

ABSTRAK

EFEK SUPLEMENTASI KOMBINASI HERBAL DAN PROBIOTIK SEBAGAI ADITIF PAKAN TERHADAP PERFORMA PRODUKSI AYAM PETELUR PADA PERIODE PRODUKSI

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Pemberian *Antibiotic Growth Promoter* (AGP) sebagai aditif pakan dikenal dapat meningkatkan performa produksi, namun penggunaannya kini dilarang karena menimbulkan residu dan resistensi antibiotik. Sebagai alternatif, aditif pakan alami seperti kombinasi herbal (*Zingiber officinale* var. *Rubrum* dan *Curcuma xanthorrhiza* Roxb.) dan probiotik (*Bacillus subtilis* dan *Lactobacillus acidophilus*) telah diketahui memiliki potensi untuk meningkatkan kesehatan usus, efisiensi metabolisme, dan daya tahan tubuh ayam. Penelitian ini bertujuan untuk mengevaluasi pengaruh kombinasi herbal dan probiotik sebagai aditif pakan terhadap berat telur, jumlah telur, *hen day production* (HDP), *hen housed production* (HHP), *feed conversion ratio* (FCR) pada ayam petelur strain *ISA Brown* selama tiga bulan. Sebanyak 40 ekor ayam umur 16 minggu dibagi menjadi dua kelompok: kontrol (tanpa aditif) dan perlakuan (pakan basal + herbal dan probiotik dengan dosis 3,5 kg/ton) selama 3 bulan. Pakan sebanyak 100 gram/ekor/hari diberikan dua kali sehari pada pukul 09.00 dan 15.00 dengan rasio 2:1 sedangkan air minum disediakan secara *ad libitum*. Telur dihitung dan ditimbang setiap hari untuk memperoleh data produksi jumlah telur, berat telur, total berat telur, HDP, dan HHP. Sisa pakan diukur guna menentukan konsumsi pakan yang selanjutnya digunakan dalam perhitungan FCR per hari. Data yang diperoleh dianalisis menggunakan uji *Independent T-Test* dengan bantuan software SPSS versi 25.0. Hasil penelitian menunjukkan bahwa rata-rata berat telur pada kelompok kontrol (K) dan perlakuan (HP) masing-masing sebesar $53,91 \pm 2,88$ gram dan $53,50 \pm 2,47$ gram. Jumlah telur tercatat $69,55 \pm 6,12$ butir (K) dan $74,10 \pm 9,89$ butir (HP), dengan total berat telur $3.745,92 \pm 344,63$ gram (K) dan $3.960,72 \pm 553,41$ gram (HP). Nilai HDP sebesar $75,71 \pm 20,05\%$ pada kelompok K dan $80,00 \pm 15,05\%$ pada kelompok HP, sedangkan nilai HHP sebesar $60,17 \pm 16,07\%$ pada kelompok K dan $64,33 \pm 12,45\%$ pada kelompok HP. Nilai FCR masing-masing $2,66 \pm 1,15$ (K) dan $2,17 \pm 0,52$ (HP). Kesimpulan dari penelitian ini adalah aditif pakan herbal dan probiotik meningkatkan jumlah telur, HDP, dan HHP serta menurunkan FCR meski secara statistik tidak signifikan ($p > 0,05$).

Kata kunci: ayam petelur, produktivitas, herbal, probiotik, aditif pakan alami

ABSTRACT

EFFECT OF COMBINED HERBAL AND PROBIOTIC FEED ADDITIVES SUPPLEMENTATION ON LAYING HEN PERFORMANCE DURING THE PRODUCTION PERIOD

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The use of Antibiotic Growth Promoters (AGPs) as feed additives has been widely recognized for enhancing production performance; however, their use has been banned due to concerns regarding antibiotic residues and the emergence of antimicrobial resistance. As an alternative, natural feed additives such as a combination of herbs (*Zingiber officinale* var. Rubrum and *Curcuma xanthorrhiza* Roxb.) and probiotics (*Bacillus subtilis* and *Lactobacillus acidophilus*) have demonstrated potential in improving gut health, metabolic efficiency, and immune function in poultry. This study aimed to evaluate the effects of a herbal-probiotic combination as a feed additive on egg weight, egg number, hen day production (HDP), hen housed production (HHP), and feed conversion ratio (FCR) in ISA Brown laying hens over a three-month period. A total of 40 hens aged 16 weeks were assigned to two groups: a control group (K) with no additive and a treatment group receiving basal feed supplemented with the herbal-probiotic combination (HP) at a dose of 3.5 kg/ton for 3 months. Feed was provided at 100 gram/hen/day, administered twice daily at 09:00 and 15:00 in a 2:1 ratio, while drinking water was offered ad libitum. Eggs were counted and weighed daily to collect data on egg number, egg weight, total egg weight, HDP, and HHP. Feed residues were measured to determine daily feed intake, which was then used to calculate the FCR. Data were analyzed using an Independent T-Test with SPSS version 25.0. The results showed that the average egg weight in the control (K) and treatment (HP) groups was 53.91 ± 2.88 grams and 53.50 ± 2.47 grams, respectively. The number of eggs produced was 69.55 ± 6.12 (K) and 74.10 ± 9.89 (HP), with total egg weights of $3.745.92 \pm 344.63$ grams (K) and $3.960.72 \pm 553.41$ grams (HP). HDP value was $75.71 \pm 20.05\%$ in group K and $80.00 \pm 15.05\%$ in group HP, while the HHP value was $60.17 \pm 16.07\%$ in group K and $64.33 \pm 12.45\%$ in group HP. The FCR was 2.66 ± 1.15 in group K and 2.17 ± 0.52 in group HP. In conclusion, supplementation with herbal and probiotic feed additives tended to increase egg production, HDP, and HHP, as well as reduce the FCR, although the differences were not statistically significant ($p > 0.05$).

Key words: laying hens, productivity, herbs, probiotics, natural feed additives