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Research Article

FEEDING PATTERN OF DAIRY COWS IN DHARMAPURI DISTRICT

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Abstract: The farmers rearing dairy cows are feeding various fodder crops and crop residue and concentrate feed available with them to Identify the feeding pattern this study was under taken, in Dharmapuri district of Tamil Nadu. The study revealed that majority of the farmers in this area are feeding Co4 cultivated fodder and rice gruel waste water during all seasons and in the all the lactation period 8-10%. Further, they allot some lands for cultivation of Co4 fodder crops to their dairy cows as green fodder feeding to reduce the milk production cost.

Keywords: *Feeding pattern, Dairy cows, Dharmapuri district*

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Introduction

The gap between availability and requirement of feedstuffs is wide, resulting in a large-scale shortage. The occurrence of drought and flood has become a constant feature in most parts of the country. This creates serious problems with respect to livestock feeds. Ration balancing and feeding will overcome the occurrence of this problem [1]. In spite of all these problems, milk production in the country is showing an increasing trend. Currently, milk is the second most important agricultural commodity after rice. The increase in production is due to a massive cross-breeding programme, especially in cattle, and the use of improved quality feed and fodder. This study was under taken to identify the pattern of feeding in dairy cows to identify what the dairy cows are fed for their milk production.

Materials and Methods

The study was conducted with 101 dairy cows Jx (Jersey cross) and 98 HFx(Holstein fresien cross) of with various physiological stages to evaluate the feeding regime followed by the farmers The data regarding nutritional status of animals were collected from the dairy cows though face to face interview with the help of questionnaire and by personal observations. Further the availability of nutrients is dependent on feeds and fodder consumed by the animals, which is affected by the season, cropping pattern, agro ecological conditions, the type and size of land holdings and socio-economic condition of farmers [2]. Therefore, the present investigation was carried out to assess and compare the existing feeding pattern, nutrient availability, nutritional status in Dharmapuri district. The data obtained were subjected to statistical analysis as per Snedecor and Cochran (1994) and the data was subjected to analysis of variance (ANOVA) and t-test.

Results and Discussion

Sorghum stovers are fed in the Central and Western regions and in parts of the Southern region. Feeding millet and pulse straw is also observed in certain localities [3]. In Dharmapuri district the common feed and fodders as well as their combinations fed to lactating cattle are presented in Figure 1 Normally Co4, Paddy straw, wheat bran, rice bran, rice gruel, fermented water and commercial feed was fed to the dairy cows during various Physiological stages.

The Jx dairy cows in Dharmapuri district farmers was maintained mainly with Co4 and fermented water during various physiological stages (5.9% to 11.1%). Other type of feed ingredients (Paddy straw, wheat bran, rice bran, rice gruel) irrespective of physiological stages the animals were fed with 1.1 to 2.4 % by the farmers. As the milk yield is more during mid lactation, Co4 (green fodder was fed in excess 10.2 % by the farmers to reduce the feed cost and to increase the milk yield. But fermented water was given more during early lactation period as the milk yield is gradually increasing,11,1% of the farmers are maintaining the dairy cows with the fermented water. Further, as the milk yield is less during late lactation 9.1 % farmers maintained by Co4 green fodder Ferm [Fig-1].

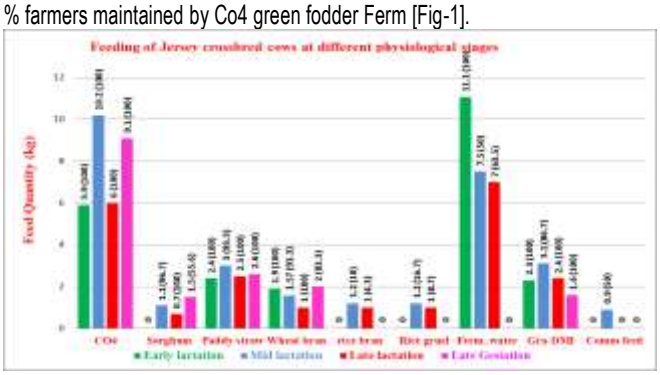

Fig-1 Feeding of Jersey crossbred cows at different physiological stages

The HF x dairy cows in Dharmapuri district farmers was maintained mainly with Co4 (Hybrid grass) and fermented water during various physiological stages (6.8% to 9.2%). Other type of feed ingredients (Paddy straw, wheat bran, rice bran, rice gruel) irrespective of physiological stages the animals were fed with 1.3 to 2.6 % by the farmers. As the milk yield is more during mid lactation, Co4 (green fodder and fermented water was fed in excess 9.2 % and 8.5% by the farmers to reduce the feed cost and to increase the milk yield. Further,7,1% of the farmers are maintaining the dairy cows with the fermented water during late lactation to reduce the feed cost as the milk yield is less during this period [Fig-2].

