EFFECTS OF LOW AND HIGH LEVELS OF DIETARY PROTEIN CONCENTRATE SUPPLEMENTS TO THE ROUGHAGE RATIONS ON GROWTH OF MURRAH BUFFALO CALVES

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EFFECTS OF LOW AND HIGH LEVELS OF DIETARY PROTEIN CONCENTRATE SUPPLEMENTS TO THE ROUGHAGE RATIONS ON GROWTH OF MURRAH BUFFALO CALVES[1]

A 16-week feeding study was conducted using 15 Murrah buffalo calves with ages ranging from 13 to 19 months, distributed at random to five treatments (rations) of three calves each. These animals were each housed and fed in individual stalls. The treatments consisted of the following: Lot I, napier soilage plus the present CLSU concentrate ration (control); Lot II, napier soilage plus low protein concentrate; Lot III, rice straw and low protein concentrate; Lot IV, napier soilage plus high protein concentrate; and Lot V, rice straw plus high protein concentrate. Comparisons among treatments were made on the basis of co-variance analysis. Criteria for growth of the calves studied under the different treatments were gains in liveweight, height at the withers, length of the body, and circumference at the heart girth. Other observations made were feed conversion efficiency and general health of the animals.

The results showed that calves on napier soilage and high protein concentrate feeding regime (Lot IV) made significant mean gains in body weight, height at the withers and circumference at the heart girth over the calves in the other treatments. Lot IV calves also made the highest feed conversion efficiency.

The calves on diets of rice straw and high protein concentrate ration made an overall

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better performance compared to the calves in Lots I, II and III indicating the possible utilization of rice straw, especially during the dry months of the year when green forage is not readily available, provided given proper protein supplementation. The comparatively less satisfactory performance of the calves in Lot I given the present CLSU concentrate ration for growing calves is indicative of sub-normal dairy management practice and the need for change is imperative.

Under the conditions of this study and at prevailing prices of feedstuffs, the overall costs of feed to make a kilogram gain in weight were ₱1.89, ₱2.27, ₱2.57, ₱3.36, and ₱3.89 for Lots IV, V, II, I, and III, respectively.

INTRODUCTION

Importance of the work. The importance of proper nutritional management of dairy calves, particularly heifers for herd replacement, during the growing period so that they will be in good condition at first calving and, thereby, enhance greater milk production efficiency is well recognized (13, 14, 18, 21). Dairy calves need in particular relatively large proportion of protein in their rations to promote rapid growth and development of tissues. In fact feeding calves with diets high in energy and protein has been reported to result in significant faster rate of growth (6, 8).

Study on the performance of Murrah buffaloes under the system of feeding and management at the Central Luzon

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