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**STATE INCOME OF KERALA**  
**1960-61 to 1968-69**

**BUREAU OF ECONOMICS AND STATISTICS**  
**GOVERNMENT OF KERALA**  
1972

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**STATE INCOME OF KERALA  
1960-61 to 1968-69**

**BUREAU OF ECONOMICS AND STATISTICS  
GOVERNMENT OF KERALA  
1972**



STATE OF KENTUCKY  
1900-01 to 1901-02

DEPARTMENT OF REVENUE AND STATISTICS  
GOVERNMENT OF KENTUCKY  
1901



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## FOREWORD

Comparable estimates of State domestic product have assumed considerable importance, especially, in the context of allocation of resources among the States and planning for balanced regional development. Comparability of estimates for the various States is of utmost importance in making them efficient indicators of regional economic growth against the national background. Keeping this in view, the Bureau has prepared a revised series of comparable estimates of State domestic product and related aggregates following the standard methodology recommended by the Central Statistical Organisation for the different States and Union Territories.

The present publication forms the first systematic effort in this direction incorporating the various additional data that have become recently available and setting forth estimates of State domestic product, aggregate as well as sector-wise, alongwith detailed notes on methods of estimation. The foundation for comparable estimates being thus laid, they may be improved in respect of data and methodology during the succeeding years.

State Income Division  
Bureau of Economics & Statistics.

TABLE I

Comparative studies of the effect of the various factors on the rate of growth of the different regions of the country. The results are given in the following table. The figures in parentheses refer to the number of observations. The figures in brackets refer to the number of observations in the different regions. The figures in the columns refer to the different regions. The figures in the rows refer to the different factors. The figures in the cells refer to the different combinations of factors and regions. The figures in the cells are given in the following order: (1) the number of observations in the different regions; (2) the number of observations in the different factors; (3) the number of observations in the different combinations of factors and regions.

State Income Division  
Bureau of Economic Statistics



## STATE INCOME OF KERALA 1960-61 to 1968-69

### INTRODUCTION

This brochure on State Income of Kerala provides the estimates of State Domestic Product for the period 1960-61 to 1968-69. These estimates represent the net domestic product at factor cost originating within the geographical boundaries of the State. This restricted concept has been adopted since reliable data on transfer income are not available.

The scope of the State domestic product is set by the line drawn between economic production and other activities classified as non-economic even though they may yield goods. Economic production includes all market oriented activities (as well as Government) and all primary activities whether marketed or for own consumption and excludes all non-primary production performed by producers outside their own trades and consumed by themselves. Thus, household services rendered by family members and cloth making etc., for own consumption by anyone not in the trade are excluded.

The estimates have been prepared broadly on the lines of the methodology suggested by the Central Statistical Organisation to bring about comparability of estimates among States. The estimates are prepared separately for all the 14 sub-sectors.

The summary results are presented in the following tables.



STATE INCOME OF KENTUCKY 1900-1901 to 1900-1902

PERIODICITY

The figures on State Income of Kentucky for the period 1900-1901 to 1900-1902 are based on the reports of the State Board of Finance for the period 1900-1901 to 1900-1902. These figures represent the net income of the State, less the income of the Federal Government, and the income of the State of Kentucky. The figures are based on the reports of the State Board of Finance for the period 1900-1901 to 1900-1902.

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PER CAPITA INCOME—KERALA 1960-61 to 1968-69  
AT CURRENT AND CONSTANT PRICES

0	*population numbers (1)	net income		per capita income		index of per capita income	
		at current prices	at constant (60-61) prices	at current prices	at constant (60-61) prices	at current prices	at constant (60-61) prices
		Rs. lakhs	Rs. lakhs	Rs.	Rs.	Rs.	Rs.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960-61	16742600	44378	44378	265.06	265.06	100.00	100.00
1961-62	17132600	48548	44994	283.37	262.62	106.91	99.08
1962-63	17531600	50960	46717	290.68	266.47	109.67	100.53
1963-64	17939900	54548	47979	304.06	267.44	114.71	100.90
1964-65	18357700	66403	49167	361.72	267.83	136.47	101.05
1965-66	18785300	78315	50301	416.90	267.77	157.29	101.02
1966-67	19222800	85843	52862	446.57	275.00	168.48	103.75
1967-68	19670500	103793	54906	527.66	279.13	199.07	105.31
1968-69	20128600	105869	58484	525.96	290.55	198.43	109.62

0.1 NET STATE DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF  
ORIGIN—KERALA 1960-61 TO 1968-69 AT CURRENT PRICES

Sl. No.	industry	Rs. Lakhs								
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Agriculture	23334	24957	25682	27027	35349	43265	46560	61084	59290
1.1	Agriculture proper	22693	24110	24861	25939	34583	42554	45719	59727	57701
1.2	Animal Husbandry	641	847	821	1088	766	711	841	1357	1589
2	Forestry and logging	571	509	523	558	673	957	1139	1341	1261
3	Fishing	475	367	392	417	594	531	698	907	1133
	Sub-total	24380	25833	26597	28002	36616	44753	48397	63332	61684
4	Mining and Quarrying	246	223	213	156	170	159	176	198	202
5	Manufacturing regd. Sector	2677	3108	3201	3353	3815	4402	5348	5452	5616
6	Manufacturing: un regd. Sector	2730	3014	2906	3267	3835	4225	4225	4333	4536
7	Construction	695	740	786	836	888	934	980	1098	1225
8	Electricity, Gas and Water Supply	220	259	283	342	393	489	622	621	735
	Sub-total	6568	7344	7389	7954	9101	10209	11351	11702	12314
9	Transport & Communication	1363	1592	1811	1973	2015	2218	2595	2992	3416
9.1	Railways	294	324	328	381	385	356	356	362	368
9.2	Communication	154	190	242	315	292	336	516	582	689
9.3	Transport by other means	915	1078	1241	1277	1338	1526	1723	2048	2359
10	Trade, Storage, Hotels and Restaurants	5453	6531	7213	7931	9023	9966	11185	11588	12548
	Sub-total	6816	8123	9024	9904	11038	12184	13780	14580	15964
11	Banking and Insurance	395	467	626	730	905	1077	1116	1283	1415
12	Real Estate and ownership of Dwellings	1109	1148	1261	1484	1579	1713	1820	1997	2433
13	Public Administration and Defence	1110	1317	1407	1469	1575	2111	2205	2484	2654
14	Other Services	4000	4316	4656	5005	5589	6268	7174	8415	9405
	Sub-total	6614	7248	7950	8688	9648	11169	12315	14179	15907
	Total									
	Net State Domestic Product	44378	48548	50960	54548	66403	78315	85843	103793	105869
	PER CAPITA INCOME—KERALA (Rs.)	265.06	283.37	290.68	304.06	361.72	416.90	446.57	527.66	525.96

\* Population figures for the intercensal period 1961 to 1971 have been obtained by interpolation of the census data.



0.2 NET STATE DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN—  
KERALA (1960-61 TO 1968-69) AT CONSTANT (1960-61) PRICES

		Rs. Lakhs)								
Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
									(P)	(P)
1	Agriculture	23334	22727	23401	23753	23676	23322	24173	24849	26721
1.1	Agriculture Proper	22693	22077	22736	23081	22993	22574	23413	24023	25843
1.2	Animal Husbandry	641	650	665	672	683	748	760	826	878
2	Forestry and Logging	571	573	593	597	642	934	1068	1112	1041
3	Fishing	475	346	352	349	423	310	368	390	427
Sub total		24380	23646	24346	24699	24741	24566	25609	26351	28189
4	Mining and Quarrying	246	220	208	150	157	146	153	164	163
5	Manufacturing: Registered Sector	2677	2928	3284	3468	3769	3934	4484	4590	4736
6	Manufacturing: un-registered Sector	2730	2785	2864	2966	3027	3093	3286	3376	3527
7	Construction	695	725	755	787	821	856	893	931	971
8	Electricity, Gas and Water Supply	220	250	262	262	288	344	325	371	431
Sub total		6368	6908	7373	7633	8062	8373	9141	9432	9828
9	Transport & Communication	1363	1507	1562	1706	1690	1672	1791	1988	2216
9.1	Railways	294	311	301	336	336	303	389	298	287
9.2	Communication	154	182	230	294	257	285	398	431	447
9.3	Transport by other means	915	1014	1031	1076	1097	1084	1104	1259	1482
10	Trade, Storage, Hotels and Restaurants	5453	5806	5917	6044	6277	6432	6708	6944	7214
Sub total		6816	7313	7479	7750	7967	8104	8499	8932	9430
11	Banking and Insurance	395	457	537	604	660	688	672	685	768
12	Real Estate and Ownership of Dwellings	1109	1127	1160	1214	1251	1280	1299	1340	1385
13	Public Administration and Defence	1110	1317	1407	1468	1575	2111	2205	2484	2634
14	Other Services	4000	4226	4415	4611	4911	5179	5437	5682	6250
Sub total		6614	7127	7519	7897	8397	9258	9613	10191	11037
Total										
Net State Domestic Product		44378	44994	46717	47979	49167	50301	52862	54906	58484
PER CAPITA INCOME— KERALA (Rs.)		265.06	262.62	266.47	267.44	267.83	267.77	275.00	279.13	290.55

0.3 INDICES OF STATE DOMESTIC PRODUCT BY INDUSTRY OF ORIGIN—KERALA  
1960-61 TO 1968-69 AT CURRENT PRICES

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
									(P)	(P)
1	Agriculture	100.00	106.96	110.06	115.83	151.49	185.42	199.54	261.78	254.09
1.1	Agriculture proper	100.00	106.24	109.55	113.86	152.40	187.52	201.47	263.20	254.27
1.2	Animal husbandry	100.00	132.14	128.08	169.73	119.50	110.92	131.20	211.70	247.89
2	Forestry and logging	100.00	89.14	91.59	97.72	117.86	167.60	199.47	234.85	220.85
3	Fishing	100.00	77.26	82.53	87.79	125.05	111.79	146.95	190.95	238.53
Sub total		100.00	105.96	109.09	114.86	150.19	183.56	198.51	259.77	253.53

P: provisional



(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4	Mining and quarrying	100.00	90.65	86.59	63.41	69.11	64.63	71.54	80.49	82.11
5	Manufacturing: registered sector	100.00	116.10	119.57	125.25	142.51	164.44	199.76	203.66	209.79
6	Manufacturing, Un-registered sector	100.00	110.40	106.45	119.67	140.48	154.76	154.76	158.72	166.15
7	Construction	100.00	106.47	113.09	120.29	127.77	134.39	141.01	157.99	176.26
8	Electricity, gas & water supply	100.00	117.73	128.64	155.45	178.64	222.27	282.73	282.27	334.09
	Sub total	100.00	111.81	112.50	121.10	138.57	155.44	172.82	178.17	187.48
9	Transport & communication	100.00	116.80	132.87	144.75	147.84	162.73	190.39	219.52	250.62
9.1	Railways	100.00	110.20	111.56	129.59	130.95	121.09	121.09	123.13	125.17
9.2	Communication	100.00	123.38	157.14	204.55	189.61	218.18	335.06	377.92	447.40
9.3	Transport by other means	100.00	117.81	135.63	139.56	146.23	166.78	188.31	223.83	257.81
10	Trade, storage, hotel and restaurants	100.00	119.77	132.28	145.44	165.47	182.76	205.12	212.51	230.01
	Sub total	100.00	119.18	132.39	145.31	161.94	178.76	202.17	213.91	234.21
11	Banking and insurance	100.00	118.23	158.48	184.81	229.11	272.66	282.53	324.81	358.23
12	Real estate and ownership of dwellings	100.00	103.52	113.71	133.81	142.38	154.46	164.11	180.07	219.39
13	Public administration and defence	100.00	118.65	126.76	132.34	141.89	190.18	198.65	223.78	239.10
14	Other services	100.00	107.90	116.40	125.13	139.73	156.70	179.35	210.38	235.13
	Sub total	100.00	109.59	120.20	131.36	145.87	168.87	186.20	214.38	240.50
	Total net state domestic product	100.00	109.40	114.83	122.92	149.63	176.47	193.44	233.88	238.56

0.4 INDICES OF STATE DOMESTIC PRODUCT BY INDUSTRY OF GRIGIN—KERALA  
1960-61 to 1968-69 AT CONSTANT (1960-61) PRICES

Sl. No.	Industry	1967-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68 (p)	1968-69 (p)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Agriculture	100.00	97.40	100.29	101.80	101.47	99.95	103.60	106.49	114.52
1.1	Agriculture proper	107.00	97.29	100.19	101.71	101.32	99.48	103.17	105.86	113.88
1.2	Animal husbandry	100.00	101.40	103.74	104.84	106.55	116.69	118.56	128.86	136.97
2	Forestry and logging	100.00	100.35	103.85	104.55	112.43	163.57	187.04	194.75	182.31
3	Fishing	100.00	72.84	74.11	73.47	89.05	65.26	77.47	82.11	89.89
	Sub total	100.00	96.99	99.86	101.31	101.48	100.76	105.04	108.08	115.62
4	Mining and quarrying	100.00	89.43	84.55	60.98	63.82	59.35	62.20	66.67	66.26
5	Manufacturing: registered sector	100.00	109.38	122.67	129.55	140.79	146.96	167.50	171.46	176.91
6	Manufacturing: un-registered sector	100.00	102.01	104.91	108.64	110.88	113.30	120.37	123.66	129.19
7	Construction	100.00	104.32	108.63	113.24	118.13	123.17	128.49	133.96	139.71
8	Electricity, gas and water supply	100.00	113.64	119.09	119.09	130.91	156.36	147.73	168.64	195.91
	Sub total	100.00	105.18	112.26	116.06	122.75	127.48	139.17	143.60	149.63
9	Transport and communication	100.00	110.56	114.60	125.17	123.99	122.67	131.40	145.85	162.58
9.1	Railways	100.00	105.78	102.38	114.29	114.29	103.06	98.30	101.36	97.62
9.2	Communication	100.00	118.18	149.35	190.91	166.88	185.06	258.44	279.87	290.26

p: Provisional.



