

CONTENTS

	<i>Pages</i>
Chapter 1. GENERAL REVIEW	1-6
National Economic Outlook	1
Trends in Kerala Economy	2
Chapter 2. INCOME, CONSUMPTION AND EMPLOYMENT	7-10
National and State Income	7
Trends in Sectoral Share of Income	7
Percapita Income and District Income	8
Consumption	9
Employment Situation	9
Professional and Technical Work—Seekers and Placement through Employment Exchanges	10
Employment in the Organised Sectors	10
Unemployment Assistance and Self Employment Scheme	10
Chapter 3. PRICES, WAGE RATES AND COST OF LIVING	11-18
Wholesale Price Index of Agricultural Commodities, Retail prices and consumer prices	11
Wages Rates	11
Farm Commodity Prices	11
Prices Received and Prices Paid by Farmers	12
Public Distribution System	12
Chapter 4. AGRICULTURE	19-35
Area and Overall Agricultural Production	19
Production of major crops	19
Productivity of Major Crops	20
Land Use Pattern and Rainfall	20
Fertilizers and Pesticides	20
Seeds of High Yielding Varieties	21
Farm Input Prices	21
Agricultural Credit	21
Longterm Credit	22
Research and Development in Agriculture	22
Development Programmes	23
Soil Survey and Soil Conservation	25
Livestock and Fisheries	25-26
Development Programmes—Fisheries	27
Forests	27
Chapter 5. INFRASTRUCTURE	36-47
Irrigation—Major and Medium	36
Minor Irrigation	36
Anti-sea Erosion	36
Flood Control	36
Power	36
Transport and Communications	36-37
Roads and Road Transport	37
Passenger Transport	38-39
	40

	<i>Pages</i>
Passenger Transport under Public Sector	40
Goods Transport	41
Railways	42
Air Transport	42
Inland Water Transport	43
Ports and Harbours	44-45
Communications	45
Banking	46
Chapter 6. INDUSTRY	48-60
Overall Industrial Production	48
Large and Medium Industries—Working Factories and Employment	48
Industrial Promotional Agencies of the State	49-51
Government owned companies	51
Government Majority Companies	52
Central Public Sector Investment	52
Government of India Companies	53
Performance of the State Public Sector Industrial Undertakings	54
Small Scale Industries	54-55
Coir Industry	55
Handloom Industry	55
Cashew Industry	57
Khadi and Village Industries	57
Beedi Industry	58
Industrial Disputes	58
Performance of the State Financial Institution and Consultancy Organisations—Kerala Financial Corporation and Kerala Industrial and Technical Consultancy Organisation Ltd.	58-59
Kerala Mineral Exploration and Development Project	60
Chapter 7. EXPORT IMPORT TRADE	61-67
India's Foreign Trade and Exports through Cochin Port	61
Marine Products	62
Spices	62-64
Cashew	64
Tea, Coffee and Coir products	65
Imports through Cochin Port	66
Chapter 8. SOCIAL SERVICES	68-76
Education	68-71
Trend in Government Expenditure on Education	69
Health	71-74
Improvement in Health Facilities—Allopathy	71
Indian systems of Medicine—Ayurveda	73
Homoeopathy	73
Spatial Distribution of Health Facilities	73
Trend in Government Expenditure on Health	73
Water Supply	74
Major Schemes completed—Rural/Urban	74
Housing	74
House-sites/plots allotted and construction of Housing units for workers	75
Financial Assistance—Loans and Subsidies	75
Urban Development	75

	<i>Pages</i>
Chapter 9. SPECIAL PROGRAMMES FOR THE WELFARE OF WEAKER SECTIONS	77-83
Integrated Rural Development Programmes (IRDP)	77
Training of Rural Youth for Self Employment (TRYSEM)	77
Development of Women and Children in Rural Areas	77
National Rural Employment Programme (NREP)	77
Rural Landless Employment Guarantee Programme (RLEGP)	77
Assistance to Small and Marginal Farmers	78
Distribution of Surplus Land	78
Fisheries Welfare Programme	79
Special Programme and Development of Women—Nutrition	79
Family Welfare	80
Social Welfare	80
Pensions and Welfare Funds	81
Welfare of Scheduled Castes Scheduled Tribes and Other Backward Classes—Education	82
SC/ST's Representation in Government Service	83
SC/ST Beneficiaries under Land Reforms	83
Chapter 10. INDICATORS OF QUALITY OF LIFE	84-87
Availability of Food	84
Demographic Factors	84
Female Enrolment Rates	87
Selected Health Facilities per '000 Population	87
Availability of Protected water supply	87
APPENDIX	95-206

CHAPTER I

GENERAL REVIEW

National Economic Outlook

The National economic scene of 1986-87 continues to present a somewhat optimistic picture, which started to show up since the beginning of the eighties. This may be seen in the trends in certain sectors of the economy as well as the price levels during the year.

1.2 Despite a poor monsoon the growth rate of the economy is estimated to reach 5 per cent, as measured by growth in national product. Electricity generation, revenue earning goods traffic, coal despatches etc. showed significant improvements. The cargo handling at major ports increased only marginally over the previous year. However, on the negative side there has been slightly higher rate of inflation, an adverse balance of payments position, an increase in money supply and an increase of RBI credit to the Government.

1.3 The monsoon in 1986-87 was below average. In spite of this the agricultural production in 1986-87 is expected to increase over the previous year. Foodgrains out-put is estimated to be over 151 million tonnes, higher than last year but below the peak level achieved in 1983-84. Stocks of foodgrains remained at 23.6 million tonnes (December 1986), a reflection of the longer term growth in foodgrain production and self sufficiency achieved in this sector. Certain major policies in agriculture aimed at boosting domestic production of sugarcane and oil seeds and reducing imports were implemented. The sugar policy implemented last year provided a stable environment to farmers which enabled increased sugar production and the value of sugar fell sharply in the current year. Similarly the policy of providing remunerative price for edible oils and oilseeds resulted in increased domestic production and a marked reduction in imports of edible oils.

1.4 The infrastructure sector has recorded a 9 to 10 percent growth rate. The improved performance of key sectors such as electricity, coal and rail traffic would tend to suggest an easing of bottleneck and to enhance the growth process in other industries. Power generation has increased by 10.3 percent during April-December 1986. Hydel power generation, which recorded a negative growth rate in the previous year, has picked up substantially to register an increase of 4 percent. Thermal power generation went up by 13.2 per cent. The Plant Load Factor (PLF) of 52.1 percent achieved in April-December 1986 is the highest for the last 7 years. However, the wide gap between supply and demand position

persists in spite of an increased performance in power generation. Coal production increased by 8.7 percent, while coal despatches increased by 4 percent. Revenue earning goods traffic went up by 6.6 percent, though good but not as impressive as it was in the previous year, when it increased by 9.4 percent. The percentage increase in cargo handled at major ports (0.9%) is poor compared to the 12.5 percent increase achieved in the previous year. There has been a small increase in crude oil production; the refinery throughput increased by 6.3 percent, which was much less than the growth rate (20.5 percent) achieved in the previous year.

1.5 A number of industrial policy initiatives were taken during the year in continuation of the basic trend in the previous years of simplifying procedures and removing bottlenecks to capacity expansion and technology upgradation. Schemes of broad-banding and capacity re-endorsement were introduced to increase output and improve capacity utilisation. Industrial production during April-October 1986 is estimated to grow around 7 to 8 percent. A rate of growth of 7.1 per cent (April-August 1986) was achieved in the mining and quarrying sector and 9.6 percent in electricity generation. However, the growth in the manufacturing sector has decelerated to 4.6 percent.

1.6 Based on present trends, it is likely that 1986-87 will end up with an inflation rate of around 6.5 percent. Though this is higher than the inflation rate of the previous year it is considerably below the average annual price increase of about 8 percent over the last decade and suggests that the over all price situation is well within control. In the previous year the excess supply condition existed in a number of fibre and commercial crops resulted in their falling prices. This followed a reduction in production of these commodities, which stabilised at a lower level this year resulting in an increase in price to more normal levels. With the result the inflation rates in the current year has gone up. However, this should be seen in the context of the falling prices in the previous year. The consumer price index increased by 7.8 percent between March and December 1986. Prices of food articles in 1986-87 have been far more stable than in 1985-86, increasing at a rate of about 4 per cent compared to around 6.5 percent last year. On the other hand price of agricultural commercial crops have increased sharply. The increase in price of edible oils this year contributed to the rise in both consumer price index and whole sale price index.

1.7 The year 1986-87 witnessed far reaching reforms in fiscal policy which carried forward the process initiated in the previous year. Steps were taken to implement most of the key proposals in the long term fiscal policy (LTFP), by way of simplifying the tax structure, rationalisation of tax rates with better administration and enforcement. Highlights of the fiscal policy initiatives undertaken during the year include an overhaul of the excise tax structure through the introduction of modified value added tax (MODVAT), the launching of certain excise duty concessions for the small scale units, revised classification and nomenclatures for the excise and customs tariffs, enhancement of income tax concession to exporters, publication of a discussion paper on "Simplification and Rationalisation of Direct tax Laws" to elicit public opinion on the matter etc.

1.8 Despite an enviable record in raising revenues the Government's resources position continued to be under severe strain because of the rapid increase in expenditure commitments. This is reflected in the growth of money supply which increased by 15.7% in the first 9 months as compared to a rise of 13.3 percent over the corresponding period in the previous year and the marked increase of net RBI credit to the Government which rose to Rs. 5048 crores (upto January 2nd 1987) from Rs. 3186 crores in the same period last year.

1.9 The Government have taken a series of measures to boost the growth of exports and curb the increase in imports. The focus was on measures to encourage indigenous production of key bulk import items such as sugar, edible oils and fertilizers. These measures together with the sharp fall in international price of crude oil contributed to an increase of 17.3 per cent in exports in rupee terms during April-November 1986 over the same period last year and the curbing of import expansion to only 1.4 per cent over the same period. As a result the trade deficit in April-November 1986 declined by 18.3 per cent over the same period last year. However, the balance of payment position continued to be under pressure due to the repayment obligations on past borrowings from the IMF and other sources, deceleration in indigenous oil production compared to the position in 1984-85, the unfavourable climate for concessional assistance etc. Overall foreign exchange reserves recorded a decline of Rs. 160 crores by the end of January 1987 compared to an increase of Rs. 577 crores in 1985-86, despite the improvement on trade account. Net invisible receipts are not expected to increase in view of the sharp fall in the international price of crude oil.

Trends in Kerala economy Income and Consumption

1.10 The State income estimate for 1985-86 reveals that after achieving an impressive growth rate of 5 per cent in 1984-85 there was a sudden fall in the growth rate to 2.9 per cent

in 1985-86. Agricultural sector has suffered a severe set back and it has registered a growth rate of 1.5 percent as against 12.1 percent achieved in 1984-85. The State income for 1985-86 is established to increase to Rs. 6322 crores from Rs. 5637 crores in 1984-85 at current prices. The per capita income at current prices went up from Rs. 2076 in 1984-85 to Rs. 2287 in 1985-86, showing a growth rate of 10.2 per cent. At constant prices there was only a marginal increase in the per capita income from Rs. 607 in 1984-85 to Rs. 614 in 1985-86 recording a growth rate of 1.2 percent.

1.11 The per capita national income which is estimated at Rs. 2596 in 1985-86 is higher by Rs. 309 when compared with the per capita State income. Whereas the national economy has registered a growth rate of 5.1 percent in 1985-86 in real terms the State economy registered a growth rate of only 2.9 percent.

1.12 The implementation of various poverty alleviation programmes in the State has had a desirable impact on the living conditions of the lower income classes. Household consumption expenditure surveys conducted under the National Sample Survey have shown that poverty ratio in the population has declined over the years. 1983 National Sample Survey shows that less than 32 per cent of the households in the State had a per capita expenditure level below Rs. 100 per month. The survey also has shown that in general 60.8 per cent of the consumption expenditure in Kerala is on food items.

Poverty alleviation programmes.

1.13. A comprehensive house to house survey was conducted in Kerala, from 1-2-1985 to 31-8-1985 with the assistance of voluntary organisations to identify rural families below the poverty line. The list was finalised by 30-10-1985. The IRDP programme had therefore a late start in 1985-86. As against the target of 86,017 families to be assisted, 71,376 families were assisted during the period, 32 per cent of which were Scheduled Caste/Scheduled Tribes families and 28% were women. The investment per family increased to Rs. 3,747 from Rs. 3,643 in 1984-85 and Rs. 1,686 in 1980-81. For 1986-87, the target was to assist 1,13,600 families and the achievement upto 31-12-1986 itself was 1,18,350 families. During 1985-86, 3,717 persons were trained under TRYSEM against the target of 6040 persons. Out of the trained persons 34% belonged to Scheduled Caste/Scheduled Tribe and 68% were women. Out of this a total of 2,201 persons were settled which comprised 30.71% of Scheduled Caste/Scheduled Tribe beneficiaries and 68.51% women.

