PENGARUH DURASI PENCAHAYAAN TERHADAP ANGKA KEMATIAN, NILAI KONVERSI PAKAN, TONASE PANEN, DAN KESERAGAMAN AYAM BROILER

INTISARI

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Penelitian ini bertujuan untuk mengetahui manfaat durasi pencahayaan terhadap angka kematian, konversi pakan, tonase panen, angka lesi dan angka keseragaman pada ayam broiler. Penelitian ini terdiri dari 4 perlakuan program durasi pencahayaan dan 6 ulangan. Perlakuan yang diberikan adalah P1 = pencahayaan full 24 jam, P2 = pencahayaan 18 jam, P3 = pencahayaan non *intermittent*, P4 = pencahayaan *intermittent*. Seluruh data yang diperoleh akan dianalisis statistik menggunakan Rancangan Acak Lengkap Pola Searah dan dilanjutkan dengan analisis Duncan's new Multiple Range Test. Hasil menunjukkan bahwa pengurangan pencahayaan dari 24 menjadi 18 jam tidak memengaruhi tonase panen, konversi pakan, angka lesi dan angka keseragaman karkas. Namun demikian, pencahayaan *intermittent* (P4) memberikan penurunan konversi pakan hingga 84,35% ($P<0,001$). Pola pencahayaan P4 juga memberikan angka kematian yang lebih rendah dibandingkan P1 hingga 64,35% dan meningkatkan keseragaman karkas ($P<0,001$). Selain itu, pencahayaan P4 juga memberikan angka lesi pada dada, kaki, dan sayap ayam broiler yang lebih rendah jika dibandingkan dengan P1 ($P<0,001$). Hasil ini menunjukkan bahwa pencahayaan *intermittent* memberikan manfaat optimal dalam meningkatkan performa produksi, kualitas dan keseragaman ayam broiler dibandingkan pencahayaan penuh atau non *intermittent*.

Kata Kunci: Angka lesi, Ayam broiler, Durasi pencahayaan, Keseragaman, Performa produksi

THE EFFECTS OF LIGHTING DURATION ON MORTALITY RATE, FEED CONVERSION RATIO, TONNAGE HARVESTING, AND UNIFORMITY OF BROILER CHICKENS

ABSTRACT

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This study investigated the effects of lighting duration methods on mortality rates, feed conversion ratio, tonnage harvesting, lesion scores, and uniformity index in broiler chickens. The study involved four lighting duration treatments and six replications. The treatments were as follows: P1 = full 24-hour lighting, P2 = 18-hour lighting, P3 = non-intermittent lighting, and P4 = intermittent lighting. All data collected were statistically analyzed using Completely Randomized Design with a one-way arrangement, followed by Duncan's New Multiple Range Test. Results indicated that reducing lighting duration from 24 to 18 hours did not affect tonnage harvesting, feed conversion ratio, lesion scores, or carcass uniformity. However, intermittent lighting (P4) significantly reduced feed conversion ratio by 84.35% ($P<0.001$). The P4 lighting pattern also resulted in a 64.35% lower mortality rate compared to P1 and significantly improved carcass uniformity ($P<0.001$). Additionally, P4 lighting resulted in significantly lower lesion scores on broiler chickens' breasts, legs, and wings than P1 ($P<0.001$). These findings suggest that intermittent lighting offers optimal benefits in improving production performance, quality, and uniformity of broiler chickens compared to full or non-intermittent lighting.

Keywords: Broiler chickens, Lesion scores, Lighting duration, Uniformity, Production performance