CHAPTER IX

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SUMMARY AND CONCLUSIONS

The analysis of the problem of educated unemployment is made against the backdrop of the trends in educational and economic development of the State since 1957. The tremedous expansion in secondary and University enrolement in the state during the 1960's, 1970's and 1980's due to the open door policy in admission and the opening of new institutions has resulted in large and ever-rising supply of educated manpower. At the same time, employment opportunities in the State did not increase commensurate with the increase in the supply of educated manpower. Thus the imbalance between the supply of and the demand for educated in the labour market led to the growing problem of unemployment of the educated.

The analysis of the census figures relating to employment by industry, occupation and education brought to light not only the fact that employment opportunities for the educated in various industries and occupations in the State have not increased commensurate with the increase in the supply of educated manpower, but also the dismal picture of slackening industrial development. A closer examination of the recent trends in the growth of employment opportunities in the organised public and

Private sectors which absorb majority of the educated manpower, also revealed that growth in employment opportunities for the educated has not kept pace with the rapid growth in the supply of educated manpower.

Among the educated persons unemployed in the State, matriculates constituted the highest proportion in 1961,1971 and 1981, while graduates and post graduates accounted for only a small part indicating lesser employment opportunities for the matriculates in the State. The number of educated unemployed in urban areas increased from 18 thousand in 1961 to 221 thousand in 1981; the corresponding figures for rural areas were 56 thousands and 719.19 thousand respectively.

The incidence of unemployment was higher among the younger age groups and lower among the higher age groups in 1961, 1971 and 1981. About two-thirds of the unemployed in 1971 were seen to be in the age group 15-24; the corresponding proportion in 1981 formed about three-fourth indicating the lengthening of the waiting period for the entrants to the employment market.

Incidence of unemployment is found to be higher in urban areas than in rural areas in 1981 both for males and females, while in 1971, it was higher in rural areas than in urban areas. Analysis of unemployment by levels of education reveals that incidence of unemployment was lower in urban areas for matriculates, 'graduates and above' category and technical diploma holders while it was higher

for other levels of education. Among the educated (SSLC and above) unemployed, incidence of unemployment is found to be the highest for the matriculates both for males and females in 1981 followed by 'graduates and above', non-technical diploma holders, technical diploma holders and technical degree holders.

Incidence of unemployment is found to be significantly higher for females than males in almost all levels of education except among the technical diploma holders irrespective of rural-urban difference.

The NSS 43rd round (1988-89) estimated that there are 15.16 lakhs open unemployed persons in the state constituting 9.42 percent of the total labour force. Among them, the educated unemployed constituted 6335 thousand representing 41.8 percent of the total unemployed. The Live Register figures of the Employment Exchanges, despite their various limitations indicate that the problem of educated unemployment has been worsening progressively during the last decade, especially after 1977.

To make a detailed study of the nature, magnitude, causes and characteristics of educated unemployment primary data were collected through personal investigation with the help of detailed pre-tested structured schedules from a random sample of 400 households chosen from four towns namely, Thrissur, Chalakudy, Aluva and Ernakulam spread over

Thrissur and Ernakulam Districts. The study has highlighted some important characteristics of educated unemployed in the State which are listed below.

1. Proportion of unemployed is the highest both for males and females in the salaried white collar households while it is the lowest in households with agriculture as the main occupation. Whereas wage labour households belong mostly to low income groups white collar families belong mostly to the high income groups.

2. With increase in the income of households, proportion of unemployed decreases.

3. Among the unemployed, females dominate males in almost all the income groups and in almost all the occupational categories of households.

4. Households belonging to lower castes are characterised by lower levels of income and education while the forward caste households have higher levels of income and education.

5. Majority of forward caste households have a regular source of income while majority of the backward castes do not have any regular source of income. Females constitute lower proportion than males in salaried white collar households among the forward Hindu castes and Christians while their proportion is higher in the same occupational category of household among the Other Backward Castes and

Scheduled Castes and Muslims. In the wage labour households females account for higher proportion than males in almost all the castes except forward Hindu castes and scheduled castes.

6. Unemployment is inversely related to father's educational level both for males and females with the exception of illiterate fathers.

7. Incidence of unemployment is more chronic among the youth in the age group 15-29; it is more acute among females than males.

8. Among the unemployed in the general education group, graduates constitute the highest proportion followed by matriculates, undergraduates and post-graduates. The larger proportion of graduates than matriculates among the unemployed indicate increasing demand for higher education.

9. Among the graduates in the general education group unemployment is more severe among Arts graduates followed by science and commerce graduates. Among the professional and technical graduates unemployment is the highest for graduates in engineering and the lowest for graduates in Education.

10. Lower levels of education are associated with lower levels of family income and higher levels of education are associated with higher levels of family income. Among the

unemployed, matriculates constitute higher proportion in the lowest income group followed by graduates.

11. Higher levels of education are associated with Forward castes and Lower levels of education, with Backward Castes. Among the unemployed, graduates account for the highest proportion among the Forward Castes while matriculates constitute the highest proportion among Other Backward Castes and Scheduled Castes.

12. Lower levels of education are associated with lower levels of family occupation and vice versa. Among the unemployed in the general education category, matriculates constitute the highest proportion in the wage labour households. In contrast, graduates and postgraduates account for the highest proportion in the salaried white Collar families.

13. The rate of unemployment is found to be the highest among the wage labour households and the lowest among the salaried white collar households both for males and females. The rate of unemployment is significantly higher for females than males in almost all the occupational categories of households except agricultural households.

14. Unemployment rate is higher among the low castes than the high castes. The rate of unemployment is found to be the highest for Muslims followed by Scheduled Castes and Other Backward Castes; it is lowest for forward Hindhus and

Brahmins. The rate of unemployment is significantly higher for females than males in all the castes.

15. Rate of unemployment is inversely related with age and family income; it is strikingly higher for females than males in all the age groups and all the income groups.

16. The rates of unemployment are lower for the professionally and technically qualified persons and higher for those without any additional qualifications. In the professional and technical education group, the rate of unemployment is the lowest for professional and technical degree holders while it is the highest for professional and technical diploma holders. The survey reveals that in the general education group the rate of unemployment is inversely related to the level of education with the exception of undergraduates. A sex-wise break-up shows significantly higher rates of unemployment for fdemales than males in almost all levels of education.

17. All the unemployed have a marked preference for white collar jobs irrespective of the educational backgrond. Clerical grade is the most preferred job for the matriculates while the officers job is the most preferred job for graduates and post graduates in the general education group. In the professional and technical education category, the professional and technical diploma holders and engineering graduates prefer to be employed as engineers while most of the graduates and post graduates in

education want to be teachers and largest proportion of the ITI certificate holders prefer to be technicians indicating the tendency of the unemployed to prefer occupations which are suited to the training they have received.

