# ABSTRACT

The study was conducted to observe the performance of milk production of different dairy cows and find out the factors that affects the milk production under household condition at Laksam Upazila of Comilla district. For achieving these goals, a total of 96 dairy cows were selected and data of different productive parameters were collected and analyzed. The average milk production was 2.23 liters with ranges between 1 and 12 liters. The age of first calving for local and cross breed was 41 and 43 months respectively. Lactation period was one month higher for cross breed as contrast to local breed, at the time of second parity milk production was peaked. Grossly the prevalence of mastitis was about 16% for both local breed and cross breed but it was 18 % and 7.7% for FMD for local and cross breed respectively. A multiple regression model was implied with backward selection based on $R\_{a,p}^{2}$, C(P) and AIC criteria. After inverse transformation of the response variable of milk production, the model satisfied the all assumptions. The model was able to explain 82.60% variations in total milk yield. It was observed that breed, lactation period, parity, calving interval and types of food were significantly associated with milk production. The daily milk production was higher for cross breed cows as compared to local breed. Milk production decreases with parity increases except at the time of second parity. Increased one unit calving interval and lactation period also increases the milk production. The milk production was higher for giving roughage, green grass and concentrate (RGC) as compared to other types of food.

**Key words**: Milk production, breed, mastitis, FMD, multiple regression, factors.