9.3	Transport by other means	100.00	110.82	112.68	117.60	119.89	118.47	120.66	137.60	161.97
10	Trade, storage, hotel and restaurants	100.00	106.47	108.51	110.84	115.11	117.95	123.01	127.34	132.29
	Sub total	100.00	107.29	109.73	113.70	116.89	118.90	124.69	131.04	138.35
11	Banking and insurance	100.00	115.70	135.95	152.91	167.09	174.18	170.13	173.42	194.43
12	Real estate and ownership of dwellings	100.00	101.62	104.60	109.47	112.80	115.42	117.13	120.83	124.89
13	Public administration and defence	100.00	118.65	126.76	132.25	141.89	190.18	198.65	223.78	237.30
14	Other services	100.00	105.65	110.38	115.28	122.78	129.48	135.93	142.05	156.25
	Sub total	100.00	107.76	113.68	119.40	126.96	139.98	145.34	154.08	166.87
	Total net state domestic product	100.00	101.39	105.27	108.11	110.79	113.35	119.12	123.72	131.79

0.5 PERCENTAGE DISTRIBUTION OF STATE DOMESTIC PRODUCT BY  
INDUSTRY OF GRIGIN—KERALA 1960-61 TO 1968-69  
AT CURRENT PRICES

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(P) (10)	(P) (11)
1	Agriculture	52.58	51.40	50.40	49.55	53.23	55.24	54.24	58.85	56.00
1.1	Agriculture proper	51.14	49.66	48.79	47.55	52.08	54.33	53.26	57.54	54.50
1.2	Animal Husbandry	1.44	1.74	1.61	2.00	1.15	0.91	0.98	1.31	1.50
2	Forestry and logging	1.29	1.05	1.03	1.02	1.01	1.22	1.33	1.29	1.19
3	Fishing	1.07	0.76	0.77	0.76	0.89	0.68	0.81	0.88	1.07
	Sub Total	54.94	53.21	52.20	51.33	55.13	57.14	56.38	61.02	58.26
4	Mining and Quarrying	0.55	0.46	0.42	0.28	0.26	0.20	0.21	0.19	0.19
5	Manufacturing registered sector	6.03	6.40	6.28	6.15	5.75	5.62	6.23	5.25	5.31
6	Manufacturing un-registered sector	6.15	6.21	5.70	5.99	5.78	5.40	4.92	4.17	4.28
7	Construction	1.57	1.52	1.54	1.53	1.34	1.19	1.14	1.06	1.16
8	Electricity, Gas and Water Supply	0.50	0.53	0.56	0.63	0.59	0.63	0.72	0.60	0.69
	Sub Total	14.80	15.12	14.50	14.58	13.72	13.04	13.22	11.27	11.63
9	Transport and Communication	3.07	3.28	3.55	3.62	3.03	2.83	3.02	2.88	3.23
9.1	Railways	0.66	0.67	0.64	0.70	0.58	0.45	0.41	0.35	0.35
9.2	Communication	0.35	0.39	0.47	0.58	0.44	0.43	0.60	0.56	0.65
9.3	Transport by other means	2.06	2.22	2.44	2.34	2.01	1.95	2.01	1.97	2.23
10	Trade, Storage, Hostels and Restaurants	12.29	13.45	14.15	14.54	13.59	12.73	13.03	11.16	11.85
	Sub Total	15.36	16.73	17.70	18.26	16.62	15.56	16.05	14.04	15.08
11	Banking and Insurance	0.89	0.96	1.23	1.34	1.36	1.38	1.30	1.24	1.34
12	Real estate and ownership of dwellings	2.50	2.36	2.47	2.72	2.38	2.18	2.12	1.92	2.30
13	Public Administration and Defence	2.50	2.71	2.76	2.69	2.37	2.70	2.57	2.39	2.51
14	Other Services	9.01	8.89	9.14	9.18	8.42	8.00	8.36	8.11	8.88
	Sub Total	14.90	14.92	15.60	15.93	14.53	14.26	14.35	13.66	15.03
	Total net State Domestic Product	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

P: Provisional.



0.6 PERCENTAGE DISTRIBUTION OF STATE DOMESTIC PRODUCT BY  
INDUSTRY OF ORIGIN-KERALA 1960-61 TO 1968-69  
AT CONSTANT (1960-61) PRICES

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(P)	(P)
1	Agriculture	52.58	50.51	50.09	49.51	48.15	46.36	45.73	45.25	45.69
1.1	Agriculture proper	51.14	49.07	48.67	48.11	46.76	44.87	44.29	43.75	44.19
1.2	Animal Husbandry	1.44	1.44	1.42	1.40	1.39	1.49	1.44	1.50	1.50
2	Forestry and logging	1.29	1.27	1.27	1.24	1.31	1.86	2.02	2.03	1.78
3	Fishing	1.07	0.77	0.05	0.73	0.86	0.62	0.70	0.71	0.73
	Sub Total	54.94	52.55	52.11	51.48	50.32	48.84	48.45	47.99	48.20
4	Mining and quarrying	0.55	0.49	0.45	0.31	0.32	0.29	0.29	0.30	0.28
5	Manufacturing registered Sector	6.03	6.51	7.03	7.23	7.66	7.82	8.48	8.36	8.10
6	Manufacturing ; un-registered Sector	6.15	6.19	6.13	6.18	6.16	6.15	6.22	6.15	6.03
7	Construction	1.57	1.61	1.62	1.64	1.67	1.70	1.69	1.70	1.66
8	Electricity, Gas and water supply	0.50	0.56	0.56	0.55	0.59	0.68	0.61	0.67	0.73
	Sub Total	14.80	15.36	15.79	15.91	16.40	16.64	17.29	17.18	16.80
9	Transport and Communication	3.07	3.35	3.34	3.55	3.43	3.32	3.39	3.62	3.79
9.1	Railways	0.66	0.69	0.64	0.70	0.68	0.60	0.55	0.54	0.49
9.2	Communication	0.35	0.40	0.49	0.61	0.52	0.57	0.75	0.79	0.76
9.3	Transport by other means	2.06	2.25	2.21	2.24	2.23	2.16	2.09	2.29	2.54
10	Trade, storage, hostels and restaurants	12.29	12.90	12.67	12.60	12.77	12.79	12.69	12.65	12.34
	Sub Total	15.36	16.25	16.01	16.15	16.20	16.11	16.08	16.27	16.1
11	Banking and Insurance	0.89	1.02	1.15	1.26	1.34	1.37	1.27	1.25	1.31
12	Real estate and ownership of dwellings	2.50	2.50	2.48	2.53	2.55	2.54	2.46	2.44	2.37
13	Public administration and Defence	2.50	2.93	3.01	3.06	3.20	4.20	4.17	4.52	4.50
14	Other services	9.01	9.39	9.45	9.61	9.99	10.30	10.29	10.35	10.69
	Sub Total	14.90	15.84	16.09	16.46	17.08	18.41	18.19	18.56	18.87
	Total net state domestic product	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

0.7 NET DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF  
ORIGIN-INDIA AT CURRENT PRICES

Rs. Crores

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(P)	(P)
1.	Agriculture	6570	6771	6905	8015	9846	9523	11491	13859
2.	Forestry and logging	174	198	206	247	260	298	383	470
3.	Fishing	77	86	86	95	108	124	137	173
	Sub-total	6821	7055	7197	8357	10214	9945	12011	14502

P: Provisional.



4.	Mining and quarrying	144	149	178	204	204	234	252	290	316
5.	Manufacturing: reg. sector	1071	1176	1298	1518	1686	1839	1970	2041	2192
6.	Manufacturing: un-regd. Sector	785	864	942	1082	1182	1225	1325	1460	1556
7.	Construction	620	653	701	792	894	942	1072	1265	1289
8.	Electricity, gas and water supply	68	77	87	109	128	144	177	200	243
	sub-total	2688	2919	3206	3705	4094	4384	4796	5256	5596
9.	Transport & communication	569	640	719	787	856	930	1034	1134	1313
9.1	Railways	252	281	313	353	360	400	426	421	470
9.2	Communication	63	72	80	91	100	113	132	147	174
9.3	Transport by other means	254	287	326	343	396	417	476	566	669
10.	Trade, storage, hotels & restaurants	1301	1389	1494	1705	2069	2235	2663	3067	3132
	Sub-total	1870	2029	2213	2492	2925	3165	3697	4201	4445
11.	Banking and insurance	158	183	224	249	288	341	362	416	459
12.	Real estate & ownership of dwellings	386	403	447	528	562	596	638	659	700
13.	Public administration & defence	538	593	668	778	890	989	1099	1247	1393
14.	Other services	905	966	1026	1099	1236	1366	1533	1714	1841
	Sub-total	1987	2145	2365	2654	2976	3292	3632	4036	4393
	Total net domestic product	13366	14148	14981	17208	20209	20786	24136	28633	28936

0.3 NET DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN INDIA  
AT 1960-61 PRICES

Rs. CRORES

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Agriculture	6570	6617	6439	6606	7224	6145	6094	7193	7165
2.	Forestry and logging	174	184	187	205	202	226	252	259	275
3.	Fishing	77	80	76	83	91	93	95	94	104
	Sub-total	6811	6881	6702	6894	7517	6464	6441	7546	7544
4.	Mining and quarrying	144	152	172	189	180	205	212	221	227
5.	Manufacturing: regd. sector	1071	1178	1291	1421	1543	1572	1579	1593	1664
6.	Manufacturing: un-regd. sector	785	849	886	949	1007	990	1005	1051	1092
7.	Construction	620	627	661	727	745	714	739	811	786
8.	Electricity, gas & water supply	68	79	88	107	118	131	140	152	171
	Sub-total	2688	2885	3098	3393	3593	3612	3675	3828	3940
9.	Transport & communication	569	614	659	709	737	779	803	843	
9.1	Railways	252	270	287	311	314	340	346	347	366
9.2	Communication	63	69	76	85	88	96	102	109	113
9.3	Transport by other means	254	275	296	313	335	343	355	387	410
10.	Trade, storage, hotels & restaurants	1301	1387	1457	1572	1679	1684	1730	1788	1851
	Sub-total	1870	2001	2116	2281	2416	2463	2533	2631	2740

P. Provisional

Source: Estimates of National Income—CSO.



11. Banking and insurance	158	179	192	206	210	218	218	222	249
12. Real estate & ownership of dwellings	386	395	412	437	443	458	477	487	496
13. Public administration & defence	538	579	654	729	820	857	905	944	1039
14. Other services	905	939	981	1018	1062	1101	1143	1184	1225
Sub-total	1987	2092	2239	2390	2535	2634	2743	2837	3009
Total Net Domestic product	13366	13859	14155	14958	16061	15173	15392	16842	17233

## 1. STATE DOMESTIC PRODUCT FROM AGRICULTURE

Agriculture Sector is divided in to two sub-sectros viz.

(1) agriculture proper comprising production of agricultural commodities and (ii) animal husbandry consisting of livestock rearing and hunting. Estimates of net product are separately derived for the subsectors and then added together to give the net product from the broad sector of agriculture including livestock products and hunting. (vide Table. 1. 10 & 1. 11)

### AGRICULTURE (*Proper.*)

#### Cover age.

Agriculture (proper) covers the activities of growing of all field crops and tree, coffee and rubber plantations and growing of trees on farmyards for firewood, timber etc. It also includes agricultural and horticultural services such as harvesting, threshing, hand pounding of cereals, preparation for marketing; operating irrigation systems including those operated by government; rental income from farm buildings and farm machinery and interest on agricultural debt. The distributive services rendered by the producers in carrying their farm produce to markets for direct sale to wholesalers are regarded as ancillary activities in the sector.

#### Methodology.

The gross value of out put is obtained by evaluating all agricultural commodities at their primary wholesale prices during the peak marketing period. The aggregate value of out put is adjusted for lower value of food grains procured by government, value added by hand pounding of paddy, wastage in actual harvesting and storage, etc. The cost of various inputs is deducted from the adjusted gross value to get the gross product. The major items of inputs considered are seed, chemical fertilisers, organic manure, pesticides and insecticides, irrigation charges, cost of diesel oil, electricity charges, cost of feed of working animals, marketing charges, cost of repairs and maintenance of fixed assets and other operational costs.

The gross product from Government irrigation systems is included in the gross domestic product. The net domestic product is derived by deducting the cost of depreciation from the gross product.

