

Metabolism Energy and Performance of Several Local Cattle Breeds Fed Rice Straw and Concentrate

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Abstract	<p>This study was conducted to examine the effect of different local cattle breeds on energy metabolism and performance fed on rice straw basal diet. Fourty local male cattle (2.5 years; \bar{X}, $\hat{\sigma}$ initial BW 300.30 $\hat{\sigma}$ \pm 0.68) of Madura cattle (M), Sumba Ongole cattle (SO), Bali cattle (B), and Bali Timor cattle (BT) were used in this study, where types of local breed were used as treatments (10 animals/treatment). The study used a randomized block design (RBD) with cattle's initial body weight as a group. The cattle were fed on rice straw ad libitum and concentrate 2.5% BW (DM 86.53%). The variables measured were energy intake (EI), digestible energy intake (DEI), metabolizable energy intake (MEI), energy retention (RE), RE to EI ratio, RE to DEI ratio, C2/C3 ratio, the efficiency of hexose conversion to VFA (ECH) and the average daily body weight gain (ADG). The results showed that the different breeds of local cattle had a significant effect ($P < 0.05$) on EI, DEI, MEI, RE, RE to EI ratio, RE to DEI ratio, C2/C3 ratio, and ECH, but had no significant effect on ADG ($P > 0.05$). M has the highest EI, DEI, MEI, and RE 139.52 MJ/day, 99.69 MJ/day, 65.84 MJ/day, and 98.45 MJ/day, respectively, but the highest RE to EI ratio at B, while for the best RE to DE ratio, C2/C3 ratio, ECH, and ADG, at SO were 99.24%, 28.85, 74.97%, and 1.24 kg, respectively. It can be concluded that the best local cattle in terms of performance and feed energy efficiency are Sumba Ongole cattle.</p>
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