CHAPTER - V

PRODUCTION, MARKETING AND ANIMAL HEALTH CARE

The economic benefits from dairying depend upon production, marketing and animal health care facilities. Animal health care facilities directly affect production, and production and marketing together determine the profitability of dairy farming. So a brief analysis of production traits of milch animals, marketing channels of milk and animal health care facilities are attempted in this chapter.

5.1.1 Distribution and Production Traits of Milch Animals

Majority of the farmers in Idukki district hold only one milch animal. There are various reasons for this. Firstly, for about 85 percent of the farmers dairying is only a subsidiary occupation. So it is very difficult to get time for rearing more than one milch animal. Secondly, majority of the farmers are economically weak and so they find it very difficult to buy more milch animals each of which costs about Rs.7000. In the study it has been found that paucity of funds for purchasing more cattle is the second most severe problem facing dairy farmers. Thirdly, maintaining more milch animals itself is a costly affair, that is, it requires more grazing facilities, more green and dry fodder, large cattle shed facilities and so on. So poor farmers are compelled

to restrict their milch animal holdings. Finally, as the survey was conducted from January to April, the number of milch animal is likely to be comparatively low because of the lean season. That is, some farmers deliberately adjust the month of artificial insemination so as to begin the milking period from May or June onwards when sufficient green fodder is available. Table 5.1 shows the distribution of milch animals among the population and the number of sample households selected from each class in the society area.

Table 5.1

Distribution of Milch Animals

Sl.No.	No. of Milch animals possessed	Total households	Percentage	Sample households taken from the class	Total no. of milch animals
(1)	(2)	(3)	(4)	(5)	(6)
1.	1	1263	89.2	223	223
2.	2	119	8.4	21	42
3.	3 and above	34	2.4	6	18
	Total	1416	100.0	250	283

Source: Sample Survey

It is clear from table 5.1 that 89.2 percent of the population have only one milch animal. 8.4 percent of them have two milch animals and 2.4 percent hold 3 or more than three milch animals. The sample households together own a total number of 283 milch animals showing an average number of 1.13 milch animals per sample households.

5.1.2 Breed of the Milch Animals

Of the total 283 milch animals 250 are cows and 33 are buffaloes. Among milch cows, 85.6 percent are cross-breds and among buffaloes in milk, 91 percent are cross-breds. As far as the exact name of the cross-bred animal is concerned, about 40 percent of the farmers do not know the name of the breed. Table 5.2 shows the available information regarding the breed of the animal.

Table 5.2

Breed of the Cross-bred Animals in Milk

Sl.No.	Name of the breed	Number of milch animal	Percentage
(1)	(2)	(3)	(4)
a)	Cows:		
1.	Sunandhini	47	22.0
2.	Swiss-brown	43	20.1
3.	Jercy	36	16.8
4.	Not-known	88	41.1
b)	Buffaloes:		
5.	Murrah	14	42.4
6.	Not-known	19	57.6

Source: Sample Survey.

Table 5.2 reveals that Sunandhini is the most popular size of cross-bred among the dairy farmers. Swiss-brown comes second and Jercy comes third in importance. It has been found in the survey that a considerable section of the farmers know only one thing that what they possess belongs to a cross-bred item, but do not know their exact name. As far as buffaloes are concerned, 42.4 percent belong to murrah breed and the name of the breed of

the remaining 57.6 percent is not exactly known.

5.1.3 Relationship between Land holding and Milch Animals

Land holding has an added advantage for dairy farming in the form of pastures, green fodder and economic power for incurring maintenance cost. It has been found that the average number of milch animal per sample household generally shows a tendency to increase in proportion to the increase in the size of land holding. At the same time there is a decreasing trend in the percentage of animals in milk to the total bovine holdings.

There are mainly two reasons for holding more milch animals by the large land holders. Firstly, it is a natural outcome of holding more bovines by them. Secondly, they want regular supply of good quality milk produced within their own homes and so they tend to keep more milch animals to make it sure that atleast one milch animal should be there through out the year.