Data on out-turn of most of the major crops are available in the annual season and crop report for

the state. Prices collected by the Bureau are used for the evaluation of a large number of commodities. The available data are also supplemented by information collected from various other sources.

### OUT-TURN AGRICULTURAL COMMODITIES

#### Source of Data:

Statistics of area and production of crops published in the annual Season and crop Reports of the State form the basic data for the estimation of SDP from agriculture. Data on area are available for all important crops. Estimates of production are regularly published for the following items: paddy, jowar, ragi; other cereals, tur, other pulses, sessamum, groundnut, coconut, sugarcane, cotton, tea, coffee, tobacco, cardamom, chillies, arcanut, pepper, ginger, turmeric, banana, other plantains, cashewnut, tapioca, rubber and lemongrass oil. Details of other important sources of data are enumerated below:

Commodity	Source
Sugarcane (consumed by factories)	Sugar factories in the State
Tea (raw leaves)	Schedules of the Annual Survey of Industries.
Coffee	Coffee Board
Palmgur	Khadi & Village Industries Board, Kerala.
Lemongrass oil	Lemongrass Research Station, Odakkali.
Mangoes (yield rate)	Report on Marketing of Mangoes in India 1956.

Estimates of production of toddy are built up on the data contained in the annual administration reports of the Excise Department. The outturn of some of the by-products like straw and stalks is estimated by applying the rates suggested by the C. S. O. Production of grass is estimated from total consumption worked out at feed rates of livestock given by the Milk Yield Survey of 1964-65. Estimates on most of the less important items are largely based on conventional rates and information collected by adhoc enquiries.

#### Estimation of Out-turn:

For the purpose of estimation all agricultural commodities are classified into three groups, namely, (i) major crops to which data on outturn are available, (ii) unspecified crops and (iii) by products and miscellaneous products.



**Major Crops:**

The out-turn data given in Season and Crop Reports are directly used for the following products:— Jowar, ragi, tur, coconut, groundnut, seshamum, tobacco, cardamom, arecanut, pepper, ginger, turmeric, banana, other plantains, cashewnut, a pioca and rubber. Out put of other major commodities is estimated as described in the succeeding paragraphs

**Paddy:**

Production of rice furnished in the Season and Crop Report for the crops of autumn, winter and summer is converted into equivalent quantity of paddy at the rate\* adopted by the Bureau.

**Sugarcane:**

Data on the annual consumption of sugarcane are collected from the three sugar factories in the State. The total quantity of sugarcane purchased by the factories from farms within the State is deducted from the annual out-turn of sugarcane to obtain the quantity of cane used for gur production and chewing. Three per cent of this quantity is considered to be used for chewing and the rest for making gur. The out-turn of gur is estimated from the quantity of sugarcane used for gur production \*

**Palmgur:**

The area under 'other sugars' furnished in land utilisation statistics refers to the area under palmyrah and sago palms tapped for gur-making. As proper data are not available on yield rates of palmgur, production data are taken from the administration reports of the Khadi and Village Industries Commission and the Khadi and Village Industries Board of Kerala.

The Out-turn of palmgur given in the administration reports include the quantities produced by (i) societies financed by the K & V. I. Board, (ii) societies not financed by the Board and (iii) individuals. The production of palm sugar and palm candy are converted into equivalent quantities of palmgur and included in the total estimate of out-turn.

**Cotton:**

Out-put of cotton lint given in Season and Crop Reports is converted into corresponding quantity of kapas at the rate adopted by the Bureau. \*

**Tea:**

Data on the input of raw tea leaves and output of manufactured tea are available in the schedules of the Annual Survey of Industries relating to the factories. The average rates of the quantity of raw tea consumed to the corresponding out-turn of manufactured tea is used to estimate the quantity of raw tea leaves from the entire annual production of manufactured tea.

**Coffee:**

Statements on the quantity of Coffee tendered to the pool by Kerala growers are furnished by the Coffee Board. The quantity of coffee includes receipts into the pool as well as small quantities retained by growers for their domestic use and seed purposes. Annual out-turn of coffee is available by the varieties of Arabica and Indica for the years 1960-61 to 1967-68. All India ratios\* of production are employed to split up the out-turn of Arabica into Plantation and cherry and Robusta into parchment and cherry. The annual estimates of out-turn given in Season and Crop Report are used for the years 1967-68 and 68-69.

**Chillies:**

Estimate of out-turn of chillies is available only for some of the years. For other years estimates are prepared on the basis of available yield rates.

**Banana and other plantains:**

Areas under banana and other plantains are clubbed together for the years 1960-61 to 1966-67, but separate estimates are available for 1967-68. The area under the two varieties are split up for all the years by applying the ratio for 1967-68.

**Mangoes:**

The Report on the Marketing of Mangoes in India gives the total production of mangoes in Kerala during the year 1956 and the average production for four years ending 1950. The average of the two estimates is taken as the average yield for the year 1953-54. Production of mangoes for other years is estimated at this rate.

**Sweet potatoe:**

Estimates of out-turn of sweet potatoe is based on information collected from the various districts.

**Lemongrass oil:**

Data on Lemongrass oil supplied by the Lemongrass Research Station is used for evaluation.

\* One tonne of paddy per 657 tonne of rice—consolidated Results of Crop Estimation Surveys on Paddy & Tapioca 1967-68.

\* The yield of gur is reckoned as 10 p. c. of the quantity of cane used (by weight.)

\* Quantity of kapas is taken to be equal to three times the quantity of lint—Season & Crops Reports of the State.

\* Average ratios of production

Arabica—Plantation to cherry 66:34 year 1966-67.

do. 68:32 ,, 67-68

Robusta—parchment to cherry 5:95 1966-67&67-68

Source: Coffee Board.



**Unspecified crops :**

All crops other than those dealt with above come under this group. Reasonable estimates of production are not available for the commodities that come under this group. However, their approximate value of output is estimated (vide notes on gross value).

**By-products & Miscellaneous:****Straw and Stalks:**

Production is estimated at the rates suggested by the C.S.O. \*, in respect of paddy, jowar and ragi as well as sticks of cotton seed and arhar.

**Grass:**

The quantity of green grass produced depends largely on the number of cattle and buffaloes. Therefore, annual production of green grass and other green fodder is estimated by using the feed rates @ furnished by the Milk Yield Survey, 1964-65. The quantity of green fodder fed to cattle and buffaloes includes sugarcane tufts besides green grass. Green fodder fed to goats consists of leaves of various kinds of trees.

**Bagasse:**

The average production of bagasse forms 30 per cent of the quantity of sugarcane crushed for making juice (1). The total out-turn is estimated at this rate from the quantity of sugarcane used for production of gur. The quantity of bagasse to be reckoned as agricultural production is estimated at 5 per cent of the total out-turn, the remaining quantity being treated as fuel consumed during gur making (2)

* Crop	Production of straw (tonnes hect.)
Paddy	1.5
Jowar	0.654
Ragi	0.810
Small millets & other cereals	0.510
Crop	Production of stalks & straw
..	
cotton	0.922 tonnes/hect.
Sessamum	0.461
	tonnes per
arhar	6.67 tonne of grain

@ Vide notes on livestock products.

(1) Schedules of Annual Survey of Industries, 1964-65

(2) National Income Statistics—1961-CSO.

**Farmyard-wood :**

The out-turn of farm yard-wood from trees outside forests for the year 1957-58 is apportioned to Kerala State from All India Estimates (.). It is carried forward to later years on the basis of the movement of combined area under (3) miscellaneous tree crops and groves and (ii) area under fruits other than bananas and grapes.

**Palm leaves:**

Estimates of production of coconut palm leaves (woven) is based on the average stand per hectare available in the Coconut Survey Report for the year 1965-66.

**Toddy:**

Administration Reports of Excise Department contain statements on the annual number of trees (by type) marked for tapping of toddy. Production estimate of toddy is based on the number of trees tapped and data on average yield rates of toddy furnished by the Excise Department and that obtained by ad-hoc enquiries.

Area under the various crops and Estimates of production of agricultural commodities are furnished in Tables Nos. 1.1 and 1.2

**Prices of Agricultural Commodities:**

Agricultural commodities are generally evaluated at wholesale prices prevailing in the primary markets during the peak marketing period. The average price of each item for a district is worked out by taking a simple average of the prices in the various centres in the district.

The State average price is obtained on weighting the district-wise prices by corresponding out-turn figures.

Primary wholesale prices or farm prices during the peak marketing period are available for the major products, namely, paddy, coconut, sugarcane, arecanut, pepper (black), ginger (dry), tapioca, banana and cashewnut.

For paddy, State average prices are first calculated separately for the three seasons (autumn, winter and summer) and they are again weighted by the production during each season to get the annual average price at State level.

Farm price of sugarcane is collected from the three sugar factories in the State. The average price received by the farmer exclusive of cost of transportation is used for estimation.

The total annual production of arecanut is split up into ripe nuts and tender nuts. Annual State average price of ripe nuts and tender nuts are weighted by the corresponding out-turn to obtain the annual average price of arecanut for the State.

Prices of cotton, tobacco and sweet potatoe are collected from the districts. As cotton is grown mostly in Palghat district, average price of cotton kapas for the district is used for evaluation.

Cultivation of tobacco is confined to Cannanore district. The out-turn of tobacco is evaluated at weighted average price of cured leaf, stalks and stems etc., collected from the district.

Secondary wholesale prices are available for sessamum, groundnut, cardamom, sugarcane gur, palmgur and turmeric. Their Primary, wholesale prices are estimated from secondary wholesale prices by applying ratios\* of primary wholesale price to secondary wholesale price derived for the years for which both kinds of prices are available.

Commodity	Ratio of primary wholesale price to secondary whole sale price (%)
Sessamum ..	64
Groundnut ..	76
Sugarcane-gur ..	86
Palm-gur ..	74
Turmeric ..	80

(3) Standard Methodology-CSO



The price used for evaluation of rubber is estimated by deflating Kottayam price of rubber by 28 per cent to account for processing etc. @

For the years 1960-61 to 1966-67, production of tea (green leaves) is evaluated at average prices implicit in the value of input of raw tea leaves calculated from A. S. I. schedules. The average price of tea leaves for 1967-68 and 1968-69 are estimated by projecting the price for 1966-67 with the help of the index of weighted average auction price of manufactured tea.

Retail price of plantations (other than banana) is available for all years. The primary wholesale price is estimated at 65 per cent of the retail price. Price of mangoes is available for the years 1961-62 to 1964-65. Prices for other years are estimated by using the index of price of plantations.

#### BY-PRODUCTS AND MISCELLANEOUS PRODUCTS

##### Straw:

Farm (retail) price of paddy straw is available for the years 1965-66 onwards. The prices for previous years are estimated by applying the index of farm price of paddy. Farm wholesale price of straw is worked out at 90 p. c. of farm retail price to allow for trade and transport margins. The production of straw of jowar and ragi is quite negligible. Therefore the total out turn of straw is evaluated at farm wholesale price of paddy straw.

##### Green grass and fodder leaves:

The total production of grass is evaluated at average price of grass used for the estimation of cost of feed of live stock. Other green fodder is also evaluated at the price of grass.

##### Sticks:

For the year 1960-61, sticks of arhar, cotton and seshamum are evaluated at prices given in the standard methodology of the CSO. These prices are adjusted for latter years by applying the index of the price of firewood used in forestry sector.

##### Bagasse:

The price of bagasse implicit in the value of output of sugar factories (obtained from A. S. I. schedules) is adopted for the year 1964-65. This is adjusted for other years with the index of price of firewood.

##### Palm leaves (coconut):

Farm price of coconut palm leaves (woven) is available for the years 1961-62 to 1965-66. The prices for other years are estimated by applying the index of wages of female agricultural labourers.

##### Toddy:

The cost of production of toddy including the lease value of palms comes to about 55 per cent of the selling price. Producer's price of toddy is estimated at this rate for all the years.

##### Timber and fuel wood:

Timber and fuel wood produced from farm yards are evaluated at producer's prices used for evaluation of forest produce.

Prices used for evaluation of agricultural commodities are given in Table No. 1.3.

#### Gross value of Output at current prices:

Commodities for which estimates of production are available are evaluated at prices discussed in the previous paragraphs. In respect of unspecified crops area statistics are available by groups such as other oilseeds, other fibres etc. Their value is estimated by applying average value of yield per hectare of major products in their groups.

#### Adjustments in gross value:

The total production of paddy is first evaluated at farm price and adjustment is made for lower value of grains procured by Government.

Value added by hand pounding is estimated by applying average wages per worker engaged in dehusking of paddy to the estimated number of workers engaged in the activity. The number of workers engaged in dehusking of paddy as their principal means of livelihood is estimated at 90 percent of the number of women workers in the household sector of minor group 200 I.S.I.C. 1961 census. From the data contained in the N.S.S. Report No. 94 (14th round), the proportion of workers engaged in small scale manufacture as their subsidiary means of livelihood is found to be 46.09 p.c. of those engaged in small scale manufacture as their principal means of livelihood. This rate is employed to estimate the number of workers engaged in dehusking of paddy as their subsidiary means of livelihood. The total wages of workers engaged in dehusking of paddy is estimated at average annual earnings per worker calculated from the administration reports of the Khadi & Village Industries Board, Kerala. The working force in the minor group 200 of 1961 is projected to later years at average growth rates for the period 1951 to 1961.

