFFECT OF ADDITED ZEOLITE, LIMESTONE AND CHARCOAL POWDER INTO *LITTER* ON THE CARCASS PRODUCTION AND *FEMUR* BONE GROWTH'S OF BROILER CHICKEN

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ABSTRACT

This research was conducted to determine the effect of addition zeolites, limestone, charcoal powder and mix all into litter on carcass production and bone growth of broiler. One hundred and twenty day old chick of broiler were used in the litter experiment. All broiler were randomly divided into five litter treatments groups in three replication with eight chickens each . The litter made from rice husk and sawdust. The treatments were KO : Original litter treatments Z, K, A and ZKA litter was add with zeolite, limestone, powdered charcoal and mixture of ZKA. The data collected were body weight, carcass weight, abdominal fat weight, femur bone length and weight of the femur bone. The collected data were analyzed by one way classification of varience analysis completely randomized design followed by testing the significant means by Duncan's Multiple Range Test (DMRT). The results showed that had no significant differences on carcass weight 1610 g; 1770 g; 1660 g; 1740 g and 1670 g for the KO, Z, K, A, ZKA respectively. Abdominal fat weight 66.00±11.27 g; 54.00±13.75 g; 65.00±16.10 g; 50.33±11.15 g and 51.67±11.24 g for the KO, Z, K, A, ZKA respectively and femur length 8.72±0.65 cm; 8.37±1.05 cm; 7.41±0.20 cm; 8.15±0.60 cm and 8.02±0.25 cm for the KO, Z, K, A, ZKA. The femur weight had significant differences ($P < 0.05$) 11.33±1.53 g; 13.33±0.58 g; 11.00±1.00 g; 14.00±1.00 g and 12.00±1.00 g KO, Z, K, A, ZKA. It can be concluded that the addition of zeolites, limestone, charcoal powder, and mix all three in the litter had not decrease carcass weight, abdominal fat, and length of the femur but increase weight of the femur.

(Keywords : Broiler chicken, Zeolites, Limestone, Charcoal powder, Carcass, Femur bone)