A Study on Problems Faced by Dairy Farmers in Supplying Milk to Cooperative and Private Dairy Firms with Reference to Ahmednagar District

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Abstract

India continued to be the largest milk producing nation in 2013-14 with an anticipated milk production of 137.6 million tonnes. The country's share in world milk production stands at 18 percent 1.The Dairy sector has developed through co-operatives in many parts of the State. Milk Industry in India has undergone substantial changes during 1990s. Through changes in government policy, the number of privately owned plants has increased substantially. The changing policy changes the structure of Indian dairy industry and competition increased in all area of operation of dairy industry.

"A Study on problems faced by dairy farmers in supplying milk to Cooperative and Private dairy firms" with special reference to selected cooperative and private dairies progressed with the help of a survey. The total sample size selected was 360 and for the data collection convenient sampling method was used. Dairy farmers were visited and information was collected from them. Research instrument was questionnaire and approach method was personal interview. Secondary data were collected directly from the literature available in library and from internet.

The main objective of the study to explore the problems faced by dairy farmers in supplying milk to Cooperative and Private dairy firms. And also to know solutions to overcome this problems. How the overall dairy firms is needs to improvise, so that it can make its presence felt in the market for a long period was find out from the survey.

Keywords: Milk Production, Cooperative and Private Dairy Firms, Problems Faced by Dairy Farmers.

Introduction

India continued to be the largest milk producing nation in 2013-14 with an anticipated milk production of 137.6 million tonnes. The country's share in world milk production stands at 18 percent 1. However, the estimated per capita availability of milk in 2013-14 increased to 302 grams per day which is more than the world average of 294 grams per day. Per capita availability of milk in developed countries is estimated at 831 grams per day and in Asia the same is estimated at 186 grams per day.

The Dairy sector has developed through co-operatives in many parts of the State. Milk Industry in India has undergone substantial changes during 1990s. Through changes in government policy, the number of privately owned plants has increased substantially. The changing policy changes the structure of Indian dairy industry and competition increased in all area of operation of dairy industry. The following table shows the daily average milk collection of Cooperative and Private dairies for Ahmednagar District in last five year,

Table No.1
Daily average Milk collection by Co-op & Private dairies for Ahmednagar district (In lakh liters/day)

Sr. No.	Year	Cooperative Dairy firms	Private Dairy firms
1	2009-10	4.90	16.64
2	2010-11	5.84	16.58
3	2011-12	5.35	16.05
4	2012-13	4.64	14.56
5	2013-14	4.29	17.13

Source:- Compiled by researcher

The above table indicates Cooperative dairy firm's average milk collection for last five years was 5.004 llpd, similarly Private dairy firm's average milk collection for last five years was 16.192 llpd. The results clearly shows that, Private dairies are providing huge competition to Cooperative year after year in area of milk collection in district.

Objective

1. To explore the problems faced by Cooperative and Private dairy farmers in supplying milk to dairy firms.
2. To find out the solution to overcome these problems.
3. To know the expectation of dairy farmers from dairy firms.

Hypothesis

1. Farmer supplying milk to Cooperative and Private dairies differ across financial problems
2. Cooperative dairy farmers are more satisfied on working of cooperative dairy firms as compare to private dairy firms.

Research Methodology

The Present Study attempts the micro level efforts made by Cooperative and Private dairies for their milk collection from dairy farmers. This Study is based on the Primary and Secondary data which are taken from Selected Cooperative and Private dairies in district.

Primary Data

Primary data has been collected from conducting survey of Selected Co-op & Private dairy .It has been collected through following way

1. **Questionnaires**: For the purpose of collection of primary data, a Structure Questionnaire was prepared on the basis of the objectives of the study. 360 Dairy farmers selected as sample.
2. **Observation**: method has also used for Collection of related information.

Secondary Data

1. Published and unpublished secondary data was collected from various books, annual reports, research journals and websites.
2. Website, Mahanand, NDDB, etc.
3. News papers
4. Reference Books

Selection of Respondents

The dairy farmers selected from the district through "Convenient Sampling method", as per below,

Table No. 2
Selection of Common Villages

Sr. No.	Talukas	Selected Units		Total Villages	Milk Producing Villages	*Common Villages	Selected Villages (10%)	Selected dairy farmers
		Coop.	Pvt.					
1	Kopargaon	1	1	79	62	42	4	80
2	Shrirampur	1	1	52	50	30	3	60
3	Sangamner	1	1	169	88	44	4	80
4	Ahmednagar	1	1	104	80	35	3	60
5	Shrigonda	1	1	114	68	25	2	40
6	Karjat	1	1	121	53	21	2	40
7	Total						18	360

The 3 talukas each was selected from North and South Ahmednagar district. The one Cooperative and one Private dairy selected from each selected Taluka. The total villages were identified along with milk producing villages. From milk producing villages the common villages identified who supply milk to both Cooperative and Private dairy firms. The 10% common villages were selected to further dairy farmer's selection. The 20 dairy farmers each was selected who supply milk to Cooperative and Private dairy firms. The total 360 dairy farmers were selected as sample through Convenient Sampling method.

Interpretation and Analysis of Data

Farmers supplying milk to Cooperative and Private dairy were asked to comment on extent of financial problem and problems at dairy firm level encountered by them, using five response options, 1 = very minor problem, 2 = minor problem, 3 = moderate problem, 4 = major problem and 5 = very major problem.

Research Question

Dose farmer supplying milk to Cooperative and Private dairies differ across financial problems?