1.14 Under NREP 72.34 lakh mandays of employment were generated during 1985-86, out of which 27.34 lakh mandays (37.81%) were exclusively for Scheduled Caste/Scheduled Tribe. The corresponding target was 67 lakh mandays. Construction of 2301 houses and completion of

586 road works were the major achievements under NREP. Against a target of 79.84 lakh mandays, 77.62 lakh mandays employment was generated under RLEGP during 1985-86, out of which 32.74 lakh mandays (42.17%) were exclusively for Scheduled Caste/Scheduled Tribe. Construction of 4802 houses, 129 roads and improvements to 12 irrigation canals are the works undertaken. Further 2,24,319 small/marginal farmers were assisted which include 27481 Scheduled Caste/Scheduled Tribe families (12.25%).

Employment

1.15 The total number of registrants on Live Registers of Employment Exchanges has increased from 25.74 lakhs at the end of December 1985 to 27.02 lakhs at the end of September 1986. Though the State accounts for only 3.7 percent of the Country's population the number of job seekers form more than 10 per cent of the total job seekers in the country. Of the total work seekers 55 per cent were having educational qualifications SSLC and above. The total number of professional and technical work seekers as on September 1986 was 73707 which include 1213 Doctors, 3400 Engineers, 180 Agricultural Graduates and 17 Veterinary graduates. The placements through Employment Exchanges also had shown an increase during 1985. The number of placements which stood at 11361 in 1984 had gone up to 13700 in 1985.

1.16 Under the Kerala unemployment assistance scheme about 1.79 lakh unemployed persons were given assistance at the rate of Rs. 50 per month during 1985-86 and the expenditure on this account is reported to be Rs. 10.12 crores. The number of beneficiaries of this scheme has increased to 2.2 lakhs by November, 1986.

Price behaviour

1.17 It is comforting to note that the inflation is contained within reasonable limits during 1986. The annual average consumer price index registered an increase of 8.3 percent from 314 points in 1985 to 367 points in 1986. But this increase compares quite favourably with that of 1984 (11.4%) and 1983 (12.8%). The wholesale price index for agricultural commodities (all crops) which showed a decline in 1985 had registered an increase in 1986. The index rose to 800 points in 1986 from 722 points in 1985 showing an increase of 11 per cent. The increase in the index number is largely due to the increase in the prices of food crops. The wholesale price index of rice which was more or less stable in 1984 and 1985 increased by 12 per cent in 1986.

1.18 During 1986 the average farm price of principal commodities, with the exception of ginger registered an increase. The parity index, defined as the percentage ratio of prices received by farmers to prices paid by them, went up from 87 points in 1985 to 92 points in 1986 showing an increase of 5.75 per cent.

Availability of Food

1.19 The food situation was generally comfortable in 1986 due to increased issue of rice from the central pool. The percapita availability of cereals (rice and wheat) increased marginally by 301 grams per day in 1985 to 311 grams in 1986. This, however, does not take into account the rice brought into the State by private traders. The allotment of rice from the central pool increased from 14.6 lakh tonnes in 1985 to 16.35 lakh tonnes in 1986. During the year 15.60 lakh tonnes of rice were distributed through 12628 ration shops. The State Civil Supplies Corporation in collaboration with the co-operative sector, continued the programme of distribution of essential commodities to hold the price line, especially during festival seasons. The total number of wholesale and retail outlets increased during 1985-86. The number of families which have ration cards rose from 43.73 lakhs in 1985 to 44.48 lakhs in 1986.

Population

1.20 The estimated population of the State in 1986 is 272 lakhs. The State has achieved substantial reductions in birth rate and death rate in recent years. The birth rate in 1985 was estimated to be 22.9 as against the all India rate of 28.0. While the death rate in Kerala was 6.6 against the all India figure of 7.6 Kerala's annual average natural growth rate of population was 1.65% compared to the national rate of 2.04%. Infant mortality rate was 32 per 1000 live births compared to the national average rate of 102.

Agricultural Production

1.21 Unlike the performance during the previous year, production of most of the crops registered a decline during 1985-86. However, productivity of crops like cereals and pulses improved, though only marginally. A striking feature is the general decline in area under almost all major crops during 1985-86. The largest fall in area is under rice (52098 hectares) followed by arecanut (2311 hectares), tapioca (1776 hectares) and groundnut (1723 hectares). While the area under rubber increased by 9700 hectares (3.13%) and ginger by 1037 hectares (7.13%), area under coconut, pepper and cardamom remained stable. Very significant increase in production is seen in the case of pepper (68%). Production of rubber also increased by 7.33 per cent, while the increase in production of crops like cashewnut and turmeric has been only marginal. The largest decline in production was noticed in coffee (45.74%), followed by arecanut (41.40%), banana and other plantains (23.64%), ground nut (12.01%), coconut (8.8%), rice (6.60%), tapioca (6.25%) and tea (5.72%) in that order.

1.22 Despite a marginal increase in productivity from 1720 kg. to 1729 kg. per hectare, the total production of rice declined by 6.6%. Against a production of 12.56 lakh tonnes in 1984-85 the production in 1985-86 was only 11.73

lakhs tonnes. The area under high yielding varieties of rice also came down by 25.69%, resulting in a reduction in the contribution of HYV of rice to the total production of rice in the State from 36% in 1984-85 to 29% in 1985-86. The decline in production during the year is attributed to the reduction in area in most of the districts and flood damages which are reported to have affected an area of 1.46 lakh hectares.

1.23 Increase in the price of fertilisers did not affect their consumption which went up by 10.72% during 1985-86. Price of farm yard manure and wood ash also went up about 25%. Price of coconut seedlings increased in the range 19 to 30% while that of cashew layers increased by 100%.

Animal Husbandary and Dairy

1.24 Thanks to the large scale cross breeding programme, milk production increased from 12.20 lakh tonnes in 1984-85 to 12.82 lakh tonnes in 1985-86, an increase of 5.08%. The per capita availability of milk increased to 126 grams per day from 122 grams in 1984-85. Marketing of milk by the cooperative sector also improved with 641 Amul Pattern Co-operatives till the end of 1986. Milma's share of the urban milk market increased to 35.7% in 1985-86 from 28.8% in 1985.

Fisheries

1.25 Fish production in the State declined by 20% from 4.52 lakh tonnes in 1984 to 3.61 lakh tonnes in 1985. The share of "inland fisheries" in the total production, however, showed a marginal increase from 0.27 lakh tonnes to 0.29 lakh tonnes. The State's share in the total fish production of the country came down to a mere 13% from 23% in 1984 and 19% in 1985. About two decades back it was around 40%.

Irrigation and Power

1.26 The total investment in major and medium irrigation schemes till the end of March 1985 is Rs. 460 crores, creating a potential for irrigating about 2.00 lakh hectares (net) or 3.60 lakh hectares (gross). The ten completed irrigation projects irrigate a gross area of 1.47 lakh hectares while the partial commissioning of seven ongoing projects of Kallada, Pamba, etc. could irrigate a gross area of 2.1 lakh hectares. The estimated potential of minor irrigation in the State is 11 lakh hectares. The total area brought under minor irrigation upto the end of 1984-85 was 1.93 lakh hectares with an investment of Rs. 65.39 crores. During 1985-86 a sum of Rs. 376.71 lakh was spent so as to benefit an area of 6336 hectares (net) or 8767 hectares (gross).

1.27 The exploitation and exploration of ground water resources in the State is carried out by the Ground Water Department. During 1985-86, the department conducted hydrological survey of 142 hectares of land to locate various

types of wells in different geological formations. Moreover 211 bore wells, 141 shallow bore wells, 294 filter point wells and 11 tube wells for ground water extraction were constructed and the irrigation potential created was 1120 hectares of land during 1985-86 by the Department.

1.28 The installed capacity of Kerala Power grid has increased from 1011.5 MW to 1271.5 MW during 1985-86 to attain an annual generation capacity of 5357.14 MU.

1.29 The per capita consumption of electricity has increased from 129 units in 1984-85 to 135 units in 1985-86. The energy loss as percentage of energy available for sale has remained more or less 25%. The number of consumers has increased from 21.25 lakhs in 1984-85 to 23.91 lakhs in 1985-86. Moreover 13714 pump sets were energised during the year under review.

Transport and Communications

1.30 The State has achieved significant progress in building the transport and communication infrastructure. The total length of roads in Kerala is nearly 1.09 lakh Kilometres as at the end of March 1986. There was a net increase of 824 kms. in 1985-86 over 1984-85. The length of roads maintained by the Public Works Department is only 19460 km. More than 81000 km. of roads are maintained by the Panchayats. The density of motor vehicles in Kerala is high compared to most of the States in India. The State has 927 vehicles per hundred Square k.m. area and 1340 vehicles per lakh population in 1985-86. The railway net work in Kerala consists of 940 km. of broadgauge lines and 113 km. of metre gauge lines. There was an increase of 44 km. of broadgauge route length during 1985-86 from the previous year. Construction work of Ernakulam—Alleppey broad-gauge railway is in progress and the scheme for extending this line upto Kayamkulam costing Rs. 28 crores has been approved. The doubling of the trunk route from Palghat to Ernakulam has been completed.

1.31 Indian Air lines operates services from Trivandrum and Cochin to major cities in the country in addition to the two international flights to Colombo and Mali. Air India operates international flights from Trivandrum to Gulf countries.

1.32 In the transportation of goods and passengers the role played by the inland water transport is significant. The activities of the State Water Transport Department is centred round the districts of Alleppey and Quilon. The Kerala State Road Transport Corporation, with its 12 boats operates ferry services in the Cochin Harbour area. The Kerala Inland Navigation Corporation is engaged in the transportation of raw materials for FACT Cochin and ferry services around Cochin. The intermediate and minor ports of Kerala handled 1.12 lakh tonnes of cargo as against 1.75 lakh tonnes during 1984-85, thus showing a decrease of 36 percent.

The quantum of cargo handled through Cochin port has increased from 40.74 lakh tonnes in 1984-85 to 52.78 lakh tonnes during 1985-86.

1.33 The State have made commendable advances in the field of communications. The average area served by a post office is 8.20 sq. km. against the all India average of 22.26 sq. km. The density of telephones in Kerala is 4.5 per sq. km. compared to 1.05 per sq. km. for the country as a whole. The average number of telephones per thousand population in Kerala is 7.1 as against the all India average of 5.06. However, the population served by a post office in Kerala is 5377 on the average, while the corresponding all India figure is 4730.

Industries

1.34 The general index of industrial production increased by 10.56% during 1985-86 over that of the previous year. According to quick estimates of the Net State Domestic Product it is found that the value added by the manufacturing sector at current prices increased by 9.7% in 1985-86, to Rs. 880.87 crores from Rs. 802.66 crores in 1984-85. The general industrial climate continued to be favourable during the year. The industrial production had not been affected much by strikes, lock-outs and other disputes. The generation of power and the number of industrial consumers had increased in the current year.

1.35 There was an increase of 4.55% in the number of registered working factories in the State during 1985 from 10647 in 1984 to 11131 in 1985 and the workers employed also increased from 2,90,104 in 1984 to 2,92,629 in 1985.

1.36 The financial assistance sanctioned by the Kerala State Industrial Development Corporation, which is the major promotional institution for medium and large scale units in the State stood at Rs. 1748.50 lakhs to 136 units during the year, and the number of units commissioned rose to 91 by the end of March 1986.

1.37 In the case of the Kerala Financial Corporation which promotes the small and medium industries also there was a substantial improvement in performance. The Corporation earned a record net profit of Rs. 50.58 lakhs during the year. The total loan sanctioned in 1985-86 was Rs. 35.09 crores, an increase of 68% and the loan disbursed was Rs. 19.51 crores, an increase of 63% over the previous year.

1.38 There were eleven central sector manufacturing companies in the State in 1985-86 out of which, ten companies furnished details on their working results. Among them seven were running on profit during the year. The remaining three viz., the Hindustan Insecticides Ltd., Cochin Shipyard Ltd., and Hindustan Newsprint Ltd., incurred loss during the period.

37/822/MC.

1.39 During the year 1985-86, 3866 new small scale industrial units were registered in the State. The investment and production of these units were estimated to be Rs. 49.83 crores and Rs. 158.51 crores respectively and the employment generated as 27574. However, the problems like scarcity of raw materials and their high prices, lack of demand for finished products especially from foreign countries, obsolescent technology, high wages and consequent rise in cost of production and shortage of working capital continued to plague the traditional industries like, Coir, Handloom, Cashew etc.

Education

1.40 Kerala has achieved significant progress in the field of education. By the end of 1985-86, the total number of schools stood at 12138 comprising 6845 L. P. Schools, 2869 U. P. Schools and 2424 High Schools. The enrolment increased to 57.16 lakhs in 1985-86 from 56.81 lakhs in 1984-85. Girls constituted 48.9 percent of the total student strength. The teacher-pupil ratio was 1:30 in 1985-86 while it was 1:31 in 1984-85. During the year under review, vocational courses were offered in eight subjects in high schools for a total of 2080 students and in 18 subjects in technical high schools for a total of 760 students.

1.41 In the higher education sector, the number of Arts and Science Colleges remained at 168 in 1985-86 out of which 43 were affiliated to the University of Kerala, 69 to Calicut and 56 to Gandhiji University. The total number of students increased from 292409 in 1984-85 to 304069 in 1985-86 showing an increase of 3.98 percent. The number of teachers increased from 13082 in 1984-85 to 13249 in 1985-86. The enrolment in the engineering colleges increased from 8913 in 1984-85 to 9568 in 1985-86 and the student strength in polytechnics increased from 9317 to 9710 during the period. New courses started include, part time MBA course in Engineering College, Trivandrum, Degree courses in Architectural Engineering in TKM College, Quilon, Electronics at M.A. College of Engineering and Computer Science at REC, Calicut.