Higher percentage of milch animals in the total bovine holding of the small land holders arises from three reasons. Firstly, small farmers consider dairying purely on a commercial basis. So they will be interested in keeping more animals in milk-production stage than in dry condition. Secondly, small land holders follow dairying for getting regular income and so they will be interested in keeping one wet animal at all times. It has been found in the study that because of lack of funds for buying new milch animals, some farmers

sell the dry animal at the end of the lactation period and buy new milch animals with some additional money. Thirdly, it is very difficult for the small land holders to incur the maintenance cost of more dry animals without any direct money-income from them. They will be interested to use their limited facilities for keeping more milch animals and not for keeping more dry animals. On the other hand, as far as the large land holders are concerned, keeping dry animals is profitable because its value will increase at the time of next lactation. Again the dung obtained from the dry animals is highly essential to the rich farmers both as a natural manure for their crops and as an input to their biogas plants. Table 5.3 shows the relationship between land holding and milch animals.

Table 5.3

Relationship between Land holding and Milch Animals

Sl.No.	Description	Size of Holdings (cents)				
		Less than 100	101-250	251-500	Above 500	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Total sample farmers	75 (30)	86 (34.4)	80 (32)	9 (3.6)	250 (100.0)
2.	Bovine holdings	229	301	289	45	864
3.	Bovine per family	3.05	3.5	3.6	5.0	3.5
4.	Total milch animals	80	99	90	14	283
5.	Percentage of bovine in milk to the total bovine population	34.93	32.89	31.14	31.11	32.75
6.	No.of milch animals per family	1.10	1.15	1.13	1.6	1.13

Note: Figures in parentheses show the percentage of sample farmers belonging to each class.

Source: Sample Survey.

Table 5.3 shows that as the size of land holding increases the average number of bovine per family and the average number of milch animals per family show an increasing trend. On the other hand the percentage of milch animals in the total bovine holdings

shows a decreasing trend. The reasons for the above trends have already been explained.

5.1.4 Milk Production

The profitability of dairy farming depends mainly upon efficiency in production and efficiency in marketing. Efficiency in production depends on various factors like breed of the bovine, quality and quantity of feed and scientific dairy management. As far as farmers in the district are concerned the breed of the bovine is generally satisfactory because about 86 percent of the cattle and 90 percent of the buffaloes in the society area belong to the cross-bred variety. Similarly about 67 percent of the cattle and 74 percent of the buffaloes are crossbreds in the non-society area.

As regards quality and quatity of feed, farmers are generally eager to provide sufficient quantity of feed, especially green and dry fodders. To majority of the farmers, green fodder is available in sufficient quantity either from their own land or from neighbouring land or from near by forest areas especially in the rainy and winter seasons. Green fodder is scarce in summer season and so a large number of farmers buy dry fodder which is a real burden to the majority of such farmers. It has been noted in the survey that about 51 percent of the farmers cultivate green fodder in their own land. Of these, nearly 70 percent cultivate green fodder

on border alone. About 15 percent of the farmers cultivate green fodder with an average area of 14 cents. Of the remaining 49 percent farmers who do not cultivate green fodder, 72 percent do not cultivate green fodder because of lack of land, 23 percent, because of free availability of grass in the locality, and the remaining five percent, because of the absence of fodder seeds.

Scientific management of dairy farming is a major factor influencing milk production. Scientific management means proper, systematic, timely and efficient management of all the activities related to breeding, feeding and milking. Factors like untimely artificial insemination, poor feeding, ugly and irritating cattle shed and unscientific milking will unfavourably affect milk production.

Production of milk per day and during lactation period are studied in detail and this is explained in this section. Generally, milking is done twice a day - that is, in the morning and in the evening. There are a few farmers (5.6 percent) who follow milking three times a day. It is generally found that the evening yield constitutes only around 50 percent of the morning yield. Though evening yield is less in quantity, it contains more fat and so gets higher price per litre. Details of average milk production per day during the lactation period is given in table 5.4

Table 5.4

Daily Milk Yield During the Lactation Period (litres)

Sl.No.	Description	Cross-bred cows	Local cows	Buffaloes
(1)	(2)	(3)	(4)	(5)
Society area				
1.	Morning	4.14	2.56	3.34
2.	Evening	2.10	1.31	1.63
3.	Total	6.24	3.87	4.97
Non-society area				
4.	Morning	3.58	2.11	2.95
5.	Evening	0.95	0.45	0.88
6.	Total	4.53	2.56	3.83

Source: Sample Survey.