Statistical test : MANOVA

Reliability Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.786	5

The value of $\alpha = 0.786$ which show good reliability.

Variable and Measurement

Independent Variable: Dairy firm type (1 = Co-op dairy, 2 = Private dairy)

Between-Subjects Factors			
		Value Label	N
Dairy firm	1.00	Cooperative dairy	180
	2.00	Private dairy	180

Dependent Variable

1. Delay in payment of milk
2. Low price of milk offered
3. Payment irregularity
4. Low provision of loan in dairy firms
5. No or less provision for advance payment for milk

H_0: Farmers providing milk to Cooperative & Private dairies do not differ in financial problems.

H_1: Farmers providing milk to Cooperative & Private dairies significantly differ in financial problems.

Level of significance: $\alpha = 0.05$

Descriptive Statistics				
	Dairy firm	Mean	Std. Deviation	N
Delay in payment of milk	Cooperative dairy	3.0944	1.21304	180
	Private dairy	2.8389	1.31669	180
	Total	2.9667	1.27062	360
Low price of milk offered	Cooperative dairy	3.2611	1.14513	180
	Private dairy	2.4944	1.23042	180
	Total	2.8778	1.24742	360
Payment irregularity	Cooperative dairy	3.4278	1.03043	180
	Private dairy	2.8444	1.41746	180
	Total	3.1361	1.27142	360
Low provision of loan in dairy firms	Cooperative dairy	2.4111	1.49408	180
	Private dairy	2.7611	.94167	180
	Total	2.5861	1.25932	360
No or less provision for advance payment for milk	Cooperative dairy	2.7333	1.12165	180
	Private dairy	3.3667	1.32404	180
	Total	3.0500	1.26568	360

A two group between subjects MANOVA was conducted on 5 dependent variable

Bartlett's Test of Sphericity	
Likelihood Ratio	.000
Approx. Chi-Square	685.235
df	14
Sig.	.000

Bartlett's Test of Sphericity is statistically significant; p value is less than 0.001 indicating sufficient correlation between dependent variable to proceed with the analysis

Box's Test of Equality of Covariance Matrices	
Box's M	349.214
F	22.933
df1	15
df2	516028.737
Sig.	.000

Samples consist of 180 respondents Box's Test of Equality of Covariance Matrices was statistically significant (p is less than 0.001), hence a Pillai's trace was employed to evaluate all multivariate effects. The Pillai's trace was significant at 5% level of significance.

Multivariate Tests[a]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Dairy firm	Pillai's Trace	.233	21.480[b]	5.000	354.000	.000	.233
	Wilks' Lambda	.767	21.480[b]	5.000	354.000	.000	.233
	Hotelling's Trace	.303	21.480[b]	5.000	354.000	.000	.233
	Roy's Largest Root	.303	21.480[b]	5.000	354.000	.000	.233

Pillai's Trace = 0.233, f (5,354), p value = 0.000

Conclusion

Scene P value 0.000 is less than level of significance the null hypothesis is rejected.

Hence it is concluded that "Farmers providing milk to Cooperative & Private dairies significantly differ in Problems at dairy firm level."

Since Pillai's Trace test significant, Univariate ANOVA was conducted on each dependent variable separately to determine the locus of statistically significant multivariate effect.
The new alpha = 0.05/5 = 0.01

From the table labeled test between subject effect,

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Dairy firm	Less improved equipment	26.678	1	26.678	11.662	.001	.032
	Uneven & insufficient supply of animal feed	15.211	1	15.211	16.158	.000	.043
	Infrequent visit of veterinary doctor	23.511	1	23.511	29.316	.000	.076
	Lack of training facilities/Expert lecture	20.544	1	20.544	12.577	.000	.034
	Management work transparency	33.003	1	33.003	13.003	.000	.035

Conclusion

1. Hence, less improved equipment is problem to Private dairy as compared to Cooperative dairy. [p = 0.001, Co-op mean = 3.36, Pvt. mean = 3.90]
2. Uneven & insufficient supply of animal feed is problem to Cooperative dairy as compared to Private dairy. [p = 0.000, Co-op mean = 2.92, Pvt. mean = 2.51]
3. Infrequent visit of veterinary doctor is problem to Private dairy as compared to Cooperative dairy. [p = 0.000, Co-op mean = 2.86, Pvt. mean = 3.37]
4. Lack of training facilities/Expert lecture is problem to Private dairy as compared to Cooperative dairy. [p = 0.000, Co-op mean = 2.58, Pvt. mean = 3.06]
5. Management work transparency is problem to Cooperative dairy as compared to Private dairy. [p = 0.000, Co-op mean = 3.27, Pvt. mean = 3.88]

Suggestion

1. Cooperative and Private dairy firms do not differ in problems of "delay in payment of milk which need to be continued.
2. Cooperative dairy should offer competitive prices to dairy farmers for purchase of milk.
3. Cooperative dairy should made milk payments to dairy farmers on regular basis.
4. Private dairy should made the provision for loan for their dairy farmers.
5. Private dairy should made the provision for advance payment of milk dairy farmers.
6. Private dairy need to improve their equipment's in order to produce more quality milk and other products.
7. Cooperative dairy should provide animal feed sufficient and regularly to their dairy farmers.
8. Private dairy need to improve their veterinary facility by frequent doctor visit at dairy farmers.
9. Private dairy should provide technical guidance by expert lecture and seminar to dairy farmers,
10. Cooperative dairy need to improve their working more efficient and effective for better business management.

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