

**PERFORMA PERTUMBUHAN DAN STRUKTUR HISTOLOGIS
ORGAN LIMFOID AYAM BROILER *Gallus gallus gallus* (Linnaeus, 1758)
SETELAH PEMBERIAN MINYAK HATI IKAN PARI TOTOL BIRU
[*Neotrygon caeruleopunctata* (Last, White & Seré, 2016)]**

Filda Mega Ayunda

21/475272/BI/10729

Dosen Pembimbing: Dr. med. vet. drh. Hendry T.S.S.G. Saragih, M.P.

INTISARI

Omega-3 merupakan asam lemak esensial pada asupan nutrisi manusia, yang bisa didapatkan dari mengkonsumsi daging dan telur. Sumber protein utama sebagian masyarakat adalah ayam sehingga penting untuk meningkatkan kualitas daging dan telur ayam. Salah satu caranya adalah dengan menambahkan minyak hati ikan pari, yang mengandung berbagai asam lemak jenuh dan tak jenuh dalam jumlah tinggi. Penelitian ini bertujuan untuk mempelajari dan mengetahui performa pertumbuhan dan morfologi organ limfoid ayam broiler, serta mengetahui konsentrasi optimal Minyak Hati Ikan Pari (MHIP) yang dapat mempengaruhi pertumbuhannya. Ayam yang digunakan berjumlah 300 ekor *Day-Old Chicken* (DOC) dengan jenis kelamin campur (jantan dan betina), yang dibagi ke dalam 4 kelompok dan 5 pengulangan dengan jumlah ayam broiler 15 ekor pada tiap ulangan. Pemeliharaan dilakukan selama 16 hari, yaitu 3 hari aklimasi dan 13 hari perlakuan. Kelompok kontrol hanya diberikan Pakan Basal (PB), sedangkan kelompok perlakuan diberikan tambahan konsentrasi MHIP. Perlakuan 1 diberikan 0,5% minyak hati/kg PB, perlakuan 2 diberikan 1% minyak hati/kg PB, dan perlakuan 3 diberikan 2% minyak hati/kg PB. Pengamatan dan pengambilan data yang dilakukan meliputi performa pertumbuhan, morfometri tubuh, struktur histologis dan indeks organ bursa fabricus dan lien. Selain itu, analisis data dilakukan menggunakan *One-Way* ANOVA dengan Uji Duncan dan tingkat kepercayaan 95% ($\alpha = 0,05$). Hasil penelitian menunjukkan bahwa kelompok P3 mengalami peningkatan signifikan dibandingkan kelompok K, P1, dan P2 pada performa pertumbuhan dan morfometri tubuhnya. Area pulpa putih lien, folikel, korteks, dan medula bursa Fabricius pada kelompok P3 memiliki hasil yang paling tinggi daripada kontrol dan perlakuan lainnya. Dengan demikian, dapat disimpulkan bahwa pemberian perlakuan MHIP totol biru dengan konsentrasi 2% mampu meningkatkan performa pertumbuhan, morfometri tubuh, struktur histologis dan indeks organ bursa Fabricius dan lien.

KATA KUNCI: asam lemak, ayam broiler, bursa fabricius, hati ikan pari, lien.

**GROWTH PERFORMANCE AND HISTOLOGICAL STRUCTURE OF
LYMPHOID ORGAN OF BROILER CHICKENS *Gallus gallus gallus*
(Linnaeus, 1758) AFTER ADMINISTRATION OF BLUE-SPOTTED
MASKRAY LIVER OIL [*Neotrygon caeruleopunctata*
(Last, White & Serét, 2016)]**

Filda Mega Ayunda

21/475272/BI/10729

Supervisor: Dr. med. vet. drh. Hendry T.S.S.G. Saragih, M.P.

ABSTRACT

Omega-3 is an essential fatty acid in human nutritional intake, which can be obtained from consuming meat and eggs. The main source of protein for many people is chicken, making it important to improve the quality of chicken meat and eggs. One way to do this is by adding maskray liver oil extract, which contains high amounts of omega-3. This study aims to investigate and understand the growth performance and lymphoid organ morphology of broiler chickens, as well as to determine the optimal concentration of maskray liver extract that can affect their growth. The chicken used were 300 *Day-Old Chicken* (DOC) with mixed sex (male and female), divided into 4 groups and 5 repetitions each with 15 broiler chickens in each repetition. Chicken rearing is carried out for 16 days with 3 days of acclimation and 13 days of treatment. The control group was only given Basal Feed (BF), while the treatment groups were given additional concentrations of maskray liver extract. Treatment 1 was given 0.5% liver extract/kg BF, treatment 2 was given 1% liver extract/kg BF, and treatment 3 was given 2% liver extract/kg BF. Observations and data collection included growth performance, body morphometry, histological structure, and the organ index of the bursa of Fabricius and spleen. Additionally, data analysis was performed using One-Way ANOVA with Duncan's Test and a 95% confidence level ($\alpha = 0.05$). The results showed that group T3 had a significant improvement compared to groups C, T1, and T2 in growth performance and body morphometry. The white pulp area of spleen and the follicles, cortex, and medulla area of bursa Fabricius in the P3 group had the highest result compared to controls and other treatment. Thus, it can be concluded that the treatment of blue-spotted maskray liver oil extract with a concentration of 2% is able to improve growth performance, body morphometry, histological structure and organ index of bursa Fabricius and spleen.

KEYWORDS: broiler chicken, bursa fabricius, fatty acid, spleen, maskray liver.