The total production of coconut with husk is evaluated at farm prices and deduction is made for loss of production of nuts from palms tapped for toddy.

#### Adjustment for under/noon-reporting:

Adjustment is not made in this respect as the figure of area and production are estimated from Land utilisation surveys.

Gross values of agricultural commodities at current prices are furnished in table no. 1.4.

#### Inputs:

The various items of inputs are estimated as shown in the following paragraphs. Their values are given in table no. 1.6.

##### 1. Seed:

The quantity of paddy used for preparing seed is estimated \* and evaluated at current prices of paddy.

Seed rates estimated from the N.S.S. report No. 32 (5th to 7th rounds, South India) are inflated by 10 p. c. to account for driage, wastage in storing etc. They are used to estimate the quantity of seed used for jowar, ragi, small-milletts and other cereals, tur, urid, moong, other pulses, sesamum, groundnut and cotton.

The number of coconuts and arecanuts kept for seed purposes is estimated from the data given in survey reports on coconut and arecanut.

@-Standard Methodology of the CSO.

\* @ 111 kg./hectare.



Seed rate of ginger is estimated from the data given in the report on Distribution of agricultural production. It is properly inflated to include wastage during storing etc. The same rate is used for turmeric also.

The seed rate for other vegetables (mainly consisting of yams and tubers) is taken to be 15 p. c. of production.

## 2. Chemical fertilisers:

Data on the quantity and value of chemical fertilisers distributed in the state are collected from the Agriculture Department. For the years 1960-61 to 1962-63 the quantity of plantation mixtures is estimated from that for 63-64 by applying the index of quantity of 'ryot mixtures' and 'straight fertiliser'. These quantities are evaluated at average price of plantation mixtures furnished by the Fertilisers and Chemicals, Travancore (FACT.).

## Organic Manures:

Among organic manures animal dung is the only item that can be reasonably estimated. But compost, green leaves, etc. form important items of manure widely used by cultivators. Therefore, the quantity of organic manures used is estimated by crop in order to get an over all estimate of organic manures including cowdung, compost and other items. The rates of application of farm yard manure for different crops are estimated from data available in reports of crop cutting surveys and other studies.\*

## Pesticides:

Estimates on area under plant protection and value of pesticides applied in the state furnished by the Central Statistical Organisation are used for the years 1961-62 to 1965-66. The area and value for 1961-62 is taken for 1960-61 also. Estimates of area and value for the years 1966-67 to 1968-69 are obtained by adjusting those for 1965-66 with indices of area under paddy and gross value of paddy respectively for the years.

## Irrigation charges:

The amount of annual revenue on account of irrigation charges paid by farmers is collected from the Board of Revenue. The current demand for each year is treated as input,

## Diesel oil:

The number of oil engines, power tillers and tractors in the state are furnished in the livestock census Reports for the years 1961 and 1966. The corresponding number of the items for the intercensal and post censal years are estimated assuming geometric growth rate and an annual deletion of 19 percent (notes on standard methodology—Central Statistical Organisation) in their number. Annual consumption of diesel oil is worked out at the rates suggested by the Central Statistical Organisation. The total annual consumption of diesel oil for the years 1960-61 to 1962-63 is evaluated at average retail prices given in the Report of the Transport High level committee, 1964. Retail prices collected from dealers are used for other years.

## Electricity charges:

The quantity and value of electricity sold for purposes of irrigation and dewatering is taken from the Annual Accounts of the Kerala Electricity Board.

## Cost of feed of livestock:

Cost of feed of bovines used for work in farms is deducted as an input in agriculture.

## Marketing charges:

It is estimated at, 518 percent of gross value as suggested by the Central Statistical Organisation.

## Adjustment in cost of inputs:

The cost of major inputs require to be adjusted to include some important items which cannot be separately evaluated owing to paucity of data. For this purpose, ten percent of the reported value of major inputs is added as 'Miscellaneous costs' so as to cover under reporting of quantity of fertilisers and pesticides and non-inclusion of higher value of seeds purchased by farmers, cost of transportation of fertilisers etc.

## COST OF REPAIRS AND MAINTENANCE OF FIXED ASSETS AND DEPRECIATION

The Central Statistical Organisation has furnished state wise cost of repairs, maintenance and other operational costs as well as depreciation of fixed assets for agriculture sector including livestock products. It is split up in the proportion of gross value for the sub sectors of agriculture (proper) and animal husbandry.

## GROSS PRODUCT

The gross product is obtained by deducting cost of inputs from the adjusted gross value of output. The gross product from operation of government irrigation systems is added to the gross product of agricultural commodities to get the total gross product of agriculture proper.

The gross product from irrigation may include the sum total of (i) compensation of employees, (ii) interest payment, (iii) operating surplus and (iv) allowance for depreciation. The operating surplus for irrigation works is negative and it is taken as zero, the deficit being treated as irrigation subsidy. Allowance for depreciation is not given in the budget documents. Therefore, the sum of compensation of employees and interest payments is shown as the gross product from government irrigation systems.

## NET PRODUCT

The net state domestic product is derived by deducting allowance for depreciation from the gross product. Estimates of net product of agriculture (proper) for the years 1960-61 to 1968-69 at current prices are furnished in table no. 18.

## Value at constant (1960-61) prices:

All commodities are revalued at 1960-61 prices. Those for which production estimates are not available are evaluated by applying the corresponding value of yield per hectare for the year 1960-61 to the area estimates of the other years also. Unspecified items in

\*Report on coconut survey—1962-65.

Report on arecanut survey—1959-62.

Study on cost of cultivation of paddy—1969-70.



the following groups are estimated in this manner: oilseeds, fibres, drugs and narcotics, spices and condiments, fruits and vegetables and non-food crop).

Gross product from government irrigation systems for the base year is projected to other years with the help of index of area irrigated by government canals.

Items of inputs having production estimates are evaluated at 1960-61 prices. Value of insecticides and

pesticides at constant prices is estimated at the value of the item applied per hectare during the base year.

Irrigation charges for the year 1960-61 is adjusted for other years by using the index of area irrigated by government canals.

Table no. 1:9 gives gross value of agricultural commodities, value of inputs and net product at 1960-61 prices for the years 1960-61 to 1968-69.

### 1.1 AREA UNDER AGRICULTURAL CROPS IN KERALA

1960-61 TO 1968-69

hectares

Sl. No.	Name of crops	1960-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Paddy	779514	753272	803283	805708	801121	802329	799438	809544	873871
2	Jowar	1474	1421	1422	1411	1321	1235	1235	1235	1235
3	Ragi	5577	5208	5214	5220	5183	5097	5106	5086	4989
4	Small millets and other cereals	5850	6747	6733	6733	6720	6717	6686	6569	6562
5	Tur	8939	8388	8825	8817	8545	8545	8501	7531	7487
6	Urid	4071	4066	4068	4067	3991	3971	3978	3347	3357
7	Moong	3606	3602	3603	3649	3645	3649	3666	4191	4201
8	Other pulses	27538	27505	27520	27353	27414	27147	27402	27561	27626
9	Sesamum	12096	11957	11922	12000	12007	11950	12070	11163	11995
10	Groundnut	16042	15998	16042	14523	14523	15215	13745	13714	13118
12	Cocconut	501146	505212	539677	545409	558991	586313	609583	6387.2	686063
13	Other oil seeds	9923	11038	11448	11582	11619	11654	11502	11047	7991
14	Sugar cane	9153	9230	9339	9493	9510	9193	8773	8033	7893
15	Other sugars	5054	5217	5145	5144	5360	5576	5846	9300	8479
16	Kapas	9829	9590	7736	7968	8695	7160	6325	6625	6299
17	Other fibres	36	36	36	36	36	36	36	36	36
18	Tea	37660	37439	38582	38435	39356	39470	39799	39282	41158
19	Coffee	16811	18813	19186	20037	21733	23602	25152	26468	27678
20	Tobacco	743	704	704	705	705	705	712	698	670
21	Other drugs & narcotics	1407	1407	1407	1407	1406	1406	1406	1406	1406
22	Cardamom	28629	28705	28705	28705	28684	28684	47026	47026	47026
23	Dry chillies	3321	3325	3325	3297	3294	3095	3185	3192	3192
24	Black pepper	99833	99922	99317	99459	99552	99695	99695	99702	98827
25	Dry ginger	12013	12054	12077	11968	11973	11847	11793	11795	11423
26	Turmeric	4669	4848	4836	4619	4614	4467	4443	4443	4874
27	Arecanut	54298	56784	55342	56739	59488	64478	71231	76044	81182
28	Other spices & condiments	18644	18775	18956	18879	19317	19317	19317	19317	19317
29	Banana	7905	7593	7714	7676	8036	8495	8106	8785	9849
30	Plantain	36553	35115	35672	35498	37163	39284	37483	40633	41739
31	Mangoes	59626	61230	62677	63713	63317	62217	61976	64479	62223
32	Chshewnut	54360	55070	82191	82432	85974	87366	90559	94990	96019
33	Sweet potatoe	8038	8090	8366	8923	10194	8211	8617	8797	7418
34	Tapioca	242388	236859	221789	210069	209371	229684	244647	297646	296661
35	Other fresh fruits	60160	61202	61015	70768	65989	66352	78623	66848	63911
36	Other dried fruits	24	24	24	24	24	24	24	24	24
37	Other Vegetables	25033	26470	25933	25366	29141	28654	30577	36670	31976
38	Rubber	122960	133180	138016	143017	146952	149634	153357	162932	168584
39	Lemon grass oil	27000	27000	26000	26000	24000	24000	24036	24036	24036
40	Green manure & Other non-food crops	30021	56918	57028	62720	64483	68853	71162	82556	66959



1.2 PRODUCTION OF AGRICULTURAL COMMODITIES—KERALA  
1960-61 TO 1968-69

		tonnes								
Sl. No.	Items	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Paddy	1624859	1528098	1663942	1716899	1706823	1518248	1650018	1710650	1904648
2	Jowar	640	620	620	594	558	450	450	450	450
3	Ragi	8006	7624	7615	7547	7457	7084	7113	7046	7062
4	Small millets and other cereals	2906	3355	3351	3236	3128	3121	3106	3058	3051
5	Tur	4272	4178	4203	4130	4005	4005	3950	3570	3509
6	Urid	1344	1314	1323	1312	1262	1245	1252	1257	1264
7	Moong	1486	1453	1462	1506	1537	1548	1567	1573	1582
8	Other pulses	10444	10214	10276	10179	10257	10103	10302	10343	10402
9	Sesamum	2586	2580	2577	2596	2399	2365	2400	2629	3961
10	Gorund nut	13797	13750	13533	20774	21838	25220	23601	24675	24029
11	Cocconut	* 3220	3247	3305	3262	3278	3293	3425	3593	3834
12	Sugarcane	124347	132443	150100	120162	162590	195024	147216	62956	89701
13	Gur	25655	24460	26691	32073	27075	21446	40180	43677	4134
14	Other sugars	20006	6980	3383	9766	6931	6413	12370	4353	2135
15	Kapas	5667	5499	4023	4287	5319	3744	3486	3489	3333
16	Tea	186927	173403	179519	186727	160727	175018	213148	208603	216292
17	Coffee	9764	5601	7803	9374	8664	9195	14370	11458	1198 <sup>8</sup>
18	Tobacco	990	915	904	905	920	911	920	902	911
19	Cardamom	1280	1283	1283	1283	1606	1606	1606	1606	1055
20	Dry chillies	2225	2225	2258	2239	2240	2024	2105	2121	2069
21	Black pepper	27027	26975	24462	22422	22228	21685	21406	21064	20437
22	Dry ginger	11264	11364	11457	11291	11323	11190	11054	11117	10839
23	Turmeric	4181	4352	4313	3912	3910	3766	3747	3725	3647
24	Arecanut ripe	* 4874	5097	5237	5369	5635	6070	6659	7067	7554
	do. under dried	5629	5386	6046	6199	6508	7102	7913	8663	9311
25	Banana	65101	56334	77012	74956	78135	77421	67060	64008	71760
26	Plantain	262753	261010	250322	250860	263251	283701	277836	310274	318719
27	Mangoes	378029	388198	397372	403941	401430	494456	392928	408797	394494
28	Cashew nuts	84634	85803	92048	92316	96463	98025	101607	106578	107732
29	Sweet potatoe	39888	40756	43579	48660	51582	41566	42654	43545	36695
30	Tapioca	2912049	2845624	2664573	2523599	2763197	3095658	3409668	4198357	4081115
31	Rubber	23045	24982	29056	33790	40065	46953	50495	59978	66473
32	Lemon grass oil	1711	1726	1632	1642	1602	1602	1602	1602	1602
33	Straw and stalks	1201273	1161251	1237766	1241473	1234357	1236076	1231644	1247029	1345366
34	Grass	1208257	1222957	1236650	1254844	1261101	1271856	1281850	1291059	1300474
35	Fodder (leaves)	660430	672330	683341	693470	702714	711074	718551	725145	730853
36	Cotton, arhar & sesamum sticks	43047	42141	39939	39918	40312	37719	37017	30989	35899
37	Toddy	** 1166	1175	1180	1207	1249	1252	1289	2058	2290
38	Fire wood	5455511	5481004	5965371	6118330	6118330	5990864	5786920	5582976	5247997
39	Industrial wood	@186276	187147	203685	208908	208908	204556	197592	190629	179191

\* Million nuts.

