

## CHAPTER V

### INDUSTRIES

For industrial activities, there is scope for maximum utilisation of the forest wealth (about 30%) and the agricultural raw materials which are abundantly available in Kodagu district. Lieutnant Connor has said in his *Memoirs of the Kodagu Survey* as follows:

"The woods of Kodagu deserve a moment's remark, they are infinitely superior in point of extent, density, age and stature to those of Wynaad; indeed it may be said that every species of vegetation attains a degree of luxuriance if not rankness, quite foreign in the neighbouring countries. Both flowers and blossoms have a brilliancy and variety unknown in the plains, and many of the wild plants possess a share of aromatic qualities, both as to odour and flavour. Roseberry, Gumbuz and Blackberry are seen in abundance among the hills."

As the main commercial crops of this district happen to be coffee, cardamom and pepper, there is possibility to develop agro-based industries related to these crops. The Cauvery and its tributaries, namely the Hemavathi, Harangi, Lakshmanatirtha, Suvarnavathi, and the Kakkabbe being excellent water resources, are helpful for industries and irrigation. Since, magnesite, molybdenum and quartz are available to some extent, they can be utilized, for industrialisation. Its rich forest is considered to be suitable for production of tassar silk.

It appears that importance was not given in this district for industrialisation, either during ancient times or during recent centuries. The fact that investment of capital not forthcoming in this district must be the reason for the existence of only a few small industries. Since only local skills were prominent, there was not much progress in other industries. Woodwork was the mainstay of the industries. Textile industry was not extensive in this district. It is notable that weavers

belonging to Devanga Community were made to settle when the town of Virajpet was founded. As observed by Dr. Moegling in 1856 and by Lt. Mackenzie in 1868, by studying some ancient relics, pottery was a developed industry in the area of this district during the prehistoric times. It is also evident that iron implements were also being manufactured during those times.

The embroidered *chele* or the midriff belt used by the Kodavas was being produced in Shirangala. Weaving of rough cloth used by the poor was carried on in Kodlipet. Finer cloth was also being produced here. In a report dated 1912 it is stated that there were 196 male iron smiths in Kodagu and they were manufacturing the swords traditionally used by the Kodavas. The author Malony, also says that he saw some swords of the Kodagu Rajas which are refined handworks, and that this industry is not getting the encouragement as in the past.

Most of the finished goods which were being used in this area, used to come from outside. The village carpenter or the blacksmith were not trained to do skilled or refined work. There was no organised industrial system in vogue. Around the year 1931 a tea factory and a rice mill were established in Madikeri. A rice mill was also established in North Kodagu. Though this district was progressive in agriculture it did not develop in industrial activities. During the days after the Second World war, industries like pottery, mat making, basket weaving, cane work and blacksmith were started. But all these were unorganised and were adopting time consuming methods, and hence were not employment ensuring and really remunerative. Perhaps due to the very reason that industrialisation moved in slow pace; there are no large industries in this district even to-day. The then government established a wood working factory at Murkal, and a Central workshop at Madikeri. These units cannot be listed as large industries. Similarly, medium industries were not in large numbers. In recent developments, this district also is moving in the direction of achieving progress in industrial field. By 31.3.90 there were 967 industrial units in this district (Source: District Industries Centre, Madikeri). In the following table small scale industries of this District and their geographical location are listed. (Table 1).

**Table No. 1 showing the different small scale Industries in the Kodagu District**

No.	Block: Name of place	General Engineering	Chemical & Plastic	Agricultural & Food based	Textiles	Electric & electronic	Forest based	Others
1	2	3	4	5	6	7	8	9
<b>A. Madikeri Block</b>								
1.	Madikeri	58	28	71	31	17	22	36
2.	Peraje	1	-	-	-	-	-	-
3.	Bhagamandala	-	1	4	-	1	2	1
4.	Karada	-	-	1	-	-	-	-
5.	Galibeedu	1	-	3	-	-	1	1
6.	Koyanadu	-	-	2	-	-	-	1
7.	Cherambane	3	-	7	-	-	-	2

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1	2	3	4	5	6	7	8	9
8.	Moornadu	5	1	7	2	-	-	
9.	Hodduru	-	-	1	-	-	-	1
10.	Makkanduru	-	1	-	-	-	1	-
11.	Maragodu	-	-	-	-	-	-	1
12.	Bettageri	-	-	2	-	1	1	-
13.	Karikee	-	-	2	-	-	-	1
14.	Chettemani	-	-	2	-	-	-	-
15.	Napoklu	2	-	4	4	-	-	-
16.	Madapura	-	-	-	-	1	-	-
Total 'A'		70	31	106	38	19	28	44

## B. Virajpet Block

1.	Virajpet	31	24	38	12	6	16	15
2.	Gonikoppal	21	6	15	2	-	3	6
3.	Ponnampet	8	2	4	2	-	3	4
4.	Kiraguru	-	-	2	-	-	-	-
5.	Kutta	1	-	-	-	-	-	-
6.	Siddapura	9	2	4	1	1	7	6
7.	Pollibetta	-	1	3	-	1	-	8
8.	Hudikeri	1	-	3	-	-	-	-
9.	Ammathi	2	1	4	-	1	2	3
10.	Mayamudi	-	1	-	-	-	-	-
11.	Balele	-	-	1	-	-	-	1
12.	Devarapura	-	-	-	-	-	1	-
13.	Tithimathi	-	-	-	1	-	-	-
14.	Chikkasodlur	1	-	-	-	-	-	-
15.	Koturu	1	-	-	-	-	-	-
16.	Srimangala	1	-	2	1	1	-	1
17.	Bittangala	1	-	-	-	-	-	-
Total		77	37	76	19	10	32	39

## C. Somvarpet Block

1.	Somvarpet	34	18	34	5	6	24	6
2.	Nagaruru	-	-	-	-	1	-	-
3.	Shavivarasanthé	4	4	8	2	1	1	3
4.	Kushalnagar	36	6	24	5	5	10	6
5.	Gowdalli	-	-	1	-	-	-	-
6.	Kodlipet	4	2	6	2	2	4	2

## Kodagu District

1	2	3	4	5	6	7	8	9
7. Hebbala		12	-	5	-	-	4	-
8. Suntikoppa		7	2	11	3	1	1	4
9. Chetalli		1	-	-	-	-	-	-
10. Shirangala		4	-	3	1	-	3	-
11. Kudige		4	-	3	-	-	-	2
12. Aigooru		1	-	-	-	-	-	-
13. T. Shettalli		-	-	1	-	-	-	-
Total		107	32	97	18	16	47	23
Grand Total	(A+B+C)	255	100	279	75	45	107	106

The following reasons can be listed for the industrial backwardness of the district. Firstly, to get the inclination to start industrial installations one must have the financial urge. There was no cause for such urge in this district. Because there was abundant crop of coffee, cardamom, pepper, paddy etc. The community of this district were generally contented and did not take interest in other activities and it appears there was no inclination towards industries since they were spending all their time and effort for the development of agriculture. Lt. *Connor* informs in 1817 that no town of this district had manufacturing industry and the local community did not have the habit of indulging in such activities. They used to barter their agricultural produces and get the finished goods required by them. Most of the people of this district were extremely land conscious. Agriculture being their primary occupation, no other profession attracted them. They did not have the sanction to transfer their lands to anybody due to the Jamma type land ownership system. Therefore, there was more interest in agriculture than in starting any industrial enterprise in Kodagu.

Adding to the above, shortage of electricity, lack of transport facility and shortage of labour are the reasons for the district's not achieving progress in the industrial sector. There is no railway connection to the entire Kodagu district. But, there was one highway towards Dakshina Kannada, two highways to Kerala and four highways towards the Mysore area. Therefore, all export and import in this district were by road transport only. This mode of transport was expensive, since more expenditure had to be incurred to procure raw material for manufacture and also to transport the finished goods. Therefore it is necessary to take note of the fact that the goods made here have no competitive rates in outside markets.

It can also be said that the way of life of the people of the district is also one of the reasons for their lagging behind in industrial progress. Because of the prevailing Jamma method of land ownership in every family, every member of the family, whether male or female, would get his/her livelihood whether one worked for it or not. Therefore there was not much initiative to pursue any other occupations. As the coffee and tea estates developed, there were more labourers from Kerala than from the local places. When so stated it should not be construed that all the locals have obtained employment. It is appropriate to state that the local people are under-employed than stating that they are unemployed.

Apart from these, the local social structure has bound the people to economic traditions. A son of a blacksmith did not have the mental orientation to take up any other occupation apart from his family occupation. Though this tendency is declining in recent times, the local people do not have the inclination to enter certain trades. For example, though there is abundant forest wealth, the local people are not inclined to work as carpenters. Traditionally, only a few craftsmen like basket weavers, oil extractors, weavers, potters and metal workers are engaged in industrial activity in limited numbers.

The social and economic reasons and the traditionalism were obstacles to the industrial progress of this district to some extent. Gradually these are receding and industrialisation is making progress. In recent days new industries are coming into existence.

### SUPPLY OF ELECTRICITY

Electricity was supplied in 1940 for the first time in this district. An organisation by name 'The Coorg Electric Company Limited, Madikeri' was promoted under the supervision of an organisation by name. 'The Mechelec Engineering Company, Madras'. This Company installed a diesel generation unit in Madikeri for supplying electricity to the Madikeri town. But this supply was not properly organised and hence the supply was not satisfactory. These generators became totally unusable in 1949 and there was no supply of electricity for several months. Even after repairs and reconditioning, this generating unit was not able to make continuous power supply. Since the financial position of this Company was not sound, it could not install new generators. There were even no street lights for several months. The then Government of Kodagu held discussions with the Mysore Government for getting supply of electricity to Kodagu. But some of the conditions laid down by the Mysore Government were not acceptable to the Kodagu Government. Because of this the Government of Kodagu took over the Coorg Electric Company under its control with the approval of the Government of India and bought it for Rs. 75,000. The generating station was reactivated. Two generators of the capacity of 60 KW and 120 KW at a cost of Rs. 1,32,829 were procured. Wherever necessary the electric lines were repaired. The total cost of all this amounted to Rs. 3,33,456.

