



ABSTRAK INDONESIA

Antibiotik atau umumnya dikenal dengan AGP (antibiotic growth promotor) merupakan salah satu imbuhan pakan yang diperjual belikan secara bebas di pasaran. AGP dapat mempercepat laju pertumbuhan hewan ternak. Tetapi, pemberian antibiotik dalam jangka waktu lama dapat menimbulkan resistensi pada hewan ternak terhadap mikroorganisme-mikroorganisme pathogen seperti *Salmonella* sp., *Escherichia coli*, *Campylobacter*, dan *Clostridium* sp., serta dapat meninggalkan residu antibiotik pada produk hasil ternak yang dapat menyebabkan penyakit bagi konsumen.

Pemerintah Republik Indonesia melalui Kementerian Pertanian telah melarang pemakaian AGP sejak tanggal 01 Januari tahun 2018, yang ditetapkan pada pasal 16 Permentan No. 14/2017 tentang Klasifikasi Obat Hewan. Ada beberapa bahan alternatif yang dapat digunakan sebagai pengganti antibiotik seperti probiotik, prebiotik, enzim, acidifier, imunomodulator dan bahan herbal alami (phytogenic) yang memiliki kemampuan antimikroba. Beberapa herbal yang digunakan sebagai pengganti antibiotik yaitu ekstrak lempuyang, daun jamblang dan daun afrika.

Penelitian tentang berbagai ekstrak herbal yang diberikan melalui air minum sebagai pengganti antibiotik telah dilaksanakan pada bulan April-Mei 2024 di Lambaro Skep, Laboratorium Ilmu Nutrisi dan Teknologi Pakan Departemen Peternakan Fakultas Pertanian, dan Laboratorium Histologi Fakultas Kedokteran Hewan Universitas Syiah Kuala. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 4 perlakuan dan 5 ulangan sehingga diperoleh 20 unit percobaan. Perlakuan yang diberikan yaitu P0 (pemberian air minum tanpa penambahan ekstrak herbal), P1 (pemberian air minum dengan penambahan ekstrak lempuyang 0,1%), P2 (pemberian air minum dengan penambahan ekstrak daun jamblang 0,1%), dan P3 (pemberian air minum dengan penambahan ekstrak daun afrika 0,1%).

Parameter yang akan diukur adalah tinggi villi, lebar villi dan usus melalui pemeriksaan histologi, serta pengukuran berat dan panjang usus besar dan usus halus. Dari hasil uji histologi diperlihatkan bahwa pemberian ekstrak herbal rimpang lempuyang (P1) menunjukkan tinggi villi terbaik. Sedangkan pemberian ekstrak herbal daun jamblang (P2) memperoleh ukuran villi terlebar. Sementara hasil analisis keragaman (anova) terhadap berat dan panjang usus besar dan halus tidak memperlihatkan pengaruh yang nyata ($P>0,05$).



ABSTRACT ENGLISH

Antibiotics or commonly known as AGP (antibiotic growth promoter) are one of the feed additives that are bought and sold freely on the market. AGP can accelerate the growth rate of livestock. However, giving antibiotics over a long period of time can cause resistance in livestock to pathogenic microorganisms such as *Salmonella* sp., *Escherichia coli*, *Campylobacter*, and *Clostridium* sp., and can leave antibiotic residues in livestock products which can cause illness in consumers.

The Government of the Republic of Indonesia through the Ministry of Agriculture has prohibited the use of AGP since January 1 2018, as stipulated in article 16 of Minister of Agriculture Regulation No. 14/2017 concerning Classification of Veterinary Medicines. There are several alternative ingredients that can be used as a substitute for antibiotics, such as probiotics, prebiotics, enzymes, acidifiers, immunomodulators and natural herbal ingredients (phytogenic) which have antimicrobial capabilities. Some herbs used as a substitute for antibiotics are lempuyang extract, jamblang leaves and African leaves.

Research on various herbal extracts given in drinking water as a substitute for antibiotics was carried out in April-May 2024 at Lambaro Skep, the Laboratory of Nutrition Science and Feed Technology, Department of Animal Husbandry, Faculty of Agriculture, and the Histology Laboratory, Faculty of Veterinary Medicine, Syiah Kuala University. This research used a Completely Randomized Design (CRD) consisting of 4 treatments and 5 replications to obtain 20 experimental units. The treatments given were P0 (giving drinking water without the addition of herbal extracts), P1 (giving drinking water with the addition of 0.1% lempuyang extract), P2 (giving drinking water with the addition of 0.1% jamblang leaf extract), and P3 (giving drinking water with the addition of 0.1% African leaf extract).

The parameters to be measured are the height of the villi, the width of the villi and the intestine through histological examination, as well as measuring the weight and length of the large intestine and small intestine. From the results of the histology test, it was shown that administration of lempuyang rhizome herbal extract (P1) showed the best villi height. Meanwhile, administration of jamblang leaf herbal extract (P2) resulted in the widest villi size. Meanwhile, the results of analysis of variance (ANOVA) on the weight and length of the large and small intestines did not show a significant effect ($P>0.05$).