

## ABSTRAK

### **PENGARUH PEMBERIAN KOMBINASI HERBAL DAN PROBIOTIK SEBAGAI IMBUHAN PAKAN TERHADAP SIFAT RESISTENSI BAKTERI SALURAN PENCERNAAN DAN PERFORMA AYAM BROILER**

**Oleh:**

**Elysha Angelina S.**

**20/459029/KH/10653**

Penggunaan antibiotik sebagai imbuhan pakan telah dilarang karena kemungkinan resistensi antibiotik. Alternatif lain yang dapat menjaga kesehatan dan meningkatkan produksi unggas namun tidak berdampak buruk bagi lingkungan diperlukan. Salah satu alternatif yaitu dengan pemberian herbal probiotik. Penelitian ini bertujuan untuk menganalisis efek penambahan kombinasi herbal dan probiotik terhadap sifat resistensi bakteri saluran pencernaan dan performa ayam broiler.

Materi yang digunakan dalam penelitian ini adalah 74 ekor broiler strain Lohman yang dibagi menjadi dua kelompok, dengan masing-masing kelompok terdiri dari 37 ekor. Kelompok perlakuan diberi kombinasi herbal dan probiotik dalam air minum sedangkan kelompok kontrol tanpa diberi kombinasi herbal dan probiotik. Ayam dipelihara selama 35 hari. Pengambilan sampel swab kloaka sebanyak tiga sampel sebelum perlakuan dan tiga sampel setelah perlakuan kemudian dilakukan uji sensitivitas antibiotik dengan metode *Kirby Bauer*. Pengujian dilakukan terhadap antibiotik ampicilin 10 µg, siprofloksasin 10 µg, kanamisin 30 µg, penisilin 10 µg, streptomisin 10 µg, dan tetrasiklin 30 µg. Hasil resistensi dihitung dari zona inhibisi yang terbentuk dan dibandingkan dengan standar CLSI. Performa ayam broiler diamati dengan melakukan penimbangan bobot badan dan perhitungan konversi pakan setiap akhir minggu. Data rata-rata konsumsi pakan, bobot badan dan FCR dianalisis dan diuji menggunakan metode T-Independen dengan program SPSS.

Uji resistensi pada sampel sebelum pemberian kombinasi herbal probiotik 100% resisten terhadap ampicilin, siprofloksasin, kanamisin, penisilin, streptomisin dan 33% resisten terhadap tetrasiklin. Sampel setelah pemberian 100% resisten terhadap seluruh antibiotik yang diujikan tersebut. Pada kelompok perlakuan dengan pemberian kombinasi herbal probiotik, performa ayam broiler yang meliputi konsumsi pakan dan pertambahan bobot mengalami peningkatan serta nilai FCR yang lebih rendah dari kelompok kontrol. Hasil penelitian menunjukkan pemberian kombinasi herbal probiotik dalam air minum berpengaruh terhadap sifat resistensi bakteri baik dalam saluran pencernaan dan mampu meningkatkan performa ayam broiler namun secara tidak signifikan. Performa paling baik ditunjukkan kelompok perlakuan pada minggu kelima dengan rata-rata bobot badan sebesar 2,5 kg dan nilai FCR 1,38.

Kata kunci: ayam broiler, imbuhan pakan, antibiotik, resistensi, performa

## ABSTRACT

### **THE EFFECT OF HERBS AND PROBIOTICS COMBINATION AS FEED ADDITIVES ON THE RESISTANCE CHARACTERISTIC OF DIGESTIVE TRACT BACTERIA AND THE PERFORMANCE OF BROILER CHICKENS**

**Elysha Angelina S.  
20/459029/KH/10653**

Use of antibiotics as feed additives has been prohibited because possibility of resistance. Alternatives that can maintain health and increase poultry production are needed. One of it is by providing probiotics and herbs. This research aims to analyze the effect of adding combination probiotics herbs as feed additives to resistance characteristics of digestive tract bacteria and performance of broiler chickens.

The material used in this research was 74 Lohman strain broiler chicken which were divided into two groups, with each group consisting of 37 chickens. The treatment group was given combination of herbs and probiotics in drinking water, while the control group was given no combination of herbs and probiotics. Chickens are kept for 35 days. Three cloacal swab samples were taken before treatment and three samples after treatment then an antibiotic sensitivity test was carried out using the Kirby Bauer method. Testing was carried out on the antibiotics ampicillin 10 µg, ciprofloxacin 10 µg, kanamycin 30 µg, penicillin 10 µg, streptomycin 10 µg, and tetracycline 30 µg. The resistance results obtained from zone of inhibition formed and compared with CLSI standard. The performances of broiler chickens are observed by measuring body weight gain and calculating feed conversion at the end of every week. Data on average feed consumption, body weight and FCR were analyzed and tested using the T-Independent method in the SPSS program.

Resistance test on samples before administration feed additives was 100% resistant to ampicillin, ciprofloxacin, kanamycin, penicillin, streptomycin and 33% resistant to tetracycline. The samples after administration was 100% resistant to all of the antibiotics tested. In the treatment group given a combination of herbs and probiotics, performance of broiler chickens includes feed consumption and body weight gain increased and the FCR value was lower than the control group. The results of this research showed that giving a combination of herbs and probiotics in drinking water had effect on the resistance characteristics of good bacteria in the digestive tract and was able to improves the performance of broiler chickens, but not significantly. The best performance was shown by the treatment group in the fifth week with average body weight of 2,5 kg and FCR value of 1,38.

*Keywords: broiler chicken, feed additive, antibiotics, resistance, performance*