

# Effect of Green Fodder Feeding on CB Milking Animals in Odisha

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## Abstract

*Crossbred livestock depends mainly on sufficient availability of quality green fodder. The Feed and fodder is a major cost component of milk animal. It comprises the major protein supply for milk production. Therefore, cultivation of nutritious and high yielding fodder at reasonable price is inevitable. The fodder intervention in the programm area could bring changes in feeding management. With enhanced fodder availability for the milch animals by 7.331 kg per day which could increase the milk production by 22.76 % . On the other hand, concentrate feeding was reduced by 26.49 % from the present level. This feeding management approach could lead to an additional return of Rs 29.12 per day per milch animal to the livestock keepers participating in the ILDP programme.*

*Key word- Green fodder, Milk production, CB animal*

## 1. Introduction

The Feed and fodder is a major cost component of milk production of livestock farming. Green fodder plays a major role in the life of milch animals, providing required nutrient for milk production and health of the dairy animals. Cows require balanced feed for profitable livestock farming which depends mainly on adequate availability of fodder at reasonable prices. Livestock is one of the livelihood programmes for the farmers of Odisha state, supporting agriculture in the form of critical inputs, supplementing incomes, offering employment opportunities. Livestock is also important as a part of agriculture diversification and income enhancement. Adequate supply of feed and fodder is crucial for improving livestock productivity. Livestock in Odisha state are maintained largely on crop residues i. e. paddy straw and grazing lands. State has remained chronically deficit in feed and fodder. The Integrated Livestock Development Programme (ILDP) “Kalyani” was conceived during 2010-11 by Govt. of Odisha to provide cattle breeding services at the door step of the livestock keeper in the remotest pockets of the state for the period from ‘2010 to ‘2016 for minimizing the gap of good quality

green fodder. This has successfully helped in increasing the green fodder production at farmers’ field, awareness among the dairy farmers about fodder cultivation and feeding system, availability of quality fodder seed and planting material of fodder grasses which has resulted in increase in total milk production of the state. The average feeding status of cattle in Odisha is only 2.7 kg/day / CB milch animal and 1.33 kg / day / CB dry animal green fodder as per available, live stock census report of Odisha(2012).

During the year 2013-14, as per the report of Directorate of Animal Husbandry & Veterinary Services, Odisha, the deficit of green fodder and dry fodder in the state was 48.4% and 23.5% respectively. Therefore, the present study was taken up to study the importance of green fodder for CB milch animals and examine the feed- milk relationships in CB animals. An effort was also made to work out and compare the marginal value productivities of feeds and green fodders with their prices to suggest rational adjustment in the feeding pattern for maximising profit from milk production.

## 2. Materials and Methods

The present study was undertaken in the Operational area of “Kalyani project” in Odisha. The fodder development programme was implemented from ‘2010 to ‘2016 at farmers’ fields to demonstrate the new technologies of intensive fodder production, to bring more land under the cultivation of fodder crops and to make available the green fodder to the dairy animals. We had developed one format for collection of data after 5 years of fodder development programme. After 5 years, a sample survey was taken up, to study its efficacy at farmer’s level. The study revealed that prior to this programme, cultivation of green fodder as a crop was never a practice in these remote areas. The last five years’ efforts on field fodder development activities have shown the possibilities to meet the nutritional requirement of large animals; crossbreds in particular. The impact of green feeding in these remote areas of the state was studied with a sample data of 1345 CB milking animals of livestock keepers from 62 CDCs in the project area. During survey, we had different type of data collected from farmers like how

many kg. of green fodder and concentrate are fed to animals with and without green fodder, what effect does it have on milk production, whether concentrate feeding is reduced or not after green fodder feeding introduction. This was studied under different farming situations & season of production .

### 3. Results and Discussion

Under different farming situation & season, 742 fodder demonstrations were studied. Out of this 1.89 % were pure perennial fodder crop of Hybrid Napier (BNH-10), 12.13 % of mixed cropping of Kharif - Maize (AT) & Cowpea with perennial, 12.26% of mixed cropping during Rabi, Oat (Kent) & Berseem intercropped with perennial was taken up. The Seasonal fodder cultivation dominated with 40.83% of pure Maize & 23.31% of mixed fodder crops of Maize & Cowpea. The activity was further extended to summer with bajra & sorghum in a limited area.

The average feeding per day per milk animal improved by 7.331 Kg for green fodder. Concentrate feeding came down to 1.312Kg from 1.868 Kg as shown in Table no-2. The average green feeding is 2.715 times above the state average of 2.700 for cross bred animals in the project areas shown in Table no-1.

This indicates the concern live stock keepers have shown on feeding management for realisation of the production potentiality of the crossbred livestock. The average feeding of green fodder was 7.331Kg per day per animal showing 22.76 % rise in milk production from the existing level from 4.87 kg to 5.65kg (Table no-1). This resulted due to regular feeding of green fodder. The improvement in milk production may be due to balancing of nutrients which might have improved rumen environment and maximum utilization of nutrients. The results are in favour with earlier reports (Dutta et al 2010 and Khochare et al 2010).

**Table-1 Effect of green fodder on milk production**

Particular	Quantity
Green fodder feeding in kg/day	7.331
Milk production in Ltr Before green fodder feeding	4.870
Milk production in Ltr After green fodder feeding,	5.649

**Table-2 Reduce concentrate after green fodder feeding**

Particular	
Concentrate feeding in kg/day before green fodder feeding	1.86
Concentrate feeding in kg/day after green fodder feeding	1.31
Reduce % of concentrate after feeding of green fodder	26.49

On one hand, feeding of good quality green fodder to CB milking animals has improved the average return per day by Rs 29.12 , on another hand it has also reduced the concentrate feeding without any negative effect on milk production in the project area. Similar finding is also revealed by Bhandari '2016.

### 4. Conclusion

Thus, it may be concluded that integration of fodder production & feeding management technologies in the study area have resulted into better price realization and lower feeding cost for the cattle keepers for up graded as well as cross bred animals in particular. Most of the farmers have gained in milk production and have saved

substantial amount due to reduction in use of concentrate feed and the cost resulting into increased income.

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