1.42 Government expenditure on education amounted to Rs. 411 crores in 1985-86. The per capita expenditure on education increased from Rs. 114.59 in 1983-84 to Rs. 145.97 in 1985-86. Of the total expenditure 53.4 per cent was spent on primary education, 26.69 per cent on secondary education, 13.38 per cent on university and other higher education, 4.2 per cent on technical education and remaining on others including special education.

Health

1.43 Kerala has built up over the years a reasonably good medical infrastructure. The medical institutions during 1985-86 consisted of 157 hospitals, 299 P.H. Centres, 529

dispensaries, 20 TB clinics and 3 Leprosy hospitals over and above the 16 grant-in-aid institutions. The number of beds increased from 33529 in 1984-85 to 35744 in 1985-86. The bed-population ratio showed a remarkable increase from 124 in 1984-85 to 130 in 1985-86. The number of medical and para medical personnel increased from 17,222 in 1984-85 to 18,910 in 1985-86.

1.44 There were 94 Ayurveda hospitals and 473 dispensaries in the state in 1985-86 compared to 551 such institutions in 1984-85. The bed strength also increased from 1679 in 1984-85 to 1689 in 1985-86. The number of patients treated stood at 139.9 lakhs in 1985-86. The number of homoeopathy institutions has increased from 223 in 1984-85 to 251 in the reporting year and bed strength from 675 to 700. The number of patients treated stood at 80 lakhs. As regards new institutions, one hospital at Kozhikode and 27 dispensaries were started during 1985-86.

1.45 Expenditure on health has increased from Rs. 7424.39 lakhs in 1984-85 to 8821.10 lakhs in 1985-86. The percapita expenditure has gone up from Rs. 25.88 in 1984-85 to Rs. 37.89 in 1985-86.

1.46 Under the Family Welfare Programmes universal immunisation programme was extended to 3 more district viz., Quilon, Malappuram and Cannanore. The expenditure under Family Welfare has gone up from Rs. 14.18 crores in 1984-85 to Rs. 21.42 crores in 1985-86.

Water Supply

1.47 The State could provide protected water supply to 70 per cent of the urban population and 58 per cent of the rural population. All the 42 municipalities and 3

corporations were covered under protected water supply, of which 34 town/cities were fully covered to urban standards. As regards rural water supply schemes, the number of schemes increased from 1493 in 1984-85 to 1611 in 1985-86. During the year under review, 118 schemes were fully completed and 1157 problem villages were partially covered and 6 villages fully covered. An amount of Rs. 543.61 lakhs was received from the LIC for the implementation of water supply schemes. The Government of India assistance under accelerated water supply schemes amounted to Rs. 1085 lakhs in 1985-86 for implementing water supply schemes in problem villages.

Housing

1.48 In the housing sector, the number of Besides during 1986, the state, under the increased from 40519 in 1984-85 to 46,661 in 1985-86 showing an increase of 15.16 percent. Besides during 1986, the state under the Rehabilitation Housing scheme, provided a subsidy of Rs. 1540 lakhs for the construction of 102,663 houses.

Social Welfare

1.49 In the social welfare sector the number of beneficiaries covered under different pension schemes increased from 6,16,350 in 1984-85 to 7,28,140 in 1985-86. The number of institutions managed/supported for the welfare of orphans, destitutes etc., increased from 462 in 1984-85 to 464 in 1985-86.

Nutrition

1.50 The mid-day meal programme was implemented in over 8500 centres and had benefited 19 lakh L. P. children. The ICDS programme, through a net work of 8100 anganwadis, covered 7.8 lakh beneficiaries during the year 1985-86.

CHAPTER 2

INCOME, CONSUMPTION AND EMPLOYMENT

National Income

At current prices national income (quick estimate) in 1985-86 is estimated at Rs. 195707 crores as against Rs. 174018 crores in 1984-85 showing a growth rate of 12.5 per cent. The growth rate in 1984-85 over

1983-84 was only 10 per cent. At constant (1970-71) prices, national income 1985-86 is Rs. 60143 crores. This was Rs. 57243 crores in 1984-85. Thus in real terms the national income registered an increase of 5.1 per cent in 1985-86 as against only 3.5 per cent in the previous year.

TABLE 2.1

State Income and National Income

Item	Kerala					India				
	1970-71	1984-85	AGGR	1985-86	AGGR	1970-71	1984-85	AGGR	1985-86	AGGR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>National Income/ State Income</i>										
At current prices (Rs. crores)	1258	5637 (11.2)	11.3	6322 (12.1)	11.4	34235	174018 (10.0)	12.3	195707 (12.5)	12.3
At constant prices (1970-71) (Rs. crores)	1258	1650 (5.0)	2.0	1698 (2.9)	2.1	34235	57243 (3.5)	3.7	60143 (5.1)	3.9
<i>Per capita Income</i>										
At current prices (Rs.)	596	2076 (9.2)	9.2	2287 (10.2)	9.3	633	2355 (7.7)	9.8	2586 (10.2)	9.8
At constant prices (1970-71) (Rs.)	596	607 (2.9)	0.1	614 (1.2)	0.2	633	775 (1.4)	1.5	798 (3.0)	1.6

AGGR—Annual Geometric Growth Rate from 1970-71

N.B. Figures within brackets give the percentage change over the previous year

Source: (1) Central Statistical Organisation
(2) DIRECTORATE of Economics and Statistics.

2.2 Although the production of food-grains rose by 3.4 per cent during the year and was of the order of 150.5 million tonnes the production of other crops showed an overall decline resulting in only a modest growth of 1.1 per cent in the agricultural sector. The Mining Sector showed an increase of 5.2 per cent in 1985-86 mainly due to higher production of coal, crude petroleum and natural gas and lime stone. The manufacturing sector registered an overall growth of 6.9 per cent compared with only 5.4 per cent in the previous year. This has been due to the increase in the production of non-metallic products, rubber and petroleum, transport equipment and electrical machinery. Electricity, gas and water supply sector also recorded a sizable growth of 8.6 per cent in 1985-86. The services sector as a whole, which contributes above 40 per cent of the net domestic product, registered a growth of 7.8 per cent in 1985-86 over 1984-85. Appendix 2.2 gives the relevant figures. The annual growth rate (Geometric) of national income from 1970-71 to 1985-86 is estimated at 3.9 per cent at constant prices and 12.3 per cent at current prices.

State Income

2.3 The state income of Kerala for the year 1985-86 stands at Rs. 6322 crores at current prices and Rs. 1698 crores at constant prices, whereas for 1984-85 it was Rs. 5637 crores at current prices and Rs. 1650 crores at constant prices. This gives a rate of growth of 12.1 per cent at current prices and 2.9 per cent at constant prices. The corresponding rate of growth in the previous year was 11.2 and 5.0 respectively. Remarkable increase was observed only in the secondary and tertiary sectors of the economy during the year 1985-86. Higher rate of growth observed in 1983-84 in income at current prices is mainly due to the higher rate of growth in the primary sector. The annual average (Geometric) growth rate of State Income from 1970-71 to 1985-86 is 2.1 per cent at constant prices and 11.4 per cent at current prices.

Trends in the Sectoral Share of Income

2.4 The sectoral contribution of state income at current and constant prices is given in Appendix 2.3.

During the last fifteen years the share of the primary sector in State income at 1970-71 prices declined by 10.3 per cent (from 49.3 per cent to 39.0 per cent) whereas the secondary and tertiary sectors increased their shares by 1.7 per cent (from 16.3 per cent to 18.0 per cent) and 8.6 per cent (from 34.4 per cent to 43.0 per cent) respectively. The share of primary sector in state income at current prices also showed a decline of

7.3 per cent, while the secondary and tertiary sectors increased their shares by 2.5 per cent and 4.8 per cent respectively. Similar trend is also seen in the case of national income. The percentage share of the major sectors of the economy in the net domestic product of Kerala and India between 1970-71 and 1985-86 at current and constant prices is presented in Table 2.2.

TABLE—2.2
Sectoral Contribution of Net Domestic Product of Kerala and India (Per cent)

Sector	Kerala							India						
	At current prices				At 1970-71 prices			At current prices				At 1970-71 prices		
	1970-71	1983-84	1984-85	1985-86	1983-84	1984-85	1985-86	1970-1971	1983-1984	1984-1985	1984-1986	1983-1984	1984-1985	1985-1986
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Primary	49.3	41.5	41.8	42.0	37.4	39.5	39.0	50.1	39.7	37.1	35.3	40.9	39.1	37.7
2. Secondary	16.3	20.5	19.4	18.8	19.9	18.0	18.0	19.7	22.3	23.1	23.9	20.6	21.0	21.3
3. Transport Communication and Trade	17.7	19.0	19.4	19.5	19.1	18.9	18.9	15.8	21.0	21.5	21.7	18.9	19.2	19.4
4. Finance and Real Estate	3.5	5.8	6.1	6.4	5.1	5.2	5.3	4.9	5.7	6.3	6.6	6.2	6.4	6.6
5. Community and Personal Services	13.2	13.2	13.3	13.3	18.5	18.4	18.8	9.5	11.3	12.0	12.5	13.4	14.3	15.0
6. Tertiary (3+4+5)	34.4	38.0	38.8	39.2	42.7	42.5	43.0	30.2	38.0	39.8	40.8	38.5	39.9	41.0
Total NDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Calculated from the State Income and National Income Estimates published by
(1) Directorate of Economics and Statistics
(2) Central Statistical Organisation

Per-capita Income

2.5 In 1985-86 the country's per-capita income in real terms is estimated at Rs. 798 as against Rs. 775 for 1984-85, registering an increase of 3.0 per cent. At current prices the per-capita income works out to Rs. 2596 in 1985-86 as against Rs. 2355 during the previous year, the growth rate being 10.2 per cent. The respective growth rates recorded for the previous year were only 1.4 per cent and 7.7 per cent respectively.

2.6 The per-capita income of Kerala is less at both current and constant prices compared with India as a whole. The per-capita state income at current prices in 1985-86 is estimated at Rs. 2287 registering an increase of 10.2 per cent over the previous year. The per-capita income at constant prices (1970-71 base) is Rs. 614 showing a rate of growth of 1.2 per cent as against 2.9 per cent for the year 1984-85. (See Table 2.1)

District Income

2.7 District Income estimates at current and constant prices during the years 1970-71 and 1980-81

to 1984-85 are presented in Appendix 2.4. Ernakulam district had the highest share in the total net domestic product in 1984-85 followed by Trivandrum district. This is true both in terms of current prices as well as at constant prices. Wyanad district has the lowest share in the State income since its formation.

2.8 The Sectoral composition of district income presented in Appendix 2.5 shows the importance of different sectors of the economy in each district for the period from 1980-81 to 1984-85. During 1984-85, at current prices the share of primary sector varies from 58.3 per cent in Idukki district to 32.2 per cent in Ernakulam district, while the share of secondary sector varies from 30.8 per cent in Ernakulam district to 7.9 per cent in Malappuram district. The share of tertiary sector is the highest in Trivandrum district (45.8 per cent)

2.9 Appendix 2.6 gives the estimates of per-capita income of the districts in the State with their ranks at current and constant prices for the years 1980-81 to 1984-85. In 1980-81 Ernakulam district had the highest per-capita income at constant prices and Idukki district had the second place. At current prices there

was an inter-change of these places between these two districts. In the year of formation itself (1981-82) Wayanad district got the first rank both at current and constant prices. In 1984-85 also Wayanad district ranks the highest as regards per-capita income at current and constant prices. Idukki occupies the second place in percapita income at current prices and Malappuram the second place at constant prices. Malappuram district ranks the lowest for all the years from 1980-81 to 1984-85 both at current and constant prices.

Consumption

2.10 The distribution of households and persons according to per-capita monthly expenditure classes is given in Table 2.3. It is seen that 5.42 per cent of the households are living at a per-capita expenditure level below Rs. 60 per month or in other words below two rupees per day in 1983. A substantial fraction (55.86 per cent) of the households enjoy a per-capita expenditure varying between Rs. 60 per month and Rs. 150 per month. Only 10.38 per cent of the households have per-capita income above Rs. 300 per month.

TABLE 2.3

Distribution of sample households and persons according to per-capita monthly expenditure—1983

Monthly per-capita expenditure	No. of households	Percentage distribution of households	No. of persons per household
(1)	(2)	(3)	(4)
0-30	11	0.24	5.82
30-40	28	0.62	6.70
40-50	76	1.69	7.43
50-60	129	2.87	6.52
60-70	225	5.00	6.45
Egg Head	463	10.29	6.09
Potato	493	10.95	5.97
Coriander	738	16.40	5.40
Chillies	595	13.22	5.50
Onion	688	15.29	4.83
Onion	390	8.67	4.57
Sugar	197	4.38	4.20
above 300	467	10.38	3.73
Coconuts	4500	100.00	5.29
Firewood			

Source:—Statistics for Planning 1986, Directorate of Economics & Statistics.

2.11 The pattern of consumption shows that as the level of per-capita income of the households rises, the proportion of expenditure on food items steadily declines. The relevant details are given in Table 2.4.

37/822/MC.

