

**Evaluation of Milk Incentive Scheme,**  
**Department of Animal Husbandry and Veterinary Services**

**Executive Summary**

Efficient and effective service delivery systems are to be provided to all the concerned stakeholders as long as all the stakeholders will have a stake in the service providing machinery or organisation. It could be an organisation, a state, a cooperative entity or an institution. The impact of an efficient and an effective “service delivery system” then needs to be assessed / measured or even to be qualitatively or quantitatively estimated.

Keeping this in perspective M/S Remote Sensing Instruments, Bengaluru, was retained and awarded by the Karnataka Evaluation Authority (KEA) to undertake an evaluation of “**Milk Incentive Scheme**”(MIS) of the Department of Animal Husbandry and Veterinary Services, in Karnataka implemented during 2008-2013.

Government of Karnataka in its order dated 08-09-2008 launched a “Milk Incentive Scheme” providing Rs. 2/- per litre of milk as an incentive amount to the farmers, who are selling milk to the Milk Producers Cooperative Societies (MPCSs), located in rural areas. The scheme is under implementation since 09-09-2008 and during the year 2013-14, the Government revised prevailing rate of Rs.2/- to Rs.4/- to be effective from 14-05-2013. The revision was mainly to encourage dairy farming activity under the cooperative sector. The Department has spent around Rs.1279.45/- crores by the end of 2012-13. Thus, around 19.41 lakh farmers are benefited throughout the State.

**Objectives/Purpose of the Scheme**

1. To make the dairy activity profitable in rural areas especially to small/marginal farmers, agricultural labourers/landless, women and other weaker section of the society.
2. To motivate the rural youth to take up dairy activity and improve their economic status and avoid migration of youth to the urban areas in search of livelihood.
3. To improve the economic and social status of the milk producing dairy farmers in rural areas.
4. To increase the milk production to help in providing food security, and
5. To support and encourage dairying activities in Cooperative Sector in the rural parts

As per the approved action plan, study has been done, committing to the points mentioned in the Terms of Reference (ToR).

## **Sampling Design and Methodology**

- There are **14 District Milk Unions (DMUs)** (“Chamarajanagar DMU” is newly established one from 1<sup>st</sup> April 2015) brought under the evaluation study.
- All the **29 districts** are covered for the study except “Yadgir district” due to absence of functional MPCs.
- **Thirteen Study Clusters** were identified covering 300 milk pouring farmers in each DMU in the vicinity of the MPCs (Total 3900 milk pourers) and **One Control Cluster** of 325 milk producing farmers of groups, supplying milk to private vendors.
- Three senior level officers in the Head Quarters, 21 District Deputy Directors of the Department of AH&VS, and 48 field level veterinarians, 14 Managing Directors of DMUs and 44 Secretaries of the local MPCs were considered as stakeholders for the study.
- Eleven trained retired senior veterinarians worked as consultant Nodal Officers for all the 13 DMUs. They were given required guidelines, inputs related to the evaluation study and operational methodology. Approved formats (1 to 5) and in addition, customized formats, required guidelines, scrutiny sheets were also given to them.
- Thirty eight evaluators were selected and trained in rural areas by the Nodal Officers to proceed with the collection of study related data and information.
- As per the Time Frame of events and strategy, 83 officers, 44 MPCs Secretaries, and 4225 dairy Milk Pourers (3900 under study cluster and 325 in control cluster) were interviewed by administering printed questionnaires in Kannada language.
- Entire data and information collection activity was monitored by the team members. Reality check was also done by the committed team by making visit to the study cluster village.
- Accordingly, required primary and secondary field data and information were efficiently collected from all the stakeholders. Furthermore, data was processed, analysed and inference registered based on the findings.

## **Incentive Amount Release and Delivery System**

- During the study period, incentive amount has been released to all the 13 DMUs (2008-2013) and newly established Chamarajanagara DMU since April 2015 through the Department of AH & VS, according to the availability of grants released by the Government.

- The DMUs have claimed actual incentive grant amount every month from the Department of AH & VS, submitting bills in the first week of the subsequent month.
- The bills have been processed at the Department of AH & VS and the cheques for the claimed amount were sent to the Managing Directors (MDs) of the respective DMUs to disburse the amount to all the MPCs, in their jurisdiction for further payment to Farmers / Cattle owners.
- The acquittance register for the disbursement is maintained by the Secretary of the concerned MPCs.

## **Findings and Discussion based on the TOR Questions**

### **1. Performance of the Department of AH & VS as an implementing agency of the MIS in nutshell**

Department of AH&VS has incurred an expenditure of 83% to 98% of Grant amount released by the Government under the MIS. Due to this within a span of 7 years, observed growth in the quantity of milk procured by the rural dairy farmers is from 11% to 39% by 2016. This increase is due to gradual shift of rural milk pourers, from the private milk procurers to the protective field of cooperative societies. This growth seen is exclusively due to the positive impact of the MIS implementation. This is a great support to the growth of cooperative institutions, in the state. Therefore, the **Overall Performance** of the Department of AH & VS is impressive and could be rated as **Very Good**. Role played by the DMUs is also **Highly Satisfactory**. This is a bench mark for achieving Excellence in future.

### **2. Average time taken for the incentive amount to reach the milk supplying person after the amount is released by the State.**

- Average time taken is 80 days in 2009-10 and in 2011-12 it is 104 days. This duration is considered as delay and is **too long**.
- Majority of stakeholders have reported that more than 3-6 months delay occurred in many instances.
- The delay caused could be mainly due to claims processing at different levels and availability of grants.

### **3. Whether the amount released to farmers is reaching them in full or there any unwarranted / illegal deductions made in any stage of disbursement?**

- The results indicated that the legitimate claims have been completely settled in full. Illegal and unauthorised cuts are not made.
- All the 13 MDs of DMUs have reported that entire incentive money pertaining to the period 2008-09 to 2012-13 has reached respective farmers in full.
- It is also reported that at present incentive money is being transferred by ECS to the farmers' account, since April 2015, without much problem.

### **4. Impact of the MIS on milk production and number of quality of milch animals and on reduction of migration of rural youth to urban areas.**

#### **I. Milk Production:**

- The growth of milk production in study cluster is indirectly measured from the data of quantity of total milk supplied to the MPCs. Observed growth is 8.16% to 70%, which is highly significant in the study cluster as compared to the control sample.
- State level sample survey results indicate Cumulative Growth in Total production is 32.7% during 2012-13 and during 2014-15 it is 42.24%
- The MIS scheme has an overall positive highly significant impact on the milk production in the state.

#### **II. Impact of MIS on Number of Milch Animals**

- Data analysis of study cluster revealed, positive growth varying from 2.18% to 9.52% by increase in the total number of milch Cross Bred Cows and Buffaloes and is highly significant as compared to the control cluster sample. Observed increase of quality milch animals could be mainly due to the impact of the MIS implementation in the state.

#### **III. MIS Impact results on other related parameters**

- Data obtained from the DMUs has revealed highly positive increase in the average percentage growth in number of functional MPCs' (26.62%), Women milk pourers(30.8%), Scheduled Caste milk pourers(28.44%), Scheduled Tribe milk pourers (37.19%), Total Milk pourers (24.31%) and Total quantity of Milk Purchased (120.48%) from Women(117.18%), and SCs' (137.32%) and STs'(131.16%) in litres during the study period 2008-13, under all the 13 DMUs in the state.

- Observed positive growth in all the 9 indicators is possibly due to the shift of milk pourers / dairy farmers, from the private milk purchasers to the MPCs and also due to increased production and productivity at household level. The observed outcome may be attributed to the influence and motivation by the incentive money being given under the MIS by the government.

#### **IV. Migration of Youth in Rural Areas of Study and Control clusters.**

- Village level Migration of youth to the cities is taking place in general for various reasons. However, data reveals that very few youth have taken up dairy farming in the study cluster villages.
- Since dairy farming provides regular income, a small number of youth, who are usually school dropouts or unemployed, have settled for dairy farming depending on their family financial situation and opportunities.
- Data analysis has also confirmed the same above.
- Data analysis has revealed that the MIS does not have any impact on reducing migration of youth. The same is confirmed during the village visit for reality check.

#### **5. Response of stakeholders on incentive amount of Rs. 2/- (in the past) or Rs. 4/- (at present) per litre of milk on the rate, revision and reasons for revision**

- Majority of respondents have reported that the existing incentive rate is less.
- Higher rate is required due to increased feed cost and increased total management cost of dairy animals. Thereby the cost of production of litre of milk has also increased substantially.
- Data revealed that the demand for rise in the incentive amount rate, by farmers is genuine and reasonable.
- A model Score Card method is suggested for adoption, to address equity among needy farmers, if the incentive rate is revised by the Government to Rs.6/- per litre of milk as a support for the districts which are relatively less in dairy development activities, under cooperative sector.
- Proposed method could be used to arrive at a variable incentive rate for DMUs/Districts, based on the Cost of Production of litre of Milk, its Purchase rate, Number of Milk Pourers in the Districts/DMUs, and the Productive Population of Milch animals in the districts.

