INVESTMENT PATTERN AND RETURN FROM DAIRYING – A STUDY WITH SPECIAL REFERENCE TO WAYANAD DISTRICT OF KERALA

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ABSTRACT

Investment pattern on a dairy farm largely depends on the returns obtained from them. The level of investment reflects the extent of business activity and its income generating capacity in the long run. The present study attempts to analyse the investment pattern and return from dairying among dairy farmers of Wayanad District. Wayanad is an economically backward district in Kerala and majority of the population depend on agriculture and allied activities. 100 farming households practicing dairy farming either as main or subsidiary occupation was interviewed to study investment pattern and return from dairying in Wayanad district of Kerala. Findings indicated that most of the respondents' are females and more than 60% are below the age group of 50. Despite the inefficiencies in the fuller utilization of resources, dairy farming emerged to be profitable enterprises for farmers. While analyzing the investment pattern and return from milking it is identified that large farmers invest more amount and they got high return for their investment.

Keywords: Dairy farming, Milk production, Investment, Return

INTRODUCTION:

Indian economy is agricultural based economy and majority of the Indian population is dependent on agriculture and agricultural business. The absolute numbers securing their livelihoods from agricultural production are increasing in the developing countries; in the present context of rural urban migration also. Any improvement in agricultural productivity increases the per capita income of our country. By this reason we can say that agriculture plays an important role in economic development and welfare of the whole population. Animal husbandry and dairying are one such type of industry and they pose a significant role in agriculture business. Development of the dairy sector has multiple effects on our rural economy. In the first place, it provides additional employment to millions of people in rural areas and thereby generating additional income as support to farmers during agricultural off seasons. Secondly with minimum infrastructure needed for dairy development, there will be an overall general development in rural areas. Since agriculture is seasonal, there is a possibility of finding employment throughout the year for many persons through dairy farming. Dairy activity has been a very popular economic activity among the rural households of Kerala from time immemorial. Even though the performance of agriculture as a whole indicates a somewhat stagnant position the dairy sector in Kerala made spectacular progress during the last three decades. Through the cross breeding programme the milch herd became highly production oriented and is a matter of about twenty seven years, cross breeds accounted for an estimated 75 percent of all milch cattle in the State, the highest ration in the country.

REVIEW OF LITERATURE:

The study of literature on the subject enlightens the studies undertaken under different conditions and in different areas. In the present study, some of the works on the subject undertaken by individuals as well as institutions earlier are reviewed.

National Dairy Development Board (1975) conducted a dairy development project for the districts of Trivandrum, Quilon and Alappey and recommends that organizing dairy farming as subsidiary occupation is the prime method to bring about the speedy economic and social transformation in the rural areas. Milk production would be enhanced by providing different technical inputs to the animals of the producer members of the societies.

Sharfuddin (1986) in his research thesis states that dairy has direct impact on the weaker sections in respect of employment, milk production and return. The milk yield is the highest in the case of small and marginal farmers which may be due to the keen interest taken in feed and fodder. He identifies that the Board of Directors selected democratically have not been adopted democratic principles in the regular business of the society to extend economic benefits to the members of the society.

Govindan Kutty K (2005) in his research work on Problems of milk producers and Prospects of milk and milk based industries in Kerala sited that people enter in to the field of dairy farming only in the later part of their life and that the involvement of young generation is relatively poor. He recommend that if dairying is to be made as an instrument for socio-economic changes in Kerala the Government and other agencies in the field should attract the younger generation and ensure their participation. The only sector that holds a promise of growth and employment is dairy sector. Therefore measures should be taken for promoting dairying as primary occupation.

John Gilson (2007) in his study on private dairying in Kerala states that optimum use of dung, income from the sale of calves, and savings in medical expenses as a result of improved health status maintained by the consumption of milk etc are important as the sale of milk to make dairying profitable. Dairy farmers keep their savings in the form of liquid cash, bank deposit and loans to others than to purchase durable goods. They educate their children in English medium schools and subscribe to newspapers in their home.