18. Job preference is broadly related to economic background of the unemployed. It is observed that the largest percentage of the unemployed in the highest income group prefer officer's job while the largest proportion of the unemployed in the lower income group prefer clerical jobs. Significant difference is not observed between males and females in respect of job preference. However females show greater preference for white collar work and aversion to manual work than males.

19. When the minimum acceptable job pattern is examined, a significant downward shift is seen in the job preference of all income groups. The proportion of the unemployed willing to under-take lower grade jobs declines with rise in family income.

20. The minimum acceptable salary is found to be influenced by household income and educational qualification. A direct relationship is observed between household income and minimum acceptable salary both for males and females. A positive relation is also found between the minimum acceptable salary and the levels of the education.

21. The average job-search period is found to be inversely related to the minimum acceptable salary both for males and females.

22. More than three-fourth of the total unemployed prefer public sector job. Wide gender difference is not observed in sectoral preference. The proportion of unemployed prefering public sector jobs is higher in the general education group. It is observed that among the unemployed prefering public sector jobs, females constitute higher proportion than males in the general education group and among the professional and technical certificate holders.

23. As for locational preference only 17 percent are willing to go abroad for employment. The largest proportion of the unemployed insist on employment in the home district indicating lower mobility of the unemployed, worsening the problem of educated unemployment in the state. The willingness to move to distant locations in search for job is also influenced by the educational background of the unemployed.A positive relationship is discernible between locational preference and educational qualification. significant gender difference is found in the locational preference when educational background is considered. Mobility is relatively higher for male graduates in the general education group. In the professional and technical education category, professional

and technical certificate holders show greater mobility. Marital status also influences the locational preference of the unemployed.

24. Majority of the unemployed are seen to be depending on parents, for their livelihood during the job-search period.Among them females account for the largest proportion.

25. Majority of the unemployed have a job-search period of more than one year. In the case of about one-third among them the job-search period has been over five years; another one-third has searched unsuccessfully for job for two to three years. In general an educated unemployed person seeks for job for about four years in the labour market.

26. Average job-search period is inversely related to family income. The largest percentage of the job-seekers have been searching for job for above 60 months in all the income brackets. Average job-search period is longer for females in almost all the income brackets, except in the highest income bracket.

27. The average job-search period is longer for the unemployed Scheduled Castes and Other Backward Castes than those from forward castes/communities. It is the longest for scheduled castes and shortest for Muslims. Average job-search period is longer for females in almost all the castes except Muslims.

28. Inverse relationship is found between average job-search period and father's educational level; it is the longest for the unemployed whose father are illiterate and the shortest for those whose fathers are graduates and post-graduates.

29. Job-search period of the unemployed is seen to decline with educational qualification. An inverse relationship is found between average job-search period and levels of education. It is the longest for matriculates (78.1months)and shortest for post- graduates (14.4months). Average job-search period is significantly higher for the unemployed with third class than those with first class at all levels of education both in general education and professional and technical education group. Average job-search period is relatively longer for females than males at all levels of academic performance in almost all levels of education.

30. Among the unemployed graduates in the general education group,average job-search period is the longest for the Arts graduates and the shortest for the Commerce graduates; in the professional and technical education category, it is the shortest for engineering graduates and the longest for graduates in Education. An inverse relationship is noted between the average job-search period and academic performance in almost all the faculties except

the faculty of science. Average job-search period is relatively longer for female graduates than their male counter parts in all the categories of academic performance in the faculty of Commerce.

31. The waiting period for the first salaried job for the employed is also found to decline with the educational qualification.

32. The average waiting period among the employed is also found to be inversely related to family income, levels of education, performance in education and father's level of education.

33. Average waiting period among the employed is also found to be the longest for scheduled castes and the shortest for Muslims. Waiting period is longer for females than males in almost all the castes except Christians and scheduled castes.

34. Average waiting period for the employed is also found to be significantly lower for the salaried white collar families. It is the longest for wage labour households while it is the shortest for 'self-employed elsewhere' households. Waiting period is longer for females than males in almost all occupation categories of households except business households.

35. Among the employed graduates, waiting period is

relatively longer for those with out any additional qualification in professional and technical courses, than those with additional qualification in professional and technical courses. Among the professionally and technically qualified persons, average waiting period is the shortest for professional and technical degree holders and the longest for professional and technical certificate holders.

36. Average waiting period is longer for females in almost all levels of education except the post graduates in the general education group.

37. Among the employed graduates in the general education group, the average waiting period is found to be the longest for Arts graduates and the shortest for Commerce graduates. Among the graduates in professional and technical education category the average waiting period is the longest for graduates in education and the shortest for graduates in Law. The waiting period is longer for female graduates than their male counterparts in the faculty of Arts, Medicine and Education. Average waiting period is inversely related to academic performance in the faculty of Arts, Science, Commerce, Medicine and Engineering indicating higher degree of absorption for the first divisioners in the labour market.

Regional Variations

1. The levels of income of households vary widely in Thrissur and Ernakulam Districts. The proportion of the unemployed is the highest in the income group Rs 1501-2500 in Thrissur district while their proportion is the highest in the income group Rs 501-1500 in Ernakulam district. In both the districts the proportion of the unemployed is the lowest in agricultural households and the highest in salaried white-collar households.

2. The wage labour households belong mostly to the low income groups while the salaried white collar families belong mostly to the high income groups in both districts. However Ernakulam District exhibits a significantly higher proportion of the unemployed in wage labour households in the lowest income bracket than Thrissur District.

3. The backward castes are associated with low income groups and forward castes are associated with high income groups in both districts. The proportion of the unemployed among 'Other Backward Castes' in the lowest income group is found to be lower in Ernakulam District compared to Thrissur District Among the unemployed Muslims, larger proportion belongs to higher income groups in both the districts. However their proportion in the highest income

group is strikingly higher in Ernakulam District as compared to Thrissur District.

4. Forward Castes belong mostly to the salaried white collar households while backward castes belong mostly to the wage labour households in both districts. However, the highest proportion of the unemployed among Other Backward Castes in Thrissur District belongs to wage labour households while the largest proportion of the unemployed in the same caste belong to salaried white collar households in Ernakulam District.

5. Maximum proportion of unemployment is observed among the wards of the parents having educational qualification at the primary level in both districts.

6. Most of the unemployed fall within the age group of 20-24 years in both the districts. A male-female break-up reveals that incidence of unemployment is higher among females than males in almost all the age groups in both the districts.