TABLE 2.4

Consumption pattern of persons of different expenditure classes—1983 and average percapita expenditure

Per-capita monthly expenditure class	Average percentage expenditure on Per-capita		
	Food items	Non-food items	
(1)	(2)	(3)	(4)
0-30	25.68	71.2	28.8
30-40	35.77	73.5	26.5
40-50	45.74	68.0	32.0
50-60	55.79	76.3	23.7
60-70	65.23	72.8	27.2
70-85	77.65	72.2	27.8
85-100	92.37	71.6	28.4
100-125	111.72	70.6	29.4
125-150	137.51	67.7	32.3
150-200	172.01	64.8	35.2
200-250	221.61	61.4	38.6
250-300	274.37	59.7	40.3
300 & above	530.88	42.4	57.6
All classes	154.77	60.8	39.2

Source: Statistics for Planning-1986, Directorate of Economics & Statistics.

2.12 In Kerala 60.8 percent of the consumption expenditure of an average household is on food items. In the lowest percapita expenditure group of Rs. 0-30, as much as 71.2 percent of the expenditure is on food. The corresponding average percapita monthly expenditure is as low as Rs. 25.68. Households in the highest expenditure class viz. Rs. 300 and above, spent as much as 57.6 percent of their total expenditure on non-food items.

Employment Situation

2.13 Live Register figures maintained by the employment exchanges, which is the only regular source of data regarding employment and unemployment in Kerala, show that the problem has been worsening during the last few years. The number of job seekers has increased from 24.58 lakhs at the end of December 1984 to 25.74 lakhs by the end of December 1985. As at the end of September 1986 the number of registrants has further increased to 27.02 lakhs. This formed more than ten percent of the total job seekers in the country. It may however, be borne in mind that live register figures contain also employed persons who have registered for better jobs. Their number, however, is not known. Of the total work seekers at the end of September 1986, 55 percent were having educational qualifications S.S.L.C. and above. Among them 9.1 percent were Pre-degree Certificate holders, 6.4 per cent were Graduates and 0.7 per cent were post graduates. The percentage of post graduate work seekers decreased from 0.39 per cent in December 1985 to 0.37 percent in September 1986 and that of graduates work seekers remained at the same level for the period

Professional and Technical Work Seekers

2.14 The number of work seekers with professional and technical qualification is given in Appendix 2.12. It is seen that there were 1143 medical graduates on the Live Register as on 31-12-1985 compared with 1035 in the previous year. This rose to 1213 as on 31-9-1986. There has been a significant increase in the number of engineering graduate work seekers during the year 1985. The increasing trend was continuing for the year 1986 also. The number of veterinary graduates, agricultural graduates and Diploma holders in engineering on the Live Register declined during the year 1985. But the number of ITI certificate holders have been steadily increasing. The number of Diploma holders in engineering rose from 11257 in 1985 to 13411 in September 1986. The number of agricultural graduates increased from 14 to 180 during the same period. As on 31-9-1986 there were only 17 veterinary graduates on the Live Register of the Employment Exchanges.

Placement Through Employment Exchanges

2.15 The number of placings effected through employment exchanges in Kerala is presented in Appendix 2.13. In 1986, till September, 12314 placements were made by the exchanges. During this period on an average 434 employers used the services of employment exchanges in Kerala. During the year 1985, there was a marginal increase in the number of placings through the employment exchanges. As against 11361 placings in 1984, the employment exchanges could arrange to place 13700 persons in employment in 1985.

Employment in the Organised Sectors

2.16 Appendix 2.14 provides details of employment in the public sector and organised private sector during the period 1970-1986. It is seen that there is a marginal increase in organised employment in private sector during the year 1986 (as on 30-6-1986). It was showing a decreasing tendency during 1984 and 1985. The share of public sector however, has been increasing steadily for the last few years. The public and private sector employment figures were 5.69 lakhs and 5.07 lakhs respectively in December 1985 and 5.14 lakhs and 5.14 lakhs respectively in December 1986. It was 5.91 lakhs and 5.19 lakhs respectively on 30-6-1986. With March 1979 as base, the organised employment indices for June 1986 in public and private sectors are 124.1 and 101.9 respectively, thus giving the index of organised sector employment at 110.6. These figures also indicate a virtual stagnation in employment in the organised private sector in Kerala.

Unemployment Assistance and Self Employment Scheme

2.17 The Kerala Unemployment Assistance Scheme and Self Employment Programme were introduced in November 1982. Upto November 1986, an amount of Rs. 3198.82 lakhs was disbursed to 2.21 lakhs eligible beneficiaries at the rate of Rs. 50 per month under the 'Unemployment Assistance Scheme' and Rs. 539.71 lakhs was paid as subsidy to 89,956 beneficiaries under the 'self employment scheme'. Year-wise details are presented in Appendix 2.15.

TABLE 3.1
Whole Sale price Index of Agricultural Commodities 1984,85 and 1986

Base 1952-53-100

Crops	Weight	Wholesale price Index			Percentage change over the previous year	
		1984	1985	1986	1985	1986
(1)	(2)	(3)	(4)	(5)	(6)	(7)
A. Food Crops	68.5	596.7	581.5	679.3	(-) 2.5	16.8
Rice	40.4	441.9	447.7	501.6	1.3	12.0
Condiments and spices	10.4	854.3	886.9	889.3	(-) 25.4	8.2
Fruits and Vegetables	10.7	912.9	1007.7	1323.6	10.3	31.3
Molasses	2.0	691.6	709.1	758.2	2.5	6.9
B. Non Food Crops	36.5	1477.2	966.1	1008.5	(-) 34.6	4.3
Oil seeds	25.5	1863.4	1141.9	1226.9	(-) 38.7	7.4
Planatation Crops	11.0	584.6	559.6	508.9	(-) 4.2	(-) 9.1
C. All crops	100	918.1	721.9	799.6	(-) 21.3	10.8

Source: Directorates of Economic and Statistics.

TABLE 3.2
Average Retail Price of Essential Commodities

Commodity	Unit	Price at the end of December			Percentage of variation	
		1984	1985	1986	1985 over 1984	1986 over 1985
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rice	Kg.	3.51	4.13	4.24	17.7	2.6
Green gram	"	7.12	6.75	6.28	-5.2	(-) 6.9
Black gram	"	6.69	6.76	6.68	1.0	(-) 1.1
Red gram	"	5.16	6.66	6.07	29.1	(-) 8.8
Dhall	"	8.19	7.91	9.37	(-) 3.4	18.4
Coconut oil	"	36.78	17.06	31.01	(-) 53.6	81.7
Groundnut oil	"	19.01	17.81	23.90	(-) 6.3	34.1
Refined oil	"	28.28	27.49	37.13	(-) 2.8	35.0
Tapioca	"	1.00	1.38	1.55	38.0	12.3
Banana-green	"	3.65	3.95	4.72	8.2	19.4
Milk cow	Litre	3.90	4.25	4.46	9.0	9.9
Egg Hen	Doz.	7.16	7.26	8.17	(-) 0.40	12.5
Potato	Kg.	2.25	2.75	4.09	22.2	48.7
Coriander	"	8.24	11.83	19.83	43.6	67.6
Chillies	"	23.30	17.65	11.45	(-) 24.2	(-) 35.1
Onion	"	2.09	2.07	3.38	(-) 1.0	63.2
Sugar	"	5.50	5.90	6.18	7.2	12.2
Coconut (without husk)	100	397.50	140.00	284.00	(-) 56.7	94.5
Firewood (local split)	Qtl	55.39	60.00	64.38	8.5	7.3
Washing soap (sunlight)	each	3.34	3.70	3.76	10.8	1.6
Electric Bulb (Osram 40w)	"	4.62	4.70	4.89	1.7	4.0
Aluminium cooking pot	Kg.	50.10	50.80	48.22	1.4	(-) 5.0
Baby food (Amul)	"	44.12	45.52	44.19	44.19	(-) 9.1

Source: Directorates of Economic and Statistics.

TABLE 3.3

Average consumer price Index number (cost of living Index) in selected centres of Kerala

(Base 1978=100)

No.	Centre	Average Annual Price Index			Percentage Variation	
		1984	1985	1986	1985 over 1984	1986 over 1985
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Trivandrum	311	321	350	3.22	9.03
2.	Qutub	318	329	355	3.46	7.90
3.	Punalur	303	308	334	1.65	8.44
4.	Alleppey	303	311	336	2.64	8.04
5.	Kottayam	311	322	347	3.54	7.76
6.	Mundakayam	297	298	321	0.34	7.72
7.	Munnar	294	307	337	4.42	9.77
8.	Ernakulam	293	303	325	3.41	7.26
9.	Chalakyudy	305	314	345	2.95	9.87
10.	Trichur	306	317	342	3.59	7.89
11.	Palghat	306	309	328	0.98	6.15
12.	Malappuram	308	317	345	2.92	8.83
13.	Kozhikode	309	317	343	5.67	8.20
14.	Mappady	309	322	347	4.21	7.76
15.	Changanore	300	311	341	3.67	9.65
State		304	314	337	3.29	8.29

TABLE 3.4

Average Daily Wages of skilled workers in the Agriculture Sector

Year	Average Daily Wage Rate		Percentage of variation over the previous year.	
	Carpenter Rs. ps.	Mason Rs. Ps.	Carpenter,	Mason
(1)	(2)	(3)	(4)	(5)
1980-81	19.82	19.78	..	..
1981-82	22.42	22.50	13.12	13.75
1982-83	23.40	23.52	4.37	4.53
1983-84	26.17	26.22	11.84	11.48
1984-85	38.74	38.69	48.13	47.56
1985-86	42.84	42.80	10.58	10.62

Source: Directorate of Economics & Statistics.

TABLE 3.5

Average daily wage rates of unskilled workers in the Agriculture Sector

Year	Average daily wage rates of paddy field workers		Percentage of variation over the previous year	
	Male Rs. Ps.	Female Rs. Ps.	Male	Female
(1)	(2)	(3)	(4)	(5)
1980-81	11.13	7.91	..	..
1981-82	12.74	8.83	14.47	11.63
1982-83	13.29	9.55	4.32	8.15
1983-84	15.86	11.02	19.34	15.39
1984-85	23.60	11.89	48.80	7.89
1985-86	26.08	15.10	10.57	27.00

Source: Directorate of Economics & Statistics.

TABLE 3.6

Average daily wages of skilled workers in the construction sector

(Rs.)

Year	Daily wages of skilled workers			
	Carpenter		Mason	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
1980-81	18.66	19.33	18.75	19.36
1981-82	22.52	22.87	22.66	23.01
1982-83	27.99	30.68	28.13	30.80
1983-84	33.43	35.00	33.29	35.12
1984-85	36.71	37.97	36.65	38.03

Source: Directorate of Economics & Statistics.

TABLE 3.7

Average daily wages of unskilled workers in the construction sector

(Rs.)

Year	Wages of unskilled workers			
	Men		Women	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
1980-81	12.30	13.07	9.62	10.22
1981-82	15.22	15.94	11.40	12.22
1982-83	17.85	19.09	13.53	14.44
1983-84	20.29	21.18	14.81	16.10
1984-85	21.90	22.80	16.37	17.38
1985-86				

Source: Directorate of Economics & Statistics.

TABLE 3.8
Average Farm Prices of Principal Crops

(In rupees)

Commodity	Unit	1982	1983	1984	1985	1986	Changes in Average Price between 1985 and 1986	
							Actual	Percent
1. Paddy	Quintal	182.72	253.87	230.78	225.18	239.89	+14.71	+6.53
2. Tapioca	"	57.21	74.59	66.32	70.71	98.90	+27.59	+39.02
3. Coconut	100 nos.	126.65	176.80	304.50	174.21	187.59	+13.38	+7.68
4. Pepper	Quintal	1165.61	1300.62	2103.08	3606.06	4669.95	+1057.89	+29.34
5. Ginger	"	1218.61	2207.32	2864.23	1498.78	846.74	-652.04	-43.50
6. Cashewnut	"	651.42	509.98	834.44	793.82	1074.47	+280.65	+35.35
7. Sugarcane	Tonne	182.58	183.65	164.48	199.15	246.14	+46.99	+23.60
8. Arecanut	100 nos.	8.41	7.83	13.59	10.35	12.48	+2.13	+20.58
9. Banana	"	45.13	53.74	56.33	60.24	64.75	+4.51	+7.49

Figures for 1986 are provisional.

Source: Directorate of Economics and Statistics, Trivandrum.

TABLE 3.9

Index Numbers of prices received and prices paid by the farmers

Year	Prices received by farmers	farm cultivation cost	Domestic expenditure	Prices paid by farmers	Parity on 2 to 5
(1)	(2)	(3)	(4)	(5)	(6)
1980	481	607	441	578	93
1981	516	704	501	594	87
1982	539	776	530	641	87
1983	688	835	600	707	97
1984	883	1086	666	850	104
1985	783	1167	688	896	87
1986	895	1286	739	975	92

Source: Directorate of Economics & Statistics

TABLE 3.10

*Distribution of Rice and Wheat Through the Public Distribution System**

Month	Rice distributed (in tonnes)		Wheat distributed (in tonnes)	
	1985	1986	1985	1986
January	107467	120163	9389	8372
February	93389	108808	6985	6706
March	106917	123349	7477	6394
April	105326	120503	7012	5562
May	114705	128386	7827	6993
June	122047	129456	9787	8771
July	119507	147088	12181	10690
August	153399	150344	11503	10369
September	106507	153149	9325	8475
October	109316	130111	8936	8666
November	119749	114861	9825	8661
December	125686	133570	9773	8906
Total	1384275	1559988	110020	98565
Average Monthly off-take	115356.3	129999	9168.33	8213.8

*Quantity actually drawn by ration card holders.