During the First Five Year Plan, under Rural Electrification Scheme, the Government of India extended a loan of Rs. 7.41 lakhs to the Government of Kodagu for supplying electricity to rural areas and to increase employment opportunities. Under this scheme Virajpet and Somvarpet towns were chosen and the small stations were installed. Two generators of 60 KW, one of 120 KW were installed in Virajpet, and electricity supply was commenced on 24.3.1956. In Somvarpet, one generator of 60 KW was installed and the electricity supply commenced on 9.2.1956.

During the Second Five Year Plan the area between Kushalnagar to Shirangala and also the agricultural and animal husbandry centre at Kudige were selected for electrification. Irrigation facility was necessary for the crops in these places. Accordingly, Kushalnagar and Kudige were electrified. A transmission line of 66 KW was installed from Krishnarajnagar to Kushalnagar. Electric supply was provided to Kodlipet and Shanivarasanthe areas from Hassan side. Hydro-electric power was supplied from the Sharavathi generating station to the four places viz. Kushalnagar, Kudige, Kodlipet and Shanivarasanthe. During the Second Five Year Plan a sum of

about Rs. 12.5 lakhs was spent for these works. Under the same scheme a 66 KW sub-station was established in Gonikoppal.

Under the Third Five Year Plan it was planned to construct a Hydro-electric station at Barapole and a sum of Rs. 20 lakhs was provided for this purpose. But due to paucity of funds this plan did not materialise.

In 1956, an office of Karnataka Electricity Board started functioning under the control of a foreman. In 1958, a sub-division was started functioning under the supervision of an Assistant Executive Engineer. In 1978, a separate division started functioning and an Executive Engineer was posted. Also, an operation and maintenance sub-division started functioning in Madikeri.

In 1990, the total number of workers in this division was 473 and the number of Officers were as follows: Executive Engineer-1, Accounts Officer-1, Assistant Executive Engineers-3, Assistant Engineers-14, Assistant Engineers(Civil)-1, Junior Engineers-20 and Assistant Accounts Officers-3, and the remaining workers. This Office is under the control of the Superintending Engineer, Mysore.

**Table No. 2 : Talukwise details of Electric Supply Lines upto 31.3.1990**

		In Kilometers
Madikeri Taluk	11 KV Line	546.59
	Low Tension Line	998.44
	Total	1,545.03
Somvarpet Taluk	11 KV Line	618.12
	Low Tension Line	807.61
	Total	1,425.73
Virajpet Taluk	11 KV Line	633.61
	Low Tension Line	910.15
	Total	1,543.76
District sum Total	11 KV Line	1,798.32
	Low Tension Line	2,716.20
	Total	4,514.52

**Table No. 3 : Details of Transmission in Kodagu District as on 31.3.1990.**

Voltage KV	From	To	Station	Capacity MVA
66'	Hunsur	Ponnampet	Ponnampet	1 X 8
33	Kushalnagar	Suntikoppa	Suntikoppa	1 X 5
33	Suntikoppa	Madikeri	Madikeri	2 X 5
33	Kushalnagar	Somvarpet	Somvarpet	1 X 5
33	Ponnampet	Srimangala	Srimangala	2 X 1
33	Virajpet	Siddapur	Siddapur	1 X 5
33	Ponnampet	Virajpet	Virajpet	1 X 5
33	Siddapura	Suntikoppa	--	--

Source: Karnataka Electricity Board, Kodagu District.

### Wind Power Generation at Talakaveri

The Karnataka State Industrial Investment and Development Corporation along with a few other state organisations drew up a plan in 1988 for the purpose of generating electricity with wind power, in the Brahmagiri range at Talakaveri, which is about 1,500 mts. above sea level at a cost of Rs. 1 crore. An aid of about Rs. 65 lakhs from the Central Government was also granted for this scheme. While the machinery and equipment required for this scheme was imported from Messrs. *Enkane* of Denmark, the responsibility of erection and commissioning was entrusted to Messrs. G.K. Synthetics of Delhi. The National Aeronautical Laboratory had recommended the above place as suitable for the installation of the wind power generators. Ever since these machines started functioning about 20,800 units of electricity has been generated till 1991. In order that these wind power generators operate satisfactorily the continuous supply of electricity is necessary in addition to high velocity winds. Since it is difficult to get an uninterrupted electric power supply in Kodagu it has been said that these wind power generators may not function satisfactorily. Presently, these generators are standing still.

## INDUSTRIALISATION

For the industrialisation of a district effective entrepreneurship is very necessary. In order to encourage the younger generation to undertake industrial activities, exhibitions and workshops are being conducted in this district under the auspices of the Department of Industries. In 1984-85, industrial entrepreneurship development programmes were conducted for 45 days. As a result of this, about 50 persons have started different industries. So also, in 1985-86, about 30 persons have started different industries. In order to provide financial assistance to the industries about 100 branches of commercial banks, 14 branches of co-operative banks, 3 branches of primary land development banks and 18 branches of Rural Banks and an Office of Karnataka State Finance Corporation are functioning in this district. For providing industrial training one poly-technic and

one industrial training institute are established at Kushalnagar and Madikeri respectively. The state-owned Karnataka Electronic Development Corporation has started a training-cum-production centre in Madikeri under the auspices of Sujyothi Mahila Co-operative Society. The details of the different industries proposed to be started in this district from the year 1988-89 to the year 1993-94 is as follows:

**Table No. 4 : showing the number of small scale industries proposed to be started from 1989-90 to 1993-94.**

Year	Number of units			Persons likely to be employed			Estimated annual production value in Rs. Lakhs		
	A	B	C	A	B	C	A	B	C
1988-89	20	40	60	48	150	220	12	60	60
1989-90	30	40	60	60	150	220	18	60	60
1990-91	40	50	65	80	160	280	20	65	80
1991-92	40	25	65	80	160	280	20	65	80
1992-93	50	60	75	100	170	280	25	70	90
1993-94	50	60	75	100	170	280	25	70	90

A-Forest Produce units;

B-Agriculture based units; C- Engineering Industries.

### Industrial Estates

There is one industrial estate in Madikeri with 18 industrial sheds of which 8 are of 'C' type and 4 are of 'D' type. In these sheds there are industries pertaining to general engineering, steel production, fabrication, household materials, rolling shutters, auto repair, umbrella manufacture etc. Two sheds are given to Government printing press. In Kushalnagar there are 8 'C' type and 4 'D' type sheds. There is a raw material store in this industrial estate. At Kushalnagar, Karnataka Leather Development Corporation has established a store. Raw material is supplied to leather workers from here. In Kudlur and Somvarpet, there is an industrial area of 250 acres. Upto 1990-91, there are altogether 27 industrial sheds constructed by Karnataka State Small Industries-Development-Corporation, among which 22 have been distributed (Madikeri 18, Kushalnagar 4). Provisional letters of intent were issued during the year 1990-91 to 138 entrepreneurs for starting new industries. Industrial licences were also issued to 152 units which started production and whose total investment was Rs. 37.43 lakhs providing employment to 391 persons. Among these units, 132 numbers are those registered in urban areas, 45 numbers are of women entrepreneurs, 22 numbers are from minorities and 52 are from Scheduled Castes and Scheduled Tribes. The talukwise details are as follows: Madikeri-34, Somvarpet-66, Virajpet-52. During the year 1990-91, nine sick units (Madikeri-4, Somvarpet-3, Virajpet-2) were given financial assistance from the State finance corporation and banks towards capital and they were revived.



Table No. 4A

## Number of Villages and also Units supplied with Electricity in Kodagu District as on 31.3.1990

(Number given in Brackets as on March 1991)

Sl. No.	Taluk	Villages as per 1981 census	villages supplied with electric-city	Homes under Bhagya Jyothi	All-Electric Homes	Commercial	Pump sets	Industries	Drinking water	Street Light	H.T.	Total
1.	Madikeri	98	73	6,764 (7,063)	2,475 (2,630)	1,749 (1,829)	393 (447)	421 (427)	48 (55)	1,301 (1210)	-	13,151 (13,661)
2.	Somvarpet	316	240	11,876 (12,518)	2,137 (2,285)	2,667 (2,789)	1,081 (1,171)	418 (439)	51 (58)	2,370 (2,150)	5	20,605 (21,415)
3.	Virajpet	127	113	7,859 (8,318)	3,425 (3,686)	2,568 (2,654)	1,080 (1,206)	737 (766)	37 (42)	589 (567)	2	16,297 (17,241)
	Total	541	426	26,499 (27,899)	8,037 (8,601)	6,984 (7,272)	2,554 (2,824)	1,576 (1,632)	136 (155)	4,260 (3,927)	7	50,053 (52,317)

Industries

All the Villages of the District are supplied with Electricity by 31.3.91. as confirmed by the Karnataka Electricity Board

Under the NABARD scheme for non-agricultural activities a loan of rupees two lakhs has been sanctioned to ten skilled workers for establishing small and very small industries in the rural areas of the district.

By the year 1990-91, there were 34 units with 95 workers with a capital investment of Rs.15.10 lakhs in Madikeri taluk; 52 units with 133 workers with a capital investment of Rs. 6.73 lakhs in Virajpet taluk and 66 units with 163 workers with a capital investment of Rs. 15.6 lakhs in Somvarpet taluk in the district. Of these, 16 units are agriculture-based, 54 forest produce-based and 17 units are for production of cloth. One unit is chemical-based, 8 are engineering units and 56 other units. The financial institutions are concentrated in Madikeri, Somvarpet, Virajpet, Kushalnagar and Gonikoppal. These financial institutions have given assistance to 46 agriculture-based and food processing units in Madikeri, 18 general engineering units, and 24 agriculture based units in Somvarpet and 24 agriculture based units in Virajpet. Under the classification of transport assistance has been given to 29 units in Madikeri, 22 units in Somvarpet and 22 units in Virajpet.

The financial assistance to Kodagu district in 1989, being Rs. 189.29 lakhs is 8.13% of that of Mysore circle and 1.5% of the financial assistance given in the entire State.