7. Unemployment is seen to be lower for the professionally and technically qualified persons than for those without any additional qualification in both the districts.

8. Lower levels of education are associated with lower

levels of family income in both the districts. The proportion of unemployed matriculates and undergraduates in the general education group is seen to be the largest in the lower income group 'Rs 501-1500' in both the districts.

9. Higher levels of education are associated with forward castes and lower levels of education are associated with backward castes in both districts.

10. Considerable differences are not observed between the two districts with respect to the job-search period of the unemployed in different age groups.

11. The average job search period is found to be inversely related to the family income, level of education, academic performance, and father's level of education in both the districts.

12. The average job-search period is the longest for the scheduled castes and the shortest for the Muslims in both the districts. However, the average job-search period is found to be markedly higher for Scheduled Castes in Thrissur District than in Ernakulam District.

13.Among the professionally and technically qualified persons, the average job search period is found to be the longest for the professional and technical certificate

holders in both the districts. However, the average job-search period is markedly higher in Thrissur District at all levels of education as compared to Ernakulam District indicating lower employment opportunities for the educated in Thrissur District than Ernakulam District.

14. Among the unemployed graduates in the general education category, the average job-search period is found to be the shortest for Commerce graduates and the longest for Arts graduates in both districts. Average job-search period is longer for females than males in the faculties of Arts, Science and Commerce in both the districts.

15. The average waiting period among the employed is also found to be the shortest for those coming from business households in Thrissur District; it is the longest for those coming from the wage labour households in both the districts.

16. The waiting period is seen to have significantly associated with levels of education, performance in education, father's level of education and family income. This is true with reference to persons with professional as well as non-professional qualifications. Other things being the same the waiting period for females is longer than their counter parts in both the districts.

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CHAPTER - III

DAIRY DEVELOPMENT IN IDUKKI DISTRICT

3.1 A General Profile of Idukki District

Idukki district formed in January 1972, is one of the mountainous districts in Kerala. It is bounded on the north by Thrissur district of Kerala and Coimbatore district of Tamil Nadu, on the east by Madura and Ramanathapuram districts of Tamil Nadu, on the south by Pathanamthitta district and on the west by Kottayam and Ernakulam districts. This district lies between latitude $9^{o}15'$ and $10^{o}21'$ north and longitude $76^{o}37'$ and $77^{o}25'$ east.

Idukki is the largest district with the lowest density of population in Kerala. It has a total geographical area of 5019 sq.km., constituting 13 percent of the total area of the state and a total population of 10.78 lakhs with a density of only 214 persons per sq.km. More than 50 percent of the area of the district is covered with dense forests. An extensive area is under plantations of tea, cardamom and coffee.

Anamudi, the highest peak south of Himalayas lies in this district. Major portion of the district lies in the mountainous tract of the Western Ghats with high hills and deep valleys.

Periyar and its tributaries, Thodupuzha and Pambar are the rivers of the district. Of these, Periyar which is the second longest river in the state passes through all the taluks of the district.

Idukki is the district having the largest hydro-electric power potential. The Periyar river and its tributaries provide the required infrastructure for generating power. More than 65 percent of the total power produced in the state is by the power projects of this district itself. The Pallivasal hydro-electric project commissioned in 1939, utilising the water of the Mudirapuzha river, the important tributary of Periyar, is the first power station of the state. Similarly, the Idukki power project constructed across the Periyar is the biggest power project in Kerala and the second highest project in India.

Owing to the peculiar topography of the district, the climate of the district varies considerably from that of the rest of the state. The Western part of the region experiences a pleasant cold climate throughout the year. Even within the highrange area, the climate at Kanthalloor is extremely cold throughout the year.

The district is blessed with a large number of splendid tourist centres. In Kerala there is no other district having more tourist centres than Idukki district. Thekkedy, Munnar,

Devicolam, Marayur, Eravikulam, Chinnar, Mattupetty, Idukki, Pallivassal, etc. are the important tourist centres of the district.

3.2 Land and Land Use Pattern

The soil of the district is classified into laterite soil, forest soil and hilly soil. The laterite soil occurs in the western portions of Thodupuzha, Peerumede and Devicolam Taluks. The soil is porous and has poor retentive capacity. The forest and hilly soil occur in Udumbanchola taluk and eastern sector of Devicolam, Peerumede and Thodupuaha taluks. It is rich in nitrogen but extremely poor in bases owing to heavy leaching.

A major portion of this district is unsuitable for cultivation because of its undulating topography and non-availability of irrigation facilities. The total cropped area of the district is 204999 hectares in 1991-92. The important crops of this district are cardamom, tea, coffee, rubber, coconut, pepper, sugarcane, tapioca, paddy, potato, orange, lemon grass, etc. Cardamom, the queen of spices, is cultivated mainly in Udumbanchola taluk followed by Devicolam and Peerumede taluks. Morethan 86 percent of cardamom is produced in the district. Tea is another important crop of the district. There are about 200 tea estates contributing about 77 percent of tea produced in the state. Sugarcane and pepper are the two other important

crops contributing 32.1 percent and 28.7 percent, respectively, of the total production of the same in the state. Table 3.1 shows the area and production of important crops in Idukki district.

Table 3.1

Area and Production of Important Crops in Idukki District (1991-92)

Sl.No.	Crop	Area (hectares) Kerala	Idukki	Production (tonnes) Kerala	Idukki
(1)	(2)	(3)	(4)	(5)	(6)
1.	Pepper	178126	38070 (21.4)	50309	14437 (28.7)
2.	Rubber	425768	36772 (8.6)	343109	29248 (8.5)
3.	Cardamom	43670	32108 (73.5)	3450	3000 (87.0)
4.	Tea	34623	23541 (70.0)	66080	51125 (77.4)
5.	Coconut	863061	16356 (1.9)	4641@	72@ (1.6)
6.	Coffee	84016	12588 (15.0)	20040	2260 (11.3)
7.	Tapioca	141881	5868 (4.1)	2657865	158312 (6.0)
8.	Paddy	541327	4851 (0.9)	1060350	10932 (1.0)
9.	Sugarcane	6237	2115 (33.9)	42822	13726 (32.1)
10.	Cocoa	9956	1459 (14.7)	5351	945 (17.7)
11.	Lemon grass	2458	1058 (43.0)	119	71 (59.7)
12.	Other crops	689994	30213	—	— —
13.	Total croped area	3021116	204999	—	— —

Note: Figures in parentheses show the percentage contribution of Idukki district to the total of Kerala.

@ Million nuts.

