

ABSTRACT

THE EFFECTS OF SUPPLEMENTATION OF MAGGOT BLACK SOLDIER FLY (BSF) FLOUR ON TOTAL PROTEIN PLASMA AND BLOOD GLUCOSE OF FEMALE JOPER CHICKEN

By

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This research aimed to determine the effects of *Black Soldier Fly* maggot flour supplementation and optimum percentage on total plasma protein and blood glucose levels of female joper chickens. This research was conducted from January to March 2022 and is located on Jl. Padat Karya No.6, Labuhan Dalam, Tj. Senang Sub-district, Bandar Lampung City. The blood samples for total plasma protein and blood glucose were analyzed at Pramitra Biolab Laboratory, Bandar Lampung. The experimental design was a completely randomized design with four treatments and five replications. The treatments were basal ration (P0), basal ration with 5% maggot flour supplementation (P1), basal ration with 10% maggot flour supplementation (P2), and basal ration with 15% maggot flour supplementation (P3). The data obtained were analyzed using analysis of variance with a significance level of 5% and continued with the test with orthogonal polynomials. The results of the orthogonal polynomial test with a cubic pattern with the equation for total plasma protein is $\hat{Y} = -0,006x^3 + 0,1316x^2 - 0,6247x + 2,68$ [0;15%] and on blood glucose $\hat{Y} = -0,1645x^3 + 3,192x^2 - 10,087x + 125,6$ [0 ;15%]. The optimum dose of Maggot flour supplementation for total plasma protein was 11,47%, with a level of 3,78 mg/dl. Meanwhile, the blood glucose level was 11,17%, at 182,02 mg/dl.

Keywords: Total Plasma Protein, Blood Glucose, Maggot Flour, and Joper chicken.

ABSTRAK

PENGARUH SUPLEMENTASI TEPUNG MAGGOT *BLACK SOLDIER FLY* (BSF) TERHADAP TOTAL PROTEIN PLASMA DAN GLUKOSA DARAH AYAM JOPER BETINA

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Penelitian ini bertujuan untuk mengetahui pengaruh suplementasi tepung maggot *Black Soldier Fly* dan persentase optimum terhadap kadar total protein plasma dan glukosa darah ayam joper betina. Penelitian ini dilaksanakan pada Januari – Maret 2022 dan berlokasi di Jl. Padat Karya No.6, Labuhan Dalam, Kec. Tj. Senang, Kota Bandar Lampung. Analisis sampel darah total protein plasma dan glukosa darah dilakukan di Laboratorium Pramitra Biolab, Bandar Lampung. Rancangan percobaan yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 5 ulangan. Perlakuan yang diberikan yaitu ransum basal (P0), ransum basal dengan suplementasi 5% tepung maggot (P1), ransum basal dengan suplementasi 10% tepung maggot (P2), dan ransum basal dengan suplementasi 15% tepung maggot (P3). Data yang diperoleh dianalisis menggunakan analisis ragam dengan taraf nyata 5% dan dilanjutkan uji dengan polinomial ortogonal. Hasil uji lanjut polinomial ortogonal berpola kubik dengan persamaan pada total protein plasma yaitu $\hat{Y} = -0,006x^3 + 0,1316x^2 - 0,6247x + 2,68$ [0;15%] dan pada glukosa darah $\hat{Y} = -0,1645x^3 + 3,192x^2 - 10,087x + 125,6$ [0;15%]. Dosis suplementasi tepung maggot optimum pada total protein plasma yaitu 11,47% dengan kadar 3,78 mg/dl, sedangkan pada glukosa darah 11,17% dengan kadar 182,02 mg/dl.

Kata Kunci: Total Protein Plasma, Glukosa Darah, Tepung maggot, dan Ayam joper.