

Buffalo's Milk Composition and Its Fat Properties as Affected by Feeding Diet Supplemented with Flaxseed or Fibrolytic Enzymes in Early Lactation

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ABSTRACT The effects of feeding lactating dairy buffaloes with crushed flaxseed or fibrolytic enzymes supplemented diets on milk production, composition and milk fat properties was studied. Thirty five lactating dairy buffaloes were randomly divided into 5 groups and fed on: control diet without supplementation, diets supplemented with low (LCF) or high (HCF) level of crushed flaxseed and diets supplemented with low (LFE) or high (HFE) fibrolytic enzymes activity. The results revealed that crushed flaxseed supplementation positively affected the milk yield and composition. Milk yield was higher in LCF and HCF diets than in control buffaloes and LCF was more effective than HCF diets. Fibrolytic enzymes supplementation had no effect on milk yield. On the other hand, feeding lactating dairy buffaloes with LCF or LFE-supplemented diets caused an increase in iodine value, long chain fatty acids (Fas), mono-unsaturated fatty acids (MUSFAs), poly-unsaturated fatty acids (PUSFAs), unsaturated fatty acids/saturated fatty acids (USFAs/SFAs) ratio accompanied with a decrease in Plonisk value, acid value, short chain FAs and medium chain FAs compared with HCF, HFE supplemented and control diets. Conjugated linoleic acid (CLA) content was increased in milk fat from LCF and decreased in milk fat from LFE compared to milk fat from control buffaloes. In addition, milk fat from lactating buffaloes fed different rations supplemented with crushed flaxseed or fibrolytic enzymes characterized with the same oxidative stability or more stable compared with those from control buffaloes.