Source: Agricultural Statistics of Kerala, 1991-92, Department of Economics and Statistics, Thiruvananthapuram.

Table 3.1 shows that pepper, rubber and cardamom are the three leading crops in the district and they form about 52 percent of the total cropped area of the district. About 73 percent of area under cardamom and 70 percent of area under tea in the state belong to Idukki district. Sugarcane, lemon grass, and coffee also have a significant place in the agricultural sector of the district.

3.3. Demographic Features

According to the 1991 census, Idukki district has a total population of 10,78,066 persons. The district has a number of salient demographic features proper to it. Though it is the largest district with 13 percent of the total area of Kerala, it is one of the least populous districts (only 3.71 percent of total population of Kerala). In Kerala, the density of population is the lowest in Idukki district. While the density is 747 per sq. km. in Kerala, it is only 215 in Idukki. After Wayanad, the sex ratio is the lowest in Idukki district. There are only 977 females per 1000 males in the district. Yet another demographic feature of the district is that, the growth rate of population from 1951 to 1991 is the second highest in the district. It is 224.8 percent in the district while it is only 114.1 for Kerala as a whole. This shows that a larte number of people in the district are migrants from other districts.

3.4 Employment and Income

Idukki is mainly an agrarian district. About 80.56 percent of the labour force in the district were engaged in the primary sector consisting agriculture, animal husbandry, forestry, fishing, mining and quarrying.[1] Secondary and tertiary sectors together constituted only about 20 percent of the labour force. The primary sector continues to contribute a major share to the district income. Table 3.2 shows the sector-wise distribution of net domestic product of the district at factor cost.

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(1) District Statistical Hand Book,(Idukki), 1989, Department of Economics and Statistics, Thiruvananthapuram.

Table 3.2

Sector-wise Distribution of Net Domestic Product of Idukki District at Factor Cost

(Rs.in crores)

Year	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)
1980-81	105.06 (54.3)	54.69 (28.5)	33.10 (17.2)	19.3 (100)
1981-82	123.76 (58.1)	53.79 (25.3)	35.37 (16.6)	212.92 (100)
1982-83	134.19 (57.6)	58.22 (25.0)	40.41 (17.41)	232.82 (100)
1983-84	174.05 (60.4)	66.67 (23.2)	47.14 (16.4)	287.86 (100)
1984-85	169.03 (57.1)	73.86 (25.0)	52.86 (17.9)	295.75 (100)
1985-86	185.94 (57.2)	80.49 (24.7)	58.86 (18.1)	325.29 (100)
1986-87	168.26 (34.2)	111.76 (22.7)	222.58 (43.1)	492.60 (100)
1987-88	212.82 (55.2)	97.28 (25.2)	75.76 (19.6)	385.86 (100)
1988-89	250.98 (52.0)	136.13 (28.6)	89.77 (18.8)	476.88 (100)
1989-90	N.A	N.A	N.A	N.A

(contd.....)

(1)	(2)	(3)	(4)	(5)
1990-91	259.30 (45.5)	199.31 (35.0)	111.54 (19.5)	570.15 (100)
1991-92	290.08 (46.0)	205.64 (32.6)	134.83 (21.4)	630.55 (100)
1992-93	314.95 (45.1)	230.77 (33.0)	152.73 (21.9)	698.45 (100)

Note: Figures in parentheses show the percentage contribution of the sector.

Source: Economic Review, Various Years, State Planning Board, Thiruvananthapuram.

Table 3.2 shows that nearly 50 percent of the district income is contributed by the primary sector. The percentage contribution of the primary sector, which was 54 in 1980-81 increased to 60 in 1983-84 and then it began to decrease gradually. In 1992-93, it was only 45 percent with the secondary sector contributing 33 percent and the tertiary sector 22 percent. The corresponding figures for Kerala were 31 percent, 26 percent and 43 percent respectively.

It is interesting to note that while the district income of Idukki constitutes only 4.63 percent of the total income of Kerala, per capita income of Idukki is the second highest in Kerala. Table 3.3 gives a comparative picture of per capita income of Kerala and Idukki district.

Table 3.3

Per capita Income of Kerala and Idukki at Current Price

(Rs.)

Year	Kerala	Idukki
(1)	(2)	(3)
1980-81	1517	2007
1981-82	1501	2116
1982-83	1715	2254
1983-84	1963	2737
1984-85	2123	2764
1985-86	2152	2894
1986-87	2397	3135
1987-88	2754	3543
1988-89	3250	4308
1989-90	3730	N.A.
1990-91	4207	5368
1991-92	4607	5785
1992-93	5065	6321

Source: Economic Review, Various Years, State Planning Board, Thiruvananthapuram.

Table 3.3 shows that per capita income of Idukki district is higher than that of Kerala by about 25 percent through out the years. While per capita income of Kerala increased from Rs.1517 in 1980-81 to Rs.5065 in 1992-93, per capita income of Idukki increased from Rs.2007 to Rs. 6321 during the same period.

3.5 General Backwardness of the District

Idukki is one of the backward districts of Kerala. It is backward in industrial development, transportation, communication, higher education and medical facilities. Industrially it is one of the least developed districts of the state. Underdeveloped transport and communication facilities may be perhaps the most important reason for its industrial backwardness. The undulating nature of its topography together with lower density of population is the main reason behind its backwardness in transport and communication facilities. It is backward with reference to educational and medical facilities too. For example, while there are 141 hospitals in Kerala, with 27037 beds, there are only 3 hospitals in Idukki district with a total number of 328 beds. This shows that Idukki district has only 2 percent of the hospitals in Kerala with 1.2 percent of beds. Similarly, in the case of higher education facilities too this district is far behind. While there are 174 colleges in Kerala, there are only 5 colleges in the district.

The industrial and infrastructural backwardness of the district, keeps it heavily dependent on agriculture and allied activities. But most of the agricultural operations of the district do not provide regular and stable income to the people. So farmers are compelled to seek subsidiary occupations for supplementing their income. Dairying is found to be one of the best subsidiary occupations in the district.

3.6 Development of Dairying in Idukki District

Dairying is one of the most important subsidiary occupations in the district. For a considerable section of farmers, it is the main occupation. Lack of employment opportunities in the industrial and service sectors, seasonal nature of agricultural work and agricultural income, hard working mentality of the people, cold climate of the district, availability of plenty of pastures and feed and existence of regular and stable market for milk through dairy co-operatives are the major factors behind the growth of dairying in the district.