## **6. Impact of MIS on the Socio-Economic condition of Farmers and Landless**

- Data analysis indicates that the individual farmers' income level in the study cluster areas has increased by annual growth varying from 7 to 20% during 2008-13. Observed Cumulative Growth is 94%.
- Regarding the Investment pattern of income, 29 to 36% farmers have used on household articles like TV, Fridge and other utility items. Majority (62.4%) of dairy farmers made savings in banks.
- 13.4% of farmers have purchased land also.
- 9% of farmers have used their income for cattle shed repairs.
- Out of additional income, 67% of farmers have also used for their children's education.
- Majority (88 to 95%) of farmer's social status increased by being Village Panchayath Members, MPCS Directors and by increased participation in local dramas and festivals etc.
- Therefore, results indicate that the MIS resulted in positive impact on the socio-economic conditions of the farmers under milk cooperative sector as compared to the control farmers.

## **7. Impact of MIS on improvement in the awareness of management practices in feeding, vaccination, de-worming, calf rearing and optimum usage of feed**

- The MIS has significantly positive impact on improving awareness of the quality of dairy farm management at the farmer's level in the study cluster as compared to the control cluster farmers.
- This is also a consequent positive effect of capacity building activities conducted, like exposure visits to the successful farmers, short term trainings by the DMUs and also due to the counselling of farmers by the local veterinarians during treating of animals.
- During reality check also has confirmed the findings during the village visit.

## **8. Impact of MIS on rural youth to take up dairy activities solely due to Incentive money.**

- The MIS might have influenced a few youth to continue with the dairy farming due to increased income from the sale of milk.

- The scheme appears to have no influence on youth to take up dairy farming, exclusively due to incentive money.
- Data analysis has indicated not much difference between the study as well as control clusters.

## **9. Impact of the MIS on the profitability of dairy farming in rural areas**

- Data analysis indicates that the individual farmers' income level in the study cluster areas has increased by annual growth varying from 7 to 20%, during 2008-13.
- It is obvious that the farmers' income has increased due to the incentive amount being paid by the government. Farmers do think that the additional income he gets is itself as profit.
- However, positive growth percentage observed in the income is significant, due to the MIS implementation as compared to the farmers in control cluster who are deprived of the MIS in their area. This is an important outcome of positive impact of the MIS implementation.

## **10. Data and information about over charging at any level and monitoring the MIS to prevent any illegal claims**

- In the study cluster, majority (98%) of farmers have reported that they have not got more money due to overcharging. However a few instances of illegal claims have been reported.
- The Extension Officers of the milk union, Local Officers and audit party have done periodical verification of accounts and payments made, as a routine activity. Dedicated teams constituted by the AH & VS Department are also verifying the accounts at the field level once in a while.
- At the state level MIS progress is being reviewed through the Video Conference, periodically by the Principal Secretary, Department of AH&F. However, it is suggested that constituted review committees at district and taluka levels have to conduct meetings regularly.

### **Opinions offered by all the stakeholders in general on the MIS Scheme / Programme**

- Farmers are happy about the scheme.
- Incentive amount being paid is less and needs to be revised to the higher scale, due to increased feed and overall dairy management cost.

- Incentive amount needs to be paid along with the milk bill of farmers to overcome the delay in making payments.
- Scheme has positive impact on milk production, increase in number of quality animals and management of dairy animals.
- Rural farmers are attracted by the scheme and coming back to the folds of cooperative sector to supply milk as milk pourers.
- MIS scheme needs to be continued till they get remunerative purchase rate by the respective district milk unions.
- Scheme has positive effect on the socio economic condition of the milk pourers.

## **Lessons learned**

### **On Incentive Amount or Service Delivery System**

*“Any scheme providing incentive amount or any service or benefit, in the larger interest of the society, before implementation, the method of delivery system for adoption has to be discussed thoroughly to know the “PROS AND CONS” by the concerned implementing agencies. Based on the outcome, an efficient, suitable delivery system could be selected and guidelines could be issued for adoption aiming at speedy implementation for achieving the objectives efficiently”.*

## **Conclusions**

**Policy decision of the Government of Karnataka, in sanctioning “The Milk Intensive Scheme” has a highly positive significant impact in general, resulting in an overall development of the dairy activity under the cooperative sector, assuring livelihood for the women, small, marginal and the landless farmers in the state. Now, the Government have a strong justification to continue the scheme with suggested improvements in the incentive amount delivery system with an upward revision in the incentive rate of R.6/- per litre of milk or more in the larger interest of dairy farming community, under cooperative sector. Revision of incentive amount rate, would definitely maintain the pace of sustainable growth in milk production, also in drought situation, aiming at food security.**



## **RECOMMENDATIONS**

- 1. Milk Incentive Scheme** under implementation is to be continued with an upward revision rate. It could be of Rs.6/- or Rs. 8/- per litre of milk poured by the dairy farmer to the local village level MPCs, since the majority of stakeholders expressed their need due to increased feed cost and overall dairy farming management cost. The scheme will have to remain till the rural farmers get “Remunerative / Profitable purchase rate” by the respective DMUs, in order to achieve maximum growth in dairy activity in the cooperative sector and to improve the status of dairy farmers.
- 2. “Monitoring, Evaluation, Learning and Documentation (MELD)”** wing could be established at the Commissionerate of AH & VS to take care of “Concurrent Monitoring, Evaluation, for Learning and Documentation” of the schemes under implementation, by suggesting timely mid course corrections and suitable remedies for problems as and when encountered.
- 3. Responsibility of calculating cost of production and purchase rate of milk procured by the milk unions from the rural dairy farmers. Two options are recommended.**

**Option – I: National Dairy Development Board (NDDB)**, could be identified by the government, to take-up the responsibility of calculating the cost of production and also fixing price of milk purchased by the milk unions at the village level, in Karnataka State.

**Option-II: „Milk“** as such, is an essential commodity, which could also be considered as an item under the purview of “**The Karnataka Agriculture Price Commission**” to protect the interest of the farmers, for assuring the remunerative price for the milk in the State.

The above regulatory authority shall also consider the financial condition of the district milk unions, as one of the parameters, while calculating the purchase rate of milk.

### **4. Incentive Amount Delivery System under the MIS.**

**Option I:** The present system needs to be further strengthened to make it more efficient in delivering the **incentive amount** to the rural milk pourers along with the farmers’ **milk bill** being paid fortnightly by the MPCs.

**Option II: If MIS is continued in the same mode of delivery system,** the situation deserves to opt for an efficient dedicated Software System with a net work of connecting all the functional MPCSSs, District Milk Unions from the Department of AH & VS., to monitor the scheme implementation. The software should have scope for maintaining detailed data of milk pourers linked to their Aadhaar number, for accounting and payments verification with digital certification at different levels to assure transparency, accountability and speedy disposal.

This net could be further widened to cover all allied institutions of the department, connecting all livestock farmers with the details of their land and livestock resources to provide door delivery services, input supply and sample survey, livestock insurance and incentives including providing disease forecasting information on mobile SMS in long run, **as a long term plan.**

**5. Logistic and Development Support:** Two percent of the incentive grant amount, be allocated for creating need based, additional infrastructure and man power, both for the AH & VS Department and the DMUs, including at MPCS level. Part of which could be used for logistic support for conducting “**Training of Trainers**” programmes for local farm women leaders and further, for conducting “**Village Based Trainings**” (VBTs), for dairy farmers to impart knowledge for rearing of dairy animals under adverse / drought situations. This model of capacity building activity results in “**Farmer to Farmer**” extension for knowledge dissemination and sustainable positive growth for the dairy development activity at the village level.

## **FINDINGS AND DISCUSSION**

### **9.1 Performance of the Department of AH & VS. as an implementing agency of the MIS in nutshell:**

Performance in relation to the grant utilisation and increase in milk procurement by the milk unions is studied for the period 2008 to 2013 (First Five Years) and then for the period 2013 – 2016 (second three years). For the first five years, farmers were paid an incentive of Rs.2/- per litre of milk poured to the MPCS. During 2013-2016 (Second three years) farmers got the revised rate of Rs.4/- litre of milk, effective from 14<sup>th</sup> May 2015.

**Table 2: Details of the year wise grant release, expenditure incurred, along with year wise milk production estimates, actual milk procurement and annual growth percentage of milk procured by the MPCs, in the State**

Sl. No.	Year	Grant amount. (Rs. Lakhs)	Expenditure incurred (Rs. Lakhs)	%	Milk production in the State. ( 000 tonnes)	Milk procured by Milk Unions (lakh litres)	% Milk procured by Milk Unions (%)
1	2008-09	11000.00	9832.61	89.40	4487	4916.30	11.0
2	2009-10	25000.00	22250.00	89.00	4769	11125.25	23.3
3	2010-11	30165.00	29445.03	97.61	5058	14722.51	29.11
4	2011-12	34700.00	33477.60	96.47	5390	16738.80	31.10
5	2012-13	34185.00	32940.58	96.36	5659	16470.29	29.10
6	2013-14	81700.00	67957.87	83.18	5937	18616.51	31.36
7	2014-15	82500.00	71871.74*	87.12	6065	21324.30	35.16
8	2015-16	99602.00	96518.80	96.90	6199	24129.70	39.00***

(\* Up to December-2014 expenditure)(\*\*\*An estimate)

Source: Department of AH & VS.,

### Findings:

- Expenditure incurred by the Department of AH & VS is **83.18% to 97.61%** against the grant amount released by the government.
- Milk procurement made by the Milk Unions in rural areas has significantly increased. During 2008-09, it was **11%** of the total milk produced (Estimated) in the state, when the Milk Incentive Scheme was introduced. Impact of the scheme on the procurement has resulted in increase to 29% during 2012-13 and to 39% in 2015-16.



**Inference:** Grant utilization and disbursement to the milk pourers in collaboration with the DMUs is **Highly Satisfactory**.