Source: Directorate of Civil Supplies.

TABLE 3.11

Public Distribution System of Essential Commodities in Kerala

Particulars	Unit	1985	1986
(1)	(2)	(3)	(4)
1. No. of Ration Card and permits as on 1st April			
(a) Ration Cards for families	No.	4373244	4447714
(b) Ration permits for Institutions	No.	7922	7987
2. No. of F.C.I. Sub Depots	No.	21	22
3. No. of wholesale shops			
(a) Co-operatives	No.	46	46
(b) Others	No.	241	245
(c) Total wholesale shops	No.	287	291
4. No. of Retail Shops			
(a) Cooperatives	No.	1441	1400
(b) Others	No.	11061	11228
(c) Total Retail Shops	No.	12503	12628
5. Quantity of Coarsecloths (allotted)	Std. Bales	1491	2787.25
6. Wheat Products Distributed	M.T.	N.A.	N.A.*
7. Sugar	M.T.	11228.6	11227.2
8. Palm oil	M.T.	N.A.	N.A.
9. Kerosene	M.T.	15000	15780

* Wheat products are distributed through the outlets of the C.S. Corporation

Source: Directorate of Civil Supplies

TABLE 3.12

Essential Commodities Distributed by Kerala State Civil Supplies Corporation

Item	1984-85 4/84 to 3/85		1985-86 4/85 to 3/86	
	Quantity (in tonnes)	Value (Rs. in lakhs)	Quantity (in tonnes)	Value (Rs. in lakhs)
(1)	(2)	(3)	(4)	(5)
1. Wheat	..	..	..	..
2. Wheat products	2661	84	418	0.4
3. Rice	67759	1939	45510	1335
4. Pulses	1439	79	2853	314
5. Coconut Oil	45	16	5039	739
6. (a) Palm oil	..	..	..	..
(b) Palmolein oil	51048	6086	30850	4300
7. Provisions and other items	..	120	..	20
8. Vegetables	..	36	..	42
9. Sugar	1266	66	10824	613
10. Tea	..	..	..	..
11. Paper for Note books	1050	298	772	232
12. Uniform clothes to students ('000 metres)	..	..	..	..
13. Textiles	..	9	..	..
14. (a) Motor spirits	..	..	..	..
(b) High Speed Diesel	..	..	..	..
(c) Lubricant	..	422	..	515
15. Cement (Free sale)	14631	221	19390	296
16. Confiscated goods	..	..	..	..
17. Sugar (levy)	132738	5250	133307	5956
18. Cement (levy)	1363'1	1408	119224	1426
19. Others	..	1410	..	97
Total (value only)		17444		15836.4

Source: Kerala State Civil Supplies Corporation.

CHAPTER—4

AGRICULTURE

Area and Overall Agricultural Production

4.1 Unlike the performance during the previous year, most of the crops registered a decline in production during the year 1985-86. However, the productivity of crops like cereals, pulses showed marginal improvement. The indices of area, production and productivity of crops are shown in Table 4.1.

4.2 A general decline in area under almost all major crops was also noted in 1985-86. The largest fall in area was 52098 ha. under rice, followed by 2311 ha. under arecanut, 1776 ha. under tapioca and 1723 ha. under groundnut. The fall in area in the case of other crops like pulses, sesamum, cashew, banana and other plantains, sugarcane, sweet potato etc., was marginal. However the area under coconut, pepper and cardamom remained stable compared to previous year. Rubber registered an increase by 9700 ha. (3.13%) and ginger went up by 1037 ha. (7.13%). Ragi, a minor crop also registered an increase in area by 167 ha. (13.9%). The largest decline in production was noticed in coffee (45.74%) followed by arecanut (41.40%), banana and other plantains (23.64%), groundnut (12.01%), coconut (8.80%), rice (6.60%), tapioca (6.25%), tea (5.72%) in that order. The production of sesamum, ginger, cardamom, sugarcane, pulses etc., also declined marginally. But the production of pepper shot up by 68 per cent when compared to 1984-85. This, atleast partly, can be reckoned as the result of an increase in price by 68 per cent (from 1984 to 1985). The production of rubber too went up by 7.33 per cent while crops like turmeric, cotton, ragi and cashewnut registered only marginal increases. (See table 4.2).

4.3 According to the estimates of the Department of Agriculture, an area of 1.46 lakh ha. under various crops were affected by flood during the year, causing serious damages and an estimated loss of Rs. 161.59 crores.

Production of Major Crops.

Rice Production

4.4 Even though the overall productivity of rice registered a marginal increase over the previous year (from 1720 kg. to 1729 kg. per hectare), the total production in the State fell back by 6.6 per cent during the year. As against a total production of 12.56 lakh tonnes of rice in 1984-85 the production in 1985-86 was only 11.73 lakh tonnes. A season-wise analysis shows that while the total production during the Virippu (Autumn) and Mundakan (Winter) seasons declined by 15.85 per cent and 2.38 per cent respectively, production during the Punja (Summer) season increased by 10.22 per cent. A similar trend is discernible in the inter-seasonal area during the year—viz., a decline of 12.21 per cent and 4.10 per cent respectively during

Virippu (Autumn) and Mundakan (Winter) seasons and an increase of 0.24 per cent during Punja (Summer) season. (See table 4.3).

4.5 The lower production during the year is due to the general decline in area in all the districts except Wayanad. The largest fall in area is registered by Alleppey District (23.86%) followed by Pathanamthitta (16.9%), Kozhikode (12.2%) Malappuram (10.6%) and Trichur (7.1%).

4.6 As against 36 per cent of the total production of rice in the State in 1984-85, the contribution by the HYV of rice in 1985-86 declined to 29 per cent. This was mainly due to a decline (25.96%) in total area covered under high yielding varieties during all the three rice seasons. An inter-seasonal analysis reveals that the largest fall (36.17%) in area coverage under HYV is during Mundakan (Winter) season, followed by Virippu (Autumn) (25.46%) and Punja (Summer) (12.61%) compared to the levels in the previous year (see table 4.4). Floods in first crop season followed by severe drought in the second crop season might have acted as deterrents against the spread of HYV during the year. Particulars of district-wise area and production of HYV are given in Appendix 4.1.

4.7 During the year under review, the average productivity of the traditional varieties of rice increased by 2.4 per cent while that of the HYV increased only by 2.1 per cent. Maximum exploitation of the HYV potential is during the Mundakan (Winter Season) and therefore a higher coverage under HYV has to be ensured during this season. (District-wise area and production of rice for the years 1984-85 to 1985-86 are given in Appendix 4.2).

Plantation Crops

4.8 Production of coffee registered considerable fall in 1985-86 both at State and all India level. In 1985-86, India's production of 1,22,000 tonnes is 2.4 per cent and rank 10th in the world production of 59,18,820 tonnes from 16 countries. The percentage share of Kerala in the total estimated production of the country is 19.4 per cent. The average productivity in the country for 1985-86 is 622 kgs. per hectare. However, the productivity has decreased by 25.5 per cent over the previous year's (1984-85) productivity of 835 kg. per hectare. (See table 4.5).

4.9 The size of coffee plantations in India show wide variation from less than two hectares to more than hundred hectares each. Of the total of 234531 holdings, Kerala accounts for the largest number of small holdings below 20 hectares—63783 small holdings. (See Appendix 4.3).

4.10 Coffee exports have doubled from 33 per cent of production in 1960 to 67 per cent in 1986. This is attributed to a relatively low rate of

growth of domestic demand (2.2%) compared to domestic supply (3.8%) (See table 4.5).

4.11 Both production and price of tea in the country and in Kerala came down during 1986. However, tea consumption in the country has been growing at 5 per cent annually against a production growth of 2.9 per cent. Consequently, while we exported 60 per cent of the production and consumed 40 per cent in 1960, the ratio has reversed to 34:66 by 1985-86 (See table 4.5/4.6).

4.12 The area, production and productivity of rubber showed increase of 3.1, 7.3 and 1 per cent respectively during the year under review. (See table 4.5). At the all-India level also there was an increase of 3.6 per cent in area, 7.5 per cent in production and 1.4 per cent in productivity. The rate of growth of domestic consumption of natural rubber has been the highest at 8.2 per cent. However demand for rubber continues to be high, necessitating imports which were of the order of 41431 tonnes in 1985-86. The total consumption of rubber including synthetic and reclaimed rubber in the country increased from 3.17 lakh tonnes in 1984-85 to 3.43 lakh tonnes in 1985-86, an increase of 8.2 per cent. But the share of Kerala in the total consumption is only 11 per cent. The average market price of indigenous natural rubber showed an increase of Rs. 77 per quintal which is 4.7 per cent higher than that of 1984-85. (See table 4.7).

4.13 Cardamom production, quantity of auction sales and export during 1985-86 crop season registered creditable performance in all spheres breaking the previous records. The final all India estimate of production for 1985-86 crop season is 4700 M. T. of which Kerala's share is 3340 M. T. This achievement was due to the favourable climatic conditions coupled with the developmental efforts of the Board. The total cropped area did not show much increase during the year due to various socio-economic causes like rampant deforestation in many cardamom tracts which pre-empt the possibility of area expansion. The productivity of the yielding area in the country increased to 75 kg./ha. during 1985-86. But the auction price and export price of Indian cardamom came down. The average auction price in Kerala fell by 29.76 per cent and export price by 33.87 per cent. The Vandannettu auction centre stands in the first position with a total sale of 1903 M. T. The highest average price of Rs. 147.23 per kg. during 1985-86 was also registered in Vandannettu (See table 4.8).

4.14 The distribution of registered cardamom estates based on size of holdings for 1985-86 is presented in Appendix 4.4. It is seen that nearly 70 per cent of the units in Kerala are less than 2 ha. While the domestic intake of cardamom has been more or less stagnant, the export has shown a moderate increase from 61 per cent in 1960 to 67 per cent in 1985.

Productivity of Major Crops

4.15 Despite the fall in total production registered by most of the crops, the productivity of a number of crops like rice, ragi, pulses, pepper, turmeric, cashewnut, sweet potato, groundnut,

cotton, rubber etc., has shown marginal increase. The highest increase in productivity is recorded by pepper (68.29%). But fall in productivity was also noticed in the case of crops like arecanut, coconut, banana and other plantains, sugarcane, tapioca, tea, sesamum etc. The largest fall is noted in arecanut (39%), followed by banana and other plantains (22.45%), coconut (10%), ginger (9.13%), tea (5.72%) and tapioca (5.47%) (See table 4.2). The fall in productivity of a perennial crop like coconut was, however, not totally unforeseen due to the severe moisture stress experienced during the previous year.

Land Use Pattern

4.16 The data on the land use pattern in the State for the year 1985-86 are not yet available. Data presented in Table 4.9 pertain to the years 1983-84 and 1984-85. During 1984-85 the net area sown has increased by 4068 ha. and the area sown more than once by 8873 ha. resulting in an increase of 12941 ha. in the total cropped area during the year compared to the previous year. The cropping intensity has shown a marginal increase from 1.312 to 1.316. Other notable features in the land use pattern are a reduction by 3662 ha. in the area under miscellaneous tree crops marking a steep fall in the progressive reduction of area under this item, and reductions by 280 ha. under current fallows, by 318 ha. under fallows other than current fallows, by 1064 ha. under permanent pastures and grassing lands and by 902 ha. under barren and uncultivable land. Cultivable waste land has, however, increased by 1174 ha. during the year.

Rainfall

4.17 Compared to 1984-85, the total rainfall in 1985-86 was less by 41 per cent resulting in severe moisture stress during major part of the year (see table 4.10). It was actually less than half the normal rainfall. However, the excessive rainfall in June 1985 caused severe flood damages during the first crop season of the year. The most unfavourable moisture regime during the year is very well reflected in the crop performance during the year especially that of the seasonal annual crops. Details of month-wise station-wise rainfall are given in Appendix 4.5.

Fertilizers

4.18 Despite increase in price, the consumption of fertilizers in 1985-86 went up by 10.72 per cent. Among the fertilizers, potassic fertilizers enjoyed the maximum increase in off-take (27.6%), followed by phosphatic (5.4%) and nitrogenous (2.7%) fertilizers. A spurt in the use of potassic fertilizers is a welcome feature in the context of low productivity of the cash crop coconut. The trend in the consumption of fertilizer nutrients is shown in Appendix 4.6.

Pesticides

4.19 The total pesticides off-take in 1985-86 declined by 4.4 per cent compared to 1984-85. However, among the pesticides, the off-take of

fungicides went up by 29 per cent while the off-take of insecticides went down by 25.6 per cent. The use of weedicides and rodenticides also went up by 31.5 per cent and 7.1 per cent respectively during the year. The total area put under plant protection coverage declined by 13.2 per cent.

Seeds of High Yielding Varieties

4.20 There was substantial increase (107.8%) in the total quantity of HYV paddy seeds distributed to the farmers in the State during 1985-86 from departmental sources. As against 2315 tonnes in 1984-85, 4810 tonnes of HYV paddy seeds were distributed in 1985-86 by the Agriculture Department. However, this has not reflected in the area coverage under high yielding varieties of rice for the reason that a large quantity of seeds so distributed was used for re-sowing due to natural calamities. An estimated area of 1.12 lakh hectares under rice crop was affected by floods during the year.