As mentioned earlier because of the industrial backwardness, inadequate transport, communication, medical and educational facilities, only a small percentage of the people are engaged in secondary and tertiary sectors. So people are compelled to depend on agriculture and allied activities for their livelihood. But majority of the agricultural crops in the district provide neither

regular nor stable income. Here comes the importance of dairying.

The crisis in the pepper sector of the district was the immediate reason for undertaking dairying as a subsidiary occupation. From 1988 onwards quick-wit disease began to affect pepper plants in the district on a large scale. The disease was more severe in Idukki than in other districts. As a result, pepper productivity decreased nearly by 20 percent. Along with this, pepper price also decreased in the subsequent years. Both these factors caused severe economic strain to the ordinary farmers who mainly depended on income from pepper. Table 3.4 shows the tred in productivity, price and income with respect to one hectare of pepper cultivation in Kerala.

Table 3.4

Productivity and Price of Pepper in Kerala

Year	Productivity (kg/ha)	price per quintal (Rs)	Income from one hectare (Rs)
(1)	(2)	(3)	(4)
1985-86	272	4748	12915
1986-87	236	5262	12418
1987-88	320	3547	11350
1988-89	275	4227	11624
1989-90	249	3010	7495
1990-91	278	3213	8932
1991-92	282	2918	8229
1992-93	286	2591	7410

Source: (1) Economic Review, Various Years, State Planning Board, Thiruvananthapuram.

(2) Agricultural Statistics of Kerala, 1991-92, Department of Economics and Statistics, Thiruvananthapuram.

Table 3.4 shows that productivity of pepper per hectare has fallen from 320 kg. in 1987-88 to 286 kg. in 1991-92. Again pepper price per quintal has fallen by 57.6 percent during this period. Consequently total income from one hectare of pepper

has fallen by 57.4 percent during the same period.

The general hardworking habit of the people of the district is yet another reason for the spread of dairying in Idukki. The agricultural background of the district, peculiar geographical features of the district with mountains, deep valleys, crude roads, pure air and water and consequent vitality of the people, etc., are the factors behind their hardworking nature. Because of the industrious nature of the people, they are ready to undertake dairying which requires continuous attention in works like fodder collection, feeding, cleaning, bathing, milking and marketing along with their agricultural and other works.

The climate of the district is particularly suitable for dairying. Excepting a few places like low ranges of Thodupuzha, the whole district enjoys a cold and pleasant climate throughout the year. The high-yielding varieties of crossbreds having less resistance to diseases and little power to adjust themselves to changing climatic conditions are particularly suitable to the district because of its pleasant climate throughout the year.

The availability of plenty of pastures and fodder is yet another favourable factor for dairying in the district. Vast areas of forests and uncultivable land in the district serve as good pastures for bovines. They are a great source of green fodder too. Therefore farmers are in a position to follow

dairying with less dependence on purchased fodder, especially green fodder. Moreover by-products of paddy, sugarcane, tapioca, cocoa, lemongrass, etc., can be used as fodder for cattle.

The agricultural background of the district results in increasing requirements of manure for almost all crops. As farmers are generally very poor, it is very difficult for them to spend huge amount on buying chemical fertilisers. Here lies the importance of dung as a form of manure. Dung is a good manure for almost all crops like pepper, cardamom, rubber, cocoa, sugarcane and tapioca. It is also used in biogas plants. In the district nearly 20 percent of farmers have biogas plants. It has been found in the study that a large number of farmers follow dairying not only for income but also for the purpose of getting dung to be used as manure and as an input for biogas plants.

Existence of a chain of dairy co-operatives providing a regular and stable market for milk produced by the farmers is another important factor for the development of dairying in the district. Role of dairy co-operatives in the dairy sector of the district will be explained in detail in the last part of this chapter.

3.7 Bovine Population in the District

According to the 1987 Livestock Census, Idukki district has

a total bovine population of 2,13,174. Though Idukki constitutes only 3.7 percent of human population of Kerala, nearly 6 percent of the bovine population of Kerala is in this district. Next to Wayanad, Idukki district has the highest number of bovine per thousand persons. It is interesting to note that while the number of bovine per thousand persons in Ernakulam and Kollam districts, having the highest number of total bovine, is only 121 and 133 respectively, it is 198 in Idukki district. Similarly in the case of crossbreds too the district has a prominant place. While the percentage of crossbred for Kerala as a whole is only 49.7, it is 63.6 in Idukki district. Table 3.5 shows the bovine population of the district.

Table 3.5

Bovine Population of Idukki District

Items	1977	1982	1987
(1)	(2)	(3)	(4)
Cattle	168162	1 66028	192311
Buffaloes	16113	14193	20863
Total	184275	180221	213174

Source: District Statistical Handbook, Idukki, 1990. Department of Economics and Statistics, Thiruvananthapuram.

Table 3.5 shows that the total bovine population increased from 168,162 in 1977 to 192,311 in 1987. While cattle population increased by 24,149, buffalo population increased by 4,750 during this period.

3.8 Institutional Facilities for Dairy Development

Though dairying has a very important role in the economy of the district, it lacks institutional facilities for the development of dairying. The insufficient institutional facilities together with the large size of the district cause difficulty in getting timely animal health care facilities. For example, dairy farmers of Kanthalloor village have to go to Marayur, which is about 20 km away from Kanthalloor for getting veterinary facilities. The inadequate institutional facilities are clear from table 3.6

Table 3.6

Institutes under Animal Husbandry Department in Idukki

Sl.No.	Name of the Institution	No.of Institutes in Idukki District	Total No.of Institutes in Kerala
(1)	(2)	(3)	(4)
1.	Clinical laboratary	1	10
2.	District A.H. Office	1	14
3.	ICDP Sub Centre	7	853
4.	ICD Project Office	1	8
5.	Regional A.I. Centre	4	33
6.	Veterinary dispensary	36	541
7.	Mobile Farm Aid Unit	1	17
8.	Veterinary hospital	5	116
9.	Mobile veterinary dispensary	1	11
10.	Veterinary poly clinic	3	51
11.	Other Institutions	7	228
	Total Institutions	67	1882

Source: Economic Review, 1993, State Planning Board, Thiruvananthapuram.

From table 3.6 it can be seen that while there are 853 ICDP sub-centres in Kerala, there are only 7 ICDP sub-centres in Idukki district. Similarly while there are 116 veterinary hospitals in Kerala, Idukki district has only 5. In short, while there are a total number of 1882 institutes under Animal Husbandry Department there are only 67 such institutes in Idukki district.

