

Improving Animal Feed Resources and Technologies

National livestock resources mainly large and small ruminants are raised on conventional methods, resultantly yield low milk and carcass weight (per unit animal milk and meat production) and encounter high mortality rate thus depleting the potential livestock resources. Feed shortages in qualitative and quantitative terms have been identified as mostly responsible for low livestock productivity including milk and meat. Generation and application of appropriate nutritional and management technologies can equalize the supply and demand of livestock products or even exceed its requirement. Adoption of innovative technologies for rearing adult stock, male calves and replacement heifers; and raising sheep and goats on specially formulated dairy and early-weaning diets and fattening rations can result in substantial increase in milk, veal, beef and mutton production in the country. Therefore, there is an urgent need to make consistent and sustainable efforts to augment per unit animal productivity and overall milk and meat production with value addition by adopting the appropriate feeding and management practices.

IMPROVING ANIMAL FEED RESOURCES AND TECHNOLOGIES

- Three iso-nitrogenous diets (A, B, C) with different levels of energy i.e., 80, 100 and 120% energy requirement as per NRC have been prepared to see the effect on growth performance of Kajli lambs. Feeding of 100% energy requirements yielded better results in terms of weight gain and feed efficiency and digestibility of dry matter and crude protein were also better on this level (Figure 1 & 2).
- Feeding and growth performance was studied in buffalo calves fed on milk products i.e., milk



Fattened Kajli lambs

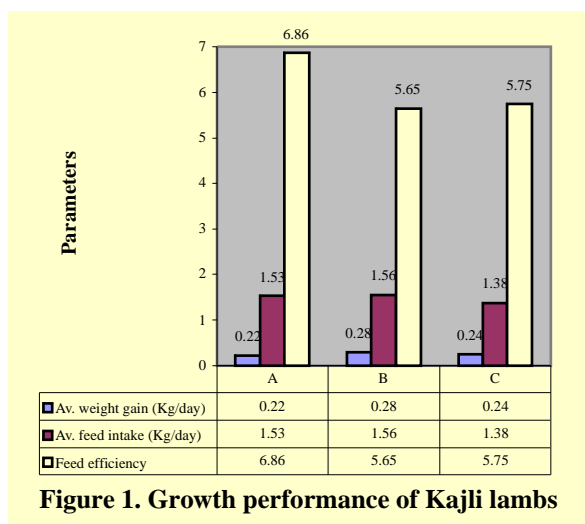


Figure 1. Growth performance of Kajli lambs

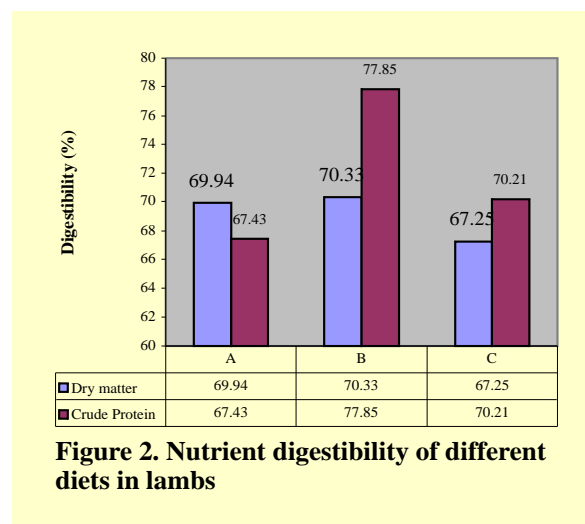


Figure 2. Nutrient digestibility of different diets in lambs

replacer (MR) and early weaning diets (EWD). Weight gain was better in calves fed on whole milk + EWD (C) and milk replacer + EWD (D) as compared to whole milk (A) and milk replacer (B). Trend of weight gain is given in Figure 3. Dry matter and crude protein digestibility was better with A and B as compared to C and D diets.

- To develop database on mineral profile of feedstuffs, i.e., Crop residues, green fodder and concentrate; samples of green fodders, dry roughage and concentrate feed ingredients were collected from different locations and analyzed for macro and micro minerals.

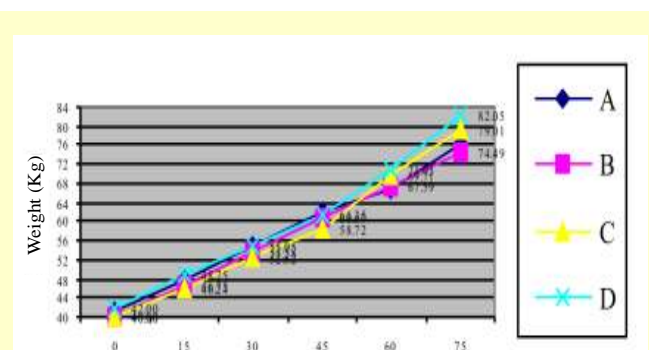


Figure 3. Growth performance of buffalo calves fed on milk, milk replacer and early weaning diets

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Rearing of buffalo calf on MR



Rearing of buffalo calf on EWD

- Average weight gain and feed intake by broiler chicks fed on three diets (control, 50g/t paxasone and 100g/t paxasone) ranged from 1995 to 2030g and 4294 to 4346 g/bird for control and paxasone supplemented diets, respectively. Average feed: gain ratio of all three diets was similar ranging from 2.14 - 2.16. Growth promoter (paxasone) did not improve the performance of the birds.



Broiler chicks at finishing stage

AZRC, Quetta

- AZRC Feed Technology Unit (feed mill) was made functional in June, 2006 for computation of different ration formulae (feed ingredients are to be provided by farmers) for participatory research with small ruminants (ewe/doe feeding and lamb/kid fattening) and dairy cattle at farmers' farms in Quetta for improvement of meat and milk production.
- Lamb mortality decreased from 50% to 2% due to proper feeding and provision of health coverage. Birth-weight of lambs also improved from 1.5 kg to 2.5 kg. Feeding is scarce during winter i.e., October to February that coincides with breeding season of sheep and goats, therefore farmers were able to manage their flocks better with minimum supplemental feeding i.e., barley grain, hay and dry breads, etc.