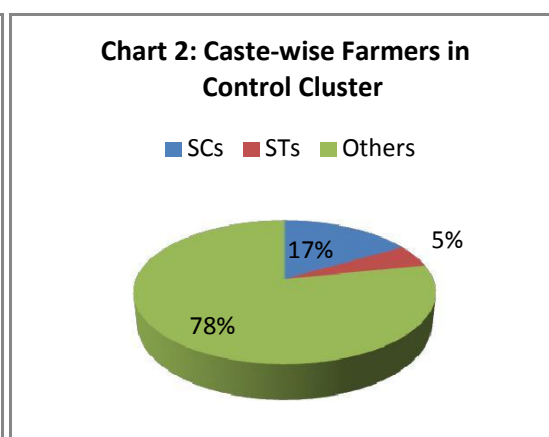
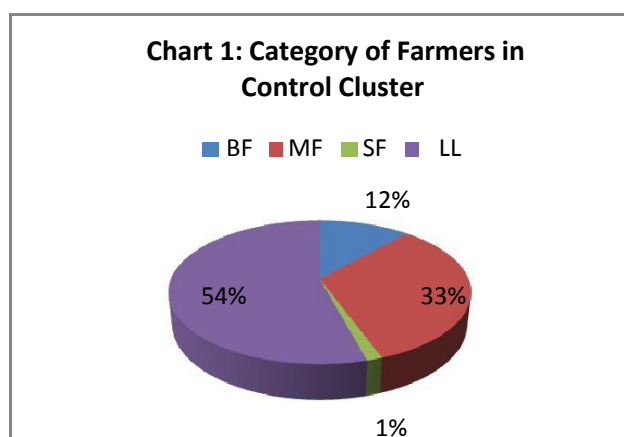
Observed growth in the quantity of milk procured by the rural dairy farmers is from 11% to 39% during 2015-16, within a span of seven years, and is due to gradual shift of rural milk pourers, from the private milk procurers to the protective field of cooperative societies. The shift observed is a positive change in changing the mindset of dairy farmers to opt the cooperative setup exclusively due to the significant impact of milk incentive scheme

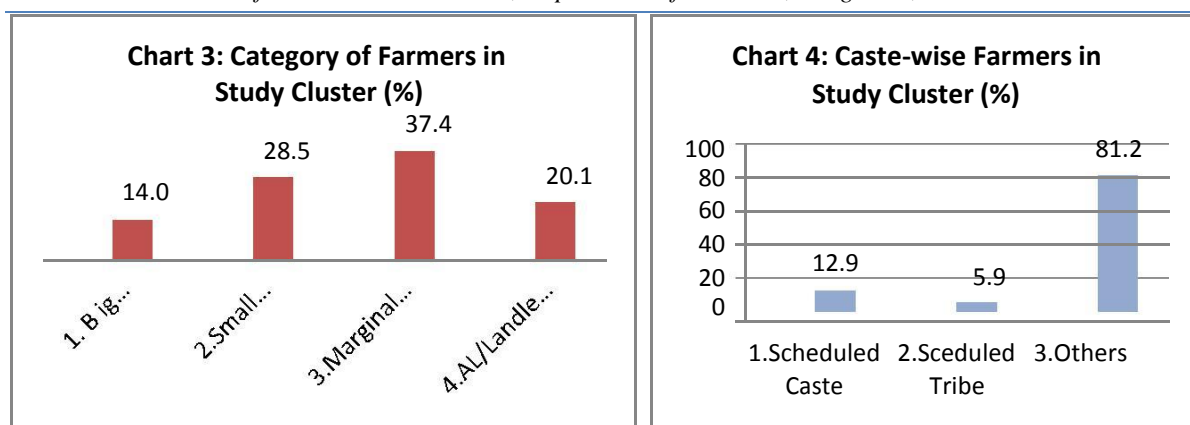
implementation. This is a great support to the growth of cooperative institutions. Therefore, the **overall Performance** of the Department of AH & VS is impressive and can be rated as **Very Good**. Role played by the DMUs is also **Highly Satisfactory**. This is a bench mark for achieving Excellence in future.

## 9.2 Data Analysis, Results, Findings and Inference drawn involving all the indicators connected to the evaluation study questions, for the period 2008-2013.

**Table 3: Gender, Farmers Category and Caste details of 325 Dairy Farmers of Control and 3900 Dairy Farmers of Study Clusters in all 13 DMUs of 29 Districts.**

Sl.Nos	Parameters/Questions	Control Cluster	Study Cluster
1	<b>Gender</b>	Percentage (%)	Percentage (%)
	Male	74.40	62.3
	Women	25.60	37.7
2	<b>Farmers Category</b>		
	Big Farmers (BF)	11.60	14.0
	Small Farmers(SF)	32.80	37.4
	Marginal Farmers(MF)	1.40	28.5
	Landless (LL)	54.20	20.1
3	<b>Cast</b>		
	Scheduled Cast	16.70	12.9
	Scheduled Tribe	5.10	5.9
	Others	78.20	81.2





- Detailed Results of the Study Cluster data (Format-4) are given in the Annexure 7.
- Detailed Results of the Control Cluster data (Format-5) are given in the Annexure 8.

**9.2.1. What is the average time taken for the incentive amount to reach the milk supplying person after the amount is released by the State? Is this too long, short or OK?**

- Average time taken for incentive to reach milk pouring farmer, from preparing the claim bill, submitting to the milk Union, verification of bill at milk Union and further submitting to the AH & VS Department, bill processing at the Department, release of incentive amount to Union, further releasing to the respective MPCs and then to the farmers by the MPCs is **80 days**; Max. **89 days** and Min. **51 days** during 2009-10. During 2011-12- Average time taken is **104 days**; Max.**142 days** and Min. **73 days**.
- Average time taken for incentive to reach milk Unions, after submitting the claim bills and transferring to the MPCs during 2009-10 is **71 days** and during 2010-2011 it is **64 days**.
- In the study clusters, **99.5%** of the farmers have reported that the delay in reaching the incentive money by them is **“too long”** after they pour milk to the MPCs.

❖ **Inference:** The delay observed for the specified period of study, in reaching the incentive money to the milk supplying farmers is **too long**, when the normal time to be taken is assumed as **30 to 45 days** in general. It is also reported that the delay has occurred to an extent of more than 4-6 months during the scheme implementation period in many instances. The delay caused could be mainly due to claims processing at different levels and availability of grants.

**9.2.2. Whether the amount released to farmers is reaching them in full or there any unwarranted / illegal deductions made in any stage of disbursement?**

- Majority (95%) of MPCS secretaries have reported that the incentive amount has reached farmers in full without any unwarranted or illegal deductions at the stage of disbursement. Other 5% have not responded.
- In the study clusters, majority (97%) of dairy farmers have reported that the incentive amount has reached them in full without any unwarranted or illegal deductions during disbursement.
- 60% in study cluster and 43% in control cluster farmers have reported that adequate infrastructures do not present in the local veterinary Institutions to implement the MIS.

❖ **Inference:** The results indicated that the legitimate claims have been completely settled in full. Illegal and unauthorised cuts are not made during the disbursement of incentive amount at any stage. All the 13 MDs of DMU have reported that entire incentive money pertaining to the period 2008-09 to 2012-13 has reached respective farmers in full. It is also reported that at present incentive money is being transferred by ECS to the farmers’ account, since April 2015, without much problem.

**9.2.3. What is the impact of the incentive amount to farmers, with reference to increase in the production of milk by increasing the number of quality of milch animals and in reduction in migration of rural youth to urban areas etc?**

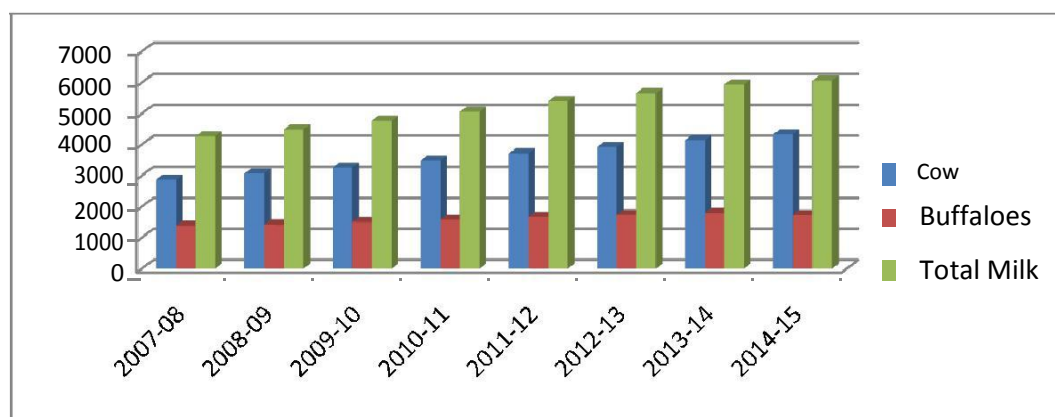
**I. Milk Production:**

*Table 4: Total Milk Production Estimates of the State (In .000 tonnes)*

Year	Cow	Buffalo	Total Milk	% Growth
2007-08	2877	1387	<b>4264</b>	
2008-09	3066	1421	<b>4487</b>	<b>5.2</b>
2009-10	3263	1506	<b>4769</b>	<b>6.3</b>
2010-11	3475	1583	<b>5058</b>	<b>6.1</b>
2011-12	3715	1675	<b>5390</b>	<b>6.6</b>
2012-13	3919	1740	<b>5659</b>	<b>5.0</b>
2013-14	<b>4142</b>	<b>1795</b>	<b>5937</b>	<b>4.9</b>
2014-15	<b>4331</b>	<b>1734</b>	<b>6065</b>	<b>2.2</b>
Cumulative Growth % 2012-13	<b>36.20</b>	<b>25.45</b>	<b>32.70</b>	
Cumulative Growth % 2014-15	<b>50.54</b>	<b>25.02</b>	<b>42.24</b>	

*Source: Report on Integrated Sample Survey for Estimation of Production of Milk, Egg, Wool and Meat for the Year 2014-15. Published by the Department of AH & VS., Bengaluru*

**Chart 5: State level year wise Total Milk Production by Cows and Buffaloes**  
(In.000 tones)



- State level Sample Survey result reveals, that the 36.2% of Cumulative Growth in Cow's Milk, 25.45% in Buffaloes Milk and 32.7% growth in the Total Milk production by the end of 2013. Similarly by the end of 2015 the Cu. Growth of 50.54% is observed in Cow's Milk, 25.02% in Buffaloes Milk and 42.24% in Total Milk production. Year 2007-08 is taken as base year. Annual growth observed is between 5.0-6.6% up to 2012-2013. But the same is reduced to 4.9 and 2.2 % by the end of year 2014 and 2015 respectively. This reduction could be due to the consequential effect of extensive Foot and Mouth disease outbreak occurred in the state during the year 2013-14.