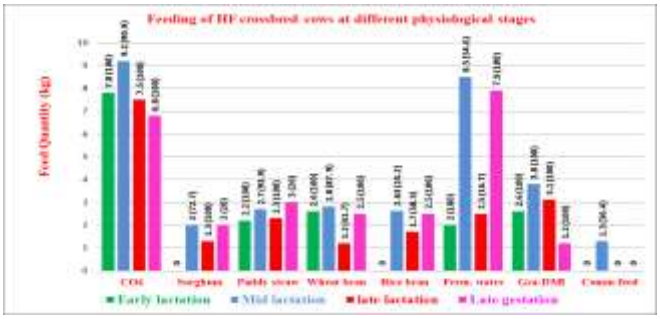

Fig-2 Feeding of HF crossbred cows at different physiological stages

Another survey in Jx dairy cows revealed that farmers in three different seasons which showed seasonal variation in the feeding in Dharmapuri district. Maximum use of Co4 (up to 8% of total dry matter) was observed in the all seasons. This suggest that farmers are allotting separate land for cultivation of green fodder realizing that green fodder feeding only minimize the feed cost. Further, fermented water was fed 5.1 to 7.5 % of farmers as it does not necessitate any cost in feeding [4]. Other type of feed ingredients (Paddy straw, wheat bran, rice bran, rice gruel) irrespective of physiological stages the animals were fed with 0.3 to 2.9 % by the farmers [Fig-3].

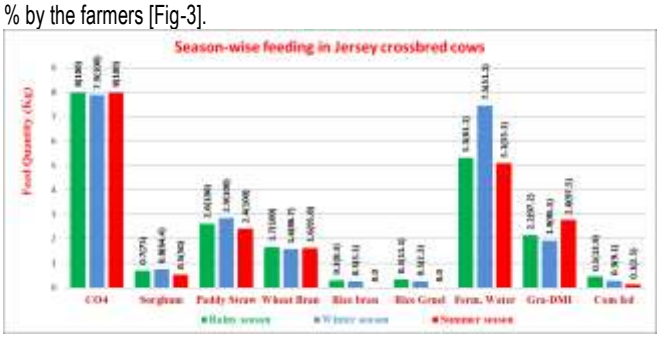

Fig-3 Season wise feeding in Jersey crossbred cows

HFx dairy cows revealed that farmers in three different seasons which showed seasonal variation in the feeding [Fig-3] in Dharmapuri district. Maximum use of Co4 and fermented water up to7.2 to 8% of farmers and 6.9 % to 8.9 % of farmers was observed respectively in the all seasons. This suggest that farmers are allotting separate land for cultivation of green fodder realizing that green fodder feeding only minimize the feed cost. Further, fermented water was fed by most of the farmers as it does not require any feeding cost. Other type of feed ingredients (Paddy straw, wheat bran, rice bran, rice gruel) irrespective of physiological stages the animals were fed with 0.3 to 2.6 % by the farmers [Fig-4].

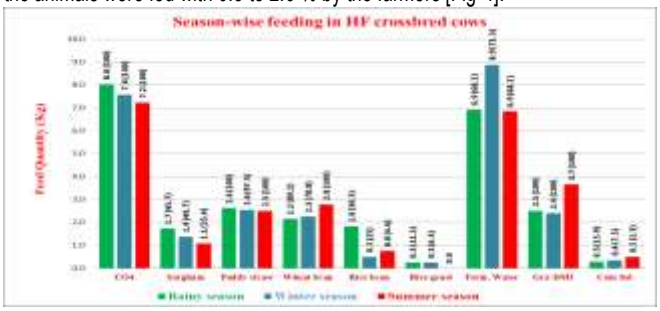

Fig-1 Season wise feeding in HF crossbred cows

Conclusion

The above study that in Jx and Hf X according to physiological status the percent of farmers adopting various ingredients are with Co4 and fermented water during various physiological stages (5.9% to 11.1%), and with Co4 and fermented water during various physiological stages (6.8% to 9.2%) respectively.

Application of research: Both breeds according to season in both breeds the percent of farmers adopting are co4 is 7.2 to 8, suggest that farmers are allotting separate land for cultivation of green fodder realizing that green fodder feeding only minimize the feed cost.

Research Category: Animal Nutrition

Abbreviations: Ferm. Water: Fermented water
Gra-DMI: Grazing dry matter intake, Comm. Feed: Commercial feed

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Author Contributions: All authors equally contributed

Author statement: All authors read, reviewed, agreed and approved the final manuscript. Note-All authors agreed that- Written informed consent was obtained from all participants prior to publish / enrolment

Study area / Sample Collection: Dharmapuri district of Tamil Nadu

Breed name: Jersey cross bred and Hoilstein freisien cross bred

Conflict of Interest: None declared

Ethical approval: Ethical approval taken from Department of Animal Nutrition, Veterinary College and Research Institute, Namakkal, Tamil Nadu Veterinary and Animal Sciences University, Chennai, 600051, Tamil Nadu, India.
Ethical Committee Approval Number: Nil [Collection of data on feeding pattern by questionnaire]

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