Table 5.4 reveals that average yield of cross-breds, local cows and buffaloes are considerably less in non-society area than in society area. Average daily yield of cross-breds, local cows, and buffaloes constitutes only 72.6 percent, 66.1 percent and 77.1 percent respectively of the daily yield of the society area. In general, the average daily yield in the non-society

area constitutes only 72.4 percent of the yield of the society area. In the analysis of the factors behind this low yield in non-society area, it is particularly important to note that while the average difference in yield is only 13.9 percent in the morning-yield, it is 54.8 percent in the evening-yield. It was found in the study that because of the absence of market for milk, a large number of farmers do not milk the bovine in the evening. Comparatively higher percentage of local cows, insufficient feeding of bovine on concentrates and compounded feed, unscientific milking and above all lack of inducement to produce more due to inadequate market and insufficient price are the important reasons for low productivity in the non-society area.

Similar difference in the total milk production during the lactation period can also be seen between the society area and non-society area. This is given in table 5.5

Table 5.5

Milk Production During Lactation Period

Sl.No.	Description	Cross-breds	Local cows	Buffaloes
(1)	(2)	(3)	(4)	(5)
Society area:				
1.	Lactation period (months)	11.16	10.36	12.42
2.	Average daily yield (litres)	6.24	3.87	4.97
3.	Total production (litres)	2089	1203	1852
Non-society area:				
4.	Lactation period (months)	12.23	11.44	13.33
5.	Average daily yield (litres)	4.53	2.56	3.83
6.	Total production (litres)	1662	879	1532

Source: Sample Survey.

Table 5.5 reveals that milk production during the lactation period is considerably higher in the society area. Production during the lactation period of cross-breds, local cows and buffaloes is higher in society area by 20.4 percent, 26.9 percent and 17.3 percent respectively than that in the non-society area. It is interesting to note that while milk production during lactation period is lower in non-society area, average lactation period is

higher there by 1.07 months, 1.08 months and o.91 months respectively for cross-breds, local cows and buffaloes. This long lactation period is economically a loss to the farmers because they are infact losing the opportunity of getting more yield through timely artificial insemination. Because of the long distance to the artificial insemination centres or to the traditional natural service centres, the general practice of the farmers in this region is to extend the lactation period as much as possible.

5.2.1 Consumption and Marketing of Milk

As explained in the first chapter, availability of milk, income and dung are the three important motives behind dairy farming. Infact, domestic consumption of milk depends up on general economic condition of the family, milk marketing facilities and milk price. If marketing facilities are limited, consumption of milk by the farmers will be high. While better marketing facilities with lower price of milk reduce domestic consumption of milk, better marketing facilities with higher price of milk generally increase domestic consumption of milk. Infact, consumption and marketing of milk are influenced by a number of factors and so they are analysed in the following section.

In the society area 84.2 percent of the total milk produced by the sample households is sold and 15.6 percent is used for domestic consumption. On the other hand, 82.69 percent of the

milk produced is sold and 17.31 percent is used for domestic consumption in the non-society area. Though comparatively higher percentage is used for domestic consumption in the non-society region, it is much less in quantitative terms compared to society area. That is, while an average quantity of 1.02 litre of milk is available per family for domestic consumption in the society area, it is only 0.67 litre in the non-society area. Consequently, the per capita availability of milk is only 118 grams per day in the non-society area whereas it is 197 grams per day in the society area. This shows that per capita consumption of milk is about 40 percent higher in the society area.

The per capita consumption of milk in the two regions shows that both are less than the minimum nutritional requirement of 250 grams. It is surprising to note that the per capita consumption of milk is less than even half of the minimum nutritional requirement in the non-society area. There are two main reasons for this pathetic situation. Firstly, as farmers are generally very poor they cannot even think of consuming 250 grams of milk per day. Secondly, as milk-price is very low in the non-society area, majority of the farmers are compelled to sell almost all the milk they produce to get atleast a minimum income. Infact, majority of the farmers do distress sale in the case of milk. It is a commonly found phenomenon in the region that majority of the tea-shop owners who buy milk also run provision shops. The dairy farmers who sell milk to these tea-shops buy the essential consumer items

from such shops. The farmers are found to be debtors to the shop owners at all times and therefore they are compelled to sell their entire milk even at very low price.