(PDFMD, 2014, Annual Report, 2013-14. Project Directorate on Foot and Mouth Disease, Mukteshwar)

- Data provided by the MPCSS' Secretaries indicate that the Average Growth in Total Milk poured by the rural dairy farmers to the society is 120.48% during the study period 2008-13. (Table-7)

❖ **Inference:** The growth of milk production in study cluster is indirectly measured in the data of quantity of total milk supplied to the MPCS. Observed growth is 8.16% to 70%, which is highly significant in the study cluster as compared to the control sample. The MIS scheme has an overall positive highly significant impact on the milk production in the state. Similarly the shift of farmers from the clutches of private procurers to cooperative sector is highly significant and it is a bounce back phenomena.





## II. Details of Number of Milch Animals and their cumulative growth in the state.

*Table 5: Number of In Milk and Milch animals Cows-2007-15 in the State.(Rs. lakhs)*

In Milk Cows			Milch Cows		
	Cross Bred	Indigenous	Cross Bred	Indigenous	Total
2007-08	7.63	14.99	9.96	26.51	<b>59.09</b>
2008-09	8.65	14.76	11.3	25.9	<b>60.61</b>
2009-10	9.39	14.96	12.01	26.19	<b>62.55</b>
2010-11	10.02	15.53	12.71	26.89	<b>65.15</b>
2011-12	10.68	16.25	13.55	27.61	<b>68.09</b>
2012-13	11.43	16.58	14.42	27.91	<b>70.34</b>
2013-14	12.12	16.78	15.24	28.11	<b>72.25</b>
2014-15	13.06	16.61	16.19	27.81	<b>73.67</b>
<b>Cumulative Growth % 2012-13</b>	<b>49.80</b>	<b>10.61</b>	<b>44.78</b>	<b>5.28</b>	<b>19.04</b>
<b>Cumulative Growth % 2014-15</b>	<b>71.17</b>	<b>10.81</b>	<b>62.55</b>	<b>4.90</b>	<b>24.67</b>

- ❖ Cumulative growth observed in the state, both in Milk and Milch Cattle is **19.04%** (2012-13) and **24.67%** (2014-2015), and the base year considered is 2007-08. However, in Cross bred cattle Cumulative Growth is **49.8%** (2012-13) and **71.17%** (2014-15) in Milk and 44.78% (2012-13) and **62.55%** (2014-15) in milch animals.



**Table 6: Details of number of Quality Buffaloes and Cumulative Growth in the State (In lakhs)**

Year	Buffaloes In Milk	Buffaloes Milch	Total Buffaloes
2007-08	15.22	23.27	<b>38.49</b>
2008-09	15.73	23.75	<b>39.48</b>
2009-10	16.17	24.43	<b>40.60</b>
2010-11	16.77	24.73	<b>41.50</b>
2011-12	17.5	25.62	<b>43.12</b>
2012-13	18.03	26.45	<b>44.48</b>
2013-14	18.24	26.75	<b>44.99</b>
2014-15	17.61	26.39	<b>44.00</b>
<b>Cumulative Growth % 2007-13</b>	<b>18.46</b>	<b>13.67</b>	<b>15.56</b>
<b>Cumulative Growth % 2007-15</b>	<b>15.70</b>	<b>13.41</b>	<b>14.32</b>

- ❖ Cumulative growth observed in the state, in Milk and Milch Buffaloes is **15.56%** (2013) and **14.32%** (2015) and in the total Buffaloes, it is **15.56%** (2013) and **14.32%** (2015); base year considered is 2007-08.
- ❖ In the study cluster number of milch animals reared by the farmers, data analysis reveals that the annual growth observed is from 2% to 9.5% during the study period of 2007-13. The cumulative growth was 33.36% in Cross Bred Cows, 12.38% in Milch Buffaloes and overall cumulative growth was 28.03% in the total increase in number of milch animals by the end of 2013.
- ❖ **Inference:** Observed growth in percentage for the study period 2008-13 in the total number of milch Cows and Buffaloes is positive and statistically highly significant. Study cluster data when compared with the data of control cluster indicates highly significant positive change on the increase of quality milch animals both in Cross Bred (CB) cows, Indigenous (IND) cows and Buffaloes (BF) in the state. This could be mainly due to the impact of the MIS implementation.



### III. Impact of results on other parameters

The details are presented in Table 7.

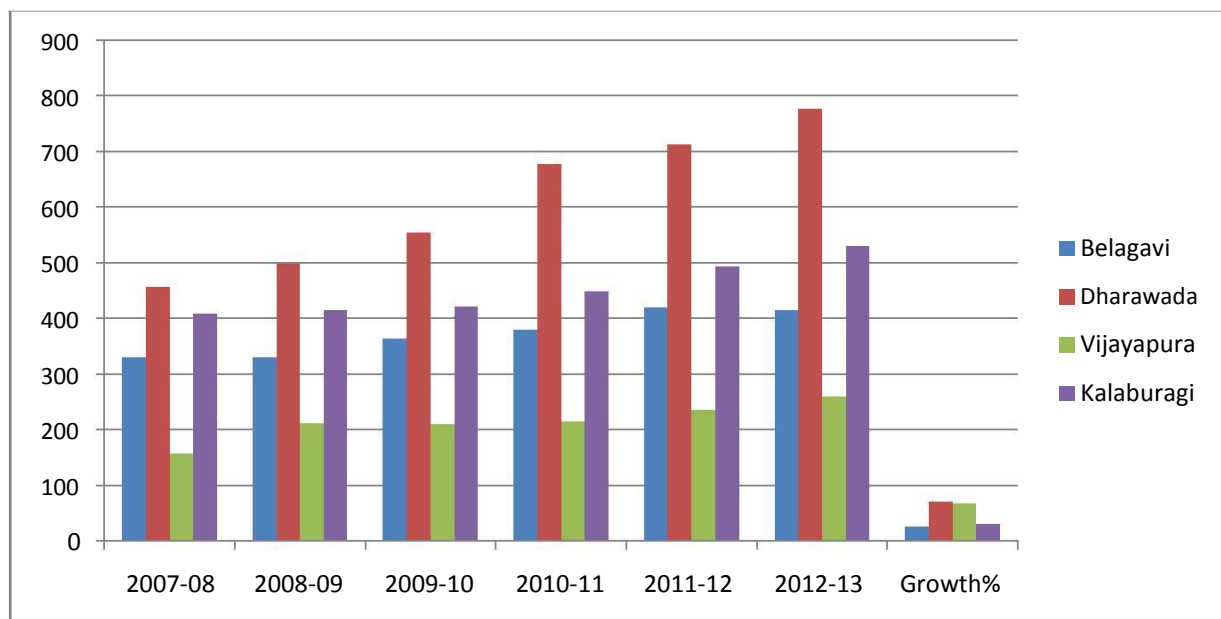
**Table 7: Average Growth % for different Parameters/Indicators of 13 District Cooperative Milk Unions for the period 2008-13**

Sl. Nos.	Parameters /Indicators	Average Growth %	Min	Max
1	MPCSs, Nos.	26.62	3.3% in DK DMU	66.4% in Ballary DMU
2	Women members, Nos.	30.80	15.3% in Kalaburagi DMU	59.2% in Hassan DMU
3	Scheduled Cast, Nos.	28.44	4.8% in DK DMU	61.1% in BNG DMU
4	Scheduled Tribe, Nos.	37.19	7.7% in Belagavi DMU	78.9% in Vijayapura DMU
5	Total Milk Producers in Nos.	24.31	2.4% in Shivamogga DMU	86% in Vijayapura DMU
6	Total Milk purchased in litres.	120.48	34.7% in DK DMU	261% in Mysuru DMU
7	Milk Purchased from Women in litres	117.18	24.1% in Bengaluru DMU	250% in Mysuru DMU
8	Milk Purchased from SCs in litres	137.32	44.8% in Tumakuru DMU	282.3% in Mysuru DMU
9	Milk Purchased from STs in litres	131.16	30.9% in Tumakuru DMU	294.6% in Mysuru DMU