Vijayakumar V (2009) in his study on gender dimensions of dairy development in Kerala attempted to evaluate role of women in dairy development. Work Participation Rate (WPR) of women remains almost constant around 55% irrespective of the number of dairy animals but the

average work time per day increases proportionately with the increase in the number of dairy animals. The socio-economic status (SES) scale was positively skewed; indicating that majority of the respondent belongs to the lower-middle socio-economic status group. Test of hypothesis validate that SES of farm households, WPR of farm women and involvement of farm women in taking decisions of different dairying task significantly affect milk productivity of dairy animals. Edhayavarman.C.S (2011) in his research thesis on economic analysis of production and marketing of milk in TN indicates that the variable costs constitute 80.69 per cent and 83.92 per cent of total cost for the cows and buffaloes respectively during the lactation period. It is found that buffalo has the higher variable cost than that of cow. The difference is due to the fact that the buffaloes require more feeds than cows. The feed cost percentage of buffalo is 60.60 per cent while it is 55.33 per cent in the case of cows. But there is no significant variation in proportion of variable cost to the total cost between cows and buffaloes. Hence, the totals fixed and the variable costs have been increasing in the same proportion for buffaloes as for the cows.
Kumar Anjani. P. S (2013) investigated about structural transformation in dairy sector and identified that during the past two decades, this sector grows at the rate of 4% per year. The growth has been primarily been driven by yield improvement. Then a shift has been observed from traditional to crossbred cows and buffaloes and which leads to improvement in milk yield. Genetic enhancement, better management of stocks, and farmers improved access to milk markets has driven the process of transformation.
Amarja Satish Nargunde (2013) conducted a study on the role of dairy industry in rural development and shows that dairying in rural areas surpassed crop production in terms of marginal, small and medium sized holdings. For small scale farmers with irrigated land, dairying and crop production together were more profitable than crop farming alone. Up to 60-65% of the income of this group now comes from dairying.

OBJECTIVES OF THE STUDY:

1) To examine the general background of dairy farmers.
2) To analyse capital investment and milk production across different farm groups.
3) To evaluate the impact of investment pattern on the return from dairying

RESEARCH METHODOLOGY:

Source of Data:

The method will be adopted in the study involves determination of the area for collecting the sample, collection of primary data directly through interviews and systematic observations based on regular visits and discussions with the participants using the schedule prepared. This study is based on primary and secondary data. Primary data related to dairy farming were collected from dairy farmers by using interview schedule.
The secondary data were collected from the annual reports of the animal husbandry department, various magazines, books, journals, publications, periodicals and articles related to dairy farming and various internet web sites.

Sampling Design:

The present study was undertaken with the objective of analyzing the savings and investment pattern of dairy farmers under dairy co-operatives in Wayanad district. Wayanad district which rank second in total number of milk suppliers among other Northern districts of Kerala. Wayand is located in the high ranges of Kerala has a population of about 7 lakhs, of which 90% depend up on agriculture for substances. There are 40,129 farmers, 74813 agriculture labourers and 17413 plantation labourers. Another 37,267 people earn their livelihood from animal husbandry and forest produce. In the recent years, Wayanad, a beautiful hilly district in Kerala, lost its beauty because of steady crush in the price of the main agricultural produce and widespread suicides by distressed farmers. Changes in climate in the last few years added misery to the mind of the farmers.

There are four blocks in Wayanad viz, Mananthavady, Kalpetta, Sulthan Batheri and Panamaram. The universe of the study consists of all farming households under dairy co-operatives practicing dairying as a main or subsidiary occupation in Wayanad. By random sampling technique chosen Panamaram Block as sample block. From the sample frame of these households, a random sample of 100 households was drawn using systematic random sampling method.

RESULTS AND DISCUSSION:

Dairying is a traditional activity carried out in our rural economy. Now it is a major source of livelihood in rural areas and treated as an instrument to socio-economic development through increasing family income and employment opportunity. For the presentation of the collected information, the respondents were classified on the basis of their landholdings in to three groups viz,

i) Small Farmers (0 to 2 acres)
ii) Medium Farmers (2 to 4 acres)
iii) Large Farmers (4 acres and above)

Out of 100 respondents surveyed, majorities 51% of them were small farmers and of the remaining 49%, 32% were medium farmers and 17 % were large farmers.

Sex Composition of the Respondents:

Even if dairy farming being back-breaking job involving long hours of work, more female are involved in this activity. In the present study too, females dominated over males in all groups. A small portion of men were employed in dairying being maximum for medium farmers (36.6%) followed by large (35.29%) and small farmers (13.73%).

Size of Family:

Nuclear family was the dominant feature in all groups and this was reflected in the average family size, which was maximum for small farmers (3.7%) followed by large farmers (3.6%) and medium farmers (3.5%).

Age of the Respondents:

Age categories of the respondents revealed that more than 60 % of the respondents in all farm groups belong to the age group of less than 50 years. Farmers within the age group of 50 and above is maximum (36.36 %) for medium farmers followed by 29.41% for large farmers and 13.73% for small farmers.