\*\* Lakh litres.

@ Cubic metres.



1.3 PRODUCER'S PRICE OF AGRICULTURAL COMMODITIES—KERALA  
1960-61 TO 1968-69

		Rs. per tonne								
	Items	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Paddy	394	425	397	423	625	833	946	1317	1040
2	Jowar	183	190	179	175	265	294	317	477	442
3	Ragi	366	380	358	350	531	588	633	953	884
4	Tur	378	377	499	461	660	858	1086	1785	1358
5	Urid	360	377	452	417	699	659	1148	1195	1162
6	Moong	530	475	760	647	1059	978	1075	1402	1204
7	Sesamum	895	912	758	852	1070	1252	1619	1207	1360
8	Ground nut	562	612	566	597	741	983	1202	1009	977
9	Coconut	215	214	248	240	269	392	368	454	393
10	Sugarcane	44	43	38	45	51	50	55	80	91
11	Sugarcane gur	523	396	601	957	734	694	966	1615	1245
12	Palm gur	622	471	549	663	763	804	941	1333	1374
13	Kapas	1150	1240	1360	1400	1500	1560	1780	1800	1800
14	Tea	559	543	618	603	636	661	521	615	573
15	Coffee	2228	2462	2748	3294	3628	4008	4449	4182	4138
16	Tobacco	1668	1220	1220	1711	1458	2173	2431	2179	2157
17	Cardamom	15992	11560	10344	11256	23392	39536	36568	32832	34760
18	Dry chillies	1814	1659	2066	1654	1548	3245	2946	1655	2917
19	Black Pepper	3349	2834	2333	2526	3488	3355	3305	3135	3089
20	Dry Ginger	1126	1024	1641	1668	3110	2552	2354	2303	5049
21	Turmeric	811	1055	1265	1405	1130	770	1026	1976	1734
22	Arecanut ripe	* 27	37	26	35	38	36	38	39	44
	Do. tender dried	3032	4159	2989	3942	4289	4072	4332	4407	4719
23	Banana	400	500	513	532	623	694	807	931	989
24	Plantain	169	194	220	220	240	298	350	389	442
25	Mangoes	46	52	75	90	108	134	158	175	198
26	Cashewnut	779	608	561	767	889	1054	1215	1265	1307
27	Sweet Potatoe	100	98	109	123	171	174	194	256	244
28	Tapioca	74	113	100	84	192	197	172	228	217
29	Rubber	2466	2262	2187	2226	2558	3375	3949	2632	3677
30	Lemongrass oil	10800	18800	11300	6800	7400	7450	17200	25700	47545
31	Straw	50	54	51	54	80	106	117	119	123
32	Grass	13	14	12	14	20	27	30	31	32
33	Toddy	** 452	452	508	508	569	664	774	897	953
34	Firewood	23	23	24	25	24	24	24	31	34
35	Industrial wood	*** 75	72	81	77	60	78	78	86	97

1.4 GROSS VALUE OF AGRICULTURAL COMMODITIES—KERALA  
1960-61 TO 1968-69 AT CURRENT PRICES

		Value Rs. '000								
	Items	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I.	Cereals	643217	652978	664085	729562	1070860	1270151	1566936	2261016	1987872
1	Paddy	639640	649330	660648	726249	1065924	1264939	1561305	2252627	1980081
2	Jowar	117	118	111	104	148	132	142	214	199
3	Ragi	2928	2893	2726	2643	3959	4162	4504	6716	6243
4	Small millets and other cereals	532	637	600	566	829	918	985	1459	1349

- \* Rs. per 1000 nuts.  
\*\* Rs. per 1000 litres.  
\*\*\* Rs. per cubic metre.



II.	Pulses	6356	6319	7338	7068	9127	12045	14136	17536	14921
5	Tur	1615	1577	2098	1904	2642	3436	4289	6372	4765
6	Urid	483	495	597	547	832	821	1437	1502	1469
7	Moong	787	690	1111	974	1628	1514	1685	2205	1905
8	Other pulses	3471	3557	3532	3643	4775	6274	6725	7457	6732
III.	Oil seeds	702286	705811	829514	797060	903115	1320933	1295413	1662072	1535569
9	Sesamum	2313	2353	1954	2210	2566	2961	3885	3174	5387
10	Ground nut	7756	8410	7656	12397	16192	24799	28363	24895	23476
11	Cocanut	690907	693591	818233	780843	882568	1290667	1260819	1631241	1504980
12	Other oil seeds	1310	1457	1671	1610	1789	2506	2346	2762	1726
IV.	Sugars	31331	18841	23638	42524	33827	29700	58585	81395	62572
13	Sugar cane	5464	5860	5731	5366	8666	9654	8119	5035	8181
14	Gur	13423	9693	16050	30683	19873	14890	38826	70557	51458
15	Other sugars	12444	3288	1857	6475	5288	5156	11640	5803	2933
V.	Fibres	6519	6822	5474	6005	7982	5844	6209	6283	6002
16	Kapas	6517	6819	5471	6002	7979	5841	6205	6280	5999
17	Other fibres	2	3	3	3	3	3	4	3	3
VI.	Drugs and Narcotics	128208	109286	133709	14538	135265	154915	177661	178569	175918
18	Tea	104492	94158	110943	112596	102222	115687	111050	123291	123935
19	Coffee	21753	13790	21442	30874	31435	36853	63932	47917	49606
20	Tobacco	1651	1116	1103	1548	1341	1980	2237	1965	1965
21	Other drugs & narcotics	312	222	221	310	267	395	442	396	412
VII.	Spices & condiments	291805	337150	266980	324573	419234	440714	473638	490300	566320
22	Cardamom	20470	14831	13271	14441	37568	63495	58728	52728	36672
23	Dry chillies	4036	3690	4664	3703	3467	6567	6202	3511	6035
24	Black pepper	90513	76447	57070	56638	77531	72753	70747	66036	63130
25	Dry ginger	12681	11636	18797	18833	35228	28560	26026	25605	51723
26	Turmeric	3393	4592	5456	5497	4418	2900	3944	7361	6324
27	Arecanut	147885	211234	155356	211170	242381	247257	289585	316264	378032
28	Other spices and condiments	12827	14720	11866	14291	18641	19182	18506	18795	21384
VIII.	Fruits & Vegetables	408525	523817	498944	476272	865005	1008416	1047619	1488269	1453087
29	Banana	26022	28140	39523	39868	43701	53733	54124	59581	70997
30	Plantain	44290	50764	55176	55295	6146	84605	97265	120680	140874
31	Mangoes	17294	20380	29605	36254	43254	52759	62083	71539	78307
32	Cashewnut	65945	52137	51647	70847	85794	103275	123418	134889	140855
33	Sweet potatoe	4004	3998	4735	5998	8805	7243	8272	11148	8954
34	Tapioca	214502	321186	266884	211764	531197	611083	587724	957519	883888
35	Other fresh fruits	25388	29254	35754	43452	47116	57594	77994	73934	81550
36	Other dried fruits	15	11	8	10	12	14	16	17	18
37	Other vegetables	11065	17947	15612	12784	36980	38110	36723	59002	47644
IX.	Miscellaneous products	393202	420317	439805	462919	524507	655947	752027	869648	1061696
38	Rubber	56829	56509	63545	75217	90467	158466	199405	157862	244421
39	Lemongrass oil	18479	32449	18442	11166	11855	11935	27554	41171	76167
40	Green manure and other non food crops	1294	2527	2556	2866	3307	4570	4723	6084	4849
41	Straw & stalks	60112	63056	61250	67412	28576	131605	143548	148372	165157
42	Grass	15514	17060	16225	17505	25840	34734	38353	39442	40978
43	Fodder (leaves)	8480	9379	8965	9674	14399	19419	21499	22153	23029
44	Cotton, arhar and sesamum sticks	242	237	219	227	227	206	202	239	275
45	Toddy	52737	53103	59901	61283	71074	83131	99785	184594	218190
46	Fire wood	125477	126063	143169	152958	146840	143781	138886	173072	178432
47	Industrial wood	13971	13475	16498	16086	12534	15955	15412	16374	17382
48	Palm leaves	40032	46426	46997	48478	49350	52115	62603	80186	92733
49	Bagarse	35	33	38	47	38	30	57	79	83
	Reported gross value	2611449	2781341	2869487	2991311	3969702	4898665	5392224	7055088	6863957



1.5 GROSS VALUE OF AGRICULTURAL COMMODITIES—KERALA  
[AT CONSTANT (1960-61) PRICES] 1960-61 TO 1968-69

(Rs. '000 )

Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
<b>I Cereals</b>	<b>TOTAL</b>	643217	606992	661499	679727	675361	600037	651181	647704	753235
1. Paddy		639640	603476	657988	676266	671960	596793	647929	644485	750012
2. Jowar		117	113	113	109	102	082	082	082	082
3. Ragi		2928	2789	2785	2760	2727	2591	2602	2577	2583
4. Small millets and other cereals		552	614	613	592	572	571	568	560	558
<b>II Pulses</b>	<b>TOTAL</b>	6356	6218	6255	6215	6192	6141	6198	6074	6077
5. Tur		1615	1580	1589	1561	1514	1514	1493	1350	1327
6. Urid		483	472	476	472	454	448	450	452	454
7. Moong		787	770	774	798	814	820	830	833	838
8. Other pulses		3471	3396	3416	3384	3410	3359	3425	3439	3458
<b>III Oilseeds</b>	<b>TOTAL</b>	702286	708505	695551	710978	714737	721369	749165	784064	840390
9. Sesamum		2313	2308	2306	2323	2146	2116	2147	2352	3544
10. Groundnut		7756	7730	7608	11679	12277	14178	13268	13872	13508
11. Coconut		690907	696999	684240	695540	698896	703711	732393	766537	822395
12. Other oil seeds		1310	1468	1397	1436	1413	1364	1357	1303	943
<b>IV Sugars</b>	<b>TOTAL</b>	31331	22960	22664	28135	25929	23779	35186	28327	26896
13. Sugarcane		5464	5820	6595	5280	7452	8569	6469	2766	3941
14. Gur		13423	12798	13965	16781	14166	11221	21023	22853	21627
15. Other sugars		12444	4342	2104	6074	4311	3989	7694	2708	1328
<b>V Fibres</b>	<b>TOTAL</b>	6519	6326	4628	4932	6120	4308	4011	4014	3835
16. Kapas		6517	6324	4626	4930	6117	4306	4009	4012	3833
17. Other fibres		2	2	2	2	3	2	2	2	2
<b>VI Drugs and</b>										
Narcotics	<b>TOTAL</b>	128208	111242	119545	127076	110991	120145	153061	143946	149455
18. Tea		104492	96932	100351	104380	89846	97835	119206	116609	120907
19. Coffee		21753	12479	17385	20885	19303	20486	32016	25528	26709
20. Tobacco		1651	1526	1508	1510	1535	1520	1535	1505	1520
21. Other drugs and Narcotics		312	305	301	301	307	304	304	304	319
<b>VII Spices and</b>										
condiments	<b>TOTAL</b>	291805	298965	294834	291193	304434	315573	332116	344467	348045
22. Cardamom		20470	20518	20518	20518	25683	25683	25683	25683	16872
23. Dry chillies		4036	4036	4096	4061	4063	3671	3818	3847	3753
24. Black pepper		90513	90388	81812	75011	74265	72379	71429	70241	68142
25. Dry ginger		12681	12794	12898	12711	12753	12598	12445	12516	12203
26. Turmeric		3393	3531	3500	3174	3173	3056	3040	3023	2959
27. Arecanut		147885	154649	158892	162899	170975	184452	202720	215944	230980
28. Other spices and condiments		12827	13049	13118	12819	13522	13734	12981	13213	13136
<b>VIII Fruits and</b>										
vegetables	<b>TOTAL</b>	408525	401532	403759	395247	425559	453226	479402	534481	529949
29. Banana		26022	22562	30968	30060	31219	30977	27054	25692	28514
30. Plantain		44290	43996	42194	42285	44374	47821	46832	52300	53723
31. Mangoes		17294	17760	18179	18480	18365	18047	17977	18702	18048
32. Cashewnut		65915	66819	74063	74493	77926	79218	82018	86285	87347
33. Sweet potatoes		4004	4091	4374	4884	518	4172	4282	4371	3683
34. Tapioca		214502	209609	196272	183776	205538	229459	251831	300258	294611
35. Other fresh fruits		25388	2448	26232	30148	28640	29194	33650	28344	28120
36. Other dried fruits		15	15	11	11	11	11	11	11	11
37. Other vegetables		11055	11832	11462	11110	14308	14327	15747	18518	15892



