A STUDY ON PRODUCTIONAND PRODUCTIVITY OF MILK INVEPPURBLOCK OF PERAMBALUR DISTRICT

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ABSTRACT

The study was conducted in Perambalur District of Veppur Block. The study area was purposefully selected by the researcher due to the following reasons: Agricultural based area, Animal Intensity Rearing habit and livelihood pattern and Employment opportunity. This study examined milk production and productivity in the study area during the financial year 2019 - 2020. The main breeds kept by milk producers in this area were cross- breeds, indigenous breed and buffalo. Cross- breeds, cows produced more milk than the other two groups. Milking was done by hand and most of the producers used bicycles to transport milk to the collection centre. The milk was sold fresh or after it was fermented to naturally fermented or cultured milk

Keywords: *Standard of living, milk production and productivity, smallholder dairying,*

I-INTRODUCTION:

India has attained the first rank in milk production in the world. The first five countries in the world producing maximum milk are India, USA, Russia, Germany and France. India has produced 13.1 per cent of the total milk produced in the world. To maintain our first position in milk production, India will have to face healthy competition from other countries. For this, only producing largest quantity is not sufficient, but the quality of milk and other factors also need to be borne in mind, the "operation flood" programme will have to be supported by quality improvement and quality maintenance.

Dairying has brought about socio-economic transformation in Tamil Nadu and is playing a significant role in strengthening rural economy. Majority of milk producers are small farmers, marginal farmers and downtrodden. Millions of small and marginal farmers in dairying who own two to three animals and produce an average of five liters comprise a critical portion of India's dairy industry. Dairying has vast potential to generate employment and has helped in alleviating poverty in rural belt. Dairying provides definite and regular income to millions of rural families throughout the year, improving the quality of their life. Thus, changes in the dairying environment have important implications for the smallholder farmers and for poverty reduction.

Research gap:

The present study covers the production and marketing of milk in the VeppurBlock. So far no research has been conducted in the block, particularly in milk production. Studies have been undertaken to analyse the function of co-operative societies but the unorganized sectors were not taken for any other study. Therefore the milk produced by the people in the Block is

not accounted for. So the milk that is produced by the producers in that area is being marketed to the household, tea stalls and the milk vendors are not accounted for.

Statement of the problem:

India is the largest milk producer in the world. The milk production of this country has increased from 17 million tonnes in 1950-51 to 108.5 million tonnes in 2008-09 and the per capita availability of milk has also increased from 112 grams / day in 1968-69 to 258 grams / day during 2008-2009. But still it is low compared to the world average of 265 grams/day. About 80 per cent of the milk produced in the country is handled in the unorganized sector and the remaining 20 per cent is shared equally by cooperative and private dairies. The productivity of the animal is also low when compared to the world countries. This deficit which is of a very serious nature may affect the health and vitality of the nation, as milk is the only source of animal protein for a large number of people in this country. To meet the nutritional requirements of the people, there is an urgent need to boost milk production. In this context this investigation aims to study the production and marketing of milk in Veppur Block of Perambalur district and know the problems encountered in the dairy sector on productivity, finance, marketing, feeding, infrastructure, and other problems.

Objectives of the study:

1. To study the standard of living of the milk producers in the study area.
2. To know the productivity of milk production in the study area.
3. To suggest appropriate measures to strengthen the milk production in the study area.

Hypotheses of the study:

1. There is an insignificance relationship between education level and standard of living of the milk producers in the study area.
2. There is a positive relationship between feed intake of milk and milk yield.

Period of the study:

The study uses both primary and secondary data. The primary data were collected for the financial year 2019 - 2020. The data were collected from the respondents through interview method. The secondary data were also collected.

Sampling design:

The study was conducted in Perambalur District of Veppur Block. The study area was purposefully selected by the researcher due to the following reasons: Agricultural based area, Animal Intensity Rearing habit and livelihood pattern and Employment opportunity. The above facts are presented based on the survey conducted by the researcher. The researcher felt that Veppur Block is viable and potential one to conduct so meaningful and systematic study for dairy Industry. There are three veterinary dispensaries of which three zones have been identified viz., Thungapuram, Veppur and Kilapuliyur. In Thungapuram dispensary controlled villages are 33, in Veppur dispensary controlled villages are 11 and in Kilapuliyur dispensary controlled villages are nine. The classification has been done on the basis of the bovine population at these villages, five villages from each group have been selected using random sampling method. The data relating to the standard of living of the milk producers in the study area.The productivity of milk production in the study area of the respondents have been obtained. From each category of villages 100 respondents have been chosen using simple random method. In this way, a total of 300 respondents (milk producer) have been chosen by using stratified simple random sampling technique.