Farm Input Prices

4.21 Unlike in the previous year, the farm input prices in 1985-86 registered considerable increase for most of the items (see Appendix 4.7). For fertilizers, the increase in price varied from 8 per cent to 37.50 per cent, for pulses seeds the increase was 38.22 per cent and that for the popular green manure seed-sunhemp was 43.77 per cent. Among the planting materials, coconut seedlings registered an increase in price ranging from 19 to 30.77 per cent, while the price of rooted pepper cutting remained stable at previous year's level. However, cashew layers registered a 100 per cent increase in price. The increase in prices of agricultural inputs was reflected in the locally available organic manures like farm yard manure and wood ash also, which went up by 24.32 per cent and 25.71 per cent respectively.

Agricultural Credit

4.22 Credit is one of the basic inputs in the process of economic development. The National Bank for Agriculture and Rural Development (NABARD) is the apex financing institution for providing credit for the promotion of agriculture, small scale, cottage and village industries and other allied economic activities in rural areas with a view to promoting integrated rural development. Refinance disbursed by NABARD for agriculture and allied activities under schematic lending increased substantially over the years. NABARD refinance for the above activities which stood at Rs. 25.6 crores during the year 1983-84 (July-June) increased to Rs. 40.00 crores in 1984-85 and touched the high level of Rs. 44.79 crores in 1985-86. Of this, the Kerala State Co-operative Agricultural Development Bank accounted for the largest share of refinance i.e. Rs. 19.83 crores while Scheduled Commercial Banks accounted for Rs. 18.59 crores, Kerala State Co-operative Bank accounted for Rs. 4.03 crores and South and North Malabar Gramin Banks together Rs. 2.34 crores, under schematic lending.

37/822/MC.

4.23 A purpose-wise analysis of the aggregate refinance shows that the largest share of Rs. 17.78 crores was utilised for financing of plantation and horticultural schemes like rubber, coconut, cardamom, pepper, coffee, tea, cashew etc. The amount disbursed for development of minor irrigation and land development works was Rs. 9.67 crores and that under IRDP was Rs. 10.45 crores.

4.24 The short-term credit limit sanctioned to Kerala State Co-operative Bank for financing seasonal agricultural operation increased from Rs. 42.70 crores in 1984-85 to Rs. 46.50 crores in 1985-86. The credit limits sanctioned to each District Co-operative Bank (DCB) were utilised to the full extent.

4.25 A small increase has been noted in the disbursement of medium term loans. For the calendar year 1986, an aggregate credit limit of Rs. 79.00 lakhs was sanctioned to the various District Co-operative Banks under medium term credit against Rs. 77.00 lakhs in 1985.

4.26 For contributing to the share capital of co-operative credit institutions, NABARD sanctioned long term loans aggregating to Rs. 21.01 lakhs to the State Government during 1985-86 as against Rs. 9.26 lakhs sanctioned during the previous year.

4.27 As regards the performance of the Commercial Banks in lending for 'Agriculture and Allied Activities', the disbursements under the Annual Action Plan of 1985 amounted to Rs. 38699 lakhs against a target of Rs. 27270 lakhs, the percentage of achievement being 141.9. Under the Annual Action Plan 1986, the achievement till June 1986 was Rs. 17831 lakhs against the annual target of Rs. 30790 lakhs, an achievement of 58 per cent.

Co-operative Sector

4.28 Co-operatives continued to be the principal agency in the dispensation of credit for agriculture and rural development.

4.29 The maximum outstanding under advances for seasonal agricultural operations during the year under review amounted to Rs. 5640 lakhs whereas the outstanding under the above item was Rs. 3180.00 lakhs. The percentage of increase being 77.3%. A slight increase is noted in the disbursement of medium term loans. The outstanding under medium term loans as on 30-6-1986 works out to Rs. 139.57 crores while it was Rs. 154.02 lakhs on 30-6-1985.

4.30 During the co-operative year 1984-85, 1570 PACs with a total membership of 54 lakhs were involved in the dispensation of credit. The average membership per society increased from 3121 to 3423 and the average share capital from Rs. 2.78 lakhs to Rs. 2.92 lakhs. The average deposit per society during 1984-85 was Rs. 20.53 lakhs as against Rs. 15.63 lakhs in 1983-84 and

the average deposit per member Rs. 599 as against Rs. 501 in 1983-84. The average working capital per society has increased from Rs. 40.33 lakhs in 1983-84 to Rs. 47.17 lakhs in 1984-85, an increase of 16.96%. The average loan advanced per member also increased from Rs. 711 to Rs. 804.

4.31 The loans advanced during 1984-85 amounted Rs. 43,312 lakhs against Rs. 34,764 lakhs in the previous year. For agricultural purposes alone, the amount advanced has increased from Rs. 18,565 lakhs as on 30-6-1984 to Rs. 22,534 lakhs on 30-6-1985. The overdue was Rs. 8,775 lakhs whereas that for 30-6-1984 was Rs. 6,899 lakhs. Eventhough the number of societies that worked on profit has decreased, the net profit earned by the societies has increased. The profit earned by the societies as on 30-6-1985 is Rs. 593 lakhs whereas that for 30-6-1984 was Rs. 528 lakhs.

4.32 The selected indicators of the performance as well as credit operations of the Agricultural Credit Societies are shown in Appendix 4.8 and 4.9.

Long-term Credit

4.33 The Kerala State Co-operative Agricultural Development Bank with its 10 Regional Offices and 35 Primary Agricultural Development Banks affiliated to it, functions as the pivotal agency for the disbursement of long-term credit to agriculturists.

4.34 Against a target of Rs. 30.00 crores fixed by NABARD for 1985-86, the Bank achieved Rs. 38.44 crores of which Rs. 17.56 crores was under ordinary lending and Rs. 20.88 crores under schematic lending. The development purpose covered by the Bank's lending activities include minor irrigation, land development including soil conservation and land reclamation, cultivation of plantation/horticultural crops like coconut, rubber, coffee, cashew, pepper, cardamom, pineapple, betelvine, arecanut etc., farm mechanisation, and other diversified activities like dairying, fish culture, poultry, gober gas, goat rearing etc. The amount utilised for scheme loans in 1985-86 is Rs. 1,907.95 lakhs whereas it was Rs. 1,430.00 lakhs in the previous year. The particulars of scheme loans advanced at the Primary Agricultural Development Bank level are shown in Table 4.11. An amount of Rs. 1,736.86 lakhs has been given under ordinary loaning programme against Rs. 1,363.59 lakhs during 1984-85.

4.35 During the year under review the performance of the Bank in disbursement of loans as well as recovery is encouraging. The percentages of overdue to demand at the 'Primary Level' and Central Level on 30-6-1985 were 19.89 and 13.56 respectively. The Bank won awards given by the Government of India and the National Co-operative Land Development Bank Federation.

Research and Development in Agriculture

(a) Kerala Agricultural University (KAU)

4.36. Starting of a College of Forestry at Vellanikkara Campus of KAU for degree courses leading to B. Sc. (Forestry) and M. Sc. (Forestry) and another college of Rural Home Science at Vellayani Campus for offering four year degree course leading to B.Sc. (Home Science), and starting of a degree course leading to Master's Degree in Co-operation and Banking in the College of Co-operation and Banking were the highlights under education in KAU during the year. The student statistics related to various academic programmes of the University are given in Appendix 4.10.

4.37. During the year under review the Kerala Agricultural University developed two elite varieties of chilli, one promising variety of guinea grass, and a hybrid variety of coconut for release for general cultivation in Kerala.

4.38. One of the outstanding achievements during the year was the remarkable control of the most dreadful floating aquatic weed *Salvinia molesta* Mitchell in the Kuttanad area using bio-control methods involving the exotic weevil.

4.39. The Australian strain of the Weevil *Cyrtobagous Salviniae* was introduced in the Kuttanad area by conducting periodic releases. Since the weevil is strictly monophagous, it is reported that no hazards to any other cultivated crops need be feared.

4.40. Establishment of a Central Training Institute at the Directorate of Extension, at Mannuthy and strengthening of the Training Service Scheme at the College of Agriculture, Vellayani were the two new projects started by KAU as sub-Project II under the National Agricultural Extension Project with 50 per cent Central Assistance.

(b) Central Plantation Crops Research Institute (CPCRI)

4.41. The Central Plantation Crops Research Institute (CPCRI) continued its research programmes on coconut, arecanut, oil palm, cashewnut, cocoa and spices during the year 1985 and from 1986 onwards, research on cashew and spices was programmed to be de-linked from CPCRI for enabling the concerned centre to take up mission oriented research on these crops. Two National Research Centres, one each for spices, (at Calicut) and Cashew (at Puttur, Dakshina Kannada) were proposed to be established.

4.42. The research highlights of the institute during 1985 and 1986 are (i) releasing of (a) a cultivar (Laccadive Ordinary) which gave 25 per cent more nuts per year and 33 per cent more Copra yield over the local tall cultivars (b) three hybrids in coconut for Kerala—viz. CDO X WCT, LO X GB and LO X CDO (c) two

varieties in arecanut—viz VTL-11 and VTL-17, and (d) one variety in turmeric viz. PCT-8.

4.43. Two rounds of survey in the six northern districts of Kerala were undertaken by CPCRI and State Department of Agriculture, in collaboration with the Coconut Development Board, Directorate of Economics and Statistics, Centre for Development Studies, Kerala Agricultural University and SADU. The total number of palms estimated by this survey is 60 million with 41 million bearing and 19 million non-bearing palms. The average yield per palm varied from 53 nuts (Kasaragod) to 68 nuts (Calicut) among the districts).

4.44. The Cost-Benefit analysis of crop production and farming systems done by CPCRI revealed that the economic potential of coconut based multistoreyed cropping under irrigation involving pepper and cocoa is as high as Rs. 28,000 per ha. of net return compared to Rs. 6900 only from rainfed coconuts and Rs. 11,400 from irrigated coconuts raised as monocrop.

4.45. It is also interesting to note that the coconut-based mixed farming system involving production of fodder (hybrid-Napier-NB 21 and Guinea Grass) in the inter-spaces of coconut, training of pepper on coconut palm, growing vegetables and banana around farm house, rearing of five units of milch cows and 30 units of rabbit gives a net return of Rs. 14,500 per hectare per year. Since this system is highly labour intensive the total returns to the family including the family labour wages is estimated at Rs. 35,000 per hectare per year. This system could be an ideal model for the self-reliant small-holder because of its high turn over and resource use efficiency.

(c) *Central Tuber Crops Research Institute (CTCRI)*

4.46. The achievements of the Central Tuber Crops Research Institute (CTCRI) at Sreekariyam, in Trivandrum District during the year 1986 include (1) addition of new germ plasm materials making the total available to 3158, (2) a few selections (4 Nos.) of Cassava which have shown the potential for 30 to 40 per cent more yield than the released hybrids H-2304 and H-1687, (3) six varieties of tuber crops, two in Sweet potato—viz. Sree Nandini and Sree Vardhini with tuber yield potential of 20 to 25 tonnes per hectare, two in greater yams (*D. alata*)—viz. Sree Keerthi and Sree Roopa with a tuber yield potential of 25 to 30 tonnes per hectare, and two in white yam (*Dioscorea rotundata*)—viz. Sree Subhra and Sree Priya with a yield potential of 35 to 40 tonnes per hectare which were proposed for release in Kerala.

4.47. Farm level studies conducted by CTCRI showed that a net income of Rs. 5110 per hectare could be derived by the farmer by cultivating high yielding varieties of Cassava

under improved practices as against Rs. 2320 per hectare only for local varieties under local practices. The cost of production of High Yielding Varieties of Cassava and local varieties were found to be Rs. 237 and Rs. 322 respectively per quintal.

Development Programmes

4.48. The year 1985-86 in general was not a good year for crop production sector. The serious flood damages in the early part of year affected 1.46 lakh hectares of cultivated area causing an estimated loss of Rs. 161.59 crores. Timely relief measures were taken by the Government to reach every possible help to the farmers. Massive flood-relief programmes were implemented during the year by utilising the assistance released by Government of India. An amount of Rs. 597.96 lakhs was given out to the affected farmers by way of input subsidies which benefited to a total number of 139708 persons in the State.

4.49. The schemes under the 20 point programme received priority consideration of the Department of Agriculture in the field. Under dry land agriculture, intensive agricultural activities were taken up in 198 selected micro-water sheds. Land development works were done in 2569 hectares, and 231 water harvesting/storage structures were also constructed. In these water sheds, 6521 hectares were covered under application of chemical fertilizers. The major inputs distributed in the water sheds include 17176 coconut seedlings, 8285 pepper cuttings, 8.16 tonnes of paddy seeds, 2.44 tonnes of pulses seeds, 4700 subabul seedlings, 200 nutmeg seedlings, 2.15 tonnes of solid and 480 litres of liquid pesticides, 6359 pulses minikits, 601 groundnut minikits, 1157 sesamum minikits, and 3478 coconut minikits. Further 128 demonstrations were conducted in Palghat District with Seed-Cum-Fertilizer drill for popularising the machinery, and 5 seed-cum-fertilizer drills were distributed to farmers at 50% subsidy.

