

## ABSTRAK

### **PENGARUH SUPLEMENTASI BERBAGAI PROBIOTIK PADA AIR MINUM TERHADAP TITER ANTIBODI AVIAN INFLUENZA (AI) DAN NEWCASTLE DISEASE (ND) BROILER**

Oleh

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Penelitian ini bertujuan untuk mengetahui tingkat titer antibodi AI dan ND pada broiler yang diberikan suplementasi berbagai jenis probiotik. Penelitian ini dilaksanakan pada Januari—Februari 2018 di Pesawaran Farm, Pesawaran dan analisis titer antibodi dilakukan di PT. Agrinusa Jaya Sentosa, Jakarta. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan empat perlakuan dan tiga ulangan yaitu air minum tanpa suplementasi probiotik (P0), air minum dengan suplementasi probiotik A (P1), air minum dengan suplementasi probiotik B (P2), air minum dengan suplementasi probiotik C (P3). Hasil penelitian ini menunjukkan bahwa titer antibodi AI yang dianalisis dengan metode *haemagglutination inhibition (HI)* dari 60 sampel menunjukkan hasil yang tidak berbeda nyata, namun Perlakuan P3 (suplementasi probiotik C) memiliki nilai rata-rata jumlah titer antibodi AI tertinggi yaitu 4,13 log 2 dibandingkan dengan P0 (tanpa suplementasi probiotik), P1 (suplementasi probiotik A), dan P2 (suplementasi probiotik B). Hanya P3 yang memiliki tingkat antibodi AI yang protektif ( $\geq 4 \log 2$ ). Hasil analisis HI titer antibodi ND menunjukkan bahwa semua perlakuan tidak berpengaruh nyata terhadap titer antibodi ND dan berada di bawah standar protektif.

Kata kunci: *broiler*, probiotik, titer antibodi, *Avian Influenza*, *Newcastle Disease*.

## ABSTRACT

### **THE EFFECT OF PROBIOTIC SUPPLEMENTATION IN THE DRINKING WATER ON BROILER AVIAN INFLUENZA (AI) AND NEWCASTLE DISEASE (ND) TITER ANTIBODY**

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This research intended to determine the level of broiler AI and ND titer antibody which is supplemented with various types of probiotics. This research was conducted in January—February 2018 at Pesawaran Farm and the titer antibody analysis was done in PT. Agrinusa Jaya Sentosa, Jakarta. This research use Completely Randomized Design (RAL) with four treatment and three repetition that is without probiotic supplementation (P0), drinks with probiotic A supplementation (P1), drinks with probiotic B supplementation (P2), drinks with probiotic C supplementation (P3). The results of this research indicated the AI titer antibody which analyzed with haemagglutination inhibition (HI) from 60 sample is not significantly different between every treatments but the P3 treatment (supplemented with probiotic C) have higher average AI antibody titer level of 4.13 log 2 compared P0 (without probiotics supplementation), P1 (supplemented with probiotic A), P2 (supplemented with probiotic B). Only P3 treatment have protective AI titer antibody level ( $\geq 4 \log 2$ ). The ND HI analysis result show that all treatments have not significantly different ND titer antibody and below the protective standard.

Key words: broiler, probiotic, titer antibody, *Avian Influenza*, *Newcastle Disease*.