Result and Discussion:

The stand of living index (SLI) is calculated as given in National Family Health Survey (NFHS-2) by giving score for each items of house and household articles.The analysis of the standard of living of milk producers in the study area can be understood with the help of the following ten tables.

TABLE NO: 1
AREA WISE STANDARD OF LIVING OF THE RESPONDENTS

Standard of living	Area			Total
	Thungapuram	Veppur	Kilapuliyur	
Low	3 (17.6)	7 (41.2)	7 (41.2)	17 (100.0)
Medium	81 (33.3)	81 (33.3)	81 (33.3)	243 (100.0)
High	16 (40.0)	12 (30.0)	12 (30.0)	40 (100.0)
Total	*100 (33.3)*	*100 (33.3)*	*100 (33.3)*	*300 (100.0)*

Source: *Primary data*

The table shows that designates the area wise standard of living of the respondents in the study area. It is classified into three categories, viz., low, medium and high. 40 per cent of the respondents were in high standard of living in Thungapuram area which is higher, In Veppur and Kilapuliyur area, the standard of living of the respondents were 30 per cent respectively. The table points out the standard of living of the respondents was very low in Thungapuram area, but in Veppurand Kilapuliyur area, the standard of the living of the respondents was the same which is 41.2 per cent respectively.

CHI - SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi - Square	2.682	4	.612
Likelihood Ratio	2.878	4	.578
Association	1.732	1	.188
N of Valid Cases	300		

From the Chi-Square test the significance value is 0.612 which is greater than 0.05, the Chi-Square test is not significant, which means that the standard of living is not significantly associated with the three areas of study.

TABLE NO: 2
EDUCATION WISE STANDARD OF LIVING OF THE RESPONDENTS

Standard of living	Education							Total
	Illiterate	Primary School	Middle School	High School	Higher Secondary School	Diploma	Graduate	
Low	0 (0.0)	3 (17.6)	4 (23.5)	8 (47.1)	0 (0.0)	0 (0.0)	2 (11.8)	17 (100.0)
Medium	21 (8.6)	50 (20.6)	31 (12.8)	97 (39.9)	34 (14.0)	8 (3.3)	2 (0.8)	243 (100.0)
High	5 (12.5)	6 (15.0)	3 (7.5)	22 (55.0)	3 (7.5)	1 (2.5)	0 (0.0)	40 (100.0)
Total	*26 (8.7)*	*59 (19.7)*	*38 (12.7)*	*127 (42.3)*	*37 (12.3)*	*9 (3.0)*	*4 (1.3)*	*300 (100.0)*

Source: *Primary data*

The table explains the educational status wise standard of living of the respondents. They are classified as Illiterate, Primary School, Middle School, High School, HigherSecondary School, Diploma and Graduate level. 47.1 per cent of the respondents have low standard of living that have finished High School level of education. 11.8 per cent of the respondents have low standard of living and they have completed Graduate level. The table discloses the medium of standard of living of the respondents. 39.9 per cent of the respondents have medium of standard of living and the respondents have completed High School level of education. 3.3 per cent of respondents have medium of standard of living which is lower and the respondents have finished Diploma level of education.

The table reveals that 55.0 per cent of the respondents have high level of standard of living and the respondents have completed High School level of education and 2.5 per cent respondents have high standard of living and the respondents have completed Diploma education.

Correlation analysis

	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Interval by Interval Pearson's R	-.048	.057	-.833	.406
Ordinal by Ordinal Spearman Correlation	-.019	.054	-334	.738
N of Valid Cases	300			

The correlation value between education level and standard of living is -0.048 and the significant value is 0.406 which is greater than 0.05. There is no significant correlation between educational level and standard of living.

From the correlation analysis the **hypothesis - 1** is proved.

The analysis of the productivity of the bovine population in the study area can be understood with the help of the following tables.

