INFLUENCE OF TOTAL MIXED RATION ON PRODUCTIVITY AND COMPOSITION OF MILK OF LACTATING BUFFALOES UNDER THE DRY ZONE FARM CONDITIONS

H.C.S. Hapudeniya[1], W.A.D. Nayananjalie[1]and U.L.P. Mangalika[2]

[1]Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
[2]Veterinary Research Institute, Gannoruwa, Peradeniya, Sri Lanka.

A 22 day lactation trial was conducted to determine the effect of total mixed ration on productivity and composition of milk of lactating buffaloes under the dry zone farm condition. Six Murrah × Nili-Ravi cross bred, early lactating buffaloes were blocked according to their parity and randomly allocated into two treatment groups. They were either offered a total mixed ration (TMR) or fed by conventional feeding system with only chopped guinea grass (control group). Milk yield, composition, feed intake were measured daily and milk urea nitrogen (MUN) and body weight were determined weekly. Data were analyzed using Analysis of Variance in SAS. Economic efficiency was evaluated by cost benefit analysis. Milk yield and average body weight were significantly higher ($p<0.05$) in animals fed with TMR (4.90 ± 0.13 L and 616.54 ± 2.55 kg, respectively) than those fed by the conventional system (2.67 ± 0.13 L and 604.99 ± 2.55 kg, respectively). Milk fat content was significantly higher ($p<0.05$) in TMR fed group while milk protein, density, solids-non-fat and lactose contents were higher ($p<0.05$) in the control group. However, the MUN content was not significantly different ($p>0.05$) when fed with TMR or only with chopped guinea grass. Moreover, average feed intake was higher ($p<0.05$) in control group (37.98 ± 0.44 kg) than the TMR fed group (28.56 ± 0.44 kg). A higher profit was reported with the TMR feeding (LKR 29.42/animal/day) compared to the control group. The results reveal that, TMR feeding do have a significant impact on milk yield and milk fat content of lactating buffaloes which improves the profit margin.

Keywords: Lactating buffaloes, Milk composition, Milk yield, Productivity, Total mixed ration