3.9 Dairy Co-operatives in Idukki District

The basic thrust behind the massive development of dairy farming in Idukki district is the working of a chain of dairy co-operatives in major centres of milk production. Internal market for milk is extremely limited in Idukki district because of two reasons. Firstly, almost all farmers keep one or two milch animals either for domestic consumption of milk or for getting income from selling milk. Secondly, because of the absence of large industrial or commercial towns, demand for milk from such centres is limited. Inorder to sell the milk in the major centres of the district like Thodupuzha, Kattappana, Adimali, Munnar, Kumily or Moolamattam, farmers have not only to travel between 25 to 50 kms spending much more than what they get from the sale of their produce, but also spend about half of the day. Here comes the role of dairy co-operatives.

3.10 Structure of Dairy Co-operatives in Idukki District

There are three kinds of dairy co-operatives in Idukki district.

They are Anand pattern dairy co-operatives under Kerala Co-operative Milk Marketing Federation, traditional dairy co-operatives under Dairy Development Department and co-operatives under charitable institutions like People's Dairy Development Project (PDDP), Malanadu Development Society (MDS), etc. There are 95 Anand pattern societies, 39 traditional societies and about 75 societies under charitable institutions. Among the charitable institutions, the PDDP with its head-quarters at Kalady has a few units in the district, and the MDS which started functioning in 1993 has a well linked chain of societies in the highrange area with one chilling plant at Anakkara and a dairy plant at Parathodu.

The Anand pattern societies in Idukki district, come under the ERCMPU which controls the dairy co-operatives belonging to the districts of Kottayam, Idukki, Ernakulam and Thrissur. Table 3.7 shows the number of societies under Ernakulam region. (ERCMPU).

Table 3.7

Number of Primary Societies Under Ernakulam Region (as on 31-5-94)

Sl.No.	Name of District	Traditional societies	Anand pattern societies	Total
(1)	(2)	(3)	(4)	(5)
1.	Kottayam	44	130	174
2.	Idukki	39	95	134
3.	Ernakulam	23	238	261
4.	Thrissur	85	120	205
	Total	191	583	774

Source: Quarterly Statement, Directorate of Dairy Development, Thiruvananthapuram.

It can be seen from table 3.7 that Idukki district has the lowest number of dairy co-operatives under Ernakulam region. While there are 774 societies in the Ernakulam region, there are only 134 societies in the district, consisting of 39 traditional societies and 95 Anand pattern societies. The number of Anand pattern societies is comparatively larger because more and more traditional societies are being converted into Anand patter societies.

An important feature of the dairy co-operatives set up in Idukki district is that there are vast stretches where milk societies

are extremely scarce and lacking in infrastructure for milk marketing. Majority of dairy co-operatives are working in Udumbanchola and Thodupuzha taluks. Devicolam taluk has the least number of dairy co-operatives in the district. It is interesting to note that though Devicolam taluk has 15 percent of breedable cattle of the district, there are only 4.5 percent of dairy co-operatives in the taluk. Table 3.8 shows the taluk-wise distribution of dairy co-operatives in the district.

Table 3.8

Taluk-wise Distribution of Dairy Co-operatives in Idukki District

Taluk	No. of dairy Co-operatives	Percentage
(1)	(2)	(3)
Udumbanchola	73	54.5
Thodupuzha	41	30.6
Peerumede	14	10.4
Devicolam	6	4.5
Total	134	100.00

Source: Compiled from the records of District Dairy Development Office, Idukki.

From table 3.8, it can be seen that more than 85 percent of the dairy co-operatives are concentrated in Udumbanchola and Thodupuzha taluks. Though Devicolam and Peerumede taluks together

form 61 percent of the geographical area of the district, only 15 percent of dairy co-operatives of the district are located here.

3.11. Milk Procurement by Dairy Co-operatives

Dairy Co-operatives in the district procure about 51,000 litres of milk per day. While the average quantity of milk procured by dairy co-operatives in Kerala as a whole is about 275 litres per day, it is nearly 410 litres in Idukki district. The percentage of milk procured by co-operatives in Idukki is one of the highest in Kerala. While the percentage of milk procured by dairy co-operatives of Kerala as a whole is only 11.6, it is around 17 in Idukki district. This means that the dependence of farmers on dairy co-operatives for marketing of their milk is 50 percent higher in Idukki district than in other districts. Similarly, the percentage of milk contributed by the district to the total procurement of milk by the organised sector of the state is on the increase. Table 3.9 shows the procurement of milk by the dairy co-operatives in Kerala and Idukki district.

Table 3.9

Milk Procurement by Dairy Co-operatives in Kerala and Idukki District

(lakh litres)

Year	Kerala	Idukki	Percentage contribution of Idukki
(1)	(2)	(3)	(4)
1987-88	1187.8	43.9	3.7
1988-89	1312.4	58.3	4.4
1989-90	1480.7	69.5	4.7
1990-91	1512.1	74.6	4.9
1991-92	1629.7	109.8	6.7
1992-93	1931.3	148.4	7.7
1993-94	2201.3	186.1	8.5

