

MANFAAT PENAMBAHAN TEPUNG KACANG SACHA INCHI (*Plukenetia volubilis*) UNTUK MENINGKATKAN KUALITAS FISIK DAGING AYAM BROILER

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INTISARI

Industri ayam broiler di Indonesia terus berkembang pesat karena permintaan daging ayam yang tinggi dan harganya terjangkau. Konsumsi daging ayam terus meningkat setiap tahun, didukung oleh kandungan gizinya yang lengkap. Kualitas daging dipengaruhi oleh pakan, salah satunya penggunaan tepung kacang sachu inchi yang bernutrisi tinggi. Penelitian dilakukan untuk mengetahui kualitas fisik daging ayam broiler yang mendapatkan pakan dengan penambahan tepung kacang sachu inchi (*Plukenetia volubilis*). Seratus ekor anak ayam broiler Strain Indian River umur sehari dipelihara di dalam kandang *closed house*, Fakultas Peternakan, Universitas Gadjah Mada Yogyakarta. Seluruh ayam mendapatkan pakan *starter* yang sama pada umur 0-7 hari (protein kasar 22,30% dan energi termetabolis 3150 kkal/kg). Pada umur 8-35 hari setiap ayam mendapatkan salah satu dari 4 perlakuan pakan *grower*, yaitu: pakan basal (protein kasar 21,30% dan energi termetabolis 3100 kkal/kg) tanpa penambahan tepung kacang sachu inchi (KSI), pakan basal + 0,5% KSI, pakan basal + 1,0% KSI, atau pakan basal + 2,0% KSI. Setiap perlakuan pakan diberikan replikasi sebanyak 5 kali, masing-masing dengan 5 ekor ayam di setiap kandang replikasi. Pakan perlakuan dan air minum diberikan secara *ad libitum*. Variabel data yang diamati dalam parameter kualitas fisik daging ini adalah nilai keasaman (pH), susut masak, daya ikat air (DIA), dan nilai keempukan daging. Data yang diperoleh diuji statistik menggunakan rancangan acak lengkap pola searah, berbasis nilai $P < 0,05$. Setiap data dengan perbedaan yang nyata diuji lanjut menggunakan Uji Duncan's new Multiple Range Test. Hasil penelitian menunjukkan bahwa penambahan tepung kacang sachu inchi tidak memengaruhi nilai keasaman daging, daya ikat air, maupun susut masak daging. Namun demikian, penambahan 0,5% tepung kacang sachu inchi dalam pakan meningkatkan nilai keempukan daging ($P < 0,05$). Dapat disimpulkan bahwa penambahan tepung kacang sachu inchi dalam pakan bermanfaat meningkatkan nilai keempukan daging, sebagai salah satu variabel paling penting dalam kualitas fisik daging ayam broiler.

(Kata kunci: Ayam broiler, Kualitas fisik daging, Suplementasi pakan, Tepung kacang sachu inchi)

**BENEFIT OF THE DIETARY SACHA INCHI (*Plukenetia volubilis*)
MEAL SUPPLEMENTATION ON MEAT PHYSICAL
QUALITY IN BROILER CHICKENS**

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ABSTRACT

The broiler chicken industry in Indonesia has shown substantial growth in recent decades, driven by increasing consumer demand and the affordability of chicken meat. The continuous rise in per capita consumption is attributed to its high nutritional value, including essential proteins, vitamins, and minerals. Meat quality is significantly influenced by feed formulation, with the incorporation of nutrient-dense ingredients such as sachu inchi flour demonstrating potential to enhance broiler productivity and meat characteristics. This research was aimed to investigate the benefit of dietary sachu inchi (*Plukenetia volubilis*) meal supplementation on meat physical quality in broiler chickens. One hundred one-day-old Indian River broiler chicks were assigned in a closed poultry house at the Faculty of Animal Science, Universitas Gadjah Mada Yogyakarta. All chickens were received a same starter diet from day 1 to 7 (22.30% crude protein and 3150 kcal/kg metabolizable energy). From day 8 to day 35, each chicken was given one of four grower dietary treatments: basal diet (21.30% crude protein and 3100 kcal/kg metabolizable energy) without sachu inchi meal (KSI), basal diet + 0.5% KSI, basal diet + 1.0% KSI, or basal diet + 2.0% KSI. Each treatment was replicated five times, with five chickens per replicate cage. Feed and water were provided *ad libitum*. The meat physical quality variables observed included pH, cooking loss, water-holding capacity, and meat tenderness. The data were statistically analyzed using a completely randomized design with a probability level of $P < 0.05$. Data with significant difference was further analyzed using Duncan's new multiple range test. Result showed that dietary supplementation of sachu inchi meal did not affect meat pH, water-holding capacity, nor cooking loss. However, dietary supplementation with 0.5% sachu inchi meal increased meat tenderness ($P < 0.05$). It can be concluded that dietary supplementation with sachu inchi meal beneficially improved meat tenderness as one of the most important variable in meat physical quality.

(Key Words: Broiler chicken, Dietary supplementation, Meat physical quality, Sachu inchi meal)