

Effect of Calcium Supplementation on Lactation Performance of Cows

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The present study was carried out at Institute Cattle Farm, Central Agricultural Research Institute, Port Blair to determine the effects of calcium (Calsagar®, Indian Immunologicals) on the lactation performance of crossbred cows. The results revealed that, in the supplemented group, the average daily milk yield (mean±SE) of a cow was significantly higher ($P<0.01$) during supplementation (5.71 ± 0.06) than before supplementation (4.95 ± 0.07) and after (5.43 ± 0.07) supplementation. Similarly, the average daily milk yield (litre) of a cow was significantly ($P<0.01$) higher in supplemented group (5.58 ± 0.06) than unsupplemented (control) ($n=4$) cows (3.24 ± 0.05). An additional benefit of Rs. 2074/- per cow per lactation length can be obtained by Calsagar® supplementation. Therefore, the present study revealed the use of special feed pellets supplementation in lactating animals being effective in enhancing milk production.

Keywords: Calcium supplementation, lactating cows, milk yield

INTRODUCTION

Calcium is one of the critical nutrients that influence the productivity of animals. Under normal conditions of feeding with dry fodder, green fodder and a little cakes and rice bran, the requirement of calcium and phosphorous is not fulfilled. A deficiency of dietary calcium causes an immediate reduction in milk production in lactating cows. Sunder et al. (2007a, b) observed that 18.90 % of sera samples showed low level of calcium which was responsible for more no of cows showing reproductive problems and poor performance in selected villages of Andaman Islands. The aim of the present study was to determine the effects of calcium (Calsagar®, prepared by Indian Immunologicals) on the lactation performance of cows.

The experiment was conducted on 8 lactating crossbred cows between second to fourth lactation maintained at Institute Cattle Farm, Central Agricultural Research Institute, Port Blair. All the cows reared under standard managerial condition were divided into supplemented ($n=4$) and unsupplemented ($n=4$) group. The supplemented group was fed with commercially available calcium supplement in the form of pellet Calsagar®, prepared by Indian Immunologicals

containing Calcium 10g, Phosphorous 5g and VitD3 200 IU. These pellets were given @ 50g per cow for a period of 30 days. After completion of the experiment the effect of calcium supplementation on milk yield was analyzed statistically (Snedecor and Cochran, 1967).

Milk yield characteristics were recorded for both the supplemented and unsupplemented groups and the milk yield of the supplemented group were compared among them i.e., prior to, during and after supplementation and also with unsupplemented group. The results revealed that, in the supplemented group, the average daily milk yield of a cow was significantly higher ($P\leq0.01$) during supplementation (5.71 ± 0.06) than before (4.95 ± 0.07) and after (5.43 ± 0.07) supplementation (Fig1). Similarly, the average daily milk yield of a cow was significantly ($P\leq0.01$) higher in supplemented group (5.58 ± 0.06) than unsupplemented (control) cows (3.24 ± 0.05). Available literatures indicate about the increase of milk yield in cows and buffaloes after feeding special calcium pellets from different corners of India. Sridhar (2008) reported higher milk production from 14.5 litres to 17.0 litres in cows and Markandeya et al. (2010) reported an increase of 14.58 ± 0.4 to 17.32 ± 0.4 litres in

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