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
IX Miscellaneous products	393202	399021	427537	445724	463664	480219	487371	544107	570325	
38. rubber	56829	61606	71652	83326	98800	115786	124521	14796	163922	
39. Lemongrass oil	18479	18641	17626	17734	17302	17302	17302	17302	17302	
40. Green manure and other non food crops	1294	2453	2458	2703	2779	2968	3057	3558	2886	
41. Straw and stalks	60112	58109	61938	62123	61767	61853	61631	62401	67322	
42. Grass	15514	15703	15879	16112	16193	16331	16459	16577	16628	
43. fodder (leaves)	8480	8633	8774	8904	9023	9130	9226	9311	9384	
44. Cotton, arhar and sesamum sticks	242	237	224	224	227	212	208	174	202	
45. Toddy	52737	53149	53363	54600	56475	56638	58293	93087	103594	
46. Fire wood	125477	126063	137204	140722	140722	137790	133099	128408	120704	
47. Industrial wood	13971	14036	15276	15668	15668	15348	14819	14297	13439	
48. Palam leaves	40032	40358	43107	43565	44651	46832	48622	51027	54816	
49. Bagasse	35	33	36	43	37	29	54	59	56	
Reported gross value	2611449	2561761	2636272	2689227	2732967	2724797	2897691	3037184	3228207	
Value added by handpounding of cereals	1112	1158	1206	1256	1308	1362	1419	1478	1539	
Less adjustment for lower value of procured food grains	..	..	..	..	5262	9877	10983	13703	17129	
Less adjustments of value of cocoanut owing to inclusion of toddy	1191	1195	1206	1234	1287	1283	1317	2304	2605	
Adjusted gross value	2511370	2561724	2636272	2689249	2727726	2714929	2886310	3022655	3210012	

1.6 VALUE OF AGRICULTURAL INPUTS—KERALA  
1960-61 TO 1968-69 AT CURRENT PRICES

Rs. '000

Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Seed	44205	46399	48185	51010	75189	98603	107964	151284	131526	
2 Chemical fertilizer	15723	26058	31089	41215	56294	69470	147896	199957	230702	
3 Organic manure	137063	141599	142342	142962	171533	204150	236027	307456	312441	
4 Pesticides	2100	2100	1900	1900	2500	2900	19986	29953	41072	
5 Irrigation charges	1921	1921	2020	1181	1020	1523	1701	1294	1283	
6 Diesel oil	2451	2802	3598	4360	5266	6345	7640	9183	10542	
7 Electricity charges	1186	1275	1369	1437	1567	1894	2570	3852	4121	
8 Cost of feed of livestock	44310	47568	48009	47462	61362	76692	84525	93628	93499	
9 Marketing charges	13527	14407	14863	15496	20519	25211	27724	36134	35253	
10 Repairs & maintenance	16003	16805	17652	18426	20253	22186	23788	25767	27179	
11 Miscellaneous costs	27849	30093	31103	32545	41550	50897	65982	85851	88762	
12 Total inputs	306338	331027	342130	357994	457053	559871	725803	944359	976380	
13 Depreciation	41478	44112	47224	50740	58355	67023	72012	79169	83391	



1.7 VALUE OF AGRICULTURAL INPUTS—KERALA  
1960-61 TO 1968-69 AT CONSTANT (60-61) PRICES

Rs. '000

Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Seeds	44205	43183	45771	45883	45968	46327	46505	48201	50759	
2 Chemical fertilizers	15723	26043	31325	41380	59828	69061	119796	140190	148388	
3 Organic manure	137063	136530	134297	139323	159561	173300	186005	220028	200602	
4 Pesticides	2100	3171	1501	627	1625	1885	12991	19469	26697	
5 Irrigation charges	1921	2036	2132	2248	2344	2440	2593	2651	2728	
6 Diesel oil	2451	2802	3207	3672	4207	4822	5530	6345	7284	
7 Electricity charges	1186	1148	1190	962	1437	1557	1976	2384	2802	
8 Cost of feed of livestock	44310	44052	43729	43343	42890	42383	41813	41196	40622	
9 Marketing charges	13527	13270	13656	13930	14130	14064	14954	15657	16628	
10 Repairs & maintenance	16003	16231	16796	17161	17167	17288	17543	17746	18901	
11 Miscellaneous costs	27849	28847	29360	30853	34912	37313	44971	51387	51541	
12 Total inputs	306338	317313	322964	339382	384069	410440	494677	565254	566952	
13 Depreciation	41478	42824	46074	48455	51408	54425	58600	62986	66937	

1.8. NET STATE DOMESTIC PRODUCT FROM AGRICULTURE PROPER—KERALA  
1960—61 TO 1968—69 AT CURRENT PRICES

(Rupees thousands)

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-63	1968-69
1	Reported gross value of output from Agriculture	2611449	2781341	2869487	2991311	3969702	4898665	5392224	7055088	6863957
2	Value added by hand pounding of cereals	1112	1201	1285	1500	1449	1392	1717	2725	2838
3	Less adjustments for lower value of procured food grains	..	..	..	..	8337	30765	39606	77292	56472
4	Less adjustments for value of coconut owing to inclusion of toddy	1191	1190	1391	1376	1615	2344	2260	4876	4765
5	Adjusted gross value	2611300	2781352	2869371	2991435	3961199	4866948	5352075	6975645	680558
6	Less inputs	306338	331027	342130	357994	457053	559871	725803	944359	976380
7	Gross product from agriculture	2305032	2450325	2527251	2633441	3504146	4307077	4626272	6031286	5829178
8	Add gross product from operation of Government irrigation systems	5742	4823	6073	11233	12532	15391	17615	20564	24343
9	Total gross product	2310774	2455148	2533324	2644674	3516678	4322468	4643887	6051850	5853521
10	Less allowance for depreciation	41478	44112	47224	50740	58355	67023	72012	79169	83391
11	Net product from agriculture	2269296	2411036	2486100	7593934	3458323	4255445	4571875	5972681	5770130



1.9. NET STATE DOMESTIC PRODUCT FROM AGRICULTURE PRORER—KERALA  
1960-61 TO 1968-69 AT CONSTANT (1960-61) PRICES

(Rupees thousands)

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	Reported gross value of output from Agriculture	2611449	2561761	2636272	2689227	2732967	2724797	2897691	3037184	3228207
2	Value added by hand pounding of cereals	1112	1158	1206	1256	1308	1362	1419	1478	1539
3	Less adjustments for lower value of procured food grains	..	..	..	..	5262	9877	10983	13703	17129
4	Less adjustments of value of cocoanut owing to inclusion of toddy	1191	1195	1206	1234	1287	1283	1317	2304	2605
5	Adjusted gross value	2611370	2561724	2636272	2689249	2727726	2714999	2886810	3022655	3210012
6	Less inputs	306338	317313	322964	339382	384069	410440	494677	565254	566952
7	Gross product from agriculture	2305032	2244411	2313308	2349867	2343657	2304559	2392133	2457401	2643060
8	Add gross product from operation of Government irrigation systems	5742	6087	6374	6718	7005	7292	7752	7924	8154
9	Total gross product	2310774	2250498	2319682	2356585	2350662	2311851	2399885	2465325	2651214
10	Less allowance for depreciation	41478	42824	46074	48455	51408	54425	58600	62986	66937
11	Net product from agriculture	2269296	2207674	2273608	2308130	2299254	2257426	2341285	2402339	2584277

1.10 NET PRODUCT FROM AGRICULTURE—KERALA (INCLUDING LIVESTOCK PRODUCTS, HUNTING & TRAPING) 1960-61 TO 1968-69 AT CURRENT PRICES

(Rs. Thousands)

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Gross value of out put from Agriculture proper	2611370	2781352	2869381	2991435	3961199	4866948	5352075	6975645	6805558
2	Gross value of out put from livestock	227599	264004	284074	303813	321476	375883	429771	495458	530502
3	Gross value of out put from hunting and trapping	153	184	271	89	75	203	205	198	371
4	Gross value of out put from Agriculture proper, livestock, hunting and trapping	2839122	3045540	3153726	3295330	4282757	5243034	5782051	7471301	7336431
5	Less inputs	466384	506328	539677	547973	697291	859723	1065905	1298699	1341381
(i)	Seed	44205	46399	48185	51010	75189	98603	107964	151284	131526
(ii)	Chemical fertilizers	15723	26058	31089	41215	56294	69470	147896	199957	230702
(iii)	Organic manure	137063	141599	142342	142962	171533	204150	236027	307456	312441
(iv)	Feed of livestock	199119	216685	238802	230137	294105	367968	414707	436597	446790
(v)	Irrigation charges	1921	1921	2020	1188	1020	1523	1701	1294	1283
(vi)	Marketing charges	17367	18996	19869	20926	26367	32073	35732	45672	45343
(vii)	Electricity charges	1186	1275	1369	1437	1567	1894	2570	3852	4121
(viii)	Pesticides and insecticides	2100	2100	1900	1900	2500	2900	19986	29953	41072
(ix)	Diesel oil	2541	2802	3598	4360	5266	6345	7640	9183	10542
(x)	Current repairs and maintenance of fixed assets and other operational costs	17400	18400	19400	20300	21900	23900	25700	27600	29300
(xi)	Miscellaneous costs	27849	30093	31103	32545	41550	50897	65982	85851	88762



6	Gross product from Agriculture proper livestock, hunting and trapping	2372738	2539212	2614049	2747364	3585459	4383311	4716146	6172602	5994544
7	Add gross product from operation of Government irrigation systems	5742	4823	6073	11233	12532	15391	17615	20564	24343
8	Total gross product	2378480	2544035	2620122	2758597	3597991	4398702	4733761	6193166	6018887
9	Less allowance for depreciation	45100	48300	51900	55900	63100	72200	77800	84800	89900
10	Net product	2333380	2495735	2568222	2702697	3534891	4326502	4655961	6108366	5928987

1.11 NET PRODUCT FROM AGRICULTURE—KERALA INCLUDING LIVESTOCK PRODUCTS, HUNTING & TRAPPING 1960-61 TO 1968-69 AT CONSTANT (1960-61) PRICES

		Rs. Thousands								
Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Gross value of out put from Agriculture proper	2611370	2561724	2636272	2639249	2727726	2714999	2886810	3022655	3210012
2	Gross value of out put from livestock	227599	231813	236249	240812	243692	253321	256787	266002	273210
3	Gross value of out put from hunting and trapping	153	124	190	103	174	182	203	73	197
4	Gross value of out put from Agriculture proper livestock, hunting and trapping	2839122	2793661	2872711	2930164	2971592	2968502	3143800	3288730	3483419
5	Less inputs	466384	480359	488751	508799	555087	584079	670439	743265	746920
(i)	Seed	44205	43183	45771	45883	45968	46327	46505	48201	50759
(ii)	Chemical fertilizer	15723	26043	31325	41380	59828	69061	119796	140190	148388
(iii)	Organic manure	137063	136530	134297	139323	159561	173300	186005	220028	200602
(iv)	Feed of livestock	199119	201697	203987	207100	208197	209949	211530	212932	214152
(v)	Irrigation charges	1921	2036	2132	2248	2344	2440	2593	2651	2728
(vi)	Marketing charges	17367	17202	17681	18051	18308	18525	19442	20378	21467
(vii)	Electricity charges	1186	1148	1190	962	1437	1557	1976	2384	2802
(viii)	Pesticides and insecticides	2100	3171	1501	627	1625	1885	12991	19469	26697
(ix)	Diesel oil	2451	2802	3207	3672	4207	4822	5530	6345	7284
(x)	Current repairs and maintenance of fixed assets and other operational costs	17400	17700	18300	18700	18700	18900	19100	19300	20500
(xi)	Miscellaneous costs	27849	28847	29360	30853	34915	37313	44971	51387	51541
6	Gross product from Agriculture proper livestock, hunting and trapping	2372738	2313302	2383960	2421365	2416505	2384423	2473361	2545465	2736499
7	Add gross product from operation of Government irrigation systems	5742	6087	6374	6718	7005	7292	7752	7924	8154
8	Total gross product	2378480	2319389	2390334	2428083	2423510	2391715	2481113	2553389	2744653
9	Less allowance for depreciation	45100	46700	50200	52800	56000	59500	63800	68500	72500
10	Net product	2333380	2272689	2340134	2375283	2367510	2332215	2417313	2484889	2672153



## 2. ANIMAL HUSBANDRY

Animal Husbandry is the sub-sector contained in the agricultural sector besides agriculture proper. It covers activities relating to production of livestock, namely (i) breeding and rearing of animals and poultry including veterinary services, (ii) production of milk and milk products, (iii) slaughtering, preparation and dressing of meat, (iv) production of raw hides and skins, eggs, honey etc., and (v) hunting and trapping.

The out-turn of livestock products is estimated on the basis of the data on livestock population furnished by the quinquennial livestock censuses. Estimates of livestock population are prepared for the intercensal and postcensal years by fitting a second degree curve to the data available from the livestock censuses during the years 1951, 1956, 1961 and 1966. Out-turn of livestock products is derived by applying average yield rates of the various products to number of livestock and poultry in the appropriate category.

Yield rates of most of the livestock products are supplied by the Central Statistical Organisation. The Milk Yield Survey for Kerala, 1964-65 (I. A. R. S.) has made available a lot of useful information on livestock and poultry. Estimation of output of livestock products is largely based on the results of the survey, such as yield rates of milk and milk products, rates of feed of animals etc. Livestock products are evaluated at producers prices derived from retail prices published in the Bulletin of Animal Husbandry Statistics\* and those collected by the Bureau. Other important sources of information utilised are Post Livestock Census Sample Survey, Kerala 1966, Poultry Survey for Kerala, 1960-61 (I. C. A. R.) and data collected from Trivandrum Central Dairy.