5.2.2 Milk Marketing Channels

Regular, stable and fair market is the crucial factor for dairy farming. It was generally found that while there are sufficient marketing facilities in the society area because of the presence of dairy co-operatives, market for milk is limited in the non-society area. The important marketing channels for milk in both the areas are given in table 5.6

Table 5.6

Marketing Channels of Milk

Sl.No.	Name of channel	Society area percentage of milk marketed	Non-society area percentage of milk marketed
(1)	(2)	(3)	(4)
1.	Neighbouring consumers	7.9	9.0
2.	Dairy Co-operatives	78.2	—
3.	Tea-shop/ Hotels	12.1	57.2
4.	Local vendors	1.8	33.8
	Total	100.0	100.0

Source: Sample Survey.

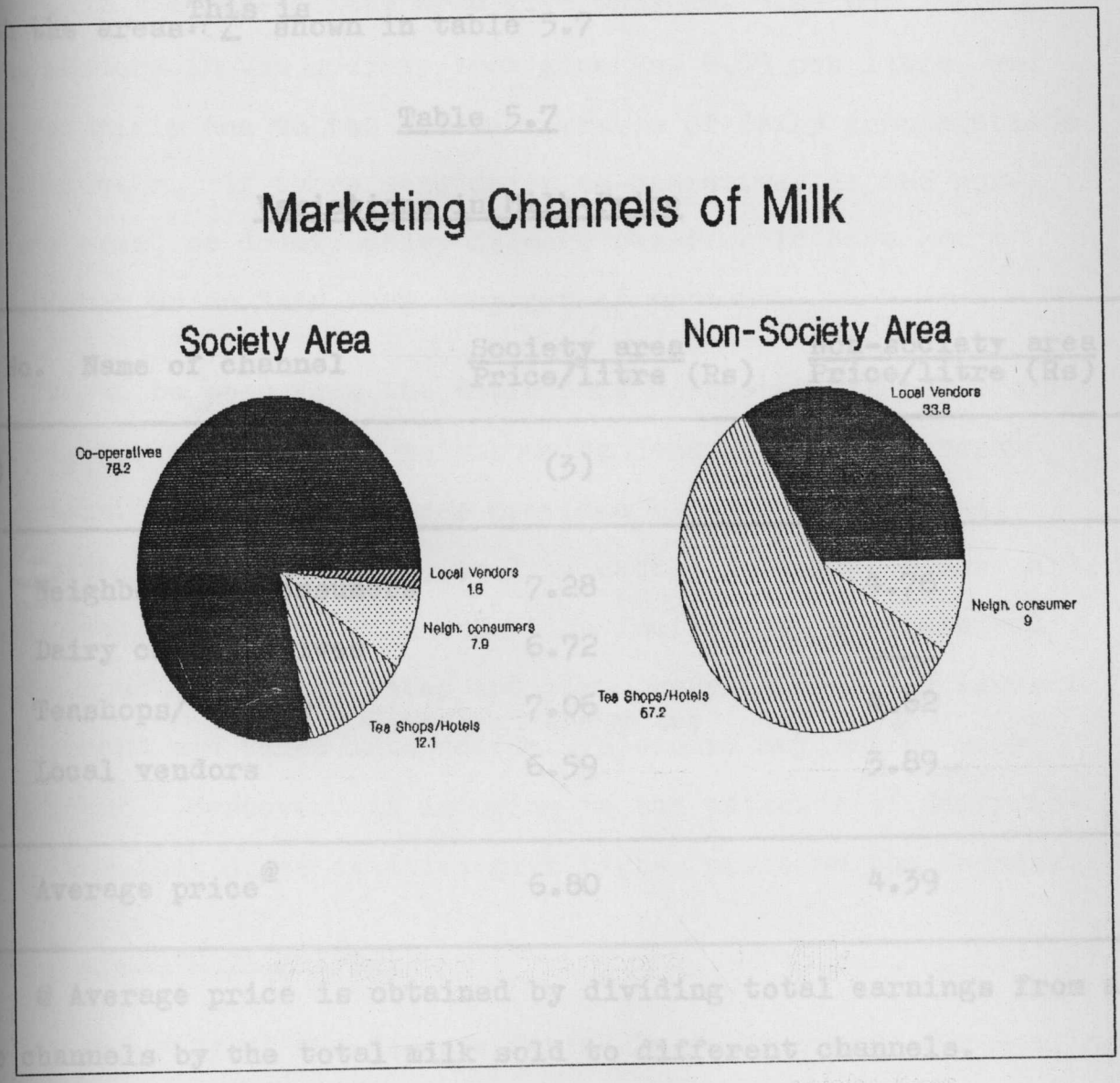
Table 5.6 reveals that while the bulk of the milk is handled by dairy co-operatives in the society area, about 57 percent of milk in the non-society area is handled by tea-shops or hotels. It is important to note that while local vendors handle only 1.8 percent of milk in the society area, they handle nearly 34 percent of milk in the non-society area. The various milk marketing channels are shown in diagram 5.1

