

ALTERNATIVE FEED RESOURCE FROM PROCESSED RUMEN CONTENTS IN POST WEANING GROWING BUFFALOE CALVES RATIONS IMPACTS ON NUTRIENTS INTAKE, DIGESTIBILITY, PERFORMANCE, AND SOME RUMEN PARAMETERS.

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ABSTRACT

Fifteen weaned male and female buffalo calves of an average live body weight 90 Kg were randomly assigned to three experimental groups in a trial lasted for 15 months. The control group was fed a basal ration (70 % concentrate feed mixture (CFM) + 30 % rice straw), while the second group T2 was fed a ration contained sun dried rumen contents (SDRC) , and the third group T3 was fed a ration contained ensiled sun dried rumen contents (ERC) to replace 50 % of the control ration concentrate fed mixture (CFM) crude protein content. The results of processing rumen contents(RC) waste showed that the sun curing period of 15 days is the best, which (with covering the material after the 4th day till the 6th. of sun drying with high density polyethylene (HDP) sheet for 48 hrs.) produced a protein content of 16.80 % and dry matter content 90.50 %. Ensiling the partially sun cured rumen contents (ERC) waste lead to increasing the crude protein content up to 19 % of the final silage (90 days age). Results showed significant differences ($P<0.05$) in favor of T2, followed by T3 over the control group for digestible DM, OM, CP, CF, EE, and NFE. Dry matter intake for the T2 was the highest followed by T1 and T3. Crude protein intake was the highest for T2 followed by T3 and the control. Results showed significant differences ($P<0.05$) in favor of T3 , followed by T2, and the control become last for rumen total volatile fatty acids(TVFA's), total nitrogen (TN), non-protein nitrogen (NPN) and true protein (TP) concentrations in rumen liquor. Feeding calves on SDRC and ERC improved ($P<0.05$) the average daily gain (AVDG) for SDRC and ERC groups followed by the control group. The usage of SDRC or ERC as a feed ingredient in buffalo calves rations did not show any negative effects on the health of the animals and their performance. This study aimed to make a step to test the sun drying and ensiling processes efficiencies in curing RC and evaluating the growing buffalo calves responses through measuring nutrients digestibility and some rumen parameters changes as the processed RC was introduced in their rations. Also, the study aimed to get an economic, acceptable alternative natural feed resource for ruminants.

Keywords: Slaughterhouse waste rumen contents, sun drying, ensiling, buffalo calves, intake, digestibility, rumen, performance.