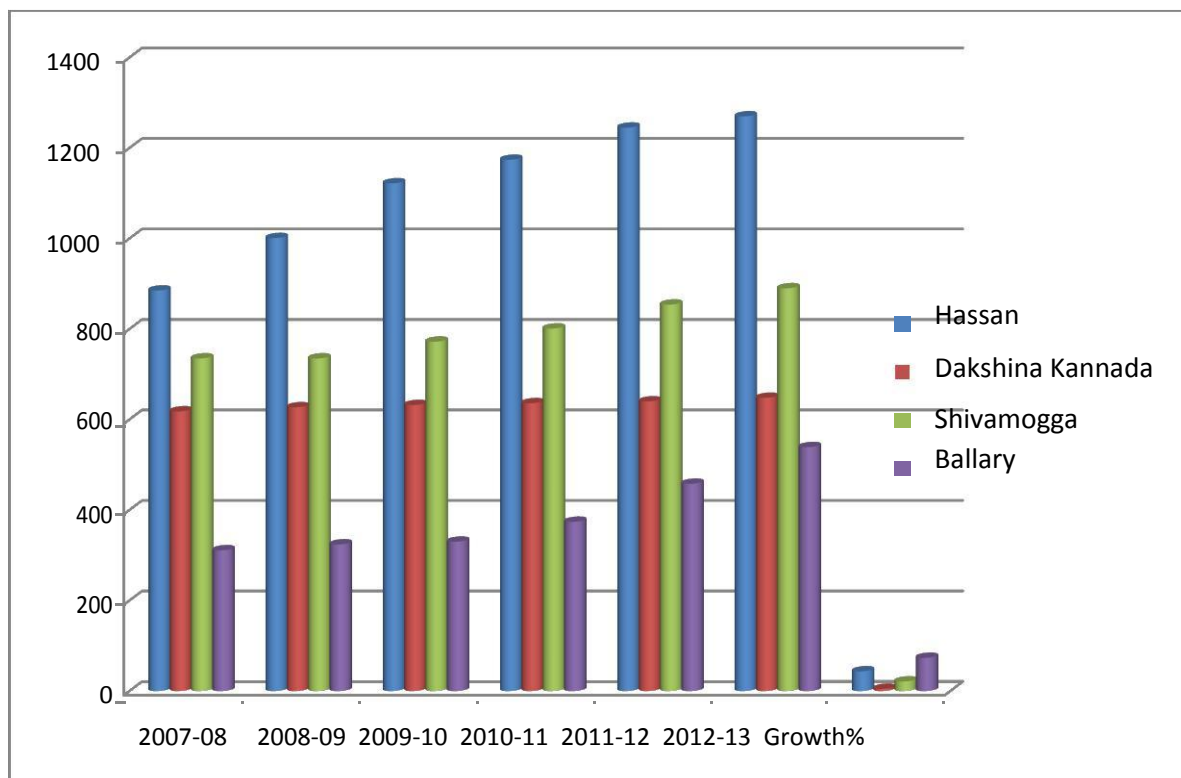
*Source: Data provided by the MDs of the DMUs of the State.*

**Indicator 1: MPCS Numbers**

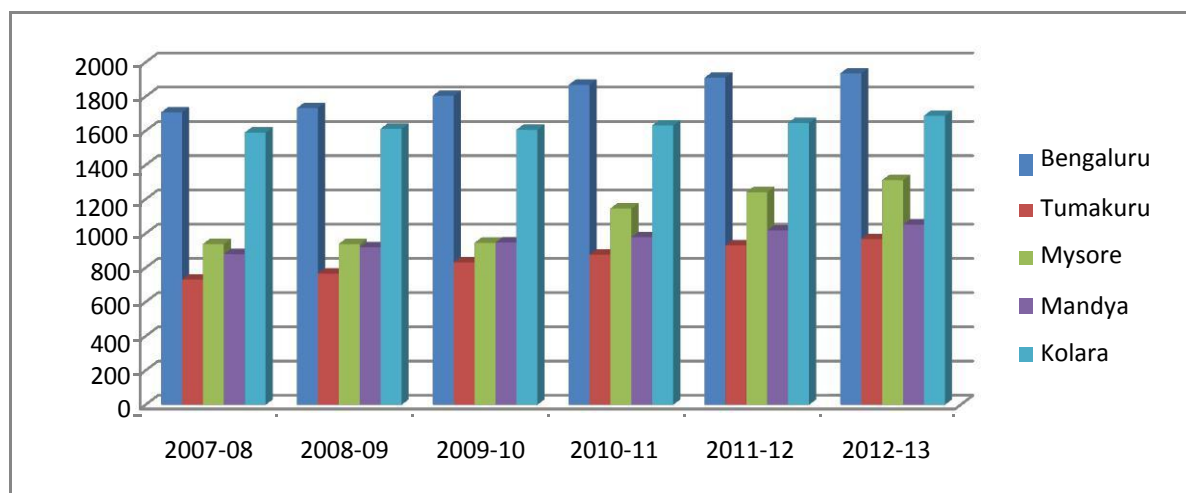
**CHART 6: Milk Producers Cooperative Societies (MPCS) under the District Milk Unions during 2007-2013 in Block-I of Karnataka State**



**CHART 7: Milk Producers Cooperative Societies (MPCS) under the District Milk Unions during 2007-2013 in Block-II of Karnataka State**



**CHART 8: Milk Producers Cooperative Societies (MPCS) under the District Milk Unions during 2007-2013 in Block-III of Karnataka State**



- ❖ **Findings:** Minimum growth observed in DMU is 3.3%. This is probably due to, majority of area in the districts are already having functional MPCSs. Maximum growth observed in Ballary DMU is 66.4%. It appears that more number of MPCSs are established as well as a few might have been revived to be functional societies. However, Average Growth of 26.62% observed in the State under DMUs is significantly positive.

#### **Indicator 2: Women Members in Numbers**

- ❖ **Findings:** Minimum growth observed is **15.3% in Kalaburagi DMU**. This probably is due to, majority of area in the districts are already having more number of women members. Maximum growth observed is **59.2% in Hassan DMU**. Here, it appears that more number of women milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **30.8%** observed in the State under DMUs is significantly positive. This change would lead to empowerment of women.

#### **Indicator 3: Scheduled Caste (Nos.)**

- ❖ **Findings:** Minimum growth observed is in **4.8% in DK DMU**. This probably is due to the DMU already having more number of SC members. Maximum growth observed is **61.1% in Bengaluru DMU**. Here, it appears that more number of SC pourers have shifted from private sector to cooperative sector. The positive change also could be due to more number of SC farmers taking up dairy farming. However, Average Growth of **28.44%** observed in the state, under DMUs is significantly positive.

**Indicator 4: Scheduled Tribe (Nos.)**

- ❖ **Findings:** Minimum growth observed is **7.7% in Belagavi DMU**. This probably is due to the DMU already having more number of ST members. Maximum growth observed is **78.9% in Vijayapura DMU**. Here more number of ST milk pourers have shifted from private sector to cooperative sector. The positive change also could be due to more number of ST farmers taking up dairy farming. However, Average Growth of **37.19%** observed in the state under DMUs is significantly positive.

**Indicator 5: Total Milk Producers (Nos.)**

- ❖ **Findings:** Minimum growth observed is **2.4% in Shivamogga DMU**. This probably because the DMU was already having more number of milk pouring members. Maximum growth observed is **86% in Vijayapura DMU**. Here more number of milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **24.31%** observed in the state under DMUs is significantly positive.

**Indicator 6: Total Milk Purchased in litres.**

- ❖ **Findings:** Minimum growth observed is **34.7% in DK DMU**. This probably because the DMU was already having more number of milk pouring members. Maximum growth observed is **261% in Mysuru DMU**. Here more number of milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **120.48%** observed in the state under DMUs is significantly positive.

**Indicator 7: Milk Purchased from Women in litres:**

- ❖ **Findings:** Minimum growth observed is **24.1% in Bengaluru DMU**. This is probably because the DMU was already having more number of women milk pouring members. Maximum growth observed is **250% in Mysuru DMU**. Here more number of women milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **117.18 %** observed in the state under DMUs is significantly positive.

**Indicator 8: Milk Purchased from SCs in litres**

- ❖ **Findings:** Minimum growth observed is **44.8% in Tumakuru DMU**. This is probably because the DMU was already having more number of SC milk pouring members. Maximum growth observed is **282.3% in Mysuru DMU**. Here more number of SC milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **137.32 %** observed in the state under DMUs is significantly positive.

### **Indicator 9: Milk Purchased from STs in litres**

- **Findings:** Minimum growth observed is **30.9% in Tumakuru DMU**. This is probably because the DMU was already having more number of ST milk pouring members. Maximum growth observed is **294.6% in Mysuru DMU**. Here more number of ST milk pourers have shifted from private sector to cooperative sector. However, Average Growth of **131.16%** observed in the State under DMUs is significantly positive.
  
- ❖ **Inference:** Data analysis indicating positive growth in all the nine indicators is possibly due to the shift of milk pourers / dairy farmers, from the private milk purchasers to the MPCS and due to increased production and productivity at household level. The observed outcome may be attributed to the influence and motivation by the incentive money being given under the Milk Incentive Scheme by the government.

### **IV. Migration of Youth in rural areas of study and control clusters.**

- Data obtained from the individual farmers from the study cluster, reveals that, some youths ranging from one to eight have continued for the dairy farming, instead of migrating to cities. This aspect is also evident that around 1.8% to 28% of farmers have concurred with the above information.
  