Eventhough members of dairy co-operatives are not allowed to sell milk outside the co-operatives, about 22 percent of milk is sold outside, that is to neighbours, vendors, hotels and tea-shops. There are several reasons for this phenomenon. Firstly, some members are not fully loyal to the society. Secondly, because of the personal relationship with the neighbours and shop-owners some farmers are obliged to sell atleast a part of the milk to them. Thirdly, as neighbouring consumers and shop-owners generally give higher price to milk some farmers give milk to them. Finally, long distance to the society, disatisfaction with the society employees, difficulty to bring milk in time to the society, etc., are other reasons for selling milk outside the society by the members of dairy co-operatives.

5.2.3 Price Variations

There exists considerable price variation both between the two areas and within the area, in the price offered by different channels. While the highest price is given by the neighbouring

Diagram - 5.1


Marketing Channels of Milk
Society Area
Co-operatives
78.2
Local Vendors
1.8
Neigh. consumers
7.9
Tea Shops/Hotels
12.1
Non-Society Area
Local Vendors
33.8
Neigh. consumer
9
Tea Shops/Hotels
57.2

consumers, the lowest price is given by the local vendors in both the areas. This is shown in table 5.7

Table 5.7

Variations in Milk-Price

Sl.No.	Name of channel	Society area Price/litre (Rs)	Non-society area Price/litre (Rs)
(1)	(2)	(3)	(4)
1.	Neighbouring consumers	7.28	4.76
2.	Dairy co-operatives	6.72	——
3.	Teashops/ Hotels	7.06	4.62
4.	Local vendors	6.59	3.89
5.	Average price@	6.80	4.39

@ Average price is obtained by dividing total earnings from all the channels by the total milk sold to different channels.

Source: Sample Survey.

Table 5.7 shows that while the average price in the society area is Rs.6.80 per litre, it is only 4.39 in the non-society area. This means that farmers in the society area get a price which is about 54 percent higher than what the farmers in the non-society area get. It is interesting to note that while local

vendors in the non-society area give only Rs. 3.89 per litre, local vendors in the society area give Rs. 6.59 per litre, and this is mainly due to the active presence of dairy co-operatives in the latter. If there were dairy co-operatives in the non-society area, no doubt, dairy farmers there would have got a much higher price than what they get at present.

It can be seen from the table that co-operatives pay comparatively lower price than neighbouring consuners or teashops and hotels. When the services provided by the co-operatives such as the provision of inputs like cattle feed, veterinary aid, fodder seeds, artificial insemination facilities, minerals and vitamins at subsidised rates and bonus varying from 1.5 percent to 5 percent are taken into account, the price discount may not be very significant. Moreover, it is owing to the presence of dairy co-operatives that other agencies give higher price to the farmers.

5.2.4. Pattern of Payment

As majority of the farmers depend on dairy income for meeting a major part of their daily consumption expenditure, timely payment of price is very important. Therefore, an analysis of the mode of payment is made here. For studying the mode of payment, it is classified into 5 categories, that is, daily, weekly, fortnightly, monthly and irregularly. Table 5.8 shows the details of mode of payment both in the society and non-society areas.