#### **Karnataka State Small Industries Development Corporation**

The Karnataka State Small Industries Development Corporation apart from constructing industrial sheds supplies raw materials to the small industries. Karnataka State Small Industries Marketing Corporation helps marketing the products manufactured by small industries. The Corporation has constructed industrial sheds at Kushalnagar and Madikeri. Some of the sheds are yet to be occupied (as in 1991)

#### **Karnataka State Financial Corporation**

The State Financial Corporation was established in 1959 for the purpose of granting long-term loans to small and medium industries. The Karnataka State Financial Corporation occupies a reputed position among the State Finance Corporations in the country. The Madikeri branch of this corporation started functioning in 1985. This is under the administrative control of the regional office at Mysore. From the time the branch started functioning till 1990, loans have been granted to 293 units. Among these units the important ones are general engineering units, agriculture-based units, forest produce based units, cloth units, chemicals and plastic units, transport, electrical equipment and electronic units and hotels. Details of the units which obtained financial assistance from the corporation between 1986-1990 are given in the table below. (Table 5).

The extent of loan distributed through KSFC between 1985-1990 is as follows: (Rs. in lakhs), 1985-0.39, 1986-23.47, 1987-24.65, 1988-61.12, 1989-79.66, 1990-44.45.

The details of the loan distributed in the district by the Finance Corporation between 1986-90 is as follows: (Table 6).

Table No. 5

	1986	1987	1988	1989	1990	Total
	2	3	4	5	6	7
General Engineering	9 (17)	10 (17)	7 (10)	8 (11)	2 (7)	36 (13)
Agriculture based and Food	17 (32)	24 (41)	18 (25)	23 (32)	12 (42)	94 (33)
Forest Produce based	1 (2)	2 (3)	-	-	1 (3)	4 (1)
Cloth	5 (9)	7 (12)	5 (7)	10 (14)	1 (3)	28 (10)
Chemical Plastics	5 (9)	-	4 (5)	4 (6)	-	13 (7)
Transport	11 (21)	8 (14)	32 (44)	14 (20)	8 (28)	73
Electricity based and Electronics	1 (2)	3 (5)	3 (4)	2 (3)	-	9 (3)
Hotel industry	-	-	-	2 (3)	3 (10)	5 (2)
Others	4 (8)	5 (8)	4 (5)	8 (11)	2 (7)	23 (8)
	53 (100)	59 (100)	73 (100)	71 (100)	29 (100)	285 (100)

The numbers in brackets are percentage of annual financial assistance.

**Table No. 6 : The Details of Loans Distributed in the District by The Finance Corporation from 1986 upto 90.**

Year	Rs. 1,000 to Rs.50,000	50,000 to 1 lakhs	1 lakhs to 2 lakhs	2 lakhs to 5 lakhs	5 lakhs to 10 lakhs	Above 10 lakhs
(Beneficiaries)						
1986	3	30	20	-	-	-
1987	1	44	14	-	-	-
1988	1	37	11	21	2	1
1989	7	33	8	12	10	1
1990	2	13	2	3	8	1
Total	14	157	55	36	20	3

**LIST OF SMALL SCALE INDUSTRIES EXISTING IN  
KODAGU DISTRICT IN 1970 (TABLE 7)**

This list is given to furnish the historical background of the industrial growth. Only statistics can be given for the period subsequent to 1970. It has already been stated earlier about the existence of 967 units in the district in the year 1990.

**Table No. 7 : A List of some of the Small Scale Industries in  
Kodagu District as in 1970.**

No.	Year Established	Name of Industry & address	Name of product manufactured	No. of Employees
1	2	3	4	5
1.	1920	CTC Stores and Printing Works, Virajpet	Note Books	6
2.	1921	Kodagu Press, Madikeri	Printing	6
3.	1928	Prakash Press, Madikeri	Printing	2
4.	1932	Chathukuttinayaka, Virarajpet	Copper, brass vessels	3
5.	1935	K.T. Machaiah, Madikeri	Copper, brass vessels	2
6.	1938	Ambika Printing Press, Madikeri	Printing, note books	7
7.	1940	Fernandes Coppersmith	Copper, brass vessels	2
8.	1944	Ramanna Motor Works, Madikeri	Vehicle repairs	3
9.	1946	Louis Industries, Madikeri	Engineering repairs and manufacture of spares	4
10	1946	P.V.Pai and Company, Madikeri	Vehicle repairs	6
11	1946	N.K.Govindan, Hudikeri	Copper, brass vessels	2
12	1947	Rahamania Soda Factory and Bakery, Virajpet	Bakery Products	6
13	1948	Naidu Bakery, Madikeri	Bakery products	3
14	1949	K.P.Narayana, copper-smith, Gonikoppal	Copper, brass vessels	4
15	1950	Polymetal works, Gonikoppal	Copper, brass vessels	4
16	1950	Ganesh Sheet Metal works, Madikeri	Steel metal works	2
17	1950	Gopal Industries, Gonikoppal	Agricultural implements	5
18	1950	Bhagwan Press, Virajpet	Printing	2
19	1951	Adam and sons, Madikeri	Coffee sprayers and spare parts	12
20	1951	Popular Copper Works, Ponnampet	Copper, brass vessels	3
21	1951	Amman Motor works, Madikeri	Vehicle repairs	5

1	2	3	4	5
22	1951	Rama Carpentry, Kushalnagar	Bullock cart and building materials	4
23	1952	Kunjappa Achari, Virajpet	Iron safe and idols	2
24	1952	Sri.Giddasheti, Santhepali Kushalnagar	Bullock cart and building materials	3
25	1953	C.V.Brothers, Madikeri	Coffee sprayers repairs	50
26	1953	National Engineering Works, Gonikoppal	Engineering works, repairs	10
27	1953	Ganesh Printing Press	Printing	7
28	1955	Lakshmivilas Printing Press Gonikoppal	Printing	3
29	1955	Raghupati Printing Press, Madikeri	Printing	6
30	1955	Rama Printing Press, Kushalnagar	Printing	3
31	1956	Nityananda Automobile Works, Madikeri	Vehicle repairs, steel casting	10
32	1956	Indian Tyres, Madikeri	Tyre retreading	10
33	1957	Monappa Motor Works	Vehicle repairs	5
34	1957	R.Freeman Sons Engineering Works, Somvarpet	Engineering devices repairs, repairs of coffee sprayers	6
35	1957	Sulochana Steel works, Ammathi	Agricultural and estate materials	4
36	1957	Joseph Furnitures, Madikeri	Furniture, building materials	4
37	1959	Joseph wood Industries, Madikeri	Packing materials	3
38	1960	Santosh Furniture Mart, Virajpet	Wood packing materials	5
39	1960	Sri Rama Press, Gonikoppal	Printing	3
40	1960	Saint Micheal Firm Press, Virajpet	Printing, notebooks	2
41	1960	Vani Printers, Virajpet	Printing and notebooks	6
42	1960	Sirajuddin Agarbathi works	Agarbathi	3
43	1961	Coorg Plastic Industries, Madikeri	Plastic bags	5
44	1961	Geetha Cosmetic Industries, Virajpet	Cosmetics	5
45	1961	Anuradha Printing Press, Madikeri	Printing, note boks	9
46	1961	Ranganatha Metal Works, Madikeri	Copper, brass vessels	3
47	1961	Shakti Power Press, Madikeri	Printing	3
48	1961	Shreedevi Printing Press	Printing	4
49	1961	V.S.Gundappa Shetty, Madikeri	Wood packing boxes	2
50	1961	Pascal Industries Corporation, Madikeri	Plastic bags	5
50A	1961	Jhansi Rani Crafts, Virajpet	Furniture	6

1	2	3	4	5
51	1962	V.V.Kunju Kannan, Moornadu	Agricultural implements	3
52	1962	Mercara Steel Industries,	Stainless steel vessels	4
53	1962	Joseph Tyre works, Madikeri	Tyre retreading	4
54	1962	Muruga Press, Ponnampet	Printing	3
55	1962	Shantha Power Press	Printing	3
56	1962	Udaya Press, Somvarpet	Printing	4
57	1962	Coorg Wood Industries, Kushalnagar	Wood sawing	6
58	1963	Orient Aromatics, Kushalnagar	Perfumed oils	12
59	1963	Baby Automobiles, Siddapur	Vehicle repair	3
60	1963	Kalikamba Motor works, Madikeri	Vehicle repair	3
61	1963	Coorg Cane Works, Gonikoppal	Furniture	3
62	1964	R.V.Prabhu Industries Estate, Madikeri	French polish	2
63	1964	Nicholas Motor Works, Pollibetta	Vehicle repair, iron casting	10
64	1964	Kanti Wood and Matchspints Industries, Shanivarasanthe	Wood sawing	6
65	1964	Sri.Sadananda Pai and Co. , Madikeri	Wood articles	5
66	1964	Tajaliyat Matchsplints and Veneers industries, Kodlipet	Matchbox decorative planks	0
67	1965	B.M.R.Industries, Somvarpet	Coffee sprayers spare parts manufacture repairs	10
68	1965	John Engineering Works, Virajpetpet	Coffee sprayers spare parts manufacture, repairs	4
69	1965	Joseph Engineering Works, Virajpet	Coffee sprayers spare parts manufacture,	4
70	1965	Swami Engineering Works	Coffee sprayers spare parts manufacture and repairs	4
71	1965	Line Tyre Works, Virajpet	Type retreading	5
72	1965	Dinakar Printing Press, Virajpet	Printing	3
73	1965	Ganesh Power Press, Virajpet	Printing	7
74	1965	Sharada Press, Virajpet	Printing	2
75	1966	Estate Instruments manufacturing works, Virajpet	Agricultural garden implements	-
76	1966	Ashoka Automobiles, Madikeri	Vehicle, pump repair	4
77	1966	Mohan Engineering works, Pollibetta	Vehicle repair	3
78	1966	Coorg Plastic Industries, Madikeri	Plastic bags	5
79	1966	Saibaba Cane Crafts, Somvarpet	Furniture	4

the total number of mills was 71. The number of mills in different taluks is as follows: Madikeri: Sheller-3, Huller-3, Sheller-cum-Huller-6, Total-12; Somvarpet: Sheller-6, Huller-15, Shellar-cum-Huller-4, Total-25, Virajpet: Sheller-7, Huller-24, Sheller-cum-Huller-3, Total-34.

