

Pengaruh kontaminasi kadmium dan efek penambahan seng dalam pakan terhadap kondisi ayam pedaging

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Abstrak

Penelitian ini dilakukan dalam usaha untuk mengetahui pengaruh kadmium dan seng dalam pakan ayam terhadap kondisi ayam pedaging. Kadmium adalah logam yang beracun dan seng adalah logam esensial. Mereka selalu ditemukan bersamaan dalam tambang maupun dalam jaringan hewan. Seng dapat mencegah keracunan kadmium. Penelitian dilakukan terhadap 125 ekor ayam pedaging yang terbagi dalam 5 kelompok perlakuan, yaitu : I. Kelompok kontrol, II. Kelompok yang diberi 50 ppm Cd, III. 100 ppm Cd, IV. 50 ppm Cd + 50 ppm Zn, dan V. 100 ppm Cd + 50 ppm Zn dalam pakannya. Berat badan dan konsumsi pakan diukur setiap minggu selama 4 minggu perlakuan. Sampel hati dan ginjal ayam diambil setiap minggu, didigesti dengan campuran asam dan dianalisis. Analisis dilakukan dengan menggunakan alat Spektrofotometer Serapan Atom. Hasil yang diperoleh menunjukkan bahwa kadmium pada ayam pedaging terakumulasi dalam hati dan ginjal. Konsumsi pakan dan berat badan ayam dihambat oleh kadmium, tetapi dengan penambahan seng ke dalam pakannya, toksisitas kadmium dapat dicegah. Dapat disimpulkan bahwa seng baik untuk mencegah toksisitas kadmium walaupun akumulasi kadmium dalam Jaringan tidak dipengaruhi.

..... The aim of this study was to reduce the effect of cadmium toxicity on zinc supplementation in the chicken feed, because cadmium is a toxic metal and zinc is an essential element. Both metal are usually present naturally in the mixing area. A hundred and twenty five broiler chicken were divided into 5 groups. Each group was treated by 50 ppm Cd, 100 ppm Cd, 50 ppm Cd add 50 ppm Zn, 100 ppm Cd add 50 ppm Zn, in their feed and a control group respectively. Body weight and feed consumption were measured every week during 4 week treatment. Sample of liver and kidney of chicken were collected every week as same as measuring the body weight, digested with acid mixture and analysed by atomic absorption spectrophotometer. The results indicated that cadmium was accumulated in the liver and kidney were increased coincided with longer time and dose of exposure. Feed consumption and the body weight of chicken were inhibited by cadmium toxicity, but by added zinc in their feed the toxicity of cadmium was prevented. This study was concluded that zinc was a good treatment for cadmium toxicity, although the accumulation of cadmium in the tissue was not affected.