- ❖ **Inference:** Village level Migration of youth to cities is taking place in general for various reasons. However, very few youths have taken up dairy farming without opting for migration as per the data report. Since dairy farming provides regular income, a small number of youth, who are usually school dropouts or unemployed, opted for dairy farming depending on their family financial situations and opportunities. Discussion with the farmers during reality check has also revealed that the Milk incentive scheme is not having direct effect on reducing migration of youth at village level. Data analysis has also confirmed the same.

#### **9.2.4. Whether the incentive amount of Rs.2/- (in the past) or Rs.4/- (at present) per litre is sufficient? Does it need to be changed? If so, why and by how much should it be?**

- Data analysis revealed that 81% of Deputy Directors (AH), 90% of local field Veterinarians, 32% of Secretaries of the MPCS have reported that the present rate of Rs.4/- per litre being given as incentive is **less**. They have also informed that

the incentive amount needs to be revised to Rs.6/- (29 %, 42% and 20% respectively) and Rs.8/-(29%, 21% and 34% respectively) per litre of milk. 79% of MDs are happy about the scheme.29% have suggested for revision from Rs.4/- to Rs.5 or 6/- per litre of milk due to increased cost offered and management in general. Other MDs have not reported.

- In the study cluster areas 79.2% of farmers have reported that they are not happy with the existing rate of Rs.4/- incentive amount as the amount rate is **less**. Around 89.5% of farmers want revision of the existing incentive amount rate. Around 25.8% farmers want Rs.6/- per litre of milk and around 29.3% of farmers want Rs.8/- as incentive money. They want upward revision due to increased feed and fodder cost and in the overall management cost in general.

❖ **Inference:** Majority of respondents have reported that higher incentive amount is required due to increased management cost of dairy animals in general. The fact is the feed cost has gone up. (At present it is Rs.18/- per kg for feed sold in MPCs).Other input costs have also increased. Thus the cost of production of one litre of milk has also increased substantially. Therefore farmers demand for rise in the incentive amount rate is genuine and reasonable.

#### **9.2.5. Is there any impact on the socio-economic condition of farmers and landless by the introduction of this scheme?**

- Data analysis indicate that the individual farmers' income level in the study cluster areas has increased by annual growth varying from 7% to 20%, by the end of 2013. Cumulative Growth **observed is 94% for the same period.**
- Investment pattern: 29 to 36% farmers have used their income on household articles like TV, Fridge and other utility items. Majority (62.4%) of dairy farmers made savings in banks. 13.4% of farmers have purchased land also. 9% of farmers have used their income for cattle shed repairs. Out of additional income, 67% of farmers have used for their children's education. Majority (88 to 95%) of farmer's social status increased by being Village Panchayath members, MPCs Directors and also by increased participation in local dramas and festivals etc.



- ❖ **Inference:** As a whole the MIS scheme has significant positive impact on the socio-economic condition of the farmers under milk cooperative sector as compared to the control farmers.

#### **9.2.6. Whether there is improvement in the awareness of management practices in feeding, vaccination, de-worming, calf rearing and optimum usage of feed and fodder solely because of this incentive provided?**

- Data analysis revealed that at the individual farmer's level, majority (88%) have reported increase in the awareness on improved/scientific management practices in feeding, vaccination, de-worming, calf rearing and optimum usage of feed and fodder because of MIS implementation. Majority of Secretaries „of MPCs have reported positive changes in dairy management.
- ❖ **Inference:** The MIS has positive impact on improving awareness of the quality of dairy farm management at the farmer's level. This is also a consequent positive effect of capacity building activities conducted, like exposure visits to the successful farmers, short term trainings by the milk unions and also the advice given by the local veterinarians during treating the animals. Thereby farmers are well motivated in the co-operative environment locally. To justify the positive impact of the scheme, results have indicated that majority (95%) of MPCs Secretaries have reported that the sale of cattle feed; mineral mixture has increased substantially at the local MPCs. It is also reported that the animal disease outbreaks have come down. Artificial Insemination in milch animals has increased at the village level. During the reality check by the team, one back yard dairy farm was inspected. It was evident that the cleanliness, condition of the animals and farmers care in dairy farm management and expected quality standards followed was apparent. During interaction also it was confirmed.

#### **9.2.7. Have rural youth been attracted to take up dairy activities solely due to this scheme being in vogue?**

- In the study area as per the data available only **94 youth have taken up dairy farming**. Similarly 56% of farmers have reported that a few youths have opted dairy farming in the village level. In control population 41% farmers have also reported the same.

- ❖ **Inference:** The milk incentive scheme might have influenced a few youths to continue with the dairy farming due to increased income from the sale of milk. The scheme appears to have no influence on youth to involve in the dairy farming. However the data analysis has indicated not much difference between the study as well as control cluster areas and no impact exclusively due to the MIS implementation on the youth adopting dairy farming.

### 9.2.8. Has the scheme made any difference in the profitability of dairy farming in rural areas?



#### **Some facts about the rural dairy farming:**

- Majority of dairy farming in rural India is on a “Back Yard or Front Yard Farming System”. It is not on an Industrial Type of Dairy Farming System.
  - Generally big farmers are having more number of milch animals and will have their own profitable marketing channel.
  - Cow’s milk has about half the fat content as of Buffalo’s milk. ( Cow’s Milk-3.5 - 5% Fat; Buffalo’s Milk - 6.1 -10% Fat )
  - The income or amount of money a farmer earns from the cooperative depends on the fat content of the milk and the amount of milk poured to the local MPCS.
  - Every farmer generates minimum of Rs. 500/- annually from each animal he owns by selling animal waste as manure.
  - Buffalo milk is much more expensive to produce than cow’s milk.
  - Farmers do consider that the premium for animal insurance is too expensive.
  - Fodder and feed cost is around 80-90% of the total cost, which decides the profitability.
  - Generally farmers rearing one or two animals, feed their animals with fodder collected after their hard labour in the agricultural lands. They don’t account for the cost for feeding fodder.
  - “Farmers labour” towards the dairy cattle management is also not considered for the cost of labour. It is a free labour in their view. Their real income out of the fodder and the labour cost generated is considered as profits by them.
- Data analysis revealed that the individual farmers’ income level in the study cluster areas has increased by annual growth varying from 7% to 20%, by the end of 2013.

- ❖ **Inference:** It is obvious that the farmers' income has increased due to the incentive amount being paid by the government. Farmers do think that the additional income he gets is itself as a profit. However, observed positive growth in the income, they got from the milk is significant as compared to the farmers of control cluster. This is an important outcome resulted due the impact of the MIS implementation.

### 9.2.9. Whether the incentive money is being over charged at any level? Are any checks and balances to prevent these?

- Data analysis finding confirms that over charging at any level is not observed by the 67% of district officers (AH) and 65% of local veterinary officers. In the study cluster, majority (98%) of farmers have reported that they have not got more money due to overcharging.
  - Similarly in the study cluster 85.5% farmers have informed that periodical checking of accounts is being done by the concerned authorities.
- ❖ **Inference:** The Extension Officers of the milk union, Local Officers and audit party have done periodical checks. It may be a monthly, quarterly or annual checks and verification of accounts about payments made; this routine activity is in vogue. Dedicated teams constituted by the AH & VS Department are also verifying accounts at the field level once in a while. At the state level periodical review of progress of the MIS is being done by the Principal Secretary AH&F by conducting the Video Conference. Review committees constituted at the District and Taluka level review the progress regularly.

## 9.3 Answers to the ToR Questions and Discussion

### 9.3.1 Whether the incentive amount is actually motivating or becoming just a subsidy?

The State Government order dated 8<sup>th</sup> Sept. 2008 sanctioning the incentive scheme clearly says that the amount of Rs.2/- per litre of milk supplied by the farmers to the MPCS is **an incentive to encourage dairy activity to run on profitable basis in rural areas under cooperative network**. Furthermore, Karnataka Government has sanctioned, revised rate of incentive of Rs.4/- effective from 14th of May 2013, due to significant increase in the fodder and feed cost, as a timely action to motivate farmers to continue the dairy cattle rearing with better margins in rural areas. The data analysis and findings have endorsed achieving the set

objectives with a positive impact on the increased milk production in the state. It has also motivated rural farmers to rear more number of milch animals. It is obvious that the scheme has given the boost to dairy development in the state. Farmers are also happy about the milk incentive scheme, but majority of them have expressed that the incentive rate of Rs.4/- being given is less. However, the findings have confirmed that the incentive money has motivated farmers to continue their dairy farming and also have come back to the fold of cooperative system by pouring milk to the MPCS.

As understood, the dictionary definition of an **incentive** is „something that motivates you to do something“. In economics one can say that an incentive is a benefit, a reward, or cost that motivates an economic action. A **subsidy** is a benefit given by the government to the groups or individuals usually in the form of cash payment or tax reduction. The subsidy is usually given to remove some type of burden and is often considered to be in the interest of the public. A production subsidy encourages suppliers to increase the output of a particular product by partially offsetting the production costs or losses.

Hence, it is opined that the incentive sanctioned is definitely an **INCENTIVE** amount **to the farmers**. But it may be considered as **SUBSIDY** amount by the milk pourers, as the incentive money being paid is an additional amount to their income and reduces the burden of increased feed cost to some extent. So, it has a dual effect on the dairy farmer.