REGRESSION ANALYSIS FOR INDIGENOUS COW MILK YIELD ON FEED INTAKE

Regression analysis is used for giving a mathematical equation between a response variable Y and a independent variable X. Here milk yield per day is taken as the response variable Y and feed given per day is taken as the independent variable X. The results are given below.

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TABLE NO: 3
MODEL SUMMARY

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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977	.955	.955	.47678

Source: *Primary data*

From the above model summary table we observe that the R^2 value is 0.955 which means that 95.5 per cent of variability in milk yield per day is determined by the feed given per day.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	.086	.035		2.434	.016
Feed intake	.784	.010	.977	79.662	.000

Source: *Primary data*

From the above table we obtain the regression equation of milk yield on feed intake given by Y=0.086 + 0.784X. Further, the correlation value between milk yield and feed given is 0.977 which is highly significant. It means that higher the feed intake higher the milk yields.

REGRESSION ANALYSIS FOR CROSS BREED COW MILK YIELD ON FEED INTAKE

Here the milk yield per day is taken as the response variable Y and feed given per day is taken as the independent variable X, the results are given below.

TABLE NO: 4
MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.955	.912	.845	5.95377

Source: *Primary data*

From the above model summary table we observe that the R^2 value is 0.912 which means that 91.2 per cent of variability in milk yield per day is determined by the feed given per day.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.715	.387		9.598	.000
Feed intake	1.520	.040	1.33	38.000	.000

Source: *Primary data*

From the above table we obtain the regression equation of milk yield on feed intake given by Y = 3.715 + 1.520 X.

REGRESSION ANALYSIS FOR BUFFALO MILK YIELD ON FEED INTAKE

Here milk yield per day is taken as the responsive variable Y and feed given per day is taken as the independent variable, the results are given below.

TABLE NO: 5
MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.933[a]	.871	.870	1.15921

Source: *Primary data*

From the above model summary table we observe that the R^2 value is 0.871 which means that 95.5 per cent of variability in milk yield per day is determined by the feed given per day.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.150	.073		2.053	.041
Feed intake	1.044	.023	.933	44.813	.000

Source: *Primary data*

From the above table we obtain the regression equation of milk yield on feed intake given by Y = 0.150 + 1.044 X.

From the above three regression analysis, the regression coefficient for cross breed cow is higher (i.e.) 1.52 compared to the other animals, which means that cross breed cow gives higher returns compared to the other animals.

From this regression analysis the **hypothesis - 2** is proved.

FINDINGS:

- 40 per cent of the respondents were in high standard of living in Thungapuram area.
- 81.10 per cent of the milk producers in the study area are leading medium standard of life.
- The area wise indigenous cow average feed intake of 0.8527 kg in Veppurarea and 0.8391 kg in Kilapuliyur area.
- The area wise cross breed cow average feed intake of 2.4722 kg in Thungapuram area and 2.3889 kg in Kilapuliyur area.
- The area wise buffalo average feed intake of 1.3043 kg in Kilapuliyur area and 1.2712 kg in Thungapuram area.
- From this study the average of milk yield of different area is not much different whereas the milk yield is different between type of animals.
- The correlation value between milk yield and feed given is highly significant. It means that higher the feed intake higher the milk yield.

SUGGESTIONS

Dairy sector in the study area depends upon the natural resource such as grazing land, forest, pastures and other uncultivated land. In a nutshell to develop bovine population resources into an income and employment generating enterprise, the productivity of milk cattle can be improved by adopting appropriate breeding policies. Necessary steps should also be taken for supply of balance feed to enable the off spring to protect their genetic potential. For improvement of milk production the innovative technique has to be adopted by the dairy farmers.

CONCLUSION

In conclusion, two differing points of view emerge about the status of dairy development in the study area. While on one hand, the area showed remarkable progress in terms of overall growth rate in milk production over the period, on the other hand, there were also wide inter-and intra-area variations in growth rates. The factors underlying area imbalance in the growth of milk production could be many. Imbalances might be associated with (a) differences in the distribution of breedable bovine population in different study area of the block; (b) differences in resource base with respect to feeds and fodder and bovine health cover; (c) differences in terms of number of insemination in the field areas for breed improvement and thereby causing differences in genetic architecture of milkanimals, and (d) differences in the productivity of animals.

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