

## ABSTRAK

### **PENGARUH PEMBERIAN EKSTRAK TEMULAWAK (*Curcuma xanthorrhiza*) DALAM AIR MINUM TERHADAP TITER ANTIBODI AVIAN INFLUENZA (AI) DAN NEWCASTLE DISEASE (ND) PADA AYAM KUB (KAMPUNG UNGGUL BALITNAK)**

Oleh

**Mokhamad Aiyon Suharis**

Penelitian ini bertujuan untuk mengetahui dosis terbaik pemberian ekstrak temulawak (*Curcuma xanthorrhiza*) terhadap titer antibodi *Avian Influenza* (AI) dan *Newcastle Disease* (ND) ayam KUB. Penelitian ini dilaksanakan pada Desember 2022—Februari 2023 dan berlokasi di Kandang *Open House* Laboratorium Lapangan Terpadu Fakultas Pertanian dan Laboratorium Pengolahan Limbah Agroindustri, Jurusan Teknologi Hasil Pertanian, Fakultas Pertanian, Universitas Lampung. Pemeriksaan titer antibodi AI dan ND dilakukan di AgriLab PT. Agrinusa Jaya Santosa, Bandar Lampung. Rancangan percobaan yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 5 ulangan. Perlakuan yang diberikan yaitu P0: air minum tanpa ekstrak temulawak (*Curcuma xanthorrhiza*), P1: air minum dengan penambahan 5% ekstrak temulawak (*Curcuma xanthorrhiza*) (5 ml ekstrak temulawak + 95 ml air), P2: air minum dengan penambahan 10% ekstrak temulawak (*Curcuma xanthorrhiza*) (10 ml ekstrak temulawak + 90 ml air), dan P3: air minum dengan penambahan 15% ekstrak temulawak (*Curcuma xanthorrhiza*) (15 ml ekstrak temulawak + 85 ml air). Data yang diperoleh dianalisis menggunakan analisis ragam dengan taraf nyata 5% dan dilanjutkan dengan uji polinomial ortogonal. Hasil penelitian menunjukkan bahwa pemberian ekstrak temulawak (*Curcuma xanthorrhiza*) dalam air minum berpengaruh nyata ( $P < 0,05$ ) terhadap titer antibodi ND. Namun, pemberian ekstrak temulawak (*Curcuma xanthorrhiza*) dalam air minum tidak berpengaruh nyata ( $P > 0,05$ ) terhadap titer antibodi AI. Hasil uji polinomial ortogonal berpola linier dengan persamaan pada titer antibodi AI yaitu  $\hat{y} = 0,0533x + 1,0667$  dan pada titer antibodi ND yaitu  $\hat{y} = 4,3893x + 64,08$ . Dosis pemberian ekstrak temulawak optimum pada titer antibodi ND adalah 14,60%.

**Kata Kunci:** Ekstrak Temulawak, KUB, Titer Antibodi AI, Titer Antibodi ND.

## ABSTRACT

### THE EFFECT OF TURMERIC EXTRACT (*Curcuma xanthorrhiza*) IN DRINKING WATER TOWARDS AVIAN INFLUENZA (AI) AND NEWCASTLE DISEASE (ND) ANTIBODY TITERS IN KUB CHICKEN (KAMPUNG UNGGUL BALITNAK)

By

**Mokhamad Aiyon Suharis**

This study aims to determine the best dose of turmeric extract (*Curcuma xanthorrhiza*) against Avian Influenza (AI) and Newcastle Disease (ND) antibody titers of KUB chickens. This research was conducted in December 2022—February 2023 and is located in *Open House* Cage Integrated Field Laboratory Faculty of Agriculture and Agro-industrial Waste Management Laboratory, Department of Agricultural Product Technology, Faculty of Agriculture, University of Lampung. AI and ND antibody titers were examined at AgriLab PT. Agrinusa Jaya Santosa, Bandar Lampung. The experimental design used was a completely randomized design (CRD) with 4 treatments and 5 replications. The treatment given was P0: drinking water without turmeric extract (*Curcuma xanthorrhiza*), P1: drinking water with the addition of 5% turmeric extract (*Curcuma xanthorrhiza*) (5 ml of turmeric extract + 95 ml of water), P2: drinking water with the addition of 10% turmeric extract (*Curcuma xanthorrhiza*) (10 ml of turmeric extract + 90 ml water), and P3: drinking water with the addition of 15% turmeric extract (*Curcuma xanthorrhiza*) (15 ml of turmeric extract + 85 ml of water). The data obtained were analyzed using analysis of variance with a significance level of 5% and followed by an orthogonal polynomial test. The results showed that the addition turmeric extract (*Curcuma xanthorrhiza*) in drinking water had a significant effect ( $P < 0,05$ ) on ND antibody titers. However, the addition of turmeric extract (*Curcuma xanthorrhiza*) in drinking water had no significant effect ( $P > 0,05$ ) on AI antibody titers. The results of the orthogonal polynomial test have a linear pattern with the equation for the AI antibody titer, namely  $\hat{y} = 0.0533x + 1.0667$  and for the ND antibody titer, namely  $\hat{y} = 4.3893x + 64.08$ . The optimum dose of turmeric extract for ND antibody titer was 14.60%.

**Keywords:** AI Antibody Titer, KUB, ND Antibody Titer, Turmeric Extract.