These mills were mainly in Gonikoppal, Ponnampet, Virajpet, Madikeri, Ammathi and Katoor. In 1964, the total capital investment of all these mills was about Rs.20 lakhs. This included the land, machinery, oil, electric power generators, steam engine driven-electric generators required for the mills. While the number of employees in these mills was normally about 300-400, during harvest time it used to increase up to 600. The owners of these mills used to process in these mills their own paddy as well as the paddy belonging to others. During the said year 80,000 tons of paddy was milled, and about 40,000 tons of rice was produced. In some of the mills boiled rice used to be produced. There was much demand for boiled rice in Malabar area. The then Government of India had directed that much preference should be given to pounded rice. The Karve committee which was appointed in this connection had recommended to impose higher excise duty on mill-made rice in order to encourage small industries. Though the Government had accepted these recommendations, it is noteworthy that the rice mill industry expanded in the district.

Before the States Re-organisation, the then Kodagu Government in accordance with the policy of the then Government of India planned a programme for developing pounded rice industry. During the Second Five Year Plan and the Third Five Year Plan a sum of about Rs.25,000/- and about Rs.4.1 lakhs respectively was provided for the development of the Small scale industry viz. pounded rice industry. But at present the clear statistics are not available about the number of paddy processing units in the district.

There are no heavy industries in the district. There are only two medium scale industries:

1. Kushalnagar Works, (II) Kudige-Somvarpet taluk.
2. Kodagu Coffee Growers Co-operative Society, Hebbale, Somvarpet taluk.

A sum of Rs.1.3 lakhs has been advanced to one unit only as capital and long term loan. By 31.3.90, a capital of Rs.607 lakhs has been invested in 117 small scale industrial units by providing employment to 5,080 persons with production valued at 970 lakhs has been achieved.

**Table No. 13. : Details of Small Industrial Units in Kodagu District in 1982-83 and of those further started annually upto 1989-90.**

Year	Industrial Units	Capital (Rs. Lakhs)	Employment
As on 1982-83	417	191.00	207
83-84	82	28.19	310
84-85	130	27.20	529
85-86	117	42.54	438
86-87	115	48.89	508

Year	Industrial Units	Capital (Rs. Lakhs)	Employment
87-88	103	42.20	252
88-89	102	48.96	361
89-90	100	35.38	376
Total	1,166	464.32	4,981

### Self-Employment Programme:

This scheme is a Central Government programme, and the State Government and District Industries Centre are the supervising representatives. A committee called Task Force Committee has been constituted to which the General Manager of District Industries Centre is the Chairman. Functional Manager of District Industries Centre, the Representative of Small Industry Service Institute, Bangalore, a Government of India organisation, Officer of Employment exchange, Manager Vijaya Bank, Manager Canara Bank, Madikeri are some of the members. The following facts are considered in the selection of beneficiaries: Age should be between 18 and 35 years, must have passed tenth standard, the family income should be less than Rs.10,000 per annum. There are guidelines that 30% of the beneficiaries should belong to the Scheduled Castes and the Scheduled Tribes. In this programme there are 3 types of benefits. 1. For Industries, 2. For Services, 3. For trading. A sum of Rs.35,000, Rs. 25,000 and Rs.15,000 respectively will be advanced.

**Table No. 14 : Details of Progress in the Self - Employment Programme in Kodagu District from 1983-84 upto 1989-90.**

Year	Scheduled Castes Scheduled Tribes	Women	Others	Total	Land Distri- buted (in lakhs)
1983-84	-	32	146	178	53.84
84-85	-	44	203	247	53.49
85-86	2	47	199	248	35.12
86-87	2	42	148	192	23.97
87-88	3	18	99	120	25.67
88-89	1	15	130	146	30.05
89-90	1	12	81	94	16.01
Total	9	210	1,006	1,225	238.15

Kudige dairy the first milk processing unit in the State was started in 1956 for the purpose of providing opportunity for the farmers to get auxiliary income and to provide milk supply to Madikeri, Virajpet, Somvarpet, Shanivarasanthe, Kodlipet, Ponnampet, Gonikoppal, Kushalnagar and so on. In 1975, this unit was brought under the control of Dairy Development Corporation. Later in 1984, it was merged with the Karnataka Milk Producers Federation and it was handed over to Hassan Milk Producers Co-operative Societies Federation. In 1975-76, the annual collection of milk was 6.08 lakh litres and in 1989-90 it increased to 32.06 lakh litres. Thus in 15 years, it has increased by 527%. In 1989-90, the total turnover was as follows: Average per month Rs. 5.68



Table No. 15

**Details of Financial Assistance given by Khadi Village Industries Commission to Societies  
Institutions and Individual Professionals in Kodagu District upto 31.3.1990**

No.	Industries	Year of Sanction	Units			Amount		
			Co-operative Societies	Institutions	Individual	Loan	Financial Assistance (in Rs.)	Total (in Rs.)
1.	Apiculture	1961-1990	2	-	361	32,11,200	13,36,375	45,47,575
2.	Village Industries Stores	1987-1989	2	-	-	50,000	5,000	55,000
3.	Carpentary and smithy	1982-1990	1	-	-	50,000	5,000	55,000
4.	Soap	1959-1966	2	3	20	7,63,650	74,460	8,38,110
5.	Leather works	1980-1982	2	-	-	1,60,250	9,150	1,69,400
6.	Village Pottery	1972-1990	4	-	31	1,96,445	77,245	2,73,690
7.	P.C.P.E.	1960-1990	3	-	29	1,85,000	10,360	1,95,360
8.	Lime Production	1987-1988	-	-	1	46,000	1,000	47,000
9.	Incense sticks	1988-1989	-	-	1	7,640	360	8,000
10.	Cane and Bamboo works	1989-1990	1	-	6	39,375	6,135	45,510
11.	Tailoring	1988-1990	-	-	4	35,600	-	35,600
12.	Service Units	1988-1990	-	-	11	91,275	-	91,275
		Total	17	3	464	48,36,435	15,25,085	63,61,250

Source : District Industrial Centre, Madiker

crores. This dairy produces milk, ghee, *pedha*, milk powder with fat content, milk powder without fat content, flavoured milk, curds, chocolate milk, condensed milk etc. (More details are given in chapter 4).

### HONEY PRODUCTION

Honey being a good and nutritious food item, its collection is in vogue in this district from times immemorial. Systematic apiculture is found in Kerala, Karnataka, Tamil Nadu, Maharashtra, Madhya Pradesh, Uttar Pradesh, Kashmir and West Bengal. The abundant gift of nature has made apiculture (industry) an important cottage industry. Many farmers follow this as a hereditary occupation like the dairy occupation. Varieties of flowers and vegetation required for apiculture is available in this district (see separate list). There are all varieties of bees here and bees of the type *Apis Indica* are capable of getting accustomed to domestically rearing environment. In the olden days earthen pots and crevices and hollows in the trees used to be the locations for making bee hives, but there are many difficulties in this system. Eg., when honey is extracted from the hive, the Queen Bee and a large number of other bees were dieing. With the modern method neither the bees nor the hive suffer any damage and the honey collected will be pure. In 1990-91, there has been 3.62 lakh kg of honey production in the district.

The reason for increased development of apiculture in the district is that the rich forest vegetation is available all round the year. In 1962, the Government set a systematic programme for identifying the vegetation which yield more honey. The Botany Department of the Government College, in collaboration with the Agriculture Department had participated actively in this programme. The Co-operative sector is also engaged in this area. The aid given by Khadi Gramodyog Commission to this industry is given in a separate table. (Table 15).

**Table No. 15A Details of Apiculture between 1980-81 and 1990-91.**

Year	Bee Families (No.)	Beehive distri- bution (No.)	Villages under jurisdiction	Honey pro- duction in k.g.	No. of Api- culturists
1980-81	40,224	1,085	220	1,96,042	10,055
1981-82	42,236	990	226	2,11,180	10,620
1982-83	44,506	835	231	2,20,530	10,940
1983-84	49,104	2,405	238	2,47,020	11,660
1984-85	51,009	1,592	247	2,55,045	11,920
1985-86	53,202	1,858	259	2,66,010	12,320
1986-87	55,108	1,088	265	2,75,540	12,864
1987-88	57,202	225	272	3,06,010	13,020
1988-89	58,304	220	277	3,01,520	13,206
1989-90	59,202	400	281	3,55,212	13,478
1990-91	60,432	750	285	3,62,592	13,702

Source: Apiculture Development Officer, Kodagu

priests-6; Mosque moulvis-23; Astrologers-38; Ayahs-5; Barbers-186; Washerman-330; Gardeners-3; Household servants-822; cooks-504; Private vehicle drivers-41; Unclassified non-governmental clerks-27; Workers in clubs and public buildings-13; Surveyors-7; lawyers-17; Assistants to lawyers-7, Technicians-1, Editors and authors-2; Photographers-7; Idol makers-2; Exhibitors-6; Buiding contractors-249; Milk producers-11; Umbrella repairers-3; Cap makers-3; Torch and petromax repairers-3; Gun repairers-3; Cycle repairers-23; Motor vehicle repairers-64; Sewing machine repairers-1; Watch repairers-19; Pen repairers-2; Lime producers-8; Basket weavers-159; Broom makers-36; Brick and tile makers-128; Bronze machine manufacturers-7; Sweet meat makers-27; Papad makers-6; Soda manufactureres-37; Snuff makers-3; Silk producers-1; Footwear makers-51; Horse and bullock shoe makers-19; Newspaper distributors-16; Unani medicine producers-2; Makers of bamboo articles for building construction-14; Mortar and brick makers-297; Book sellers-16; Druggists-312; Cutglass and knife sellers-117; Petty shop owners-990; Copper vessel merchants-15; Earthen pot sellers-3; Glass ware sellers-7; Automobile spare parts sellers-13; Diamond merchants-4; Ammunition sellers-4; Fruit sellers-99; Sweetmeat sellers-21; Fish sellers-39; Arecanut merchants-3; Vegetable sellers-22; Milk vendors-22; Jaggery merchants-36; Cardamum merchants-2; Pepper merchants-4; Coconut merchants-28; Butter and ghee sellers-9; Coconut cil sellers-4; Spirit sellers-49; Toddy sellers-10; Soda sellers-11; Tobacco merchants-21; Betel leaves merchants-37; Petrol dealers-11; Pan beeda sellers-43; Kerosene oil sellers-1; Fire wood sellers-1; Cloth merchants-191; Leather merchants-11; Footwear merchants-12; Paddy dealers-18; Wholesale coffee dealers-17; Wholesale grocery dealers-13; Wholesale wood dealers-124; Wholesale dealers of fancy articles-4; Wholesale cloth dealers-8; Wholesale beedi dealers-3; Wholesale dealers of non-edible items-8; Estate agents-1; Insurance company workers-8; Motor vehicle drivers-254; Bullock cart workers-223; Other motor vehicle workers-330; Mahouts-52; Transporters by horses-3; Transporters by donkeys-1; Boatsmen-5; Doctors including local quacks-71; Dentists-2; Nurses-29; Veterinary workers-7; Compounders-39; Tea agents-4.