Marital Status:

The analysis of marital status of the respondent revealed that majority (86 to 90%) of them was married and around 9 to 11 % of them were widows who had taken up dairy farming. Only 5% of the medium farmers were unmarried.

Educational Status:

The educational status of the respondents revealed that all the respondents are exposed to some form of formal education. Educational status of large farmers was more impressive than other groups, since the percentage of farmers with college education was higher (11.76%) in these groups.

Occupation:

Occupational status pursued by the respondents revealed that agriculture is the main occupation for medium (68.18%) and large (70.59%) groups under study. The proportion of small farmers (56.86%) practicing dairying was very high as compared to other two groups. The small land holding lead them to undertake dairying as their main occupation.

Total Income

In terms of economic status, the small farmers had lowest average monthly income of Rs.5120 followed by medium farmers (Rs.5772) and large farmers (Rs. 6088).

Land Holdings:
The average size of landholding for small, medium and large farmers was calculated as 0.9 acres, 1.85 acres and 3.35 acres respectively. The average size of landholdings was more for large farmers when compared to small and medium farmers. The small size of landholding may be one of the reasons to take dairy farming as their principal occupation.
The demographic and socio- economic characteristics of the respondent are presented in Table No 1.

Experience in Dairy Farming:
Table No 2 shows the classification of the farm households on the basis of year of experience in running the dairy enterprise.
It is found from the table that while about 31 percentages of the small farmers had more than 20 years of experience in dairying, there were nearly 27 percentages for medium and 29.42 percentages for large farmers. The portion of beginners was maximum (25.49%) for small farmers and the least (9.1%) for medium farmers. Thus dairying is not an occupation but a tradition for majority of the farmers.

Capital Investment:
Total investment on dairy farming was obtained by summing up the present value of milch animals, cost of cattle sheds, and investment on dairy equipment and machinery and is presented in the Table No.3. Table revealed that the total capital investment of different farm groups varied from Rs.43636.78 to Rs.60494.10. The better financial position of the large farmers helps them to invest large amount for dairy farming. It can also be depicted that the proportion of investment on milch animals increased with increase in farm size groups. Investment on equipment and machinery was least for small farmers (110.05 per annum) and maximum for large farmers (150.60 per annum).

Milk Production:
The Table No. 4 shows the production of milk per day per animals across different farm groups. The per day animal milk production, on an average, was highest for cross-bred cows ranging from 25.08 to 43.34 liters per day , followed by indigenous cows (9.1 to 11.84 litres per day) and buffaloes (3.36 to 5.8 litres per day). The cross breed cows have good genetic potential compared to others is the reason for this differences in milk production. The per day milk production for indigenous cows was highest (11.84 litre per day) for medium farmers followed by large (9.46 litres per day) and small farmers (9.1 litres per day). In the case of buffaloes, the milk production was slightly higher (5.8 litres per day) for large farmers followed by medium (4.8 litres per day) and small farmers (3.36 litres per day).
The average lactation period per year was 272 days for both indigenous cows and buffaloes and 292 days for crossbred cows. Because of better genetic potential cross bred cows have highest lactation period as compared to indigenous cows sand buffaloes.

Investment and return of milk production:
The Table No. 5 shows the investment in dairy farming and return in the form of milk production. The amount of investment was highest (60494.10) for large farmers and least (43636.78) for small farmers. The same pattern is reflected in the return from milk production also. Return is highest (480679.80) for large farmers and least (342799.36) for small farmers. Small farmers got an average of Rs. 32 per litre and medium and large farmers got Rs 31 each.

CONCLUSION:

From the above discussion it is evident that agriculture and dairy farming are the main source of revenue among the members of the study group. Even with the inefficiencies in the effective use of the available resources, milk production emerged as a profitable enterprise for all the farmers. It was observed that there exist a direct relationship in between investment and return from dairying among various groups under study. It provides income for almost whole the year.

Women are more actively involved in dairying than men. Lack of education, lack of technical knowledge, lack of good facilities etc are the important problems in dairy farming. It needs vast attempt to improve work ability and awareness in this business. Milk production is hard-work based business, but this business may create employment on large scale in rural areas. Hence in the light of all these findings it could be said that dairying activities increases the income and standard of living of the rural household.

