ABSTRACT

Production Performance and Nutrient Digestibility of Peranakan Ongole Cows Given Feed Rice Straw Based Diet with Supplementation and Complete Feed

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Good quality forage in Rembang regency is difficult to obtain because climate is the limiting factor. Rice straw is then used as an alternative feed for Peranakan Ongole (PO) cows. However, rice straw is a low-quality feed indicated by the low palatability and low protein content. Good quality supplements should be given to complete the nutrient content of rice straw-based diet. Rich nutrient supplement (SKN) and complete feed can be formulated to meet the needs of PO cows, and these are the efforts to improve production performance of PO cows. The purpose of this experiment was to study the response of PO cows to the improvement of rice straw-based feed with supplementation and complete feed. The study was carried out using 16 PO cows that were randomly allocated in 4 groups as replications. The data were analyzed using analysis of variance and differences among treatments were tested by contrast orthogonal test. The treatments given were R1 (rice straw), R2 (R1 + rice bran 2 kg/day), R3 (R2 + SKN 0.4 kg/day), and R4 (complete feed). SKN was the supplement consisted of energi, protein, and mineral supplements. This SKN was also used and combined with rice straw to form complete feed. Variables observed were feed and nutrient consumptions, digestibility of nutrient, body weight gain (BWG), feed efficiency ratio (EPR), and income over feed cost (IOFC). The results showed that the use of rice bran, SKN and complete feed can improve the nutrient quality of rice straw-based feed and can improve nutrient consumptions. The results of this experiment were significant on dry matter (DM) and crude protein (CP) digestibilities (P<0.05), but did not significantly affect organic matter (OM) and energi digestibility. The pattern of DM and OM digestibility values tended to decrease from R1, R2, R3 to R4, but the pattern of CP and energi digestibility tended to increase. However, there was an increase of digested nutrients along with increased consumption. The treatment did not significantly affect BWG and EPR although the values had increase, and R2 produced the highest IOFC compared with R1, R3, and R4. The conclusion is, complete feed showed the best effect on PO cows performance, on the other hand, SKN did not showed good effect due to limitations in the amount that was given. Nevertheless SKN and rice bran supplementation can also improve the performance of PO cows.

Keywords: rice straw, supplementation, SKN, complete feed, Peranakan Ongole cows.