The gross value of out-put from hunting and trapping is added to the gross value of livestock products.

The inputs in animal husbandry consist of cost of feed of livestock (other than working animals) marketing charges and cost of repairs and maintenance and other operational costs. The quantities of different items of feeds are worked out by categories of animals and kind of feed by applying the feed rates of livestock given by the Milk Yield Survey. Marketing charges are estimated at rates given in the standard methodology. Cost of repairs and maintenance and cost of depreciation in animal husbandry are worked out from the total estimates for the agricultural sector as already indicated.

All livestock products and items of inputs are evaluated at their 1960-61 prices to derive the net product at constant prices.

### ESTIMATION OF PRODUCTION

#### Milk and milk products:

Production of milk is estimated by using the following formula adopted by the Central Statistical Organisation.

#### Annual production of milk:

No. of average annual average daily 365  
animals in × percentage of × yield of milk ×  
milk dry animals in milk per animal 100  
in milk

The number of animals in milk and dry in respect of cows, buffaloes and goats is available among the

estimates of livestock population. Average annual percentage of animals in milk and average daily yield of milk are obtained from the results of the Milk Yield Survey 1964-65, for Kerala State. (I. A. R. S.)

Kind of animal		Cow	Buffaloe	Goat
Average annual percentage of animals in milk	%	45	59	35
Average daily yield of milk per animal in milk	Kg.	1.11	2.01	0.266

#### Utilitation rates of milk

Percentages of the quantities of milk consumed as such and the quantity converted into ghee and butter out of the total annual production are estimated by combining the results of the Post Livestock Census Sample Survey of 1966 and Milk Yield Survey 1964-65 (I. A. R. S.). The rates of quantities converted into ghee and butter are derived by splitting up the total quantity of milk converted in the ratio 14:9, the ratio of the percentages of conversion into ghee and butter for the State suggested by the Central Statistical Organisation.

#### Rates of production of ghee and butter:

Average rate of production of ghee and butter from milk is estimated from the data on fat content in milk and legal standard of butter, specific gravity of milk and ghee, etc., supplied by the Trivandrum Central Dairy. The rates worked out are shown below:—

Kind of animal	Total production of milk		Quantity consumed as such		Total quantity converted		Quantity converted into		Quantity produced as percentage of quantity of milk converted	
							Ghee	Butter	Ghee	Butter
Cow	100	83	17	10	7		3.75	4.67		
Buffaloe	100	55	45	27	18		5.52	6.86		

#### Butter-milk:

Butter-milk is produced from the milk used for making ghee and butter. Milk is first converted into curd. The yield of curd is taken at 85 percent of the quantity of milk converted. The quantity of ghee and butter obtained is deducted from the quantity of curd to arrive at the production of butter-milk.

All the goat-milk produced is consumed as such.

### MEAT AND MEAT PRODUCTS

#### Slaughter Statistics:

Data on number of animals slaughtered in slaughter houses in the State are available in the Bulletin of Animal Husbandry Statistics published by the Department of Animal Husbandry. These Bulletins give the number of animals slaughtered in Municipalities from the year 1963-64 and that in



Panchayats from 1964-65. The number of animals slaughtered during the previous years is estimated separately for urban and rural areas by employing the ratio of the number of animals slaughtered to the corresponding animal population during 1964-65.

#### Slaughter products:

Meat and meat products are estimated at the rates suggested by the Central Statistical Organisation.

Yield Rates of Meat and Meat Products from slaughtered animals (Yield: Kg. per animal slaughtered)

Items	Kind of animal			
	Cattle	Buffaloe	Sheep and Goat	Pigs
Meat with bones and fat	78.54	127.22	9.39	27.31
Glands	2.49	3.18	0.45	1.36
Head and legs	10.80	12.07	1.86	4.54
Fats	1.36	2.27	0.36	2.72
Edible offals	9.07	11.34	1.59	4.54
Tail stumps	0.086	0.086	..	..

The total number of animals slaughtered in the State (by kind) including unrecorded slaughter is estimated for the year 1966-67, taking into account the total number of animals imported (other than slaughter animals), the number of animals born, the number died and that exported during the year. The ratio of the total number of animals slaughtered (recorded plus unrecorded) to the number slaughtered in slaughter houses is worked out on the basis of the above estimates and slaughter statistics. The ratios derived are given below.

	Kind of animal slaughtered:			
	Cattle	Buffaloe	Sheep and Goat	Pigs
Total No. slaughtered as p. c. of recorded slaughter	200	128	90	1003

The number of goats and sheep imported solely for slaughter is large. Hence the number slaughtered out of local population is less than recorded slaughter.

#### Hides and skins:

The following rates are used to estimate the production of hides and skins in the State.

#### Kides and skins in the State

Kind of animal	Average weight per hide/skin	Mortality rate of animals	No. of fallen hides collected as p. c. of fallen animals
	Kg.	%	%
Cattle	9	5.20	47
Buffaloe	17	7.23	47
Goat	3	10.00	70

The average weight per hide is based on data available in the Bulletin of Animal Husbandry Statistics for the half year ending 31-12-1963. The percentages of fallen cattle hides and goat skins are estimated from rates given in the reports on marketing of hides and skins in India. The mortality rates of cattle and buffaloes made available by the Milk Yield Survey 1964-65 are used to estimate the number of fallen hides. The number of fallen goat skins is worked out at the rate suggested in the standard methodology.

#### Eggs and poultry meat:

Production of eggs of hens and ducks is estimated at rates given in the standard methodology. The rate for geese is adopted for estimating production of eggs of other poultry.

The annual number of adult poultry consumed in the State is found to be about 47 per cent of the adult poultry population, from the monthly disposal rates of poultry birds made available by the Poultry Survey for Kerala 1960-61 (I. C. A. R.) The number of chickens consumed amounts to 27 per cent of the total number of chickens for the year. The outturn of poultry meat is estimated at the rate of 1.031 Kg. per adult bird and 0.375 Kg. per chicken.

#### Dung:

Daily rate of collection of bovine dung is 2.62 Kg. per head of bovine population, according to the results of Milk Yield Survey 1964-65. The quantity of dung collected is estimated at this rate. The Survey also gives utilisation rates of dung. The quantity of dung used as manure is estimated at 93 p. c. of total production, that used as fuel and for cleaning purposes being 4 p. c. and 3 p. c. respectively. The production of dry cakes is estimated at 60 per cent of the quantity of dung used for the purpose. The collection of dung per goat is worked out at 10 p. c. of the rate for bovines. The rate of collection of poultry manure is taken to be 0.5 p. c. of that for bovines.

#### Bones:

Yield rates of bones are estimated from data available in the report on marketing of bores and bovemeals.



## FIELD RATES OF BONES

Kind of animal	Yield rate Kg. per animal	
	Slaughtered	Fallen
Cattle	10.9	13.6
Buffaloe	13.5	16.3

The quantity of bones collected is estimated at 24 p. c. of total production in respect of fallen animals.

*Horns and hoofs:*

Production is estimated at rates given by the C. S. O. for slaughtered animals, the whole production is considered to be collected and 2½ per cent of the production from fallen animals is treated as actual collection.

Unrecorded production is not taken into account in the estimation of out-turn of bones, hoofs and horns.

*Honey and wax:*

Estimates of production supplied by the Khadi and Village Industries Commission are used for the years 1960-61 to 1965-66. Data for later years are taken from administration reports of the Khadi and Village Industries Board, Kerala.

*Feed of Livestock:*

For the estimation of quantity of feed, bovine population is divided into three groups viz. (I) working bovines used in transport industry (II) working bovines used for agricultural purposes and (III) non-working bovines. Estimates of feed of animals in the first group are not required in agriculture and animal husbandry dry sectors. The cost of feed of working animals used for agricultural purposes is treated as input in agriculture proper and that of non-working bovines as input in animal husbandry.

The following categories of bovines are considered as animals used for work in agriculture:-

1. Bullocks (cattle and buffaloe) used for work only-Rural population only.
2. Bullocks (cattle and buffaloe) for breeding and work-50 per cent of rural population plus 50 per cent of urban population, the remaining 50 p. c. of rural and urban population being included under non-working bovines.
3. Cows and she-buffaloes used for work only-rural and urban.

Bullocks used for work only in urban areas are considered as animals used for work in transport industry. All the remaining categories of bovines are classified under non-working bovines which contribute to production in animal husbandry. The cost of feed of non-working bovines is treated as input in animal husbandry sector along with the cost of feed of goats, sheep, pigs and poultry.

The other animals, viz. horses, ponies, donkeys and mules are animals used in transport industry and hence their feed is not considered under this sector.

The Milk yield Survey of 1964-65 gives the feed rates of bovines and goats in respect of green fodder

dry fodder, and concentrates. Rates are furnished for cattle and buffaloes by categories, viz. cattle and buffaloes in milk, dry, bullocks and young-stock.

The quantities of different kinds of feed are separately worked out for the various categories of livestock.

*Green fodder:*

Green fodder fed to bovines mainly consists of green grass and sugarcane tufts. Green fodder of goats and sheep is mostly leaves of trees like jack trees and banian trees.

*Dry fodder:-*

Day fodder consists of straw of paddy and other cereals.

*Concentrates:*

The concentrates considered are oil-cakes of groundnut, coconut, gingelly, rice bran, cotton seed, blackgram, horsegram, tamarind seed, rice and readymade cattle feed.

*Feed of pigs and poultry:*

cost of feed of pigs and poultry is estimated by using the cattle equivalence rates furnished in the standard methodology, viz. 10 p. c. for pigs and 5 p. c. for poultry.

*Prices of livestock products and feed:*

Data on prices of livestock and poultry products for the years 1962-63 onwards are available in the Bulletin of Animal Husbandry Statistics (Half yearly) published by the Department of Animal Husbandry of the State. These prices are mostly purchaser's prices or retail prices. The annual average prices are adjusted to approximate them to producer's price by using suitable rates estimated from available data.

*Milk and milk products.*

Producer's price of milk is estimated at the rate based on the information supplied by the Central Dairy at Trivandrum. For the year 1967-68 producer's price of cows milk and buffaloe milk is found to be about 74 percent of consumer's price. This percentage is applied to the annual average prices of milk, ghee and butter of cow and buffaloe in order to derive their producer's prices. The prices of milk for 1960-61 to 62-63 are estimated by using the index of rural price of milk for the years.

Urban and rural prices of goat's milk are estimated at the rates of 98 p. c. of price of cow's milk respectively for all the years. The percentages are derived from the prices given in the milk yield survey.

Prices of ghee and butter for 1960-61 and 61-62 are estimated from the price of milk during each year by applying the ratio of the price of each item to that of milk for the year 1962-63.

On examining the retail prices of milk and butter-milk for 1965-66, the average price of butter milk is found to be 52 percent of the price of milk. This rate is used to work out price of butter milk for the different years.



### Meat and meat products.

The Milk Yield Survey of 1964-65 (IARS) gives data on purchaser's price and producer's price of cattle and buffalo by different categories viz., cattle and buffalo in milk, dry, bullocks and young ones. The ratio of the two kinds of prices is used for deriving the producer's price of livestock from the average purchaser's price of each category of livestock for the evaluation of increment in stock.

Producer's price expressed as percentage of purchaser's price for different categories of cattle and buffalo slaughtered (viz., (i) dry without calf, not pregnant (ii) bullocks and (iii) calves) are weighted by the number of animals in each category slaughtered in the State during 1964-65. The weighted average percentages (78 p. c. for cattle and 74 p. c. for buffalo) are used to estimate producer's prices from purchaser's prices of meat and meat products of cattle and buffalo. Prices of meat of cattle and buffalo for the years 1960-61 and 61-62 are estimated from those for 1962-63 by applying indices of the prices for the years supplied by the Central Statistical Organisation.

Prices of pork are made available by the Central Statistical Organisation for the years 1960-61 to 63-64. The price for 1963-64 is projected to later years by using the index of weighted average price of cattle meat.

The price of glands is taken to be the same as that of the corresponding meat. Other minor items such as head and legs, edible offals, etc., are evaluated at suitable percentages of corresponding meat prices.

Data on the annual number of animals slaughtered in slaughter houses in the various Panchavats and Municipalities of the State are furnished in the Bulletin of Animal Husbandry. Production of meat and other slaughter products from all slaughtered animals in rural and urban areas by kind of animal are first valued at prices estimated as detailed above. The weighted annual average price of the various items for the State are employed for final evaluation of all meat and meat products including products from unrecorded slaughter.

### Eggs and poultry meat.

Annual average purchaser's prices for rural area deflated by 10 p. c. is used for evaluation of eggs. The annual production of hen's eggs, duck eggs and eggs of other poultry are separately estimated at the above rate. Price of eggs of hens and ducks for 1960-61 and 61-62 are estimated from that for 1962-63 with the help of indices of the prices furnished by the Central Statistical Organisation.

Annual average prices (per kg. body weight) of slaughter fowls is used to evaluate total annual production of poultry meat. Prices for 60-61 to 61-62 are worked out at the price for 62-63 by applying indices of the price for the years supplied by the Central Statistical Organisation.

