

EVALUATION OF COMPLETE FEED BLOCKS IN MILCH BUFFALOES

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The crop residues are categorized as low grade roughage and therefore, their nutritive value and digestibility need to be enhanced through mixing molasses or blending them with adequate leguminous and herbaceous additives. High volume and low value of crop residues do not permit their economic transportation from surplus to deficit areas. Present study was taken up to develop sound technology for complete feed block so that seasonal surplus crop residues can be conserved fortified and densified for their easy handling, storage and economic transportation.

Materials and Methods

Complete feed blocks (CFB) were prepared with the ingredients as wheat straw 40%, berseem hay 20%, molasses 20%, concentrate mix 19% (linseed cake and ground barley grain in equal proportion) and mineral and vitamins 1% by using power operated IGFRI densifying machine. The ingredients were mixed manually maintaining the moisture level 20 percent.

On farm feeding trial of complete feed block was conducted in two villages Simardha and Buda of Jhansi district of Uttar Pradesh. Farmers participated in feeding trial were rearing milch Bhadawari buffaloes. Total 8 number of identical buffaloes (average body weight 391 ± 11.2

kg) were selected for feeding trial, in which 4 buffaloes were fed with CFB (T2) and remaining 4 buffaloes were kept as control and offered similar ingredients in loose/mash form (T1). Additionally, 5 kg fresh berseem fodder was provided to each milking buffalo in both groups. After one month feeding of CFB as an adoption period, 7 days digestibility trial was conducted. Analysis of proximate principles was done as per AOAC (2000). NDF analysis was done as per Goering and Vansoest (1970) and the data were analysed statistically as per Snedecor and Cochran (1968).

Results and Discussion

Wheat straw and berseem hay are very common and conventional feed ingredients in ruminants diets. Molasses was added as a binder to make firm blocks and it also provide nutrients. The prepared blocks had average density of 398 kg/m^3 , weight 20 kg and cross section size 31 x 33 cm with variable length (45-60 cm). Chemical composition of the rations did not differ significantly as both the ration contained similar proportion of ingredients. Result of the feeding trial revealed that average DM intake/animal and average DM intake / 100 kg body wt. was statistically similar in both the groups fed with Mash (T1) and CFB (T2). Feed intake by buffaloes confirms the high palatability of both the

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diets. Physical forms of the diet either CFB or mash did not influence the intake. Similar findings on feed intake were also observed in earlier studies. (Dwivedi *et al.*, 2003, Verma *et al.* 1996). Digestibility coefficients of CP, EE and NFE were comparable in both the groups. Samanta *et al.* (2003) also reported non significant difference in digestibility coefficients. But the digestibility of dry matter and crude fibre was higher ($P < 0.05$) in T2 (58.94 ± 0.42 and 58.01 ± 0.56) as compared to T1 (54.01 ± 0.40 and 53.10 ± 0.01) Higher digestibility of crude fibre in complete feed block might be due to the proportionate intake of roughage and other ingredients. However, Singh *et al.* (1998) reported higher crude fibre digestibility in group fed with mash diet. The DCP and TDN content were comparable in both the groups. Average milk yield and average milk fat content were also comparable in both the groups. Cost of production including ingredients of complete feed block was Rs. 530 per quantal with 80% capacity utilization of IGFRDensifying Machine.

The results of the trial indicate that feeding of complete feed block to milch buffaloes provide intake, digestibility and milk production as good as conventional feeding of loose ingredients. Additionally, densified complete feed block (398 kg/m^3)

require about four time less space for storage and transportation.

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