4.50. Under a pilot project for propagation of water conservation and harvesting technology, 7 micro-water sheds in Palghat District were selected and construction of 35 wells/tanks and 6980 metres of bunds was completed. Land levelling works were done in 252.7 hectares and planting of subabul and fruit plants was done in 99 hectares.

4.51. Against a target for production of 26,000 tonnes of pulses in the State, 20145 tonnes were produced during the year. The shortfall was mainly due to the floods in the early part of the year and severe moisture stress during the remaining part of the year, which affected almost all seasonal and annual crops. However, under the Centrally Sponsored Scheme for pulses developments, 208.6 hectare of pulses demonstration plots against a target of 200 hectare, 19.7 tonnes of pulses seeds distributed against a target of 150 tonnes, distribution of 7033 packets of Rhizobium culture against a target of 5750 packets, and 5500 minikit demonstration against

a target of 5500 were the achievements. The shortfall in the distribution of pulses seeds under the above programme was more than off-set by the distribution of 179 tonnes of pulses seeds during the same year free of cost through the mini-kit programme for small and marginal farmers.

4.52. Though no specific schemes were implemented for oil seed development, through the distribution of minikits of oil seeds under the small and marginal farmers programme and extension efforts, the production of oil seeds in the State would reach the level of 13852 tonnes against a target of 13000 tonnes.

4.53. The Department of Agriculture implemented a number of programmes to extent economic support to scheduled caste and scheduled tribe farmers in the State. They include 1988 schemes under Special Component Plan in 2497 colonies/settlements benefiting 26406 hectares of land belonging to 92131 scheduled caste farming families, and 199 schemes in 206 tribes/settlements benefiting 4578 hectares of land belonging to 5917 tribal families. In all, an amount of Rs. 138.53 lakhs (Rs. 100.70 lakh from SCP+Rs. 37.83 lakhs from small and marginal farmers programme) for scheduled caste farmers and Rs. 55.05 lakhs (Rs. 25.27 lakhs from TSP+Rs. 29.78 lakhs from small and marginal farmers programme) for tribal farmers were spent during the year. The physical achievements under these programmes are detailed in Table 4.12.

4.54. Under the programme for increasing agricultural production of small and marginal farmers, the Department of Agriculture distributed free of cost 44758 minikits (179 tonnes) of pulses seeds, 1667 minikits (50 tonnes) of groundnut seeds, 31895 minikits (31.895 tonnes) of sesamum seeds and 101922 kits (5.09 lakh numbers) of coconut seedlings to 204364 small and marginal farmers in the State. Land development works done on 19714 hectares of land under this programme benefited 24122 small and marginal farmers. A total sum of Rs. 332.621 lakhs was expended for the benefit of small and marginal farmers during the year.

4.55. In order to develop non-conventional sources of energy, the Department of Agriculture constructed 2405 bio-gas units during the year under the National Bio-gas Development Programme by spending Rs. 69.74 lakhs during the year.

4.56. The achievements under coconut development programmes implemented by the Department of Agriculture, include (i) distribution of 15.808 lakhs quality coconut seedlings against a target of 15.30 lakh and procurement of 20.7 lakh seed nuts of coconut for raising seedlings for next year under the State Plan Scheme (ii) distribution of 47493 TxD hybrid coconut seedlings and procurement of 50595 hybrid seednuts of coconut under the Centrally Sponsored Scheme, (iii) Survey of 11025 hectares for rejuvenation

of diseased and unproductive coconut plantations and distribution of 1.12 lakh coconut seedlings for underplanting in the above plantations (iv) installation of 425 pumpsets for irrigation in coconut gardens and (v) cutting and removing 54000 root (wilt) affected trees by giving Rs. 75 per tree as compensation.

4.57. Enforcement of quality control measures on fertilizers and pesticides by the Department of Agriculture led to the analysis of 1597 fertilizer samples and 349 insecticide samples. Of these 50 fertilizer and 3 insecticide samples failed the standard. Apart from taking prosecution steps in 3 cases, 48 registration certificates were suspended during the year.

4.58. Under the Seed Act, 237 Seed Samples were collected, of which 232 were analysed.

4.59. Quality control of agricultural commodities through AGMARK grading was attended to by the Marketing Wing of the Agriculture Department. It graded 35015 quintals of coconut oil, 6502 quintals of gingelly oil, 879.50 quintals of honey and 1411 quintals of ground spices during the year, against 8765 quintals of coconut oil, 752 quintals of gingelly oil, 5487 quintals of honey and 1541 quintals of ground spices respectively during the previous year.

4.60. As against a target of 2300 hectares an area of 1560 hectares were newly planted with cashew during the year under the World Bank assisted Multi-State Cashew Project. The total length of 29 roads constructed under this project reached 195.03 k.m.

4.61. Other achievements under cashew development were (i) continuance of 409 cashew demonstration plots, (ii) continuance of 80 hectares of progeny garden for cashew at Adhur, (iii) continuance of the support programme for MSCP and (iv) coverage of 4280 hectares under plant protection on cashew.

4.62. A special scheme for development of vegetable cultivation in Trichur and Malappuram districts was sponsored by the National Horticulture Board during the year. Under the programme 4000 minikits of vegetable seeds were distributed free of cost to the cultivators.

4.63. An amount of Rs. 50 lakhs was made available by Government through supplementary demand for giving 25% subsidy on fertilizers to paddy growers in problem areas during the year. Out of this a sum of Rs. 49.747 lakhs was given out as fertilizer subsidy covering an area of 49.747 hectares in the districts of Alleppey, Kottayam, Pathanamthitta, Trichur and Malappuram. Selected indicators of Agricultural development are presented in Table 4.13.

4.64. The Farm Information Bureau continued to extend information communication support to the agriculture development programmes in the State through its publications, farm news programme through All India Radio, Special features, through daily news papers, exhibitions

etc. The Doordarsan media was also effectively used.

4.65 The development activities under the World Bank assisted Special Agricultural Development Unit (SADU) during the year included coverage of (i) 4616 hectares under the 'Coconut Rehabilitation Programme' as against 932 hectares in the previous year (2) 1266 hectares under New Planting Programme' as against 412 hectares in the previous year. (3) 2682 hectares under 'Pepper Rehabilitation Programme' as against 587 hectares in the previous year, and (4) loan disbursement of Rs. 553.88 lakhs, Rs. 161.07 lakhs and Rs. 180.82 lakhs respectively for the above three programmes during 1985-86 as against Rs. 188.55 lakhs, Rs. 74.89 lakhs and Rs. 132.05 lakhs only during the previous year.

Soil Survey

4.66. Detailed Soil Survey was conducted in the command area of Periyar Valley, Idamalayar, Kakkadavu, Onattukara problem areas, Kothamangalam taluk, Attappady Valley Irrigation Projects, portions of Kottayam, Palghat taluks, Puravimala Sankin konam, Kunnathumala Tribal Colonies (20-Point Programme), portions of Trichur and Cannanore districts. About 58,128 hectares was covered under detailed soil survey as against 48,707 hectares in 1984-85. The coverage under reconnaissance soil survey was 1,06,000 hectares as against the previous years' 95,547 hectares. Reconnaissance soil survey has been completed in the taluks of Adoor, Kunnathoor, Mavelikara, Karunagappally, Karthikappally, Shertalai, Ampalapuzha, Kuttanad, and Ernad taluks.

Soil Conservation

4.67. The Progress of work under soil and water conservation in arable lands was not encouraging. Only 212 hectares of land was brought under various conservation measures while the coverage during 1984-85 was 679 hectares. Achievement under soil conservation measures in selected water sheds availing 'Institutional Finance' was 92 hectares as against 80 hectares in 1984-85. Only 314 hectares belonging to Scheduled Caste and Tribes were conserved with appropriate soil conservation measures, while corresponding figures for the previous year is 369 hectares.

4.68. An area of 1367 hectares of land was brought under various soil conservation measures in the catchment of River Valley Project, Kundha implemented as a 100% Centrally Sponsored scheme—50% subsidy and 50% loan during 1985-86 as against 1020 hectares during 1984-85.

Land use Planning.

4.69. For the proper utilisation of the remote sensing data generated by the IRS Satellite, a 'User Cell Agency' under the National Natural Resource Management System has been set up in the State Land Use Board.

37/822/MC.

B. Live Stock and Fisheries

Production and distribution of Milk.

4.70. As per the 1982 Live Stock Census the population of live stock and poultry increased to 56.44 lakhs and 150.83 lakhs. When compared to the 1977 census the increases are 6.12% and 12.66% respectively. As a result of the large scale cross breeding programme around 56 per cent of the breedable cows are cross breeds. The improvement in the genetic make up of the cattle contributed to increased milk production, from 12.20 lakh M.T. in 1984-85 to 12.82 lakh M.T. in 1985-86, an increase of 5.08 per cent. The per capita availability of milk is now 126gms. per day as against 122 in 1984-85.

Production of Eggs.

4.71. The main source of egg production in the State is backyard poultry. The total production of eggs in 1985-86 was 1360 millions, an increase of 3.66% over the production of 1312 millions in 1984-85.

Production of Meat

4.72. The meat production during 1985-86 was 24703 M.T. against 22505 M.T. in 1984-85.

Development Programmes

Veterinary Services

4.73. The net work of Veterinary Institutions providing Veterinary care comprised 49 polyclinics, 65 hospitals, 461 dispensaries, 12 mobile dispensaries, 18 mobile Farm Aid Units and one District Veterinary Centre. During 1985-86 a total of 47.17 lakh cases were treated in these institutions and 15.23 lakh live stock and 19.6 lakh poultry were protected against common contagious diseases. The Institute of Animal Health and Veterinary Biologicals at Palode produced 21,27,493 doses of vaccine. In order to tackle infertility problems, especially among cross bred cows 156 'Infertility Camps' were conducted.

4.74. The three Live Stock Management Training Centres established by the Animal Husbandry Department continued to provide in-service training to para-veterinary personnel and extension training to farmers. Accordingly 140 Live Stock Inspectors and 718 farmers were given training. Details of major activities of the A. H. Department are given in Annexure 4.11.

Cattle Breeding

4.75. The Kerala Live Stock Development and Milk Marketing Board produced 17.49 lakh doses of frozen semen during 1985-86, which is 2.20 lakh doses more than the production during 1984-85. The number of doses distributed also increased to 12.86 lakhs from 11.09 lakhs in 1984-85. Production of buffalo semen also increased to 1.65 lakh doses from 1.27 lakh doses. The total quantity of liquid nitrogen

produced was 4.45 lakh litres, against 3.29 in the previous year. Adoption of latest processing technology facilitated a reduction in the strength of breeding bulls from 150 to 118. The total number of artificial inseminations performed during the year are: A. H. Department—8.03 lakhs and Dairy Development Department—3.72 lakhs. The corresponding figures for the previous year are 7.56 and 3.54 respectively. In addition, the K.L.D. and M.M. Board performed 58648 A. I. under the Progeny Testing Scheme, against 37836 during 1984-85.

Dairy Extension

4.76. The Department of Dairy Development continued its extension activities which included house visits, cattle shows, infertility camps, deworming in calves, assistance for construction of cattle sheds etc. Efforts to promote fodder production continued to get priority. Fodder demonstration plots, construction of silopits, supply of fodder seeds etc. were part of these efforts.

Milk Marketing

4.77. The Kerala Co-operative Milk Marketing Federation Limited (MILMA) has organised 641 Amul Pattern Co-operatives (APCO) till the end of 1986, out of which 549 are functional. The Federation runs 7 dairies with the total processing capacity of 1,76,000 lpd. The two Milk Unions meant for the Trivandrum and Ernakulam milk sheds were formed and they took over the procurement and input services from 1-10-1985 and 1-3-1986 respectively. Milma's share of the Urban Milk Market increased to 35.7% in 1985-86 from 28.8% in 1985.

4.78. Details of the performance of the procurement and Input Wing of the Federation and that of the dairies are shown in Table 4.14 and 4.15.

Production of Fish—Marine and Inland

4.79. The total estimated catch of exploited fishery resources in Kerala in 1985 was 3.61 lakh tonnes, including 0.29 lakh tonnes of inland fishes. The share of fisheries sector in the State Income during 1985-86, at current prices was estimated at Rs. 98.30 crores. It provides direct employment to 1.80 lakh active fishermen.

4.80. The total fish production in the State declined from 4.52 lakh tonnes in 1984 to 3.61 lakh tonnes in 1985 showing 20 per cent decrease over the year. In the total fish production of 28.10 lakh tonnes in 1985 at the All India level, the contribution of our State is only about 13 per cent.

Marine Fish Production

4.81. The estimated exploitation of marine fishes along the coast of Kerala, was 3.32 lakh tonnes in 1985 as compared to 4.25 lakh tonnes in the previous year, a decrease of 22 per cent. The State's share of the total marine fish production of the country in 1985 was 19 per cent, whereas the figure for the previous year was 23 per cent. It may be mentioned in this connection that about

two decades back the State was contributing around 40 per cent of the total exploited marine fishery resources in the country. Today, in terms of quantity of fish production while Kerala stands at the level of 1965, the nation has marched far ahead with more than double the production of 1965. Table 4.16 shows the marine fish landing in Kerala and India during selected years. Details of year-wise marine fish landings in the State from 1981 to 1985 are shown in Appendix 4.12.

