

## **PENGARUH PENGGUNAAN TEPUNG *FULL-FAT* DAN *DEFATTED* LARVA *BLACK SOLDIER FLY* (*Hermetia illucens*) DALAM RANSUM TERHADAP BIOKIMIA DARAH ITIK PEDAGING**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan tepung *full-fat* dan *defatted* larva *Black Soldier Fly* (BSF; *Hermetia illucens*) dalam ransum terhadap biokimia darah itik pedaging. Total 140 ekor itik dibagi menjadi 5 perlakuan yaitu kontrol = pakan basal tanpa penambahan tepung larva BSF, FF8 = Kontrol + *full-fat* BSF 8%, FF16 = kontrol + *full-fat* BSF 16%, DF8 = kontrol + *defatted* BSF 8%, dan DF16 = kontrol + *defatted* BSF 16%. Setiap perlakuan terdiri dari 4 ulangan dengan 7 ekor itik per perlakuan. Hasil penelitian menunjukkan bahwa penambahan tepung larva BSF tidak berpengaruh pada kadar protein dalam darah itik ( $p > 0,05$ ). Kadar albumin dalam darah mengalami peningkatan pada semua perlakuan ( $p < 0,05$ ). Kadar glukosa darah meningkat pada perlakuan pakan FF8 dan DF8 ( $p < 0,01$ ), meskipun pada perlakuan DF16 kadar glukosa lebih rendah dibanding dengan kontrol dan perlakuan FF16 tidak menunjukkan perbedaan terhadap kontrol. Kadar kalsium dalam darah pada FF8 dan DF8 tidak berbeda dengan kontrol, namun meningkat pada FF16 dan menurun pada DF16 ( $p < 0,01$ ). Penambahan tepung larva BSF dalam ransum menurunkan kadar fosfat ( $p < 0,01$ ) dengan kadar paling rendah pada perlakuan DF8. Pemberian pakan pada perlakuan DF8 meningkatkan kadar trigliserida sedangkan pada perlakuan lainnya tidak berbeda dengan kontrol ( $p < 0,05$ ). Kadar kolesterol dalam darah itik meningkat pada semua perlakuan ( $p < 0,05$ ). Perlakuan FF16 dan DF16 meningkatkan kadar HDL dalam darah ( $p < 0,05$ ) meskipun pada FF8 dan DF8 tidak berbeda dengan kontrol. Kesimpulan penelitian ini yaitu penambahan tepung larva BSF pada level 8% *defatted* dapat meningkatkan kadar albumin, glukosa, trigliserida, kolesterol dan LDL serta menurunkan kadar fosfat dalam darah itik.

Kata kunci: biokimia darah, itik, pakan, protein, tepung larva BSF

## **EFFECT OF USING FULL-FAT AND DEFATTED BLACK SOLDIER FLY LARVAE MEAL (*Hermetia illucens*) IN RATIONS ON THE BIOCHEMISTRY OF DUCK BLOOD**

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### **ABSTRACT**

This study aims to determine the effect of using full-fat and defatted Black Soldier Fly larvae meal (BSF; *Hermetia illucens*) in rations against the biochemistry of broiler duck blood. A total of 140 ducks were divided into 5 treatments, namely control = basal feed without the addition of BSF larvae meal, FF8 = control + full-fat BSF 8%, FF16 = control + full-fat BSF 16%, DF8 = control + defatted BSF 8%, and DF16 = control + defatted BSF 16%. Each treatment consists of 4 repetitions with 7 ducks per treatment. The results showed that the addition of BSF larvae meal did not affect protein levels in duck blood ( $p > 0.05$ ). Blood albumin levels increased in all treatments ( $p < 0.05$ ). Blood glucose levels increased in FF8 and DF8 feed treatment ( $p < 0.01$ ), although in DF16 treatment glucose levels were lower than in control and FF16 treatment did not show a significant difference in control. Blood calcium levels in FF8 and DF8 were no different from controls, but increased in FF16 and decreased in DF16 ( $p < 0.01$ ). The addition of BSF larval flour in the ration decreased phosphate levels ( $p < 0.01$ ) with the lowest levels in DF8 treatment. Feeding in the DF8 treatment increased triglyceride levels while in other treatments it was no different from the control treatment ( $p < 0.05$ ). Cholesterol levels in duck blood increased at all treatments ( $p < 0.05$ ). FF16 and DF16 treatments increased HDL levels in the blood ( $p < 0.05$ ) although FF8 and DF8 were no different from controls. This study concluded that the addition of BSF larvae meal at 8% defatted level can increase levels of albumin, glucose, triglycerides, cholesterol and LDL and reduce phosphate levels in ducks' blood.

Keywords: blood biochemistry, ducks, feed, protein, BSF larval flour