**Table No. 11 : Details of some Rural/Cottage Industries in Kodagu District in 1990**

Details of Industries	Madikeri	Somvarpet	Virajpet	Total
Handloom	--	--	80	80
Footwear making unit	15	05	10	30
Leatherworks	30	30	40	100
Carpentry unit	62	56	83	201
Smithy unit	53	62	67	172
Gold, silver unit	87	63	102	252
Wood carvers	--	01	03	04
Bamboo workers	75	15	25	115
Matchbox making unit	--	01	00	01

Details of Industries	Madikeri	Somvarpet	Virajpet	Total
Pottery unit	60	20	--	80
Doll making unit	01	--	--	01
Skilled workers unit	05	02	02	09
Lime making	05	02	07	14
Bedding	20	05	15	40
Total	413	252	434	1109

Source (Annual Credit Plan)

**Table No. 12 : The details of the Main Workers in Kodagu District as per 1991 census are as follows.**

Main Workers	1981			1991		
	Men	Women	Total (Percentage)	Men	Women	Total (Percentage)
Total Cultivators	25.59	18.61	23.31	21.96	16.52	20.07
Village	29.16	19.76	25.92	25.40	17.90	22.59
Towns	4.99	3.69	4.74	3.33	1.66	2.96
Agricultural Labourers						
Total	13.74	20.12	15.82	18.75	13.22	15.18
Village	15.75	21.22	17.64	15.14	19.78	16.83
Towns	2.16	5.99	2.89	2.77	6.71	3.63
Home Industries workers	1.17	.62	0.99	1.02	0.77	0.93
Village	1.06	0.56	0.89	0.98	0.72	0.88
Towns	1.79	1.51	1.74	1.23	1.33	1.26
Other Workers Total	59.50	60.65	59.88	63.88	63.86	63.82
Village	54.03	58.46	55.55	58.48	61.60	59.65
Towns	91.06	88.81	91.63	92.67	90.30	92.15

Source: 1991 Census.

## SOME MINOR INDUSTRIES

### Tea Industry

The Glenlorn Estate which was started in 1851 by an English Company was re-organised under the name of the Coorg Tea Company and started functioning from 1943. It was growing tea in an area of 1227 acres near Hudikeri and its annual production of tea in 1962 was 1,82,000 kg. The processed tea powder was being sent to Cochin for sale. At present tea is grown in an area of 370 hectares and it is being sent to other tea factories. Though tea estates of considerable size exist in Kodagu, there is no big or medium-sized tea processing factory in this district.

### Pottery

Pottery is mainly prevalent in Madikeyabidu, Thorenooru, Hebbale, Shirangala, Shanivarasanthe, Siddapur and Napoklu. Madikeyabidu is important among these towns. While in the years 1960-70, about 50-100 families were in the business of making earthen pots and toys, presently this number is decreasing. For some people this is a hereditary profession. They sell these products in different towns mainly at the shandies. They make figures of votive tigers, dogs and so on. The main requisites that are required by a potter's family are a big wheel, clay etc. Generally a family earns from Rs.800-1000 per month. During the First, Second and Third plan periods, a sum of Rs. 18,000, Rs.82,000 and Rs.31,000 respectively were spent for development of pottery. During the subsequent years subsidies and loans are being given by the Department of Commerce and Industries, Khadi and Gramodyog Commission and other financial institutions. Training and encouragement has been given to make flower vases, dolls, jars, coffee kettles, cup and saucers etc. apart from making household articles. Rural pottery units existing in 1990 in Madikeri taluk were 60 and in Virajpet taluk 20.

### Rubber Industry

In 1962-63, there were seven rubber estates in the district. They were:

1. The Portland Rubber Estate Co., Makutta (between 1950-60). Average production 1,12,500 kg.
2. The Kadamakal Rubber Estate Co., Kadamakal - 90,000 kg.
3. The Cochin Malabar Estate Co. Ltd., Sampaje - 84,000 kg.
4. The Nilambar Rubber Co. Devarakolli - 40,000 kg.
5. The Rampura and Chikkanahalli Estates, Karadigodu
6. The Padanjarakara Estate, Karidigodu.
7. The K.T. Kunjamman Estate, H.Karadigodu.

About 25,000 kgs of Rubber sheets were being manufactured and sent to Kerala, by the last three estates. Presently, there being about 1920 hectares of rubber gardens in the district, rubber sheets are sent to Kerala. There are no major factories which manufacture rubber products in the district.

### Handlooms

Handloom industry was not much prevalent in the district in the past. When Virajpet was founded a few weavers who were encouraged to settle there. In addition there were weavers belonging to Kuruhina Shetti community in Somvarpet over generations. As reported by an author in 1957, rough quality woollen rugs were being manufactured in Kodagu. Cotton cloth was procured from outside. After 1952, encouragement has been received for the manufacture of cotton cloth and the weaving was concentrated in Shanivarasanthe and Shirangala. Among the two, Shanivarasanthe was more prominent. There were 127 cotton cloth hand looms and 200 workers in

1964. The weavers adopted the traditional technique of pit-loom method and the production was not considerable. The non-availability of capital, raw materials like good quality yarn and also colours locally are the main causes for this. The main articles produced here were *panche*, *lungi*, handkerchiefs and wiping cloth. The turban (*pagadi*) for the police and the forest department employees were being made in the past at Shirangala. In 1989-90 there were 80 handlooms in Somvarpet taluk of this district. This industry is not seen in the remaining taluks.

### Saw mills

Though there is abundant forest wealth in Kodagu district, wood sawing workshops were very few in the past. Around 1960, about 450 persons were engaged in sawing wood under forest contractors. The majority of wooden logs used to be sent to Hunsur for sawing. This industry has not made much progress here. There was one wood sawing workshop in Madikeri by name Appachchu workshop. In 1954, the Kodagu Government established a Government-owned wood sawing workshop at Murkal under the first Five Year Plan. This workshop was being used for reducing the loss in the process of wood sawing and also for sawing those trees which were felled in about 680 acres area near Nagarahole and Kalhalli for the purpose of planting teak.

The wood sawn here was being sent to the Government depot at Hunsur. With the help of this workshop wood was being sawn in time to the required sizes and used which otherwise would have been destroyed without being used. The workshop was helpful in utilising the wood procured from the forest in a profitable manner. Later the wood treatment units were added to this workshop. The wood required for manufacturing household articles could be obtained from here. The wood required by the Housing Board for the doors and windows of the houses constructed by the Board was being supplied from this workshop. Also, Government departments like Public Works Department, Indian Railways, Hindustan Aeronautics, Indian Telephone Industries, and the like factories and departments were getting supply of wooden planks.

In 1954-55, the value of wood sawn in the workshop was Rs.35,900. In 1961-62, it was Rs.1,28,387 and in 1962-63 it was Rs.2,46,857/-.

In 1955, another unit making household articles was established in Murkal. Since workshops which caused reduction in manual labour were established in this unit, it became possible to use small pieces of wood profitably. Increased demand came from schools and Government Offices. There was increased demand for chairs, tables, benches, and cupboards, stands for keeping maps, stools, bee hives, and so on. In 1959, one more wood treatment unit at a cost of Rs. 1.2 lakhs was installed.

### Rice Mills

This district has been a paddy growing area from a long time. In 1962-63 paddy was grown in an area of about 1,12,541 acres and the quantity of rice produced was 40,000 tons. While in 1988-89, the paddy growing area was 44,298 hectares and the rice production was 73,489 tonnes. Because of this reason it can be said that there is considerable increase in the number of rice mills in the district. In 1956, there were 13 small scale mills and 6 large scale (Huller) mills. By 1964,

1	2	3	4	5
80	1966	Sri Shanmukha Carpenter	Wood articles	3
81	1967	Coorg Kannada Soap Works, Madikeri	Washing soap	4
82	1967	Cosmos Ice-cream Factory, Madikeri	Ice-cream, ice-candy manufacturing	5
83	1967	Nanda Industries, Madikeri	Vermicelli manufacturing	3
84	1967	Coorg Metal Works, Virajpet	Agriculture, horticulture implements manufacturing	2
85	1967	Commonwealth Trust Motor, Madikeri	Vehicle repairs	4
86	1967	Rafael's Autoland, Siddapur	Vehicle repairs	4
87	1967	Sheela Sheet metal works,	Steel furniture	5
88	1967	Tyre Service, Madikeri	Tyre retreading	5
89	1967	Sharada Press, Kodlipet	Printing	3
90	1967	Cauvery Furniture Works, Virajpet	Furniture, building materials	3
91	1967	Atlas Plastic Industries, Madikeri	Plastic bags, suit case	5

The economic activities in the district are considerable when compared to the size of the district. There are neither big rice-mills nor the three star hotels. Some other available details on industrial activity are given here.

- Madikeri:** Hotels-47, Bar and Restaurants-6, Clubs-2, Rice Mills-5, Mill-1.
- Virajpet:** Hotels-24, Medical Stores-4, Bar and Restaurants-4, Nursing Homes-4, Saw Mills-2, Rice Mills-4, Other workshops-22.
- Suntikoppa:** Hotels-30, Medical Stores-3, Bar and Restaurant-8, Nursing Homes-4, Rice Mills-2, Workshops-10.
- Shanivarasanthe:** Hotels-20, Medical Stores-2, Bars and Restaurants-4, Carts-125, Rice Mills-7, Clinics-4, Other workshops-8.
- Ponnampet:** Hotels-15, Bars and Restaurants-1, Nursing Home-1, Carts-6, Rice Mills-4, Workshops-8.
- Kushalnagar:** Hotels-31, Medical Stores-7, Bars and Restaurants-4, Nursing Homes-1, Carts-10, Saw Mills-2, Rice Mills-2, Other workshops-30.