Table 5.8

Pattern of the Payment of Milk Price

Sl.No.	Name of channel	Mode of payment (in percentage) Daily	Weekly	Fortnightly	Monthly	Irregularly
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Society area:					
1.	Neighbouring consumers	0	27.5	19.2	50.5	2.8
2.	Dairy co-operatives	0	83.9	11.0	0	5.1
3.	Teashops/ Hotels	27.8	38.9	4.8	15.0	13.5
4.	Local vendors	34.0	32.0	12.0	10.0	12.0
	Non-society area:					
1.	Neighbouring consumers	0	62.1	8.6	17.2	12.1
2.	Teashops/ Hotels	12.3	16.9	7.4	15.3	48.1
3.	Local vendors	36.6	23.1	6.9	18.1	15.3

Source: Sample Survey.

Table 5.8 reveals that irregular payment is higher in non-society area for all the marketing channels. It was found in the study that majority of the farmers prefer weekly payment. An analysis of the mode of payment from this point of view, shows that the pattern of payment by dairy co-operatives is the most

preferred because 83.9 percent of the payment by dairy co-operatives is made weekly.

In the society area, about 50 percent of the payment by neighbouring consumers is monthly. This is because of two reasons. Firstly, some of the neighbouring consumers are salaried persons and so monthly payment is more convenient to them. Secondly, some of the farmers who give milk to the neighbouring consumers are economically above average and so weekly receipt of milk price is not necessary for them. It can be seen from the table that the percentage of irregular payment is the lowest in the case of neighbouring consumers both in the society and non-society area. This is because of the fact that there are personal relations between the farmers and the neighbouring consumers on the one hand and that farmers supply milk mostly to those neighbours who have ability and willingness for regular payment.

Though 57.2 percent of milk in the non-society area is sold to tea-shops and hotels, only 29.2 percent of the payment is made either daily or weekly and 48.1 percent of payment is irregular. The problem of lower price together with irregular payment is so critical in the non-society area that a few farmers crying for getting their milk-price in time, were found at the time of the sample survey. The tea-shop and hotel owners deliberately do not

make correct payment for increasing their sales in the teashops or attached provision shops.

As far as local vendors are concerned nearly 60 percent of payment is made either daily or weekly and the percentage of irregular payment is 15.3. Though local vendors are more regular in payment they give the least price, which is about 15 percent less than the price given by teashops and hotels. Infact, some local vendors make even advance payment to the farmers. But it is important to note that even for buffalo milk the local vendors in the non-society area give only around Rs.3.50 per litre while buffalo milk gets an average price of Rs.7.95 per litre in the dairy co-operatives, which is about 55 percent higher than the price given by local vendors.

Inshort, it has been found in the study that timely payment of a slightly lower price is more desirable than irregular payment of a higher price.

5.3.1 Animal Health Care Facilities

Animal health care facilities are crucial in dairy farming. Introduction of high yielding varieties of breeds with high responsiveness to climatic changes and low resistance power has made it very essential to have sufficient veterinary facilities. Timely availability of veterinary facilities within the easy reach of the dairy farmers at cheap rate is very important for efficient

and scientific dairying. As far as Idukki district is concerned veterinary facilities are more or less satisfactory in the society area whereas it is extremely insufficient in the non-society area. There are four sources of veterinary facilities or animal treatment facilities in the society area. They are Union veterinary doctors through dairy co-operatives, Govt. veterinary doctors, private veterinary doctors and local 'Vaidyans' (traditional practitioners). In the non-society area, all these facilities are extremely limited. For example in Keezhanthoor and Kanthalloor regions, the dairy farmers have to travel about 20 kms for getting the service of a veterinary doctor. In the non-society area, there are only two sources of veterinary facilities that is, government veterinary doctors and local 'Vaidyans'.

5.3.2. Animal Treatment

Farmers require two kinds of treatment for their bovine, that is, for ordinary minor diseases and for emergency cases. As far as the former case is concerned, farmers buy medicines from the respective veterinary centres by telling the details of the disease. For emergency treatment cases farmers usually bring the veterinary doctors or local Vaidyans for their immediate personal care and treatment.

