

**EFFECTS OF TOTAL MIXED RATION ON GROWTH PERFORMANCE
OF BUFFALO CALVES AT NLDB FARM AT MELSIRIPURA: A CASE
STUDY**

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This study was carried out to see the effects of total mixed ration (TMR) on growth performance of buffalo calves at NLDB farm at *Melsiripura*. Fourteen, female buffalo calves were weaned at the age between 4 – 6 months and blocked according to their body weight. They were either offered a total mixed ration or fed according to existing feeding system at farm with hay or guinea grass and cattle feed (control group). The potential ration ingredients were collected from farm surrounding and analysed for proximate components. According to the nutritional requirements of weaned calves, TMR was formulated. The calves assigned to TMR group were fed *ad-libitum* twice a day providing 2.5% of the body weight and extra 5% of the requirement. Body weight of calves were measured weekly and health parameters were observed daily. Body weight and weight gain were analysed using the statistical analysis software. Total mixed ration contained $10.48 \pm 0.31\%$, $18.76 \pm 1.03\%$, $13.55 \pm 1.29\%$, $18.56 \pm 6.72\%$ and $4.11 \pm 2.18\%$, crude protein, crude fibre, ash, dry matter and crude fat, respectively. Body weight and weight gain were significantly higher ($p < 0.05$) in animals fed with TMR (62.14 ± 0.79 kg and 0.05 ± 0.01 kg per week) than those fed with the existing feeding system (52.98 ± 0.79 kg and 0.02 ± 0.01 kg per week). The recorded feed conversion ratio of TMR fed calves was 18.78 ± 7.34 . The total feed cost for TMR was estimated as 53.00 LKR per animal per day and it was 58.50 LKR with the existing feed system. Results revealed that feeding TMR improves the body weight and growth rate of buffalo calves.

Keywords: Buffalo calves, Feed intake, Growth performance, Total mixed ration