(Information from other centres could not be had in time)

#### Government Central Workshop, Madikeri

The Government Central Workshop was established in Madikeri in 1954 by the then Kodagu Government. The main purpose of the workshop was to repair the Government motor vehicles, road rollers, concrete mixers etc. After the States Re-organisation this came under the control of Karnataka Government. A wood working unit was added in 1961-62 and a separate section was

opened to manufacture and supply wood articles like furniture, packing cases etc., to the Government offices and to the public. This workshop is situated in a site measuring about 2 acres. The annual maintenance expenditure of this workshop from 1956-57 to 1960-61 was as follows: 1956-57: Rs.0.61 lakhs, 1957-58: Rs.0.77 lakhs, 1958-59: Rs.1.27 lakhs, 1959-60: Rs.1.57 lakhs, 1960-61: Rs.1.52 lakhs.

A brief report of the activities of the Central Workshop from 1960-61 to 1962-63 is given in the following table. (Table 8).

Some students were trained in smithy in this organisation. By 1962-63 certificates were issued to the students of the technical institutions after giving training in this workshop.

**Table No. 8 : Table showing the Activities of Central Workshop from 1961-62 to 1962-63**

Details	1960-61	1961-62	1962-63
	Rs.	Rs.	Rs.
1. Government Capital	3,26,263	3,88,435	4,80,099
2. Turnover (Income)	1,52,498	1,40,607	1,50,204
3. Gross profit/loss	+38,799	+39,772	-8,146
4. Nett profit/loss	-1,032	-8,607	-63,807
5. Nett profit/loss (percentage)	-0.68	-6.12	-42.48

There are wood working machines in this workshop, and it appears that these machines are under-utilised. It is being considered to transfer the wood working section to Karnataka Forest Industries Corporation. While the expenditure of this division in 1989-90 was Rs.18.47 lakhs and the income was only Rs.11.74 lakhs for the same year. During the year 1990 there were 31 monthly salaried employees and 3 daily wage employees in this unit. This unit is under the administrative control of the Director of Industries and Commerce of the Government of Karnataka and is managed by a Director stationed at Madikeri.

**Table No. 9 : Details of Small and Very Small Industries (those registered) in Kodagu District as on 31.3.1990.**

No.	Registe- red Units	Authori- sed capital (Rs. lakhs)	Employees	Production capacity (Rs. lakhs)	Main end products
1	2	3	4	5	6
1. Wood and wood based	125	56.37	590	107.24	Wood, bamboo, household articles
2. General engineering	144	84.67	516	139.32	Gobergas plants
3. Leather and wood based	63	34.53	358	70.52	Tyre retreading and Footwear



1	2	3	4	5	6	7
4. Repair and service		152	32.92	593	75.01	Motor vehicle repairs
5. Food based		120	91.42	864	188.43	Bakery units, cool drinks Honey processing
6. Hosiery		98	16.79	306	60.17	Woolen Clothes
7. Printing		59	44.11	356	47.46	- - -
8. Others		410	312.00	1,495	282.11	Flour mill, rice mill, studio, coffee beans processing etc.
Total		1,171	666.81	5,080	970.26	

Source: District Industrial Centre, Madikeri.

### Government Printing Press

A full scale printing press of the erstwhile Kodagu Government was in Madikeri. In the year 1922, this printing press was merged with the Residency Printing Press in Bangalore, and all the machinery and equipment and the staff were transferred to Bangalore. Thereafter, all the printing work connected with the Kodagu State was being done in the Bangalore Residency Printing Press. When the Bangalore Civil and Military Stations were brought under the control of Mysore State Government in 1948, the Residency Printing Press became a part of the Mysore State Printing Press. Though the printing work connected with Kodagu was being done in the Mysore Printing Press this arrangement did not prove satisfactory after some time. Because of this reason the then Kodagu Government with the permission of the Government of India re-established the Madikeri Printing Press in the same premises. The required machinery and equipment, the types etc. were purchased. The Madikeri Printing Press started functioning from 1st March 1954. The Press improved and by 1964 there were 26 workers. Presently, this printing press is under the control of the Director, Government Printing Press, Bangalore. There are one Assistant Director, one Supervisor, and 67 other staff members. The Government books are also printed here.

### OTHER OCCUPATIONS

Based on the 1951 census, the 150 various non-agricultural professions and the number of persons engaged in these professions as was found in Kodagu district are as given below:

Tea Plantation workers-219; Coffee plantation workers-20,357; Rubber plantation workers-674; Sandalwood workers-76; Pepper plantation workers-153; Orange garden workers-429; Arecanut garden workers-66, cardamom garden workers-204; Vegetable growers-100; Rice mill workers-35; Bakery workers-78; Copper metal workers-23; Tyre workers-10; Printers-20; Plastering-175; Earth work-721; Grocery shop workers-434; Circus company workers-110; Hotel workers-1025; Animal husbandry-86; Elephant taming-55; Charcoal producers-6; Wood cutters-638; Snake catchers and crocodile hunters-32; Fisherman-12; Butchers-27; Toddy tappers-313; Tailors-335; Cobblers-1; Blacksmiths-151; Weavers-20; Goldsmiths-283; Potters-28; Carpenters-283; Stone chippers-609; Painters-22; Bangle sellers-37; Bards-2; Dancers and actors-14; Music teachers-3; Temple Priests-157; Priests-10; Church

Table No. 10

## Talukwise details of Small and Very Small Industries Registered in Kodagu District between 1983-84 and 1989-90

Year	Units	Capital (Rs. in lakhs)	No. of employees	Units	Capital (Rs. in lakhs)	No. of employees	Units	Capital (Rs. in lakhs)	No. of employees	Units	Capital (Rs. in lakhs)	No of employees
1983-84	30	5.64	115	32	13.61	117	20	3.32	57	82	10.27	29
1984-85	44	7.35	146	58	11.11	288	28	8.62	87	130	27.06	521
1985-86	34	10.21	77	45	12.82	182	38	21.61	120	116	49.63	379
1986-87	37	11.84	163	46	21.63	242	32	15.00	111	115	48.20	516
1987-88	43	13.07	80	35	20.31	106	25	8.85	66	103	-	252
1988-89	35	21.23	112	37	15.86	148	30	11.86	1101	102	-	361
1989-90	37	14.05	138	30	13.76	125	33	7.80	113	100	-	376

Source : District industrial Centre, Madikeri

The details of Honey-yielding bees are as follows:

1. *Apis Indica*: Bees which can be cultured in ordinarily available tins or pots. 2. *Apis Dorsata* and 3. *Apis Floria*: which are available in bushes. This type of apiculture is a full time occupation in America, Russia, Australia and Europe. This is becoming a prominent occupation during the recent years in Malnad and Kodagu districts of our state. Apiculture being a cottage industry could be practiced by anyone. This is an industry which does not require much labour, and space, but requires small capital and can be had by the grants from the Government. The infrastructure required for this industry are one honey extracting device, and a few other devices. Honey extracting unit can be owned together by 8 or 10 persons or can be owned through co-operative societies. Much effort is not required to learn this industry. The bees store the honey for winter. In winter, many trees and plants do not flower. The bees go on collecting honey from October to June. If honey is emptied from the hive, they collect honey again. Though the investment is very little in this culture the profit is high. In favourable conditions about 40-45 kg of honey can be collected from one hive annually (presently the price of honey is Rs. 30 or 40 per kg). In 1930, a new type of apiculture was brought into practice in the district. The Kodagu Government started evincing interest in apiculture since 1936. In 1936, an organisation called the Coorg Honey and Wax Producers Co-operative Society Ltd. was established in Virajpet for developing this industry. In 1948, after the Second World War under the re-habilitation programme, Central Apiculture Programme was instituted in Bhagamandala. But, all these programmes were inactive till 1952. The new Government which came into existence in 1952 set a programme to develop this central Apiculture Programme. One lakh of rupees was earmarked for this purpose during the First Five Year Plan. According to this scheme, supplying the beehives to the Apiculturists and to start honey centres in other places in the district was conducted by the Central Apiculture Programme. An expenditure of Rs. 98,900 was incurred till February 1956.

During the Second Five Year Plan, about 50% of the Rs.18.95 lakhs, the amount provided for Rural and Small Scale Industries, i.e., Rs.9.11 lakhs was ear-marked only for Apiculture. The old type of earthen pot beehives were substituted by the box type beehives at the rate of 5,000 nos. per annum. The honey storing and the Library on Apiculture were developed at the Central Government Honey Centre at Bhagamandala. During the Third Five Year Plan, Rs.10 lakhs was the outlay for expanding the Apiculture in the district. Grants to the Apiculture co-operative societies and training to the employees was given. All-India Khadi and Village Industries Commission also extended aid to Apiculture.

The two giant honey co-operative societies of the district viz. Coorg Progressive Bee Keepers Co-operative Society, Bhagamandala and the Coorg Honey and Wax Producers Co-operative Marketing Society Ltd., Virajpet with the help of Khadi and Village Industries Commission lend assistance to Honey development programmes (details given in chapter 8). Honey production in the district from 1960 to 1990 was as follows: 1960- 1.00, 1970-1.50, 1980-2.00, in 1986-87 -2.75, 1987-88-3.00, 1988-89:3.50 and in 1989-90 it was 3.60 (lakh kgs). Apart from this, there is honey production in the private sector also. It was estimated that around 1960 this had exceeded 1 lakh kg.

Honey is a special chemical compound. During the time when the nectar is abundantly available one family having 2 or 3 bee hives can collect 4-5 kg of honey in 8-10 days. It is learnt from research that honey generally consists of the following materials: water-17%, dextrose sugar-40-50%, levurose sugar 34%, sucrose sugar-1%, ash content-3.1%, sticky compounds-0.15%, acid-0.08% and nitrogenous materials-0.04%. Bee wax is used to manufacture artificial comb foundation in apiculture. It is also used in the manufacturing of candles, leather and wood works, polishing cement floors, manufacturing some cosmetics, manufacturing boot polish and gramophone records, dentistry, electric and glass industries and also in printing.

It is learnt that honey has the property to cure the following diseases: diabetes, blood pressure, pneumonia, cold and cough, typhoid, tuberculosis, throat troubles, chicken pox, kidney diseases, constipation, burns and buises.

There are Apiculture Deveopment Officers in Madikeri who supervise the Apiculture activities. This is a Branch Office of the Industries and Commerce Department.