Until recently, there was an efficient and regular veterinary route for the Regional Union through dairy co-operatives. Veterinary doctors of the Regional Union visit all dairy co-operatives (APCOS)

once in every fortnight according to a pre-determined time-schedule. Members of dairy co-operatives get free veterinary treatment and medicine from these regular veterinary routes. But it was found in the survey that there were no regular veterinary route facilities of the Regional Union for about last 6 months.

Regional Union provides emergency treatment facilities too to the members at a nominal rate. If the farmers require emergency treatment for their cattle or buffaloes, what they have to do is to inform their dairy co-operative society with a nominal fee of Rs.35. The society would immediately inform the respective veterinary centre of the Union either by telephone or by the milk collection vehicle. The Union veterinary doctor would come immediately on receipt of information and according to the availability of doctors there. All the treatment and medicine are fully free. It is important to note that though their arrival was not timely in many cases, there was no incident of not arriving at the spot eventhough their arrival may be after one or two days in certain cases.

It was found in the survey that there was a total number of 671 emergency treatment cases in the society area during the last 5 years showing an average of 2.68 cases per sample household. On the otherhand, there were 194 emergency treatment cases in the non-society area with an average number of 1.94 cases per sample household during the last years. This shows that the average number of emergency treatment cases is less by 27.6 percent in the non-society

area. This is due to two reasons. Firstly, because of the lower percentage of cross-breds, disease is comparatively lower there. Secondly, economic difficulties of the farmers together with the absence of veterinary facilities within their easy reach discourage them to call experts for ordinary cases. It is interesting to note that because of the lack of veterinary facilities in the non-society area, the average number of animals lost per 100 sample households during the last 5 years is higher when compared to society area, that is, it is 47 animals per 100 sample households in the non-society area, whereas it is only 36 in the society area. The number of emergency cases treated by various sources is given in table 5.9

Table 5.9

Number of Emergency Cases Treated by Various Sources

Sl.No.	Source	Society area		Non-society area	
		Number	Percentage	Number	Percentage
1.	Union veterinary doctor	403	60.2	—	—
2.	Government doctor	165	24.6	168	86.6
3.	Private doctor	83	12.4	—	—
4.	Local vaidyan	19	2.8	26	13.4

Source: Sample Survey.

Table 5.9 shows that about 60 percent of the emergency cases in the society area are treated by Union veterinary doctors through dairy co-operatives. While government doctors treat only one fourth of the cases in the society area, about 86 percent of the cases are treated by them in the non-society area. Local Vaidyans handle only 2.8 percent cases in the society area whereas they handle about 13 percent of the cases in the non-society area. Private veterinary doctors too are working in the society area and they handle about 12 percent of cases.

5.3.3 Emergency Treatment Expenses

It has been found in the study that there exists considerable difference in the emergency treatment expenses among various sources. Even though animal treatment is fully free in Government veterinary hospitals and dispensaries, in most cases, farmers are not in a position to take the animals to the centres because of various reasons like critical nature of the diseased animal, lack of transport facilities, long distance to the centre and so on. So farmers are compelled to fetch the veterinary doctors to the spot and for this they have to incur a huge expense in the form of taxi charge, fees to the doctors and assistants, and cost of medicine. Table 5.10 shows details of expenses of emergency treatment by various sources.

Table 5.10

Expenses of Emergency Treatment by Various Sources (Rs)

Sl.No.	Source	Society area	Non-society area
(1)	(2)	(3)	(4)
1.	Union veterinary doctor	35	——
2.	Government doctor		
	(a) Taxi charge	56	155
	(b) Fees to doctor	52	64
	(c) Fees to assistant	19	21
	(d) Cost of medicine	66	47
	Total to Government doctor	193	287
3.	Private doctor	89	——
4.	Local vaidyan	32	38

Source: Sample Survey.