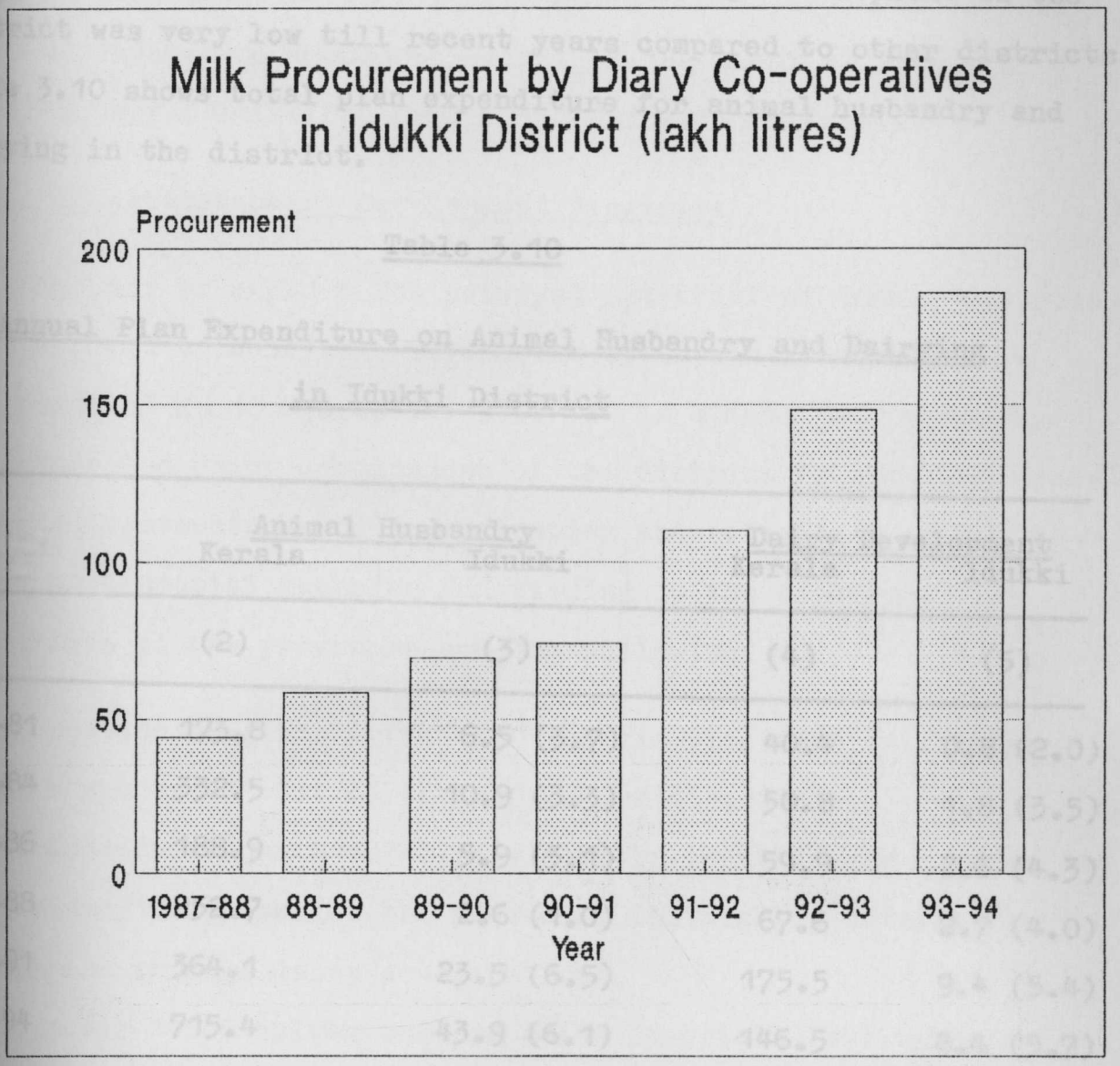
Source: Compiled from the records of Directorate of Dairy Development, Thiruvananthapuram.

Table 3.9 indicates that there has been a continuous increase in the percentage contribution of Idukki, especially from 1988-89 to the total procurement of milk by the organised sector of the state. Procurement of milk by dairy co-operatives during the above period increased by about four times, that is from 43.9 lakh litres in 1987-88 to 186.1 lakh litres in 1993-94. Milk procurement by dairy co-operatives in the district is illustrated in diagram 3.1

3.12. Government Expenditure on Animal Husbandry and Dairying

Though dairy sector has a prominent place in Idukki district,

Diagram - 3.1


Milk Procurement by Diary Co-operatives in Idukki District (lakh litres)
Procurement
200
150
100
50
0
1987-88
88-89
89-90
90-91
91-92
92-93
93-94
Year

plan expenditure on animal husbandry and dairy development in the district was very low till recent years compared to other districts. Table 3.10 shows total plan expenditure for animal husbandry and dairying in the district.

Table 3.10

Annual Plan Expenditure on Animal Husbandry and Dairying in Idukki District

Year	Animal Husbandry		Dairy Development	
	Kerala	Idukki	Kerala	Idukki
(1)	(2)	(3)	(4)	(5)
1980-81	173.8	6.5 (3.7)	40.4	0.8 (2.0)
1983-84	332.5	10.9 (3.3)	50.8	1.8 (3.5)
1985-86	188.9	5.9 (3.1)	59.9	2.6 (4.3)
1987-88	252.7	2.6 (1.0)	67.6	2.7 (4.0)
1990-91	364.1	23.5 (6.5)	175.5	9.4 (5.4)
1993-94	715.4	43.9 (6.1)	146.5	8.4 (5.7)

Note: Figures in parentheses show the percentage of Idukki district out of the total to Kerala.

Source: District-wise Break-down of Funds, Various years, State Planning Board, Thiruvananthapuram.

Table 3.10 shows that up to 1987-88, the percentage allotment of funds to Idukki district was very low, that is around 3 percent

of the total allotted to Kerala. But it began to increase from 1990-91 onwards to around 6 percent of the total allotment of funds both for animal husbandry and dairying in Kerala.

3.13 Integrated Dairy Development Programme

Inorder to exploit the untapped potential of Idukki district in the field of dairying, Government of Kerala launched a new programme of Rs.10 crores in 1993. It is a four year programme of integrated dairy development of the district by creating necessary infrastructure and co-ordinating the activities of the various governmental agencies functioning in the district. The objectives of the programme are the following:

1. to provide adequate Artificial Insemination (AI) facilities by starting 119 new AI centres in the district,
2. to provide adequate veterinary care by establishing 5 more veterinary dispensaries and providing fortnightly veterinary service through dairy co-operatives,
3. to cover 11000 calves under Special Livestock Development programme,
4. to increase the handling capacity of chilling plants to 1.20 lakhs litres per day,
5. to organise more dairy co-operatives for effective marketing,
6. to produce more fodder by bringing additionally 1100 hectares under fodder crops,

7. to conserve 25,000 MT of fodder as hay,
8. to modernise dairy co-operatives,
9. to establish a dairy training centre for training of dairy farmers, and,
10. to conduct village level study and demonstration classes for better dairy practices and manufacture of indigenous milk products.

As a result of this programme, milk production in the district is expected to increase to 1.56 lakh MT during 1995-96. By the end of the programme, milk production per day in the district will be 4,28,000 litres creating 18,000 additional full-time employment opportunities.

3.14 Milk Production in Idukki District

Milk production in Idukki district is growing at an increasing rate. While the growth rate of milk production in Kerala was 6 percent in 1993-94, it was 8 percent in Idukki district. Milk production in the district is expected to increase by 12 percent in 1994-95 and 15 percent in 1995-96. Idukki district contributes 6 percent of milk produced in the state. It is interesting to note that though the milk production of the district forms only 6 percent of the state, it contributes nearly 9 percent of the milk procurred by organised sector of the state. This shows the commercialised nature of dairy farming on the one hand and heavy

dependence on dairy co-operatives for marketing on the other.

Table 3.11 shows the trend in milk production in the district.