**Apiculture Diseases:** Till recent years there was no instance of any disease contracting the bee families in Karnataka State. But in 1992, it has been observed that in the border villages of Kodagu and South Kanara districts the larvae of the Indian Hive bee (*tudive*) family contracting a disease, called Thaisac Brood. According to the opinion of the honey producers this disease is suspected to have commenced during October-November 1991. The larvae of the Indian Hive Bees families reared in boxes in North India are contracting diseases called European Foul Brood and Thaisac Brood since a few years. It is recognised that the European Foul Brood disease is caused by disease producing bacteria and the Thaisac Brood disease is caused by disease producing virus. The disease observed now in Karnataka is also learnt to be Thaisac Brood. In order to prevent further spread of the disease the following precautionary measures have been proposed by the Apiculture Development Department:

a) The combs of the diseased bee families and the bees are to be destroyed by burning. While extracting wax the combs are to be immersed in boiling water before collecting wax. All parts of the infected box have to be dipped in boiling water for 10-15 minutes then dried and then the new family is to be located.

b) All the devices used for investigating the diseased box are to be dipped in boiling water before using again. The honey from the diseased combs should not be extracted through the extractor. The cloth should be dipped in boiling water.

c) The honey producers should disinfect themselves by washing after examining the diseased families.

Some of the apiculture centres ran under the auspices of Khadi and Village Industries Commission are: Napoklu, Nelaje, Parane, Badagarakeri, Bittangala, Gonikoppal, Nemmale, Kadanga, Hysodalur, Badagomkeri, Peruru, Arji, Pollikote, Nariyandada, Ammathi, Kibbetu, Bettadakoppa, Bacchalli, Nanjarayapatna, Hebbatageri, Bettageri, Biligiri, Beguru, Kutti, Madapura Hatti, Kandacheri, Suntikoppa, Gejjanakodu, Garawale, Bettagiri, Moornadu and Bhagamandala. Apart from these there are Government centres in Nagarahole, Begur, Srimangala, Titimathi, Ponnampet, Birunani, B.Shettigeri, Pollibetta, Virajpet, Kakkabe, Bhagamandala,

Madikeri, Galibeedu, Chettalli, Madapura, Somvarpet, Shanivarasanthe, Shanthalli, Jakkanalli and Kudige. In some of the schools and colleges there are apiculture clubs: there are commercial apiculture centres and apiculture centres in coffee and cardamom plantations.

During 1963-64, the private honey producers were around 16,000 and they were adopting the old methods, presently in 1991, though the number of honey producers is not very much higher (it is around 20,000) they are producing more honey by adopting new methods. In 1963, the Regional Apiculture Research and Training Centre was set up in Madikeri under the stewardship of Khadi and Village Industries Commission. About 60% of the honey production in the country is produced in Karnataka. Kodagu is producing about 66% of the production in Karnataka. Therefore this Research Centre has made big strides in Apiculture Research and in studies of the bees. In this direction an Apiculture Development Officer is posted in Madikeri under the Commerce and Industries Department of the Karnataka Government.

The following are the details of the very important vegetation which provide the flowers and pollen to the bees in Kodagu district:

#### Flowering Calendar of the Bee Flora of Kodagu

**January:** 1) *Nimbe gida* (*Citrus medica*, Linn., var *acida*.), 2) *Noga mara* (*Cedrela toona*, Roxb), 3) *Tumbe gida* (*Leucas aspera*, Spreng), 4) *Mavina mara* (*Mangifera indica*, Linn.), 5) *Ambate mara* (*Spondias mangifera*, Willd), 6) *Buruga mara* (*Eriodendron anfractuosum*, D.C.), 7) *Kadu tumbe gida* (*Leucas helianthemifolia*, Desf), 8) *Muni mullu* (*Mimosa pudica*, Linn.) and 9) *Nekki* (*Vitex negundo*, Linn.)

**February:** 1) *Noga mara* (*Cedrela toona*, Roxb.), 2) *Nerale mara* (*Eugenia jambolana*, Lam.), 3) *Tengina mara* (*Cocos nucifera*, Linn.), 4) *Sige* (*Acacia concina*, D.C.), 5) *Kadu geru* (*Semecarpus anacardium*, Linn.), 6) *Ambate mara* (*Spondias mangifera*, Willd), 7) *Geru mara* (*Anacardium occidentale*, Linn.), 8) *Bage mara* (*Albizia lebeck*, Benth), 9) *Parivala* (*Erythrina indica*, Linn.), 10) *Kadu parivala* (*Erythrina lithosperma*, Miq.), 11) *Adike hoo* (*Areca catechu*, Linn.), 12) *Coffee plant* (*Coffea arabica*, Linn.) 13) *Tumbe gida* (*Leucas aspera*, Spreng.) and 14) *Sanna anugalu* (*Schefflera venulosa*, Harms.)

**March:** 1) *Nandi mara* (*Lagerstroemia lanceolata*, Wall.), 2) *Bagemara* (*Albizia lebeck*, Benth) 3) *Nayi tulasi* (*Stachytarpheta indica*, Wahl.) 4) *Sanna anugalu* (*Schefflera venulosa*, Harms) 5) *Kadu coffee* (*Casaria rubescence*, Dalz), 6) *Karekayimara* (*Randia dumentorum*, Lam.), 7) *Kithale gida* (*Citrus Aurantium*, Linn.), 8) *Sige* (*Acacia concinna*, D.C.) 9) *Bale mara* (*Diospyros ebenum*, Koenig), 10) *Nelli* (*Emblia officinalis*, Gaertn.), 11) *Nerale mara* (*Eugenia jambolana*, Lam.) 12) *Bili dhoopa* (*Vateria indica*, Linn.) 13) *Bite mara* (*Dalbergia latifolia*, Roxb) and 14) *Honge mara* (*Pongamia glabra*, Vent.)

**April:** 1) *Dodda anugalu* (*Schefflera wallichiana*, Harms), 2) *Kurambelu* (*Fluggea leucopyrus*, Willd.), 3) *Ponjinoga* (*Heynea trijuga*, Roxb), 4) *Karmanji* (*Carissa inermis*, Wahl.), 5) *Nayi tulasi* (*Stachytarpheta indica*, Wahl.) 6) *Bennekathi* (*Mussenda frondosa*, Linn.), 7) *Nandi mara* (*Lagerstroemia lanceolata*, Wall), 8) *Southe balli* (*Cucumis sativus*, Linn.) 9) *Sasive gida* (*Brassica juncea*, H.F. & T.), 10) *Bage mara* (*Albizia lebeck*), 11) *Kadu mallige* (*Jasminum*

*regidum*, Zenker), 12) *Nerale* (*Eugenia jambolana*, Lam.), 13) *Bilwarada mara* (*Albizzia odoratissima*, Benth) and 14) *Biliummatti* (*Brunsfelsia*)

May: 1) *Nandi mara* (*Lagerstroemia lanceolata*, Wall), 2) *Dodda anugalu* (*Schefflera Wallichiana*, Harms), 3) *Sanna anugalu* (*Schefflera Venulosa*, Harms), 4) *Biliummatti*-*Brunsfelsia*, 5) *Tadasalumara* (*Grewia umbellifera*, Bedd.) 6) *Udutale* (*Memecyclon sisparensis*, Gamb.) 7) *Bennekarthi* (*Mussaenda frondosa*, Linn.), 8) *Renjada mara* (*Mimosops elengi*, Linn.), 9) *Hunise* (*Tamarindus indica*, Linn.), 10) *Adike* (*Areca catechu*, Linn.), 11) *Kithale* (*Citrus aurantium*, Linn.), 12) *Tumbe gida* (*Leucas aspera*, Spreng), 13) *Dodda Bandanike* (*Loranthus longiflorus*, Desf.), 14) *Jambu nerale* (*Eugenia jambos*, Linn.), 15) *Sampige mara*-(*Michelia champaka*, Linn.), 16) *Honnemara*(*Pterocarpus Marsupium*, Roxb.), 17) *Gandhada mara* (*Santalum album*, Linn.), 18) *Dalimbe* (*Punica granatum*, Linn.) and 19) *Kadu tumbe* (*Leucas helianthemifolia*, Desf.)

June: 1) *Dodda anugalu* (*Schefflera wallichiana*, Harms.), 2) *Sanna anugalu* (*Schefflera venulosa*, Harms), 3) *Mara Anugalu* (*Schefflera racemosa*, Harms.), 4) *Kurambelu* (*Fluggea leucopyrus*, Willd), 5) *Butale* (*Grewia oppositifolia*, Roxb.) and 6) *Tegada Mara* (*Tectona grandis*, Linn.)

July: 1) *Mooda mara* (*Ochna squamosa*, Linn.), 2) *Chepemara*, (*Psidium Guyava*, Linn), 3) *Kempu dasavala* (*Hibiscus Rosa-sinensis*, Linn.), 4) *Nayi tulasi* (*Stachytarpheta indica*, Wahl.), 5) *Muni Mullu* (*Mimosa pudica*, Linn), 6) *Kadu Kumbala Balli-Vitis* spp.) 7) *Tumbe gida* (*Leucas aspera*, Spreng.), 8) *Bili Ummatti* - *Brunsfelsia*. 9) *Gini grass*- (*Panicum jamentorum*, Pers.) and 10) *Chinnada Kaddi*-(*Solidago canadensis*)

August: 1) *Tumbe gida* (*Leucas aspera*, Spreng), 2) *Bili Ummatti*-*Brunsfelsia*, 3) *Kempu dasavala* (*Hibiscus Rosa-sinensis*, Linn.), 4) *Sevantige gida* (*Chrysanthemum indicum*, Linn.) 5) *Rakta honne mara* (*Pterocarpus marsupium*, Roxb.), 6) *Chinnada Kaddi* (*Solidago canadensis*) and 7) *Kadu Kumbala Balli* - *Vitis* spp.

September: 1) *Tumbe gida* (*Leucas aspera*, Spreng), 2) *Bili tumbe* (*Leucas lanata*, Benth.), 3) *Kempu dasavala* (*Hibiscus Rosa sinensis*, Linn.), 4) *Bili dasavala* (*Hibiscus Rosa-sinensis* Linn, var *alba*, Plenus). 5) *Chepe mara* (*Psidium Guyava*, Linn.) 6) *Rakta honne Mara* (*Pterocarpus marsupium*, Roxb), 7) *Sige* (*Acacia concinna*, D.C.), 8) *Kadu Kumbala Balli-vitis* spp:) and 9) *Udutale*- (*Memecyclon sisparensis*, Gamb)

October: 1) *Sige* (*Acacia concinna*, D.C.), 2) *Baine mara*-(*Caryota urens*, Linn.)