Table 5.10 shows that the lowest expense is for the treatment by the Union Veterinary doctors and local Vaidyans. But it is to be noted that while Union doctors provide expert treatment, local Vaidyan's treatment is not scientific and hence not dependable. While the treatment of private doctors costs an average amount of Rs.89, it is Rs.193 to the Government doctors in the society area and Rs.287 to Government doctors in the non-society area. It is

clear from the table that taxi charge constitutes a major portion of the expense for the treatment by the Government doctors in the non-society area.

In the analysis of the expenses of treatment by various sources, it is very important to note that it costs only Rs.35 in the case of Union Veterinary doctors, which forms only 18 percent of the expenses of Government doctors. The members of dairy co-operatives need not fetch them by taxi. The farmers neither need go to the centre nor to medical shops for buying medicine. It is interesting to note that there was not even a single incident of buying bribe by the Union doctors, eventhough some farmers were ready to pay. On the other-hand, there was not even a single case of not taking fees by the Government veterinary doctors from the farmers.

5.4 Artificial Insemination

Sufficient artificial insemination facilities are of great importance in view of the increasing demand for cross-breds. Efficient and cheap artificial insemination facilities within easy reach of the farmers is crucial in milk production. It has been found in the study that of the total 283 milch animals in the society area, 83.4 percent were artificially inseminated and the remaining 16.6 percent were left to natural service. In the non-society area, of the total 116 milch animals, 60.4 percent were artificially inseminated and the remaining 39.6 percent were left

to natural service. There are mainly four agencies for artificial insemination in the society area. They are Government Veterinary Hospitals, Intensive Cattle Development Project Centres, Dairy Co-operative Societies and private centres. Government Veterinary Hospital is the only agency for artificial insemination in the non-society area.

Among the various centres of artificial insemination in the society area, Government Veterinary Hospitals including ICDP centres do 62.3 percent of insemination. While dairy co-operative societies do 30.1 percent, the remaining 7.6 percent is done by private centres. Private centres were found to be most efficient and least expensive when the total expense per conception is considered. Details of expense per conception by artificial insemination and natural service are shown in table 5.11

Table 5.11

Details of Expenses Per Conception

Sl.No.	Centre	Average distance to the centre (km)	Fees (Actual) (Rs)	Extra payment (Rs)	Total expense per service (Rs)	Average no.of service per conception	Total expense per conception (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Society area:						
1.	Society	1.9	20	14	34	1.6	49
2.	Government hospital and ICDP centre	4.3	15	12	27	1.7	45
3.	Private	3.0	30	0	30	1.5	43
4.	Natural service	2.7	50	0	50	1.8	50@1
	Non-society area:						
5.	Government hospital	15.5	15	15(40)	70	1.8	122
6.	Natural service	6.5	35	(25)	60	1.9	83@2

Note: Figures in parentheses show the additional labour expenses.

@1. As the second service is free, initial expense alone is considered.

@2. Though second service is free, additional labour cost is taken into account.

Source: Sample Survey.

Table 5.11 shows that the natural service is least efficient and most expensive. It is least efficient because an average number of 1.8 service is required per conception. Its fees is Rs.50 and if the first service fails the second service is free. Even though it is expensive certain farmers bring their milch animals to the natural service centres mainly because of the proximity of the centre and long distance to the artificial insemination centres. It has been noted in the survey that certain failed cases in the artificial insemination centres have prompted some farmers to go to the natural service centres. Though the actual fees is Rs.20 in the Society and Rs.15 in the Government Hospital, farmers are in general compelled to make extra payment in the form of bribe ranging from Rs.10 to Rs.25 to the inseminators. It is interesting to note that a large number of farmers fear that if they do not give bribe to the inseminators they would not inseminate the animal in the proper way and this would lead to waste of more time, energy and money by bringing the animal for a second time.

Table 5.11 also reveals that expense per conception is much higher in the non-society area. While the total expense per conception in the Government Hospital is Rs.45 in the society area, it is Rs.122 in the non-society area. Expense per conception under natural service too is higher by about 60 percent in the non-society area. The higher expense is due to two reasons. Firstly, because of long distance to the centre, the help of an additional labourer

is essential which costs between Rs.25 and Rs.60. Secondly, as the inseminated animals have to walk long distance, the success rate is low leading to a second bringing of the cattle to the centre.