

ABSTRAK

PERBANDINGAN KUALITAS DAN STATUS MIKROBIOLOGI DAGING AYAM BROILER YANG DIBERI PREBIOTIK, PROBIOTIK DAN ANTIBIOTIC GROWTH PROMOTOR SELAMA PEMELIHARAAN

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Daging ayam *broiler* banyak dikonsumsi oleh masyarakat sehingga peternakan ayam di Indonesia sangat berkembang dan kompetitif. Demi menjaga pertumbuhan ayam tetap stabil selama masa pemeliharaan pembuat pakan komersial umumnya menambahkan *Antibiotic Growth Promoter* (AGP). Banyak negara telah melarang penggunaan AGP sehubungan dengan residu dalam daging yang mungkin mengakibatkan resistensi mikroba terhadap pengobatan antibiotik baik pada hewan dan manusia. Imbuan pakan prebiotik dan probiotik diusulkan menjadi pengganti AGP.

Tujuan penelitian ini adalah untuk mengetahui pengaruh tambahan pakan alami (prebiotik dan probiotik) dibandingkan dengan *Antibiotic Growth Promoter* (AGP) terhadap kualitas dan status mikrobiologi daging ayam *broiler*.

Enam puluh empat *Day-Old-Chick* (DOC) dipelihara di kandang *litter*. Sampel ayam yang digunakan terdiri atas tiga kelompok perlakuan dan satu kelompok kontrol. Kelompok P0 kontrol, P1 diberi prebiotik Multivit dosis 20 mL/3 liter air minum, P2 diberi probiotik EM4 dosis 20 mL/1 liter air minum dan P3 diberi antibiotik *Virginiamycin* waktu *starter* sebanyak 500 g/100 kg pakan dan *finisher* 250 g/100 kg pakan. Ayam disembelih pada umur 35 hari kemudian daging diukur: pH, keempukan, susut masak, susut mentah, *salt-water induced gain test*. Status mikrobiologi daging ditentukan dengan uji angka lempeng total dengan agar *Plate Count Agar* (Oxoid, UK) dan *Brilliance™ E. coli/coliform Selective Agar* (Oxoid, UK). Data yang diperoleh kemudian dianalisa menggunakan SPSS versi 16.0 dengan metode *Analysis of Variance* (ANOVA).

Hasil menunjukkan bahwa persentase karkas dan kualitas (pH, keempukan, susut masak, susut mentah, *salt-water induced gain test*) daging ayam yang diberi prebiotik dan probiotik selama pemeliharaan, sebanding dengan pemberian AGP. Performa status mikrobiologis yang diberi prebiotik dan probiotik sebanding dengan antibiotik yang tidak berpengaruh nyata pada cemaran bakteri pada daging ayam.

Kata Kunci: kualitas daging; Prebiotik; Probiotik; Antibiotik

ABSTRACT

THE QUALITY AND MICROBIOLOGY STATUS OF BROILER CHICKEN MEAT TREATED WITH PREBIOTIC, PROBIOTIC AND ANTIBIOTIC GROWTH PROMOTORS DURING MAINTENANCE

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Broiler chicken meat is widely consumed in Indonesia so chicken farms in Indonesia are highly developed and competitive. In order to maintain the growth of chicken remain stable, commercial feed makers generally add Antibiotic Growth Promoter (AGP). Many countries have banned the use of AGP due to residues in meat which might result in microbial resistance to antibiotic treatment. The prebiotic and probiotic feed additives are proposed to be substitutes for AGP.

The purpose of this study was to determine the effect of additional natural food (prebiotics and probiotics) compared to Antibiotic Growth Promoter (AGP) on quality and microbiological status of broiler chicken meat.

Sixty-four day-old-chicks (DOC) were grown in litter cages and divided into three treatment groups and one control group. P0 was control group, P1 was given Multivit prebiotics dose of 20 mL / 3 liter of drinking water, P2 was given EM4 probiotics dose of 20 mL / 1liter of drinking water and P3 was given Virginiamycin antibiotics 500 g / 100 kg of feed at the starter and 250 g /100 kg of feed at the finisher. Then, at the age of 35 days, chicken were slaughtered then the meat was measured for: pH, tenderness, cooking loss, drip loss and saltwater induced gain test. The microbiological status of meat was determined by total plate count test with plate count agar (Oxoid, UK) and Brilliance™ E. coli / coliform Selective Agar (Oxoid, UK). The data obtained were then analyzed using SPSS version 16.0 with the Analysis of Variance (ANOVA) method.

The results showed that the percentage of carcass and quality (pH, tenderness, cooking loss, drip loss and saltwater induce gain test) of chicken meat that were given prebiotics and probiotics during maintenance period were comparable to AGP. In addition, the microbiological status of those three groups were equal and have no significant effect on bacterial contamination in meat.

Keywords: meat quality; Prebiotics; Probiotics; Antibiotics