Table 3.11

Trend in Milk Production in Idukki District

Year	Production (lakh M.T)	Growth rate
(1)	(2)	(3)
1987-88	.88	----
1988-89	.91	3.4
1989-90	.95	4.2
1990-91	1.00	5.3
1991-92	1.06	6.0
1992-93	1.12	5.7
1993-94	1.21	8.0
1994-95	1.36@	12.4@(projected)
1995-96	1.56@	14.7@(projected)

@ Figures are projections given by the Directorate of Dairy Development, Thiruvananthapuram.

Source: Compiled from the records of Directorate of Dairy Development, Thiruvananthapuram.

From table 3.11 it can be seen that a steady increase in milk production is taking place in the district. The growth rate is also increasing at an increasing rate except in the year 1992-93. The table also reveals that from 1987-88 to 1993-94, the milk production has increased by about 37 percent from o.88 lakh M.T to 1.21 lakh M.T.

3.15 Per capita Availability of Milk

Idukki district has the highest per capita availability of milk in Kerala. While the per capita availability of milk in Kerala was only 176 grams per day in 1992-93, it was 283 grams per day in Idukki district, which is 61 percent higher than that of Kerala. Considerable increase in milk production and the small size of population are the main reasons behind this greater per-capita availability of milk in the district. But because of the general economic backwarness of the dairy farmers and greater commercialisation of dairy farming in the district, per capita real consumption of milk among the poor dairy farmers is far less than the per capita availability indicated. Table 3.12 shows the district-wise per capita availability of milk in Kerala.

Table 3.12

District-wise Per capita Availability of Milk in Kerala (1992-93)

(grams/day)

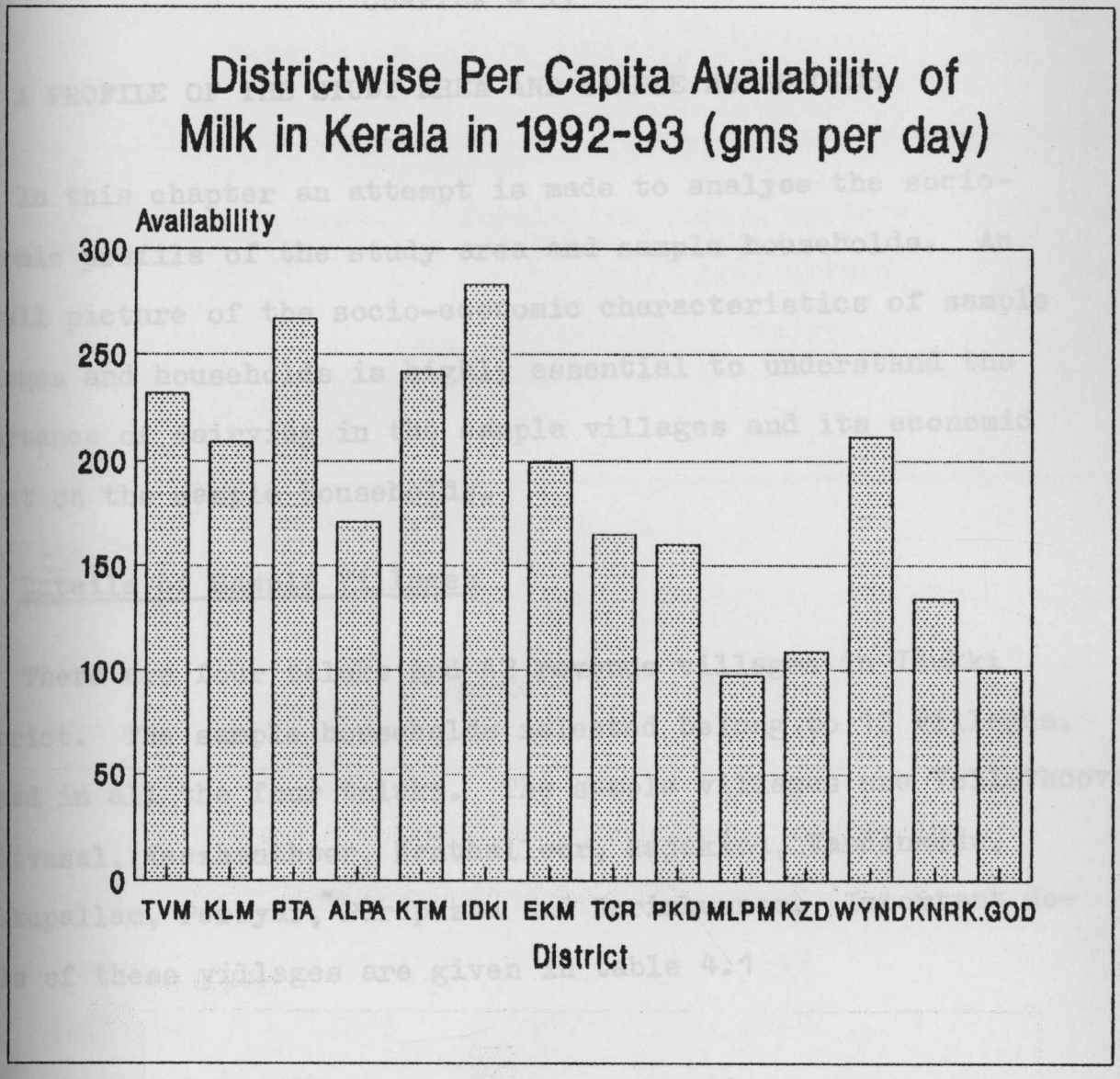
Sl.No.	District	Per capita Availability	Variation from state average
(1)	(2)	(3)	(4)
1.	Thiruvananathapuram	232	+56
2.	Kollam	209	+33
3.	Pathanamthitta	267	+91
4.	Alappuzha	171	-5
5.	Kottayam	242	+66
6.	Idukki	283	+107
7.	Ernakulam	199	+23
8.	Thrissur	165	-11
9.	Palakkad	160	-16
10.	Malappuram	97	-79
11.	Kozhikod	109	-67
12.	Wayanad	211	+35
13.	Kannur	134	-42
14.	Kasargod	100	-76
	State average	176	

Source: Compiled from the records of Directorate of Dairy Development, Thiruvananthapuram.

From table 3.12 it is clear that per capita availability of milk is the highest in Idukki district. It is 107 grams higher than that of the state average. District-wise per capita availability of milk in Kerala is shown in diagram 3.2

An analysis of the various aspects of dairy development in Idukki district was done in this chapter. The profile of the study area and the sample households are given in the next chapter.

Diagram - 3.2


Districtwise Per Capita Availability of Milk in Kerala in 1992-93 (gms per day)
Availability
300
250
200
150
100
50
0
TVM KLM PTA ALPA KTM IDKI EKM TCR PKD MLPM KZD WYND KNR K.GOD
District