November: 1) *Jambu nerale* (*Eugenia jambos*, Linn), 2) *Nelli* (*Emblica officinalis*, Gaertn.), 3) *Nekki* (*Vitex negundo*, Linn.), 4) *Chinnada Kaddi* (*Solidago canadensis*), 5) *Nayi tulasi* (*Stachytarpheta indica*, Wahl.), 6) *Tumbe gida* (*Leucas aspera*, Spreng), 7) *Biliummatti* (*Brunsfelsia*) 8) *Suryakanthi* (*Helianthus annus*, Linn), 9) *Rakta honne mara* (*Pterocarpus marsupium*, Roxb.) and 10) *Suragimara* (*Ochrocarpus longifolius*, Benth, & Hook)

December: 1) *Bili tumbe* (*leucas lanata*, Benth), 2) *Suragi mara*-*Ochrocarpus longifolius*, Benth & Hook. 3) *Mavina mara*-(*Mangifera indica*, Linn.), 4) *Avare gida* (*Dolichos lablab*, Linn.), 5) *Noga mara* (*Cedrela Tonna*, Roxb.), 6) *Bili matti* (*Terminalia arjuna*, Bedd.) and 7) *Kadu badami* (*Terminalia catappa*, Linn.)

### Facilities required for the Improvement of Apiculture

The methods of apiculture in our State are different when compared to the apiculture in Western countries. In those countries it is done with most modern methods. In order to achieve progress the attitude of apiculturists is an important factor. In this district the apiculturists have advanced bee families in the bee hives. But in Western countries care is taken to see that there is a youthful Queen Bee of a good breed in their bee families. They select the best bee family from among the families they are rearing and they rear queen bees from this family and then the queen bees of other families are replaced by the queen bees which are specially reared. Such exchanges of queen bees are made once in a year or two. They buy a queen bee at a cost of about Rs. 30-50. In Western countries apiculture is cultivated as a large scale industry. The large scale apiculturists rear 5,000-10,000 bee families in their land holding. Medium scale apiculturists rear 1,000-5,000 bee families. The small scale apiculturists rear 100-1,000 bee families. About 20 kg of honey can be obtained from one bee hive. This is about 3 times the quantity that we get in our country. In the private sector apiculture has not attracted people in large numbers because it is not highly profitable. This industry can develop through co-operative societies.

### Silk Industry

The silk industry was introduced in this district recently, that is at the end of the First Five Year Plan. Since the farmers in some parts of Somvarpet taluk did not have much irrigation facilities and they had to depend on ragi and crops of pulses, and also they did not raise commercial crops like tobacco and cotton, it was proposed to introduce sericulture as home industry. In a survey conducted in 1942, it has been recommended to start sericulture in this district. In 1955, mulberry was grown on an experimental basis in an area of 5 acres (2 hectares). Since encouraging results were obtained from this, larger areas were selected for sericulture in Kushalnagar Hobli. During the Second Five Year Plan the Kudige farm was further expanded and the farmers were given training in mulberry crops and rearing of silkworms. Under this scheme a Composite Sericulture Centre was established in Kudige and the mulberry growers were given financial aids and loans from the Government. About Rs. 2.3 lakhs were spent under this scheme for sericulture. In 1960-61, loans were advanced to 80 farmers at the rate of Rs. 100 per hectare for 6 hectares. Encouraged by this 4,330 kg cocoons and 10.89 lakhs seeds of foreign breed were produced in 1961-62. It was estimated that the monthly income of each family increased by Rs. 300 as a result. It is to be mentioned here that one K.T.Acchaiah of Kodagu origin who was a senior level Sericulture Officer in the erstwhile Madras Province. He gave much encouragement to Sericulture in the South and developed Sericulture in Kollegal and other areas.

In 1980-81, mulberry was grown in 73 hectares and 9 metric tonnes of cocoons and also 0.5 tonnes of silk was produced. These figures for the years 1983-84 were 77.1 and 0.1, and for 1985-86 were 77.14 and 1, and later in 1988-89 the extent of mulberry cultivation was 303 hectares and 838 persons were sericulturists. In 1989-90, 1400 farmers had undertaken sericulture in an area of about 485 hectares and 80 tonnes of cocoons were produced. It is estimated that a net income of Rs. 70,000 could be earned per hectare by sericulture of Bivoltine Breed. The soil of this district being a mixture of black and red soils and the environment is very conducive for the

production of bivoltine silk. In 1989-90, 5,242 tonnes of cross-breed and also 49,503 tonnes of bivoltine cocoons had been produced.

For the expansion of sericulture some of the programmes taken up in 1988-89 and 89-90 are as follows:

1) Subidiary programme for Scheduled Tribes : This programme has been started in 2 colonies of Somvarpet with a provision of Rs.3 lakhs.

a) In Seegehosur Scheduled Tribe Collective Mulberry Colony 8: beneficiaries of Scheduled Tribes are engaged in mulberry cultivation in 4 hectares.

b) Under 'Yelakkanur Honnali Scheduled Tribe Collective Mulberry Cultivation Programme' assistance has been given to 8 Scheduled Tribe persons to extend mulberry cultivation in 16 hectare area. In Sulugodu Scheduled Tribes colony of Virajpet taluk sericulture has been expanded in 2.4 hectares of land and 16 beneficiaries belonging to Scheduled Tribes have been given manure and silk worm rearing devices free of cost. In 1987-88, a development centre was sanctioned for the Scheduled Tribes and has a strength of one sericulture extension officer, one supervisor, and also one demonstrator.

2) Under the Special Component programme 17 beneficiaries have received incentives for cultivating mulberry, devices for rearing silk worms and aid for constructing the building for locating silk worms at a total cost of Rs. 23,600.

3) Under Forest Special Unit Programme Rs. 9,800 has been distributed to 14 beneficiaries.

4) Under Western Ghat Development Programme, free distribution of M-5 cuttings to small and very small farmers, subsidy to the extent of 25% to buy equipment for rearing silk worms, supply of devices to bivoltine silk producers, subsidy to Male Mahadeshwara Silk Demonstration Centre have received assistance of Rs. 1 lakh.

5) A sum of Rs. 45,000 has been spent in Madikeri and Virajpet taluk by establishing sericulture demonstration unit.

6) In the Kudige Government Sericulture centre 44 persons have been imparted training as to new sericulturists.

7) Under Package Programme Benefit Scheme 40 persons of the Scheduled Tribe beneficiaries who have newly cultivated mulberry crops have been given financial assistance of Rs. 2,500 per head for acquiring the equipment for rearing silk worms.

An office of the Assistant Director of Sericulture is functioning in this district and the total expenditure of this office and its sub-ordinate offices during the year 1988-89 was Rs. 3.5 lakhs and in 1989-90 it was Rs. 6.33 lakhs.

As per the estimate of the plans of Sericulture Department for the period 1992-95 the expansion of the cocoons producing areas and mulberry growing in the district will be as follows. Increase in the area for mulberry cultivation in hectares: 1992-93 - Somvarpet taluk 1000,



Madikeri taluk 160, Virajpet taluk 160, Total 1,320; 1993-94- Somvarpet taluk 1,215, Madikeri taluk 240, Virajpet taluk 240, total 1,695; 1994-95-Somvarpet taluk 1,400, Madikeri taluk 320, Virajpet taluk 320, total 2,040. Cocoon production: 1992-93-Somvarpet taluk 150, Madikeri taluk 40, Virajpet taluk 40, total 230 tonnes, 1993-94. Somvarpet taluk 200, Madikeri taluk 60, Virajpet taluk 60, total 320. 1994-95-Somvarpet taluk 250, Madikeri taluk 80, Virajpet taluk 80, total 410 tonnes.

The following villages were identified for the fast development of sericulture during 1990-91  
 Madikeri taluk: Madre, Ka'akeri, Murnadu, Mutharumudi, Kiggalu, Bhagamandala and Hodduru,  
 Virajpet taluk: Ammatti, Balele, Ponnampet and Siddapur; Somvarpet taluk: Kodlipet, Kodlur,  
 Bedagutte Kajooru, Mulluru, Ankanahalli, Nandigunda, Gowdalli Ganagooru, Gonimarooru,  
 Yalakanooru, Manajooru Shirangala, Thorenooru, Hebbale, Hulase, Kudige, Kudumangalore,  
 Mullusoge, Aigooru, Nakooru, Kushalnagar, Andagove, Kiragandooru and Nidtha.

Though it is considered that the local forest area is very much suitable for the production of tussar silk there has been no special progress in this direction.

### **Industrial Potential**

Keeping in view of the existing facilities and the requirements it could be stated that there is a favourable climate for establishing industries to produce some of the following products: 1) Hawai Chappals, 2) P.V.C. pipes and chappals, 3) Plastic objects (injection moulded), 4) Electroplated objects, 5) Bakery items, 6) Paint and varnish, 7) Laundry soap and jelly, 8) Ball point pens and refills, 9) Tyre retreading, 10) Polythene bags, 11) Thermoplastic objects, 12) Spice powders, Sambar powder, Chutney powder, etc. 13) Washing soap and detergent, 14) White phenyle 15) Plastic buttons, 16) Moulded plastic vessels, 17) Candles, 18) Distemper, 19) H.D.P.E. bags, 20) Aluminium vessels, 21) Ferrous and non-ferrous articles, 22) Machine parts required for coffee plantations, 23) Watch repair 24) Umbrella making 25) Poultry cages, 26) Bottle caps, 27) Bio-gas plants, 28) Lime production, 29) Screen printing, 30) Production of colours, 31) Thick paper from coffee shell, 32) Fuel from Agricultural waste. 33) Oil from spices, 34) Jackfruit pappad, 35) Alcoholic beverages containing honey, 36) Fruit processing and production of fruit juices, 37) Antuvala shampoo, 38) soapnut soap, 39) Gooseberry pickles and jams 40) Cane furniture, 41) Door panels, 42) Bricks and tiles, 43) Pottery products, 44) Wooden toys 45) Instant coffee etc.