### **9.3.2 Whether the scheme is meeting the desired objectives?**

Yes. The scheme has largely met the desired objectives. To justify the same, analysis of data in the study clusters has clearly indicated, that the impact is positive in providing additional income to the milk pouring farmers. In addition to that, the dairy activity has increased with an improvement in the quality of dairy management, resulting in substantial increase in the milk production and procurement by the MPCS in the villages.

### **9.3.3 Areas of concern and what corrective action is needed?**

It is a possibility that the prevailing purchase rate of milk offered to the farmers for the milk poured to the MPCS may not be remunerative. It is really a concern area, since, the objective of assuring remunerative price is still a challenge to the DMUs in the state. However, in order to suggest corrective measures, the dedicated team has studied the data obtained by all the MDs of the DMUs on “the cost of production and the procurement rate” for the period 2007-08 to 2015-16.

Data study has revealed some facts and the details are the following.

- “The Cost of Production and the Purchase Rate” of milk considered by the milk unions has varied from union to union.
- It is a fact that, while calculating the purchase rate of milk at the union level, the rate doesn’t depend, only on the cost of production of milk“ but also the financial condition and its status of the Milk Union, which is an important factor.
- At present, Karnataka state is not having an empowered agency at the government level, to advise the “seasonally variable cost of production and purchase rate of milk, to be followed by the DMUs.
- Discussion held with the concerned officers, has given some more information, and the details are;
  - The DMUs may be having an attitude of functioning like corporate bodies, for its survival in the highly competitive field of milk marketing, which is “profitable to the unions”.
  - Milk Unions may be generating more profits for their sustainable growth, for creating, required infrastructure using their own resources, for providing dairy farming related quality services to the farmers without depending on the Government grants.
  - Government grants being received by the DMUs as a “support” for infrastructure development may not be sufficient, to ensure remunerative purchase rate for the milk purchased by the rural dairy farmers.

In order to sort out the lacunas prevailing in the setup, based on the above mentioned facts, the following three options are discussed;

**Option – 1: National Dairy Development Board (NDDB)** could be identified by the government, to take-up the responsibility of recommending the procedure and methodology for calculating cost of production and also for fixing purchase rate considering seasonally variable costs to the DMUs of the state.

**Option-2: “Karnataka Agriculture Price Commission”** could be requested to look into the methodology for calculation of cost of production and purchase rate of milk procured by the DMUs.

**Option-3:** On a participatory method, thirty district level empowered committees could be constituted to follow a standard method of **calculating the cost of**

**production** involving farmers representative – representing landless, MF/SF and Big dairy farmers and respective MDs of the DMUs, the District Deputy Director of AH&VS and a district level officer of the Co-operative Department. (In this option, there is scope for biased action).

### 9.3.4 Action taken on the proceedings of the 25<sup>th</sup> Technical Committee meeting held on 26<sup>th</sup> December 2015, under the Chairmanship of the Secretary, Planning, Programme Monitoring and Statistics, GoK.

The Committee suggested that “since the cost of milk production vary from place to place and purchase rate of milk from union to union, cost of milk production data and purchase rate data could be used to suggest either milk union/district specific variable incentive amount”. In response to the suggestion made, latest required data was obtained from the DMUs, for the study. The details are provided in Table 8.

**Table 8: Cost of Production and Purchase Rate of One litre of Milk in Rural areas during 2015-16.**

Sl No.	2015-16	Cost of Production (Rs)	Purchase Rate (Rs)	Difference
1	Dakshina Kannada	23.00	<b>27.37</b>	4.37
2	Kalaburagi	23.21	24.70	1.49
3	Ballary	17.10	24.45	7.35
4	Mandya	17.14	23.81	6.67
5	Shivamogga	21.00	22.71	1.71
6	Kolara	17.54	22.65	5.11
7	Dharawada	10.22	22.25	12.03
8	Bengaluru	18.28	22.16	3.88
9	Vijayapura	9.11	21.50	12.39
10	Mysuru	19.13	21.00	1.87
11	Belagavi	12.36	20.60	8.24
12	Tumakuru	20.00	19.71	<b>-0.29</b>
13	Hassan	26.18	21.00	-5.18
14	Chamarajanagara	17.63	21.00	2.37

Further, in order to verify the method of calculation being followed for Dairy Economics, 14 estimates are received from the MDs and Field level Veterinarians and they were studied in detail. The study indicates that none of them have followed a uniform pattern or method for calculation, considering all the parameters of cost of production and reasonable profit to the producer. Even the data considered for their calculation appears to be adhoc and un-scientific.

Hence it is presumed that the DMUs might have not followed a common method of calculating the Cost of Production and the Purchase Rate of milk with reasonable profit to farmers. In addition to that they have arrived at the purchase rate, mainly based on the financial condition/situation of the respective unions. Therefore, it is opined that, **it is not possible to suggest “specific variable incentive amount” with the existing incentive rate as the data available is inadequate and un-scientific.** However, a study on “Exploring the cost of milk production & potential economies of scale in a dairy cooperative” in Anand, Gujarat State, an article published in 2012, by Wharton Research Scholars, Wharton School, Pennsylvania, as extract abridged copy is given in **Appendix 9**, as a reference document.

It is ascertained that the **National Dairy Research Institute (NDRI), Karnal, Haryana State**, has been entrusted by the Department of Animal Husbandry, Dairying and Fisheries (DAH,D&F), Government of India (GoI) to take-up a study on **“Costs and Returns in Milk Production: Developing a Standardized Methodology and Estimates for Various Production Systems 2015”**. Similarly, the Department of AH & VS also could request the DAH, D&F, GoI, to consider the Karnataka State for taking up similar study on calculation of Standardised method of Cost of Production and the Purchase rate of milk produced in rural Karnataka State. Once the method is recommended, the same can be used for fixing purchase rate for winter, rainy and summer seasons by considering different variables seasonally, to advise the respective DMUs in the state. Another option is, similar study could also be entrusted to, any Institution in the state having expertise, by providing required financial assistance by the Department of AH & VS, through the KEA, Department of Planning, Programme Monitoring and Statistics of Government of Karnataka.

However, the study team after a detailed discussion, decided to propose a **Model Score Card Method, if the present incentive rate of Rs.4/- is revised to Rs.6/- as a presumption**, to suggest a variable incentive rate to address the equity, based on need for development of the districts, which could be adopted safely with justification, by considering four parameters. Detailed work sheet is given as **Appendix 10**.

### **9.3.5 Whether the incentive amount needs to be altered? If so, what should it be?**

Field data analysis reveals that majority (79.2%) of stakeholders have expressed that the present incentive amount being given is less. Further, majority (89.5%) of farmers have expressed that the present rate is to be revised or changed. 25% of farmers want revision to Rs.6/- and around 30% want revision for Rs.8/- for the milk purchased. Others want a rate more than Rs.8/-.

Furthermore, while discussing with the MPCS Chairman and the member farmers during the reality check it was found to be a **fact that increase in the cost of feed and the cost of dairy farming management in general, is causing hardship and diluting the farmers' efforts**. All those farmers, who were present, strongly expressed their opinion that "instead of giving incentive amount, it could be merged with the existing milk purchase rate and it should be not less than Rs.28/- per litre of milk, which may be on par with the cost of production of milk. It was also informed that anything given more than Rs.28/- it may be a profitable dairy farming for them, in their view.

Continued discussion, evinced that the MIS has motivated the farmers to continue the dairy farming activity with an improved quality of management, resulting in increased milk production and their socio economic status, to some extent. However, it was mentioned that the scheme has minimum effect on avoiding migration of youth to urban areas in search of livelihood. They also said that dairy farming is a vibrant activity in the village, as well as a ray of hope for their survival under harsh conditions, since they get regular uninterrupted income throughout the year. The study findings also endorse the opinion expressed by the farmers that the dairy farming activity is a visible silver line for the development of strong and sustainable rural economy in long run. Therefore, government could consider revision of present rate of Rs.4/- to Rs.6/- with a variable rate based on the factual parameters, considering CoP, PR, Productive Animals Population and number of functional MPCS or milk pourers in DMUs/ Districts.

### **9.3.6 Is the delivery of the incentive amount is efficient and aberration free? If not what is the suggested recourse to ameliorate it? And whether transfer of incentive money to the bank accounts of milk supplying farmers by ECS is the interest of the scheme's objectives and milk suppliers?**

The study findings indicate that during the period 2008 to 2013, the incentive money was reaching farmers with a gap of 2 to 3 months after the milk is poured to the MPCS. Money was also being paid on acquittance at the society level. Only a few complaints of abnormal claims were reported. However, at present incentive amount delivery system is



made by adjusting or transferring money to the farmers account by ECS by the DMUs is in the interest of the scheme's objective and the milk suppliers.

As regard to the incentive amount claims verification for the correctness and to check the unauthorised claims in the bills, the DMUs are following a simple method. The total incentive amount claimed is being verified with the actual total quantity of milk they received at the union level. If, the amount claimed is tallying with the total milk purchased, then the respective bill is accepted and submitted to the Department of AH&VS for release of grant amount. This procedure effectively eliminates any fraudulent claims. In addition the government should ensure timely and adequate grants for the scheme.

The present delivery system is not very efficient enough to address the delay caused in delivery of amount to the farmers. It is also a cumbersome system with a scope for benami claims as an abrasion. In addition to this, it has caused additional work load to the existing staff at all levels. Therefore, in order to recourse and ameliorate the aberrations, user friendly customised software needs to be developed and applied as a dedicated net work. In addition to this the Department of AH&VS must have an exclusive wing for Monitoring and Surveillance of the schemes. However, the senior officers of the department are taking care of investigations, looking for checks and balances periodically at the DMUs level. In a few instances, district level and taluka level constituted committees have also reviewed the progress of the MIS. In the state level, MIS progress has been reviewed in the video conference by the Principal Secretary AH & F Government of Karnataka. However, it is suggested that the committees formed at various levels to take up review and monitoring of the scheme regularly.