4.82. The landings of oil sardine, the principal species among pelagic fishes, were estimated at 106.3 thousand tonnes in 1985, accounting for 32 per cent of the total marine fish landings along the coast of Kerala. Though it showed an increase of about 5000 tonnes over the previous year's landings, the State could not attain the 1981 level of production of oil sardine.

4.83. An increase of about 16 per cent in the exploited resources of mackerel was noticed in 1985 as compared to 1984, the estimated figures for the two years being 24.2 and 20.9 thousand tonnes respectively. Since 1981, the landings of mackerel have been showing an increasing trend.

4.84. Among the demersal fishes, prawns formed the major catch, contributing 10.8 per cent of the total marine fish landings in 1985. The landings of prawns increased from 31.1 thousand tonnes in 1984 to 35.9 thousand tonnes in 1985, an increase of about 4.8 thousand tonnes. In the case of prawns also an upward trend in production is noticed since 1981. The particulars of annual landings of selected marine fishes in Kerala (1981-85) are given in Table 4.17.

4.85. The major varieties of pelagic fishes landed along the coast of Kerala include oil sardine, other sardines, meckerel, anchoviella etc. The demersal fishes consist of penacid prawns, elasmobranchs, perches, pomfrets etc. From appendix 4.17 it can be seen that the average landing of marine fishes for the period 1981-85 was 3,48,451 tonnes, whereas the annual landings in 1981 and 1985 were 2,74,395 and 3,32,503 tonnes respectively. It also gives particulars of species-wise landings and percentage distribution.

Inland Fish Production

4.86. The estimated production of inland fishes in Kerala during 1985-86 was 28,578 tonnes as against 27,617 tonnes in 1984-85, an increase of 961 tonnes (3.5 per cent). The share of inland sector to the total fish production of the State is only 7.76 per cent whereas 39 per cent of the total fish production in the country is contributed by inland fisheries. Data on species-wise and percentage distribution of inland fish production in Kerala for 1984-85 and 1985-86 are given in Table 4.18.

Export of Marine Products

4.87. Exports of marine products from Kerala during 1985-86 was 29,580 tonnes valued at Rs. 138.08 crores. The corresponding figures for 1984-85 were 31,570 tonnes and Rs. 148.13 crores. Equipment of marine products from the State during 1985-86 was 35.4 per cent of the total

exports from the country. In terms of value, the State contributed 34.7 per cent of the export earnings of the nation.

4.88. An increasing trend in the boat side price of marine fishes is noticed for almost all varieties. Appendix 4.13 gives the average rates of boatside prices of selected marine fishes for the preceding three years.

Development Programmes

4.89. Phase I of the Integrated Pilot Project for Fisheries Development was introduced from 1985-86 in 15 villages, at the rate of 5 villages each in Trivandrum, Ernakulam and Cannanore districts. The physical achievements under the project at the end of December, 1986 include distribution of 109 crafts, 169 outboard engines and 20,067 kg. of gear, against the targets of 374, 441, and 60315, respectively during a period of two years. These work out to only 29 per cent, 38 per cent and 33 per cent respectively. Renovation of ice plants at Neendakara and Cannanore and provision of three vehicles for transportation of fish and one mobile workshop for repair and maintenance of out board engines were other items implemented under the project. Besides, extension services such as Vidyakendras, mass contact programmes, exhibitions, seminars, film shows, dramas etc., were also organised.

4.90. The fibre glass crafts, developed by the Bay of Bengal Project, proved more efficient and economical for fishing. In Kerala, two such crafts were supplied to two fishermen groups during 1986. Construction of 15 more boats for the scheme was in progress.

4.91. The construction of fishing harbours at Vizhinjam and Neendakara continued during 1985-86. The fish landing centres at Neelaswaram and Munakkakadavu were commissioned and the construction of the landing centre at Kasaragod was completed.

Inland Fisheries

4.92. The achievements under the inland fisheries sector during 1985-86 include production of 20.4 lakh fingerlings, and 50 lakh prawn seeds, stocking of 510 ha. of ponds and tanks with fingerlings and starting construction of a hatchery at Mopla Bay.

4.93. The Commercial ventures in the State under fisheries sector include the fishing fleet, with four trawlers, operating along the coast of Vishakapatnam, the nylon net factory at Ernakulam, ice-cum-freezing plants located at Neendakara, Cochin, Calicut and Cannanore and the fish manure plants at Calicut and Azhikode. The value of prawn and fishes landed by the deep sea fishing trawlers during 1985-86 was Rs. 112.10 lakhs as against Rs. 96.47 lakhs in the previous year, an increase of 16 per cent. New machines worth Rs. 1.50 crores, received as grant-in-aid from Japan have been installed in the net factory. As a result, the sales turn over of the factory increased from 1985-86. The sale of fish and pickles processed and prepared in the ice-cum-freezing plants Rs. 53.63 lakhs in 1984-85 to Rs. 64.95 lakhs in

1985-86 compared to Rs. 8.29 lakhs in the previous year. The sale value of ice during 1985-86 was Rs. 1.37 lakhs, where as the amount from that source during 1984-85 was Rs. 83 thousand. These achievements were mainly due to major renovation works done during the year in the factories at Neendakara and Cannanore. The performance of the fish manure plants also improved during 1985-86, by recording sales turnover of Rs. 6.70 lakhs compared to Rs. 4.04 lakhs during the previous year.

Fishermen Population

4.94. The fishermen population in Kerala in 1985-86 is estimated as 8.77 lakhs. They form nearly 3.2 per cent of the population of the State. Compared to the previous year, the fishermen population has increased by 13,543 (1.57 per cent). Appendix 4.14 shows district-wise distribution of fishermen population in Kerala in 1985-86.

C. FORESTS

4.95. Encroachment of forest land for agricultural, residential and other purpose is a continuing menace to the protection and management of the forests in Kerala. It is reported that prior to January 1, 1977, about 20,814 hectares of forest land was occupied by settlers. In order to ascertain the genuineness of the report Government decided to examine meticulously each and every case of encroachment through a joint verification of records by a team of officers from Forest and Revenue Departments. Accordingly, 16,336 ha. of forest land was verified and 835 hectares were found to have been encroached and occupied only after January 1, 1977.

4.96. The data on category-wise and division-wise area of forests in Kerala is shown in Appendix 4.15. Appendix 4.16 gives species-wise area under forest plantations. The principal items of produce extracted from our forests include timber, firewood, charcoal, cardamom etc. Particulars of item-wise output are given in Appendix 4.17.

4.97. The revenue added to state income by forestry sector amounted to Rs. 42.45 crores in 1985-86 as against Rs. 33.81 crores in 1984-85, an increase of Rs. 8.63 crores which is 26 per cent of the previous year's figure. In this, sale proceeds of timber which constituted 82 per cent of the total income from forestry, increased by 21 per cent from Rs. 28.57 crores to Rs. 34.63 crores. The data on sale proceeds of timber and other forest produce are given in Appendix 4.18.

4.98. Under the Kerala Social Forestry Project, 584.10 lakh seedlings were produced and distributed to public. The achievements under other components of the project include raising large block plantations in 1434 ha, small block plantations in 123 ha, strip plantations in 65 hectares, fuelwood plantations in 61 ha. and medicinal garden in 10 ha. The achievements under the project are generally higher than the physical targets set for the year, except in respect of certain minor items such as raising strip plantations and fuelwood plantations.

TABLE 4.1

Index of Area, Production and Productivity of Crops in Kerala
Base Year: Average of Triennium Ending 1979-80

Item	Area			Production			Productivity		
	Average of 3 years 1976-77 to 1978-79	1984-85	1985-86	Average of 3 years 1976-77 to 1978-79	1984-85	1985-86	Average of 3 years 1976-77 to 1978-79	1984-85	1985-86
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All Crops (A+B)	101.48	100.77	98.95	100.17	91.97	85.79	98.71	91.27	86.70
A. Food grains (1+2)	102.55	89.71	83.53	98.67	97.89	91.53	96.22	109.12	109.58
1. Cereals	102.59	90.11	83.72	98.85	97.46	91.05	96.35	108.16	108.75
2. Pulses	101.53	80.37	79.33	87.06	110.34	109.05	85.75	137.29	137.46
B. Non Foodgrains (3 to 8)	101.00	105.86	106.04	100.52	90.57	84.44	99.52	85.56	79.63
3. Oil Seeds	101.66	106.64	106.29	103.48	92.46	83.37	101.79	86.70	78.45
4. Plantation Crops	95.04	134.92	137.47	93.84	140.49	124.84	98.74	104.13	90.81
5. Condiments and Spices	100.65	101.70	101.14	89.40	95.74	104.92	88.82	94.14	103.73
6. Drugs & Narcotics	82.29	123.64	116.89	89.57	112.41	112.41	108.85	90.92	96.17
7. Fruits & Vegetables	103.20	90.87	90.36	105.94	88.30	82.28	102.65	97.17	91.06
8. Miscellaneous Crops	103.59	109.42	108.88	98.02	101.92	101.23	94.62	93.15	92.97

Note—Index numbers for 1985-86 are based on provisional estimates

Cereals: Rice, Jowar, Ragi and other Cereals and Millets

Oil Seeds: Groundnut, Sesamun. and Coconut

Plantation Crops: Cocoa, Tea, Coffee and Rubber

Condiments and Spices: Pepper, Ginger, Chillies, Turmeric, Arecanut and Cardamom

Drugs and Narcotics: Lemongrass oil and Tobacco.

Fruits and Vegetables: Banana and Plantains, Mango, Jack, Cashewnut, Tapioca and Sweet Potato

Miscellaneous Crops: Sugar (gur) and Cotton.

TABLE 4.2

Area, Production and Productivity of Principal Crops in Kerala

Crop	1984-85			1985-86			Area			Production			Productivity				
	Changes over the previous year			Changes over the previous year			Changes over the previous year			Changes over the previous year			Changes over the previous year				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)				
1. Rice	720379	676281	720379	(-)	7.13	1255902	1179051	(-)	82851	(-)	6.69	1720	1729	(+)	9.8	(+)	0.52
2. Ragi	1200	1367	1367	(+)	13.92	1000	1141	(+)	141	(+)	14.10	833	835	(+)	2	(+)	0.24
3. Pulses	28715	28344	28344	(-)	1.29	20984	20145	(-)	239	(-)	11.17	719	711	(+)	11	(+)	0.14
4. Sigarcane (Gur)	7838	7770	7770	(-)	0.88	42754	42193	(-)	561	(-)	1.31	5454	5380	(-)	74	(-)	0.44
5. Pepper	105835	105835	105835	..	..	17350	29165	(+)	11815	(+)	68.10	164	276	(+)	112	(+)	69.29
6. Ginger	14537	15574	15574	(+)	7.13	41245	40152	(-)	1093	(-)	2.66	2937	2878	(-)	59	(-)	9.13
7. Turmeric	2885	2881	2881	(-)	0.13	5186	5965	(+)	1179	(+)	22.46	1797	1862	(+)	65	(+)	3.62
8. Cardamom*	58769	58769	58769	..	..	2850	2803	(-)	47	(-)	1.65	48	48	..	..	..	..
9. Arecanut**	59089	56778	56778	(-)	3.91	8469	5033	(-)	3536	(-)	41.40	145357	88049	(-)	56708	(-)	39.01
10. Coconut**	687483	687483	687483	..	..	3453	3149	(-)	304	(-)	8.80	5000	4500	(-)	500	(-)	10.00
11. Cashewnut	185869	185717	185717	(-)	0.11	72294	72637	(+)	363	(+)	0.50	538	381	(+)	157	(+)	0.57
12. Banana & other Plantains	51417	51298	51298	(-)	0.23	331192	256214	(-)	74978	(-)	22.64	6441	4995	(-)	1446	(-)	22.45
13. Tapioca	216742	214966	214966	(-)	0.82	3694270	3462263	(-)	231007	(-)	6.25	17044	16111	(-)	933	(-)	5.47
14. Sweet Potato	4635	4601	4601	(-)	0.73	38779	38691	(-)	88	(-)	0.23	8366	9409	(+)	43	(+)	10.51
15. Groundnut	11824	10101	10101	(-)	14.57	11768	10885	(-)	1413	(-)	12.01	995	1025	(+)	30	(+)	13.02
16. Sesamum	14448	14122	14122	(-)	2.26	3632	3496	(-)	136	(-)	3.74	251	248	(-)	3	(-)	1.20
17. Cotton***	6326	6326	6326	..	..	10010	10212	(+)	202	(+)	2.02	1582	1614	(+)	32	(+)	2.02
18. Tea*	35003	NA	NA	..	..	56389	53104	(-)	3225	(-)	5.72	1609	1517	(-)	92	(-)	5.72
19. Coffee*	65641	NA	NA	..	..	43565	23640	(-)	19825	(-)	45.74	664	..	..	..	..	..
20. Rubber*	310200	319900	319900	(+)	3.13	172082	184700	(+)	12608	(+)	7.33	555	577	(+)	22	(+)	3.96

Note: Figures for 1985-86 are provisional.
 * Figures of Commodity Boards and UPASI.
 ** Production in Million Nuts and Productivity in Nuts.
 *** Production and Productivity in Bales of 170 Kg.
 Source: Directorate of Economics and Statistics, Trivandrum.