

Animal feeding and management strategies in the commercial dairy farms

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The milk production in the dairies depends on the quality and quantity of the feed and fodder fed to the animals. It is very necessary to provide balanced diet to livestock so as to obtain an optimum level of production. Further the diet of the animals also governs the overall health and reproductive performance of the animals. Poor diet and management leads to a number of health and reproductive problems.

Keeping in view the above facts, the present study was undertaken with the major objective of carrying out an in-depth analysis of the feeding and management strategies in the commercial dairy farms. The study is based on the assumption that the commercial dairy units mainly produce milk for marketing and therefore will be adopting most of the scientific feeding practices to enhance milk productivity of their animals. Commercial dairy farmer for the purpose of the study was operationalised as a farmer rearing 2 or more than 2 milch animals solely for the purpose of marketing of milk.

Commercial dairy farmers (90) from 3 different categories, i.e. small (2–10 milch animals,) medium (11–20 milch animals) and large (more than 20 milch animals) were randomly selected from the 10 different wards of Municipal Corporation of Bareilly city of India and their animal feeding and management practices were studied. Apart from this 3 case studies of commercial dairy farmers from rural, periurban and urban areas were conducted to determine the differences in feeding and management practices among these farmers.

Feeding to milch animals: Majority of the commercial dairy owners (65.56%) did not feed green fodder in any season to their livestock. However, animals purchased from other states of India (Haryana and Punjab) were fed green fodder for few days for acclimatization, which was slowly reduced. Main reason reported by majority of dairy owners (62.22%) for not feeding green fodder was its poor availability and high cost while few other reported (20.00%) that it does not contribute to increase in milk production and

so its feeding is not profitable. Cent percent of these owners regularly fed concentrates to their milch animals and most of them (55.56%) fed 6–7 kg of concentrates to milch animal/day as they felt that feeding concentrates increase milk production and also fat percentage of milk. The concentrates consisted of 50% wheat bran, 25% pulses bran (red gram and or black gram) and 25% of oil cakes (mustard oil cake and or linseed oil cake). The dry fodder mostly consists of wheat straw and paddy straw. Majority of the dairy owners (51.11%) were also not feeding salt regularly to their animals. Feeding of mineral mixture to dairy cattle and buffalo was also not adopted by 86% respondents, as they felt it was not profitable. Further none of them knew about the urea treatment of straw to increase its nutritive quality.

Feeding to calves and heifers: The results of the study revealed a very poor scenario of calf feeding in the commercial dairies wherein the calves were allowed to suckle before milking for milk let down and then were left after milking the animals. This resulted in poor growth performance of the calves. Further, the practice of timely colostrum feeding was not practiced in majority of the dairies (87.78%) and was fed only after release of placenta, which reflects the poor knowledge of the dairy owners with regards to the importance of feeding colostrum in developing immunity in the calves. Malik and Nagpaul (1999) and Singh *et al.* (2003) and Tiwari *et al.* (2006), also found that buffalo owners feed colostrums to calves only after release of placenta as they feel that if they feed colostrums immediately then the animal will not release the placenta. No proper milk feeding (97.77%), no separate sheds (92.23%) and no proper veterinary care for calf (64.44%) were found in commercial dairy farms. Most of the calves of commercial dairies suffered from pneumonia, naval ill, diarrhoea and ecto-endo parasitic infestation. Either these calf died at early age, or if they survived they were sold by these dairy owners to fetch some money. The naval care of calf was not done in any of the farms (100%) and deworming was not done in 83.33% due to lack of knowledge about the importance of these 2 practices. It was also found that these commercial dairy owners were not interested in rearing the calves and heifers.

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Further the calf mortality in these farms was as high as 81.09%. It was also found that the feeding of heifers was very poor in all the 3 dairies. They were not feeding any concentrates to these heifers and these were mostly dependent on grazing. Similar findings were reported by other researchers (Kumar 2002, Singh *et al.* 2003, Tiwari *et al.* 2006).

Shed management practices: Managemental practices in the commercial dairies have revealed that the dairy owners are not keeping the animals in a hygienic condition and mostly the animals were crowded in sheds (closed and open) with very less space for sitting and movement. Further the sheds floors are broken and filled with dung and urine and the sheds roof were very shabby and broken. In fact, it was found that several dairy owners (14.45%) are keeping the animals in open area near the roads and railway track. The shed of majority (49.35%) of the dairy farmers was of closed design and were open from one side only, while 9% were those who had shed closed from all sides with one door and had no ventilation at all. Majority of the respondents took least care for shed maintenance and spent only up to Rs 1000/annum on shed maintenance. Further most of them (54.44%) were disposing the dung near the side of the shed which was polluting the shed environment and giving rise to mosquitoes and flies around the shed. Similar findings were reported by Rajkumar (1993) who found the cow housing of a closed design, with poor ventilation, drainage and space usage in the commercial dairies in Mauritius.

Breeding management: Breeding management was not so sound in commercial dairies. The commercial dairy owners purchased the animals of improved breed from other places, either from animal fairs or from their native tracts especially Punjab and Haryana, and harnessed its productivity. They rarely opted for artificial insemination for breed improvement specifically in case of buffalo (100% not adopted) since they focussed on higher production only instead of breed improvement. When the animal came into heat, they provided

service and kept the animal up to its potential milk productivity, afterwards either they sold it off or gave on lease up to its calving.

Health management: The commercial dairy owners were very prompt in vaccinating their animal against contagious diseases like HS and FMD (81.09%) and to provide treatment to their sick animals (84.44%) for which they utilized the services from private veterinary practitioner. Although some dairy owners use indigenous technical knowledge in treatment of sick animals.

SUMMARY

The study revealed a very poor calf and heifers feeding and management scenario in the commercial dairies. The shed management and breeding management was also very poor indicating that the commercial dairy owners use the dairy animals as a milking machine and discard the animals as soon as the milk production reduces. Therefore a lot of attention needs to be paid to the feeding and management pattern in the commercial dairies with special emphasis on the calf and heifer feeding and management.

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