

PENGARUH PEMBERIAN HERBAL KOMBINASI (*Zingiber officinale*, *Curcuma longa*, dan *Allium sativum*) TERFERMENTASI DALAM AIR MINUM TERHADAP KINERJA PERTUMBUHAN AYAM BROILER

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INTISARI

Penelitian ini ditujukan untuk mengetahui pengaruh pemberian fitobiotik herbal kombinasi (*Zingiber officinale*, *Curcuma longa*, dan *Allium sativum*) terfermentasi 1:1:1 dalam air minum terhadap kinerja pertumbuhan ayam broiler. Sembilan puluh ekor ayam broiler Cobb 500 jantan dipelihara dalam penelitian ini. Setiap ayam dalam penelitian ini mendapatkan 1 dari tiga perlakuan: pakan basal komersial + air minum (P0), pakan basal komersial + air minum + 10ml/L herbal kombinasi (P1), atau pakan basal komersial + air minum + 10ml/L herbal kombinasi terfermentasi (P2) selama 35 hari masa penelitian. Setiap perlakuan terdiri dari 5 replikasi, masing-masing replikasi terdapat 6 ekor ayam. Pakan basal berupa pakan komersial (*starter* dan *grower*) berbasis jagung kuning dan bungkil kedelai dengan kandungan CP 20-23%. Fermentasi herbal dilakukan menggunakan bakteri *starter* EM4 selama 3-5 hari. Parameter yang diteliti berupa kinerja pertumbuhan, yang meliputi data konsumsi pakan, penambahan bobot badan harian, konversi pakan, dan indeks kinerja. Data yang diperoleh dianalisis statistik menggunakan completely randomized design 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 herbal kombinasi jahe, kunyit, dan bawang putih dengan maupun tanpa fermentasi tidak berpengaruh terhadap kinerja pertumbuhan pada fase *grower* 1, *grower* 2, maupun fase *finisher*. Namun demikian, pada fase *starter* pemberian air minum dengan penambahan herbal kombinasi tanpa fermentasi meningkatkan penambahan bobot badan ayam ($P < 0,05$). Dapat disimpulkan bahwa penambahan air minum dengan herbal kombinasi tanpa fermentasi bermanfaat meningkatkan pertumbuhan ayam broiler Strain Cobb 500 pada fase awal pertumbuhan (*starter*).

Kata kunci: Ayam broiler, Fermentasi, Herbal kombinasi, Kinerja pertumbuhan

EFFECT OF FERMENTED HERBAL COMBINATION (*Zingiber officinale*, *Curcuma longa*, and *Allium sativum*) IN DRINKING WATER ON BROILER CHICKEN GROWTH PERFORMANCE

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ABSTRACT

This study aimed to investigate the effect of fermented herbal phytobiotic combinations (*Zingiber officinale*, *Curcuma longa*, and *Allium sativum*) at a ratio of 1:1:1 in drinking water on the growth performance of broiler chickens. Ninety male Cobb 500 broiler chickens were used in this research. Each chicken received one of three treatments: commercial basal feed + drinking water (P0), commercial basal feed + drinking water + 10ml/L herbal combination (P1), or commercial basal feed + drinking water + 10ml/L fermented herbal combination (P2) over a 35-day experimental period. Each treatment was replicated five times, with six chickens per replicate pen. The basal feed consisted of commercial *starter* and *grower* feed based on yellow corn and soybean meal with a crude protein content of 20-23%. The herbal mixture was fermented using EM4 bacterial *starter* for 3-5 days. Growth performance parameters, including feed consumption, average daily gain, feed conversion ratio, and performance index, were evaluated. Data were statistically analyzed using a one-way completely randomized design at a significance level of $P < 0.05$. Significant differences were further analyzed using Duncan's new multiple range test. Results showed that the addition of ginger, turmeric, and garlic herbal combinations, whether fermented or not, did not affect growth performance during the *grower 1*, *grower 2*, or *finisher* phases. However, during the *starter* phase, drinking water with the unfermented herbal combination significantly improved weight gain ($P < 0.05$). It can be concluded that adding an unfermented herbal combination to drinking water beneficially improved growth of Cobb 500 broiler chickens during the early growth phase (*starter*).

Keywords: Broiler chicken, Fermentation, Growth performance, Herbal combination