

## Efisiensi Metabolisme Rumen Pakan Berbasis Jerami Padi Amoniasi dan Konsentrat yang Disuplementasi Ekstrak Daun Waru (*Hibiscus tiliaceus*) (In-Vitro)

<b>Title</b>	Efisiensi Metabolisme Rumen Pakan Berbasis Jerami Padi Amoniasi dan Konsentrat yang Disuplementasi Ekstrak Daun Waru ( <i>Hibiscus tiliaceus</i> ) (In-Vitro)
<b>Author Order</b>	1 of 3
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<b>Abstract</b>	<p>ABSTRACT. Penelitian bertujuan mengkaji pengaruh interaksi taraf suplementasi ekstrak etanol daun waru (<i>Hibiscus tiliaceus</i>) dan rasio jerami padi amoniasi dan konsentrat terhadap efisiensi metabolisme rumen dan total protozoa rumen secara in vitro. Penelitian eksperimental menggunakan Rancangan Acak Kelompok pola faktorial 3 x 3. Faktor pertama adalah imbang bahan kering (BK), jerami padi amoniasi (JPA) dan konsentrat yaitu 45:55 (R1), 55:45 (R2), dan 65:35 (R3). Faktor kedua adalah taraf suplementasi ekstrak etanol daun waru yaitu 0 ppm (E0), 200 ppm (E1), dan 400 ppm (E2). Variabel yang diamati adalah total protozoa dan produk fermentasi rumen yaitu sintesis protein mikroba (SPM), volatile fatty acids (VFA), N-NH<sub>3</sub>, gas metan, rasio Asetat/Propionat (A/P), dan efisiensi konversi glukosa menjadi VFA (EVFA). Hasil penelitian menunjukkan bahwa tidak terdapat interaksi (P0,05) antara rasio JAP: konsentrat dan taraf ekstrak etanol daun waru terhadap N-NH<sub>3</sub>, total VFA, asam asetat, asam propionat, asam butirat, rasio A/P, dan (EVFA). Rasio JAP: konsentrat R2 menghasilkan EVFA dan SPM lebih tinggi (P0,05) jika dibandingkan dengan R1 dan R3, akan tetapi metan dan protozoa lebih rendah (P0,05). Suplementasi ekstrak etanol daun waru sampai 400 ppm meningkatkan secara liner (P0,05) EVFA, SPM, dan propionate, akan tetapi menurunkan rasio A/P, gas metan, total protozoa, dan asetat. Suplementasi ekstrak etanol daun waru pada taraf 400 ppm dan rasio JAP: konsentrat 55:45% BK dapat meningkatkan efisiensi metabolisme rumen. (Rumen metabolism efficiency of rice straw ammoniation and concentrate based diet supplemented with <i>Hibiscus tiliaceus</i> leaf extract in vitro) ABSTRAK. The aim of this study was to examine the effect of the interaction between the level of supplementation of ethanolic extracts of waru leaves (<i>Hibiscus tiliaceus</i>) and the ratio of ammoniated rice straw and concentrate on rumen metabolism efficiency and total rumen protozoa in vitro. The research was carried out experimentally designed using a 3 x 3 factorial randomized block design. The first factor was the dry matter (DM) ratio of ammoniated rice straw (ARS) and the concentrates were 45:55 (R1), 55:45 (R2), and 65:35 (R3). The second factor was the supplementation level of ethanolic extracts of waru leaves of 0, 200, and 400 ppm for E0, E1, and E2, respectively. The variables measured were total protozoa and rumen fermentation products, namely microbial protein synthesis (MSP), volatile fatty acids (VFA), N-NH<sub>3</sub>, methane gas, acetate/propionate (A/P) ratio, and efficiency of glucose conversion to VFA (EVFA). The results showed that there was no interaction (P 0.05) between the ratio of ARS:concentrate and the ethanol extract level of waru leaves on N-NH<sub>3</sub>, total VFA, acetic acid, propionic acid, butyric acid, A/P ratio, and (EVFA). The ratio of ARS: concentrate on R2 resulted in higher EVFA and SPM (P0.05) compared to R1 and R3, but lower methane and protozoa (P0.05). Supplementation of waru leaf ethanol extract up to 400 ppm increased linearly (P0.05) EVFA, SPM, and propionate, but decreased A/P ratio, methane gas, total protozoa, and acetate. Supplementation of the ethanolic extracts of waru leaves at the level of 400 ppm and the ratio of ARS:concentrate is 55: 45% increase the efficiency of rumen metabolism.</p>
<b>Publisher Name</b>	Agricultural Faculty
<b>Publish Date</b>	2021-10-01
<b>Publish Year</b>	2021
<b>Doi</b>	DOI: 10.17969/agripet.v21i2.19463
<b>Citation</b>	
<b>Source</b>	Jurnal Agripet
<b>Source Issue</b>	Vol 21, No 2 (2021): Volume 21, No. 2, Oktober 2021
<b>Source Page</b>	113-121
<b>Url</b>	<a href="http://www.jurnal.unsyiah.ac.id/agripet/article/downloadSuppFile/19463/3977">http://www.jurnal.unsyiah.ac.id/agripet/article/downloadSuppFile/19463/3977</a>
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