

EVALUASI AKTIFITAS ANTIPARASIT BERBAGAI HIJAUAN PAKAN  
TERHADAP CACING *Haemonchus contortus*

INTISARI

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Domba rentan terserang parasit nematoda *H. contortus* yang menyebabkan anemia, penurunan performa dan kerugian ekonomi. Sementara itu, ditemukan resistensi terhadap antiparasit komersial seperti *albendazole*, sehingga dilakukan penelitian tanaman mengandung *condensed tannin* (CT) yang berpotensi sebagai bioantelmintik. Tujuan penelitian ini adalah mengetahui metode ekstraksi infusa yang menghasilkan CT tertinggi pada daun *Muntingia calabura* (CA), *Azadirachta indica* (AZ), *Hibiscus rosasinensis* (RS), *Morinda citrifolia* (CF), dan *Hibiscus tiliaceus* (HT), serta mengetahui aktifitas antiparasitnya terhadap telur dan cacing *H. contortus* dewasa dari domba Ekor Tipis betina secara *in vitro* dan *in vivo*. Penelitian dilakukan pada bulan Juli 2017 s.d Mei 2018. Sampel daun muda dan tua dibedakan lalu dianalisis CT. Daun yang menghasilkan kadar CT tertinggi, dilanjutkan uji lama perendaman 1, 2, 3, dan 4 jam dalam aquades dan diuji pada kecepatan sentrifuge berbeda, yaitu 2.314 g dan 372 g. Infusa 2%, 4%, dan 6% daun CA, AZ dan HT diuji *in vitro* terhadap daya tetas telur dan motilitas *H. contortus* dewasa dibandingkan dengan *albendazole* 2mg/ml sebagai kontrol positif. Rancangan menggunakan ANOVA pola searah dan faktorial, dilanjutkan uji Duncan. Uji *in vivo* menggunakan 16 ekor domba ekor tipis betina dengan ransum berbasis rumput raja dan *wheat pollard* 70 : 30 yang dibagi secara acak dalam 4 kelompok yaitu kontrol (A), infusa AZ 6% (B), infusa AZ 8% (C), dan dosis tunggal *albendazole* 5mg/kgBB (D). Hasil penelitian menunjukkan bahwa umur daun mempengaruhi kadar CT ( $P < 0,05$ ) kecuali AZ dan RS. Lama perendaman berpengaruh signifikan terhadap kadar CT ( $P < 0,05$ ), tetapi tidak pada kecepatan sentrifugasi, kecuali CA. Terdapat interaksi antara jenis tanaman mengandung CT dengan level konsentrasi yang diberikan ( $P < 0,05$ ). Hasil *in vitro* menunjukkan bahwa infusa AZ, CA, dan HT menurunkan daya tetas telur dan motilitas cacing dewasa ( $P < 0,05$ ). Hasil *in vivo* menunjukkan bahwa infusa AZ 6% dan 8% mampu menurunkan telur cacing per gram feses tanpa mempengaruhi konsumsi BK, BO, dan PK dan penambahan bobot badan. Sehingga, dapat disimpulkan bahwa umur, lama perendaman, dan kecepatan sentrifugasi berpengaruh terhadap kualitas infusa sebagai bioantelmintik serta infusa AZ, CA, dan HT berpotensi sebagai bioantelmintik menggantikan antiparasit komersial.

Kata kunci: Antiparasit, Hijauan pakan, *Haemonchus contortus*, Condensed tannin, Bioantelmintik

EVALUATION OF ANTIPARASITE ACTIVITY FROM VARIOUS FORAGES  
LEAVES AGAINST TO *Haemonchus contortus*

**ABSTRACT**

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*H. contortus* found to infest the sheep, which can lead to anemia that affects the decline in production performance, even resulting in economic losses. On the other hand, anthelmintic resistance of nematodes has become a major concern. It lead a strong enthusiasm to explore the anthelmintic source from *Condensed Tannin* (CT) rich plants as bioanthelmintic. The objectives of this study were to determine the effect of leaf maturity, maceration time, and centrifuge force on CT level produced in infusion leaves of *Muntingia calabura* (CA), *Azadirachta indica* (AZ), *Hibiscus rosasinensis* (RS), *Morinda citrifolia* (CF), and *Hibiscus tiliaceus* (HT), and to evaluate the effect of a water-based leaf infusion supplementation on in vitro egg hatch inhibitory effect and adult worm motility test, and also on in vivo faecal egg per gram count in Javanese Thin Tail ewes. This study was conducted on Juli 2017 to April 2018. Mature and immature leaves separated and they were then analysed on CT content, continued to 1, 2, 3, and 4 hours of maseration, and 2,314 g dan 372 g sentrifugation. The supernatant resulting i.e. 2%, 4%, and 6% of the leaf infusion were tested on in vitro egg hatch inhibitory effect and adult worm motility test as compared to 2 mg/ml of albendazole, with Completely Randomized Design, then continued to Duncan test. Sixteen Javanese Thin Tail sheep were randomly divided into four groups of four animals each. They were treated with infusion of AZ at 6% (B) and 8% dose levels (C), the other group with albendazole at 5mg/BW as single dose (D) and the last group was left untreated (A). The result showed that leaf maturity had significant effect on CT ( $P<0.05$ ), except on AZ and RS. The maseration time also showed significant effect on CT ( $P<0.05$ ), except on sentrifugal forces, not including on CA. There were significant interaction both of CT rich plants species and dose levels ( $P<0.05$ ). The in vitro results showed that AZ, CA, and HT infusion declined the egg hatching and adult worm motility ( $P<0.05$ ). Meanwhile, the in vivo result test showed that the AZ infusion at 6% reducing faecal egg per gram count ( $P<0.05$ ) without affecting of dry matter, organic content, and crude protein intake. These result conclude that leaf maturity, maseration time, and sentrifugal force have significant influence in production infusion with maximum CT, which suggest that the leaf infusion of AZ, CA, and HT may be usefull in the control of *H. contortus*, moreover to supersede the commercial anthelmintic.

Keywords: Antiparasite, Forages, *Haemonchus contortus*, Condensed tannin, Bioanthelmintic