ACKNOWLEDGEMENT:

It is by the unfathomable grace and blessing of the almighty that I have been able to bring in to light this humble piece of work for which I am extremely indebted to the God.
I have immense pleasure in expressing my earnest gratitude to my Research Supervisor Dr. Swarupa. R, Associate Professor, Mahatma Gandhi College, Iritty for her inspiring and scholarly guidance.
I also indebted to the Principal, Dr. Sivadasan Thirumangalathu and Management of Sree Narayana College, Kannur for providing necessary facilities and permission to do this work.
I take this opportunity to thank all the staffs of Dairy Development Department, Kalpetta for their assistance and encouragement to carry out this work.
Thanks are also due to staffs of Kannur, Calicut and Kerala and Agricultural University libraries and CDS, Trivandrum for their support and excellent service.
I have great pleasure to record my indebt to my family, friends and colleagues for their much needed support and priceless suggestions in the completion of this work.
At last but not least, I am also thankful to all those who have helped me directly or indirectly during the course of this work, who could not be listed here due to limited space.
Place : Kannur Rejitha.P.R
Date: 8/11/2017

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TABLES

Table No. 1: Demographic and Socio-Economic Characteristics of the respondents

Features	Small Farmers	Medium Farmers	Large Farmers
Number of respondents(in percentages)	51	22	17
Sex Male Female	 7(13.73) 44 (86.27)	 8(36.36) 14(63.64)	 6(35.29) 11(64.71)
Types of Family Nuclear Joint	 100 0	 100 0	 100 0
Average size of the family (in numbers)	3.7	3.5	3.6
Marital status Unmarried Married Widow	 0 46(90.19) 5(9.81)	 1(4.55) 19(86.36) 2(9.09)	 0 15(88.24) 2(11.76)
Age 20-30 30-40 40-50 50 and above	 4 (7.84) 23(15.34) 17 (33.33) 7 (13.73)	 3 (13.64) 6 (27.27) 5 (22.73) 8 (36.36)	 2 (11.76) 4 (23.53) 6 (35.29) 5 (29.41)
Educational status Illiterate Primary Secondary Higher secondary College	 0 13(25.49) 12(23.52) 22(43.14) 4(7.84)	 0 10 (45.45) 6 (27.27) 4 (18.18) 2 (9.09)	 0 9 (52.94) 4 (23.53) 2 (11.76) 2 (11.76)
Main occupation Agriculture Non-agriculture Dairying	 16 (31.37) 6 (11.76) 29 (56.86)	 15 (68.18) 3(13.64) 4 (18.18)	 12 (70.59) 1 (5.88) 4 (23.52)
Average family income (in Rs per month)	5120	5772	6088
Average size of landholding	0.90	1.85	3.35

Source: Primary data (Figures within the brackets indicate percentage to the total.)

Table No. 2: Year of experience in dairy enterprises

Year of experience	Small Farmers	Medium Farmers	Large Farmers
1-5 years	13 (25.49)	2 (9.1)	2 (11.76)
6-10	9 (17.65)	1(4.55)	2 (11.76)
11-15	7(13.73)	4 (18.18)	4 (23.53)
16-20	6(11.76)	9 (40.9)	4 (23.53)
20 years and above	16(31.37)	6 (27.27)	5 (29.42)
Total	**51**	**22**	**17**

Source: Primary data (Figures within the brackets indicate percentage to the total.)

Table No. 3: Investment pattern in Dairy Farming

Types of Investment	Small Farmers	Medium Farmers	Large Farmers
Milch animals	33539.42 (76.87)	36783.65 (77.44)	44796.76 (74.05)
Cattle shed	9987.31 (22.88)	10584.78 (22.28)	15546.74(25.7)
Machinery& Equipment	110.05 (0.25)	130.64 (0.28)	150.60 (0.25)
Total Investment	43636.78 (100)	47499.07 (100)	60494.10 (100)

Source: Primary data

Table No. 4: Production of milk across different farm groups

Particulars	Small Farmers			Medium Farmers			Large Farmers		
	Average Milk production per day (in litres)	Total milking days	Total production	Average Milk production per day (in litres)	Total milking days	Total production	Average Milk production per day (in litres)	Total milking days	Total production
Indigenous cows	9.1	272	2475.2	11.84	272	3220.48	9.46	272	2573.12
Buffaloes	3.36	272	913.92	4.8	272	1305.6	5.8	272	1577.6
Crossbred cows	25.08	292	7323.36	27.08	292	7907.36	43.34	292	11355.08
Total			**10712.48**			**12433.44**			**15505.8**

Source: primary data

Table No. 5: Investment and return from dairying across different farm groups in a year

(1) Farm groups	(2) Investment (In Rs)	(3) Production of milk	(4) Average rate of milk (per litre)	(5)=(3)*(4) Return from dairying
Small Farmers	43636.78	10712.48	32	342799.36
Medium Farmers	47499.07	12433.44	31	385436.64
Large Farmers	60494.10	15505.8	31	480679.80

Source: primary data

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