

**GOA STATE CO-OPERATIVE MILK PRODUCERS' UNION LTD
CURTI PONDA GOA -403401**

SUCCESS STORY

“UPGRADATION OF LOCAL LIVESTOCK (COWS)”

INTRODUCTION:

Goa State Co-Operative Milk Producers' Union Ltd is the apex body of affiliated 175 Dairy Co-Operative Societies having membership of more than 18000 farmer families constitute nearly 60 % of milk producing community in the state . Goa milk union being the only Milk Union in the state has a status of State milk Federation , therefore shoulders the responsibility to plan and implement the various developmental activities for the Dairy Development in the state.

Goa State has large number of indigenous non- descript milch animals. Due to their low milk production and lack of facility of indoor feeding these animals tend to wonder in search of feed and water .Available stock of animals contributes few thousand litres of milk for the State production, ranging from 1-3 litres of milk per animal /day. These animals are physically sound and having greater potential to sustain diseases and climatic changes .In spite of having good milk producing traits and disease resistance power, these animals are deprived of good animal management practices by their owners. Thus they become uneconomical to rear. They tend to destroy vegetation and even consume waste material leading to further decline in the health conditions .

Considering the available milk traits, milk quality and sustainability of these animals, it high time to ensure their genetic improvement , reproductively and quality nutrition there by enhancing the milk producing capacity of these animals in the state.

NEED FOR UPGRADATION OF LOCAL COWS

- 1) To enhance the milk producing capacity of the local cows.
- 2) To maintain genetic character responsible for disease resistance, climatic adaptability and enhance milk production traits.
- 3) To develop good calves to have economically viable milch animals.
- 4) As a awareness of crossbreeding technique in local cows.
- 5) To save vegetative destruction by local cows
- 6) To minimise the stray nature of the local cows.
- 7) Promote employment in local youth in dairy sector.

Local Cow



PROJECT IMPLEMENTATION

Scheme of local cow up gradation was implemented in Dec 2008 in 175 dairy Co-operative societies in the State with the support of RKVY. As a part of farmer awareness one day training programme was organised in each dairy society to plan and implement the scheme. Awareness camps were organised at society level where in farmers and animal details were collected by Veterinarians , supervisors , cluster AI workers and secretaries of the concern DCS . Required information was compiled as per the Dispensary area mainly at Ponda , Curchorem , Colvale and Sakhali dispensary.

During implementation at DCS level 1650 milk producers participated in the scheme. In order to avail local animals in oestrus 2800 local cows were examined for oestrus signs during infertility camps at village level. Those cows showed oestrus signs were inseminated with Sahiwal / HF/Jersey semen depending on the size, breeding history and other parameters of the cow. Rest animals were treated for heat induction and synchronization of the heat by way of hormones or other relevant medication. Total 733 artificial inseminations were performed in the cows of 246 beneficiaries, where in 485 cows conceived with first insemination and balance 248 with subsequent inseminations for conception, thus average conception rate was 52.9 % for getting 388 pregnancies in the cows.

On confirmation of the pregnancy at 3 month cows were microchipped with Radio frequency Identification Tags thus making permanent identification of the animals.

Radio Frequency Identification Ear Tags



From Goa Milk Union Cattle feed Plant 450 kg pregnancy ration was made available at doorstep of the beneficiaries for feeding of pregnant animal during last 180 days of pregnancy period @ 2.5 kg / day. This pregnancy ration was specially designed as per the nutritional requirement of pregnant animals. All the cows were kept indoor and required feeding was under taken in cowshed only. This has restricted the movements of cows and thus avoiding loss of energy in search of fodder and destruction of vegetation and wondering as stray cattle's on road.

Pregnancy ration of Goa Dairy



OUTCOME OF THE SCHEME

It is reported that out of 388 pregnancies, 4 cows aborted during last trimester of pregnancy, one cow died and 383 calves were born healthy. Out of which 203 males and 180 females were born.

Local Cow (Mother)



Upgraded daughter born from Sahiwal frozen semen (F 1)



Upgraded adult Cow(Local X Sahiwal - F1)



Upgraded Adult Cow (Local X Sahiwal - F2)



Upgraded Adult Cow (Local X HF - F2)



Upgraded Heifer (Local X Sahiwal - F1)



INDIRECT IMPACT

Cows received pregnancy ration had normal calving, few cases had retention of placenta but no case was reported with metabolic disorder. Farmers reported that there was additional increase in milk @ 1.5-2 lts / day to past lactation. The main observation was persistency of lactation for more than 210 days as compared to 120 days in other animals who did not receive pregnancy ration. This has proved that animals can enhance milk yield if good feeding practices are followed during dry / pregnancy time in local cows. AI incentives paid to the milk producers has created awareness of Artificial Inseminations in local cows. Due to feeding of pregnancy ration animals remained indoor this has helped to save vegetation in open areas, stray nature of the local cows.

DIRECT IMPACT

This scheme has proved to be result oriented in terms of milk, calves, breeding, feeding awareness amongst milk producers. Feeding attitude towards feeding of dry / pregnant animals helped to get better quality young calves having high milk yielding genetic potential.

Due to feeding of good quality pregnancy ration from Goa Milk Union @ 2.5 kg / day in last 180 days of pregnancy period helped local cows to develop nutritional body reserves to have good health and enhanced milk yielding capacity.

- a) Calves born to these animals gained average birth weight of 21-23 kg as compared to 13-15 kg in animals without pregnancy ration at last trimester of pregnancy.
- b) Calves were healthy and had good growth rate.
- c) Feeding of pregnancy ration supported for higher colostrums which has helped for better passive maternal immunity to the young ones.

- d) Cows received pregnancy ration showed early oestrus signs post calving of 3 month.
- e) Calves born out of artificial insemination had better conception rate and higher milk yield of 10-13 lts / day in F1 generation and it is expected that further performance will increase during F2 generation to 15 lts milk / day.
- f) Calves born from local cows remarkably showed the presence of local characters like sturdiness, black hooves, good skin coat and adaptability to the existing feeding practices and higher milk traits.
- g) Daughter's age at first calving was 27-32 month as compared 48-55 months in local cows.
- h) Body weight at first calving was reported 225 – 275 in F1 generations as compared to 150-180 in local cows.
- i) Cows developed from calves under scheme have present market value of Rs 20000- 30000/ cow depending on average yield of 10-13 lts /day.
- j) Scheme has proved the importance of artificial insemination in local stray animals, feeding during pregnancy period and care of young calves to have their own cows with best genetical potential instead of purchasing animals from other states.

CONCLUSION

Project on up gradation of live Stock (Cow) was a need based programme. This project has achieved desired targets in local cows , in terms of Artificial Insemination technique , breeding , feeding of pregnant animals , induction of milk giving traits of different established breeds and development of economically viable milch animals to strengthen dairy business. Targeted beneficiaries has seen the actual

output of the project in terms of enhanced milk yielding capacity of their local cows , process of upgrading the existing stock of their animals in shortest span of time by way Artificial Insemination as compared to natural breeding . Major success was to develop own superior milch animals who are certainly contributing to the state milk production.