In this connection, for effective implementation of the scheme, it is suggested to establish an exclusive **Monitoring, Evaluation, Learning and Documentation (MELD) wing or Cell**, under the direct supervision of Vigilance wing of the Commissionerate of Department of AH & VS. The wing with a team of trained officers, would actively participate in concurrent monitoring of this scheme. This setup would help the beneficiaries.

## **REFLECTIONS AND CONCLUSIONS**

### **10.1 Opinions and Suggestions provided by the 23 Senior Officers and 48 field Veterinarians of the Department of AH & VS based on their experience on the process of Implementation of Milk Incentive Scheme.**

1. Milk Incentive amount to be paid along with the payments made for the regular milk bills to the farmers.
2. It is good that Milk incentive amount is being given to the farmers. But it should be paid with minimum time without delay in full without any cuts.
3. Incentive amount rate should be revised based on the cost of production and purchase rate of milk.
4. Higher incentive rate is required for buffaloes due to its higher management cost.
5. Making incentive money payments through the ECS which is in vogue to be continued.
6. Improvement needs to be made for the existing infrastructure at the Veterinary Institutions and provide additional man power at the MPCS level also.
7. Government Officials and Social Audit Committees should visit the MPCS to check the utilisation of incentive amount.
8. Training is required for Secretaries of MPCS to manage the MIS efficiently.

### **10.2 Opinions and Suggestions provided by the Managing Directors of all the Milk Unions on the “Milk Incentive Scheme Implementation process” to improve the efficiency, based on their experience.**

#### **Incentive amount: Time taken to reach the hands of farmers:**

- At present incentive money is reaching farmers late. Therefore, it is better if the incentive money is paid weekly along with the regular milk payments. This system ensures transparency and confidence among farmers.
- Prevailing system of transferring incentive money directly to the farmers account by ECS is quite efficient, transparent and could be continued.

#### **Revision of rate of Incentive amount – reasons:**

- Incentive amount is to be revised to Rs.6/-per litre of milk. This revision is required due to increased cost of production, rise in animal cost and increased cost of animal feed and treatment cost.

- Belagavi Milk Union is very close to Maharashtra boarder. Therefore too much competition is seen in milk collection and marketing. Hence Rs.6/- incentive per litre of milk is required to motivate farmers and to compensate the increased maintenance cost of dairy animals in general. Further Buffaloes maintenance cost is higher than the cost of rearing cows.

**Regarding the Cost of Production and Purchase Rate of milk in rural areas by the MPCs:**

- There is a need to constitute an expert committee at the government level to provide a model method for calculating cost of milk production and purchase rate of milk in rural areas. Based on that all the unions shall follow a common method and arrive at the purchase rate for milk.
- In the interest of the farmers, the Unions provide subsidised feed and green fodder seeds along with technical support to reduce the production cost.

**Regarding Incentive payment system, financial management and surveillance, checks and balances in the scheme implementation process:**

- User friendly suitable customised software is to be provided to monitor all the activities of the incentive scheme. The software could be used at different levels for effective monitoring, accountability and transparency.

**Existing infrastructure and man power status:**

- Lumpsum amount equivalent to two percent of the incentive amount is to be released as grant to the unions separately to meet the costs of required additional infrastructure and the man power. At present union is incurring additional cost for auditing the accounts at different levels. Additional cost met for the staff per month is around Rs. 50000/- to 60000/-. This has to be paid by the Government to the union.
- If the government provides additional grants for increasing the milk processing capacity and value addition activity, including the cost for infrastructure and man power, unions would be able to run on profits. Thereby farmers could also be given additional amount to the existing purchase rate by the union. Thereby Milk incentive scheme could be withdrawn. Therefore it is suggested that government could implement long term capital investment programmes to reduce revenue expenditure and to make it feasible to pay higher purchase rate by the MPCs to the farmers.

**Any Other:**

- Instead of Unions transferring the Incentive amount to the milk producers' account directly, as informed in the government order, it is better, if the Government treasury transfers the same directly to the farmers account.

**10.3 Consolidated Opinions and Suggestions provided by the Secretaries of the MPCs on the impact of the Milk Incentive Scheme:**

1. There is increase in the Artificial Inseminations for animals and sale of Cattle feed, Mineral mixtures at MPCs level. It is also observed that disease outbreaks in animals have come down due to effective preventive measures and the hygienic practices followed in the dairy farming management.
2. Chilling plant established.
3. Milk Pourers increased.
4. Milk production in village increased.
5. Number of milch animals has increased.
6. Automatic milk Analysers are established at MPCs for testing.
7. In general dairy activity is vibrant in the village.
8. To some extent living standards among dairy farmers has gone up.
9. Dairy farmer's children are studying in convents and their attendance is also good.
10. Repairs and improvements for an old building of a dairy farmer are observed.

**Suggestions by the Secretaries of the MPCs:**

1. Revising the Incentive rate of Rs.4/- to Rs.6/- or Rs.8/- is required to meet increased management cost of dairy farming in general.
2. In order to avoid delay in getting incentive money, it should be paid along with the regular milk bills by the society.
3. Societies staff incentive to be enhanced due to increased work load in existing system. Therefore Rs.500/- per month is to be paid as honorarium.

**10.4 Lessons Learned**

**On Incentive Amount or Service Delivery System**

Any scheme providing incentive amount or any service or benefit, in the larger interest of the society, before implementation, the method of delivery system for adoption has to be discussed thoroughly to know the "PROS AND CONS" by the concerned implementing agencies. Based on the outcome, an efficient, suitable delivery system could be selected and guidelines issued, for adoption aiming at speedy implementation for achieving the objectives efficiently.

## **10.5 Conclusions**

**Policy decision of the Government of Karnataka, in sanctioning “The Milk Intensive Scheme” has a highly positive significant impact in general, resulting in an overall development of the dairy activity under the cooperative sector, assuring livelihood for the women, small, marginal and the landless farmers in the state. Now, the Government have a strong justification to continue the scheme with suggested improvements in the incentive delivery system with an upward revision in the incentive rate of R.6/- per litre of milk or more in the larger interest of dairy farming community, under cooperative sector. Revision of incentive rate, would definitely maintain the pace of sustainable growth in milk production, also in drought situation, aiming at food security.**

## **RECOMMENDATIONS**

**11.1. Milk Incentive Scheme** under implementation is to be continued with an upward revision rate. It could be of Rs.6/- or more per litre of milk poured by the dairy farmer to the local village level MPCS, since the majority of stakeholders expressed their need due to increased feed cost and overall dairy farming management cost. The scheme will have to remain till the rural farmers get “Remunerative / Profitable purchase rate” by the respective DMUs, in order to achieve maximum growth in dairy activity in the cooperative sector and to improve the status of dairy farmers.

**11.2. “Monitoring, Evaluation, Learning and Documentation (MELD)”** wing could be established at the Commissionerate of AH & VS to take care of “Concurrent Monitoring, Evaluation, for Learning and Documentation” of the schemes under implementation, by suggesting timely mid course corrections and suitable remedies for problems as and when encountered.

**11.3. Responsibility of calculating cost of production and purchase rate of milk procured by the milk unions from the rural dairy farmers. Two options are recommended.**

**Option – I: National Dairy Development Board (NDDB)**, could be identified by the government, to take-up the responsibility of calculating the cost of production and also fixing price of milk purchased by the milk unions at the village level, in Karnataka State.

**Option-II: „Milk“** as such, is an essential commodity, which could also be considered as an item under the purview of “**The Karnataka Agriculture Price Commission**” to protect the interest of the farmers, for assuring the remunerative price for the milk in the State.

The above regulatory authority shall also consider the financial condition of the district milk unions, as one of the parameters, while calculating the purchase rate of milk.

**11.4. Incentive Amount Delivery System under the MIS.**

**Option I:** The present system needs to be further strengthened to make it more efficient in delivering the **incentive amount** to the rural milk pourers along with the farmers’ **milk bill** being paid fortnightly by the MPCSSs.

**Option II: If MIS is continued in the same mode of delivery system,** the situation deserves to opt for an efficient dedicated Software System with a net work of connecting all the functional MPCs, District Milk Unions from the Department of AH & VS., to monitor the scheme implementation. The software should have scope for maintaining detailed data of milk pourers linked to their Aadhaar number, for accounting and payments verification with digital certification at different levels to assure transparency, accountability and speedy disposal.

This net could be further widened to cover all allied institutions of the department, connecting all livestock farmers with the details of their land and livestock resources to provide door delivery services, input supply and sample survey, livestock insurance and incentives including providing disease forecasting information on mobile SMS in long run, as **a long term plan.**

**11.5. Logistic and Development Support:** Two percent of the incentive grant amount, be allocated for creating need based, additional infrastructure and man power, both for the AH & VS department and the DMUs, including at MPCs level. Part of which could be used for logistic support for conducting “**Training of Trainers**” programmes for local farm women leaders and further, for conducting “**Village Based Trainings**” (VBTs), for dairy farmers to impart knowledge for rearing of dairy animals under adverse / drought situations. This model of capacity building activity results in “**Farmer to Farmer**” extension for knowledge dissemination and sustainable positive growth for the dairy development activity at the village level.