

**STRUKTUR HISTOLOGIS OTOT PEKTORALIS DAN PERFORMA
PERTUMBUHAN AYAM BROILER [*Gallus gallus gallus* (Linnaeus, 1758)]
SETELAH PEMBERIAN SUPLEMEN MAKROALGA LAUT
Chaetomorpha linum (O. F. Muller) Kutzing**

Indah Nur Fauziah

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INTISARI

Meningkatnya permintaan daging ayam mengakibatkan peningkatan kebutuhan pakan dan suplemen yang dapat mengoptimalkan performa pertumbuhan dan mengoptimalkan kualitas daging ayam. Namun sejak dilarangnya penggunaan *antibiotic growth promotor* (AGP) pada pakan ayam, penggunaan suplemen yang berasal dari bahan alami menjadi alternatif dalam industri ayam. *Chaetomorpha linum* (CL) merupakan salah satu makroalga laut yang tersedia sepanjang tahun dan tersedia secara lokal di wilayah pesisir Indonesia. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian *Chaetomorpha linum* terhadap struktur histologis otot pektoralis dan performa pertumbuhan ayam broiler. Penelitian ini menggunakan 300 *day old chicks* (DOC) ayam broiler jantan yang dipelihara hingga berumur 21 hari. Penelitian ini menggunakan rancangan acak lengkap, dengan 4 kelompok perlakuan dan 5 ulangan, setiap kelompok ulangan berisi 15 DOC. Kelompok perlakuan pada penelitian ini terdiri dari CON, kontrol pakan basal (BF); CL1 (0,75%/kg BF); CL2 (1,5%/kg BF); CL3 (3%/kg BF). Parameter yang diamati adalah struktur histologis otot pektoralis dan performa pertumbuhan. Analisis data menggunakan uji *one way* ANOVA dan dilanjutkan dengan uji lanjut Duncan dengan signifikansi $P < 0,05$. Penelitian ini menunjukkan bahwa histomorfologi otot pektoralis yang meliputi luas fasikulus dan miofiber, dan jumlah miofiber, serta performa pertumbuhan yang meliputi berat badan, *weight gain*, *feed intake*, *feed conversion ratio* (FCR), dan morfometri tubuh pada kelompok perlakuan CL1 (0,75%/kg BF), CL2 (1,5%/kg BF) dan CL3 (3%/kg BF) meningkat secara signifikan dibandingkan dengan kelompok CON. Pemberian *C. linum* sebagai suplemen dalam pakan ayam broiler meningkatkan histomorfologi otot pektoralis dan performa pertumbuhan.

Kata Kunci: broiler, alternatif pakan, fasikulus, *myofiber*, produk laut

**HISTOLOGICAL STRUCTURE OF PECTORAL MUSCLE AND
GROWTH PERFORMANCE OF BROILER [*Gallus gallus gallus* (Linnaeus,
1758)] AFTER THE INCLUSION OF MARINE MACROALGAE
Chaetomorpha linum (O. F. Muller) Kutzing SUPPLEMENT**

Indah Nur Fauziah

21/490664/PBI01816

ABSTRACT

The increase in demand for chicken meat has resulted in an increase in the need for feed and supplements that can optimize growth performance and optimize chicken meat quality. However, since the ban on the use of antibiotic growth promoters (AGP) in chicken feed, the use of supplements derived from natural ingredients has become an alternative in the chicken industry. *Chaetomorpha linum* (CL) is one of the marine macroalgae that is available throughout the year and locally available in Indonesia coastal area. This study aims to observe the effect of *Chaetomorpha linum* on the histological structure of the pectoral muscle and growth performance of broiler. 300 day old chicks (DOC) male broilers were reared until they were 21 days old. This research used a completely randomized design, with 4 treatment groups and 5 replications, each replication group contained 15 DOC. The treatment groups in this study consisted of CON, control basal feed (BF); CL1 (0.75%/kg BF); CL2 (1.5%/kg BF); CL3 (3%/kg BF). The parameters observed were the histological structure of the pectoral muscle and growth performance. Data were analyzed using one way ANOVA and continued with post-hoc Duncan test with a significance of $P < 0,05$. The result revealed the pectoral muscle histomorphology which includes the area of fascicles and myofibers, and the total number of myofibers, as well as growth performance which includes body weight, weight gain, feed intake, feed conversion ratio (FCR), and body morphometry of CL1 (0.75%/kg BF), CL2 (1.5%/ kg BF) and CL3 (3%/ kg BF) groups improved significantly compared to CON groups. Conclusively, the inclusion of *C. linum* as supplement in broiler feed improves pectoral muscle histomorphology and growth performance.

Keywords: broiler, alternative feed, fasciculus, myofibers, marine product