

ABSTRAK

PROFIL HEMATOLOGI AYAM PETELUR YANG DIINFEKSI *Salmonella enteritidis* DENGAN PERLAKUAN SERBUK KUNYIT (*Curcuma domestica*) DAN MENGGUDU (*Morinda citrifolia* L.)

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Salmonellosis adalah penyakit yang dapat menyerang ayam petelur, disebabkan oleh bakteri *Salmonella enteritidis*. Obat herbal sebagai pengganti dari penggunaan antibiotik yang terbukti menimbulkan resiko residu dan resistensi. Kunyit dan mengkudu memiliki senyawa aktif yang bersifat antimikroba. Profil hematologi merupakan salah satu parameter dari status kesehatan hewan. Penelitian ini bertujuan mengetahui profil hematologi ayam petelur yang diinfeksi *Salmonella enteritidis* dengan perlakuan serbuk kunyit dan mengkudu. Sebanyak 50 ekor *Day Old Chick* (DOC) dibagi menjadi 5 kelompok. Kelompok A diinfeksi *Salmonella enteritidis* dan diberi serbuk kunyit dosis 500 mg/kgBB, kelompok B diinfeksi *Salmonella enteritidis* dan diberi serbuk mengkudu dosis 500 mg/kgBB, kelompok C diinfeksi *Salmonella enteritidis* dan diberi kombinasi serbuk kunyit dan mengkudu 1:1 dosis 500 mg/kgBB, kelompok D kontrol sehat, dan kelompok E kontrol sakit diinfeksi *Salmonella enteritidis* tanpa perlakuan herbal. Perlakuan dilakukan selama 21 hari, dari hari ke- 19 sampai 40 dan pengambilan darah dilakukan di hari ke-41, melalui *vena brachialis*. Sampel darah digunakan untuk pemeriksaan kadar hematokrit, hemoglobin, eritrosit, leukosit, total protein plasma (TPP) dan fibrinogen. Kadar hematokrit dan hemoglobin pada semua kelompok berada dalam rentang standar. Kadar total protein pada kelompok A (serbuk kunyit) dan C (kombinasi serbuk kunyit-mengkudu) berada dalam rentang standar. Kadar eritrosit pada kelompok C (kombinasi serbuk kunyit-mengkudu) berada dibawah standar. Kadar leukosit kelompok A (serbuk kunyit), kelompok B (mengkudu) dan kelompok C (kombinasi serbuk kunyit-mengkudu) berada dibawah standar. Kesimpulan penelitian ini adalah pemberian serbuk kunyit, mengkudu, dan kombinasi kunyit-mengkudu pada ayam yang diinfeksi *Salmonella enteritidis* memberikan gambaran kadar hematokrit dan hemoglobin yang normal, dan menurunkan kadar leukosit.

Kata Kunci : *Salmonella enteritidis*, gambaran darah, serbuk kunyit, serbuk mengkudu

ABSTRACT

HEMATOLOGICAL PROFILE OF *Salmonella enteritidis* INFECTED LAYERS WITH TURMERIC (*Curcuma domestica*) AND NONI FRUIT (*Morinda citrifolia* L.) POWDER TREATMENT

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Salmonellosis is a common disease that affects laying hens, and is caused by the contamination of *Salmonella enteritidis*. The risk of residues and resistance from antibiotic use caused in the search of its substitute. Antibacterial effect was found in the active substances of turmeric and noni fruit. Hematological profile is one of the parameters of animal health status. The aim of this study was to identify the effect of turmeric and Noni fruit powder treatment on the hematological profile of *Salmonella enteritidis*-infected layers. Sample of 50 Day Old Chick (DOC) was divided into 5 groups. Group A was infected with *Salmonella enteritidis* and then treated with turmeric herbal (500 mg/kg body weight). Group B was infected with *Salmonella* sp and treated with Noni fruit herbal (500 mg/kg body weight). Group C was infected with *Salmonella enteritidis* and treated with combined (1:1) turmeric and noni fruit herbal (500 mg/kg body weight). Group D was not infected by *Salmonella enteritidis*, and group E was infected with *Salmonella enteritidis* and left untreated. The treatment was carried out for 21 days from 19th to 40th. Blood sampling through *v.brachialis* was done in the 41th day. Blood samples were used to examine the level of hematocrit, hemoglobin, total amount of protein, erythrocyte, and leukocyte. The results were averaged per groups and then compared to the normal standard literature. Hematocrit and hemoglobin status in all groups were still in standard level, total amount of protein in the group treated with turmeric powder was in the standard level. The lowest erythrocyte level was found in the group treated with combined turmeric and noni fruit powder. Leucocyte count was lower than standard in the turmeric powder treatment group, noni fruit powder treatment group, and the combined turmeric and noni fruit powder treatment group. The conclusion of this study was the treatment of turmeric, noni fruit, and the combination between the two herbals toward *Salmonella enteritidis*-infected layers resulted in hematological profile with normal hematocrit and hemoglobin levels, and decreased leukocyte levels.

Keywords : *Salmonella enteritidis*, haematological profile, turmeric powder, noni fruit powder