

Economic Analysis of Feeding Locally Formulated and Commercial Milk Replacer to Camel Calves in the Arid and Semi-Arid Lands of Kenya

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ABSTRACT

Despite the huge potential for the growth of camel herds, calf mortality remains a challenge among the pastoral camel keepers in Kenya. This is due to competition for milk by calves and households for domestic consumption and trade among other factors. Adoption of Commercial Milk Replacer (CMR) and locally formulated Plant Based Milk Replacer (PBMR) as an alternative to camel milk feeding has the potential of improving the camel calves' nutrition and household income. Ten camel calves were randomly assigned to two separate diets; PBMR and CMR, five in each diet, for 70 days. A control group of 5 calves on the pastoral milk feeding regime was also observed. Calves on PBMR were confined throughout the experimental period while calves on CMR were not confined but fed 2 litres of CMR daily. All the calves were weighed weekly. This study employed a Cost Benefit Analysis (CBA) to assess the financial viability of using PBMR and CMR as a replacement to camel milk. Costs which included milk replacer and labour were captured and extrapolated for ten years to show the benefits of PBMR over CMR. Net Present Values (NPV), a financial analytical tool that shows viability of each feeding regime was then calculated. The results showed that it is more economical to feed calves using PBMR (5) compared to CMR (3) or pastoral feeding regime (3). The study recommends promotion of PBMR among pastoral camel keepers for improvement of nutritional status of suckling camel calves and household income.

Keywords: Camel calves, Cost-benefit analysis, Mortality, Net present value, Nutritional status