### Dung.

Dung used as fuel's (dry cakes) is evaluated at 50 percent of the price of fuel wood used in forestry sector. Producer's price of dung used for manuring and cleaning purposes is derived by adjusting annual average rural price of cowdung.

### Increment in stock.

For the years 1962-63 to 67-68 purchaser's prices adjusted as already indicated are used for evaluation of cattle and buffalo. Prices for 1960-61 and 61-62 are estimated with the help of indices of corresponding meat prices for the years.

Prices of goat and sheep for 60-61 and 61-62 are estimated from annual average price during 6-63 by applying index of price of mutton.

Average yield of pork per pig is 27 Kg. at the rates adopted for estimation of production. The average price per pig is taken to be the price of pork yielded by the pig.

Increment in fowls is evaluated at the price of slaughter fowls. From the annual average price per Kg. of body weight of fowls, average price per bird is calculated at the yield rate of drawn meat per bird. Prices supplied by the Central Statistical Organisation are used for evaluation of increment in ducks for the years 60-61 to 62-63. The price during 62-63 is projected to later years with the help of the index of price of fowls. Other poultry is evaluated at price of ducks.

Bones, hoofs and horns are evaluated at annual average prices estimated from the data furnished in the Bulletin of Animal Husbandry.

### Honey and wax.

The production of honey during the years 60-61 to 65-66 is evaluated at prices obtained from the Khadi and Village Industries Commission, Bombay. Prices available in the administration reports of the Khadi and Village Industries Board are adopted for later years. Prices of wax for the different years are estimated from that for 1966-67 by applying the index of price of honey.

### Value added by slaughter of imported slaughter animals.

Out-turn of meat and meat products is first estimated for animals slaughtered from local livestock population. A large number of slaughter animals are imported. The value added by slaughter of such animals is estimated and added to the value of livestock products. The value added by slaughter per head of animal (cattle, buffalo and goat) is estimated for the year 1966-67 from the data on purchase price of slaughter animals and average value of products per head of animal. It is projected for other years by applying the index of average price of meat. The number of slaughter animals imported (by kind) during other years is estimated from the import for 1966-67 using the index of number of animals slaughtered in urban areas.

### Gross value of output from hunting and trapping.

The revenue of the Government from sale of elephants forms the major part of the income from hunting and trapping. It is inflated by 20 percent to include similar income from private forests and unrecorded hunting and trapping. This amount is treated as the gross value of output from hunting and trapping and added to that from livestock products in order to derive the gross value of output from the subsector of animal husbandry.



## INPUTS

## Feed of livestock

\* Source: administration reports of the Forest Department.

## Straw.

Straw fed to livestock is evaluated at the weighted average price of rural wholesale and retail prices, the weights being the proportions of straw home supplied (83 p. c.) and purchased (17 p. c.) respectively (vide N. S. S. report No. 65 of 1956-57.)

## Green grass and fodder leaves.

From the result of the Milk yield survey the average purchase price of grass is found to be 44 percent of the price of straw. Purchase price of grass is worked out at this rate from the rural retail price of straw. The price of grass home supplied is taken to be 50 p. c. of the purchase price. The two kinds of prices are weighted by the proportions of grass home supplied (95 p. c.) and purchased (5 p. c.) respectively (Vide N. S. S. Report No. 65 of 1956-57) and their weighted average price is used for the evaluation of green grass fed to livestock. Fodder leaves are also evaluated at this price.

## Concentrates.

The Milk Yield Survey has furnished the quantities of different items of concentrates fed to livestock per day by categories of animals as well as the corresponding number of observations. From the data, the quantities of the various items of concentrates consumed per day is worked out for different groups of animals (working bovines used in agriculture, working bovines used in transport industry, non-working bovines and goats). For each group these quantities are used to weight item-wise prices of concentrates in order to estimate the weighted average price of concentrates during the different years.

## Salt, medicine and other feeds.

Cost of salt, medicine and other feeds per head of livestock for the year 1955-56 supplied by the

Central Statistical Organisation, (Rs. 1.62 per head) is projected to the years 1960-61 to 68-69 by using the index of price of salt for the years.

## GROSS PRODUCT

The gross product from Animal Husbandry is derived by deducting the following items from gross value:

(i) cost of feed of livestock and poultry used for production in animal husbandry including cost of salt, medicine and other miscellaneous feeds;

(ii) marketing charges; and

(iii) cost of repairs, maintenance and operational cost.

Cost of feed of livestock and poultry is estimated at prices already discussed.

Marketing charges of milk products and meat products are estimated at the rates supplied by the Central Statistical Organisation. For the year 1960-61 the marketing charges of meat and meat products amount to 3 percent of the gross value. This percentage is applied to the gross value of eggs poultry and other products to derive their marketing charges.

The costs of (i) repairs and maintenance and (ii) depreciation in animal husbandry are worked out from the total estimates (furnished by the Central Statistical Organisation for the agriculture sector including livestock products) in the proportion of the gross value for the sub-sectors of agriculture (proper) and animal husbandry.

## NET PRODUCT

The net State domestic product is arrived at by deducting the cost of depreciation from the gross product. The various livestock products and inputs are revalued at 1960-61 prices in order to get the net product from animal husbandry at constant prices.

Tables number 2.1 to 2.7 give details of livestock products, namely, annual out-turn, prices, gross value, cost of inputs and net product at current and constant prices.

### 2.1 OUT-TURN OF LIVESTOCK PRODUCTS, KERALA 1960-61 TO 1968-69

Sl. No.	Items	Out-turn in Tonnes									
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1	Milk consumed as such—Total	186574	190655	194884	200176	203806	208387	213314	218298	223431	
2	Cow's Milk	141205	144736	148443	153238	156391	160624	165047	169641	174412	
3	Buffaloe Milk	26771	26986	27199	27419	27627	27740	28034	28238	28440	
3	Goat's Milk	18598	18933	19242	19528	19788	20023	20233	20419	20579	
	Ghee Total	1364	1385	1407	1435	1455	1477	1506	1531	1558	
4	Cow Ghee	638	654	670	692	706	725	746	765	787	
5	Buffaloe Ghee	726	731	737	743	749	752	760	766	771	
	Butter Total	1158	1175	1194	1219	1236	1255	1280	1302	1325	
6	Cow Butter	556	569	584	603	616	632	650	668	686	
7	Buffaloe Butter	602	606	610	616	620	623	630	634	639	
8	Butter Milk Total	40681	41403	42155	43087	43749	44522	45445	46338	47259	



II Meat and Meat Products											
	Meat	Total	26301	26320	26677	27159	26798	32018	31206	36829	39807
9	Cattle Meat		16474	16628	16874	17274	17160	20704	19520	22285	22656
10	Buffaloe Meat		5644	5627	5601	5691	5532	6716	6982	9495	11210
11	Goat Meat and Mutton		2839	2861	2868	2860	2792	2993	2858	2812	2922
12	Pork		1344	1344	1334	1334	1314	1605	1846	2237	3019
	Other Meat Products—										
	Total		8876	8955	9014	9165	9054	10646	10456	12165	13104
13	Glands		371	379	884	898	885	1049	1021	1188	1288
14	Heads and Legs		3586	3616	3641	3702	3658	4222	4226	4893	5201
15	Edible Offals		3110	3133	3156	3206	3170	3772	3664	4267	4613
16	Fats		385	392	392	399	397	478	462	555	592
17	Other Products		924	935	941	960	944	1125	1083	1262	1350
III	Hides and Skins—Total		4650	4687	4713	4773	4716	5346	5195	5829	6133
18	Cattle Hide		2456	2487	2516	2568	2558	2967	2835	3155	3200
19	Buffaloe Hide		1036	1033	1030	1038	1015	1175	1204	1537	1764
20	Goat and Sheep Skins		1158	1167	1170	1167	1143	1204	1156	1137	1169
IV	Eggs Total *		369261	385085	399973	413924	426937	439013	450153	460358	469627
21	Hen Eggs		336944	352751	367841	382215	395872	408811	421035	432541	443330
22	Duck Eggs		32296	32314	32112	31690	31048	30187	29106	27805	26285
23	Other Eggs		21	21	20	19	17	15	12	12	12
	Poultry Meat—Total		3006	3122	3228	3322	3407	3480	3542	3596	3639
24	Adult		2677	2786	2885	2975	3058	3133	3197	3255	3304
15	Chicken and Ducklings		329	336	343	347	349	347	345	341	335
V	Dung										
26	Dung Fuel (dry cakes)		61122	61631	62060	62546	62677	62866	62996	63164	63379
27	Other Dung		2562941	2585308	2604006	2624581	2630518	2638347	2643396	2651135	2660425
VI	Other Products—Total		2657	2705	2753	2826	2906	3340	3306	3752	3937
28	Bones Hoofs and Horns		2617	2639	2656	2701	2679	3086	3013	3477	3653
29	Honey and Wax		40	66	97	124	227	254	29	276	284

2. 2 PRICE OF LIVESTOCK PRODUCTS, KERALA  
1960-61 to 1968-69

Price Rs. per tonne.

Sl. No.	items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I Milk consumed as such										
1.	Cow's Milk	471	528	567	621	637	709	805	864	933
2.	Buffaloe Milk	574	642	690	753	767	929	1095	1127	1122
3.	Goat Milk	409	457	492	535	575	642	711	734	857
4.	Cow Ghee	6088	6824	7339	7500	7608	8350	9626	10461	10609
5.	Buffaloe Ghee	5481	6138	6600	6787	7259	7823	8986	9283	9016
6.	Cow Butter	4205	4712	5067	5166	5627	6924	7200	7725	8280
7.	Buffaloe Butter	3872	4335	4654	5044	5361	6904	7340	8008	8670
8.	Butter Milk	272	304	326	357	364	426	494	518	500
II										
9.	Cattle Meat	747	1029	1029	1068	1102	1214	1420	1700	1792
10.	Buffaloe Meat	758	818	892	1051	1063	1178	1307	1627	1767

\* Out turn in 1000's



Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
11.	Goat Meat and Mutton	2229	2502	2548	2647	2969	3332	3776	4313	4637
12.	Pork	1464	2015	2036	1750	1803	1995	2328	2783	2941
13.	Glands	1041	1304	1326	1360	1332	1559	1796	2082	2230
14.	Heads and legs	144	180	183	189	199	218	250	289	309
15.	Edible offals	772	969	1000	1013	1068	1162	1339	1553	1663
16.	Fats	187	245	247	268	272	301	348	420	446
17.	Other Products	93	128	130	135	142	155	179	211	203
<b>III</b>										
18.	Cattle hide	865	1167	1167	1185	1216	1365	1723	1871	1523
19.	Buffaloe hide	735	775	848	976	938	851	1081	1009	955
20.	Goat and sheep skins	1042	1427	1426	1479	1516	1662	2030	2115	1934
<b>IV</b>										
21.	Hen eggs	90	103	113	113	128	146	165	195	184
22.	Duck eggs	82	108	115	115	138	178	189	205	200
23.	Other eggs	82	108	115	115	138	178	189	205	200
24.	Poultry meat	1741	1824	2099	2490	2602	2723	2851	3077	3245
<b>V</b>										
25.	Dungfuel dry cakes	12	12	12	13	12	12	12	16	17
26.	Other dung (manure)	15	16	16	15	15	16	17	19	21
<b>VI</b>										
27.	Bones, hoof and horns	157	205	203	212	206	248	284	321	345
28.	Honey	4400	4400	4400	5000	5000	5000	4000	5000	7000

**2.3 GROSS VALUE OF LIVESTOCK PRODUCTS, KERALA  
1960-61 TO 1968-69 AT CURRENT PRICES**

Rs. in '000.

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>I Milk consumed as such—</b>										
	<b>Total</b>	89442	102376	112450	126236	132245	152441	177944	193374	212341
1	Cow's milk	66475	76378	84220	95154	99668	113822	132838	146552	162812
2	Buffaloe milk	15364	17337	18770	20627	21202	25765	30711	31825	31897
3	Goat's milk	7603	8661	9450	10455	11375	12854	14395	14997	17632
	<b>Ghee Total</b>	7863	8950	9781	10233	10808	11937	14010	15114	15300
4	Cow ghee	3884	4463	4917	5190	5371	6054	7181	8003	8349
5	Buffaloe ghee	3979	4487	4864	5043	5437	5883	6829	7111	6951
	<b>Butter Total</b>	4669	5308	5798	6222	6790	8677	9304	10237	11220
6	Cow butter	2338	2681	2959	3115	3466	4376	4680	5160	5680
7	Buffaloe butter	2331	2627	2839	3107	3324	4301	4624	5077	5540
8	<b>Butter milk Total</b>	11045	12593	13763	15374	15946	18955	22457	24003	23624



II Meat & meat products											
Meat	Total	24880	31741	32383	34335	35449	46221	51932	71687	82856	
9	Cattle meat	12306	17272	17363	18449	18910	25135	27718	37885	40600	
10	Buffaloe meat	4278	4603	4996	5981	5881	7911	9125	15448	19808	
11	Goat meat & mutton	6328	7158	7378	7570	8289	9973	10792	12128	13549	
12	Pork	1968	2708	2716	2335	2369	3202	4290	6226	8879	
	Other meat products Total	3981	5050	5162	5405	5621	7256	8150	11016	12708	
13	Glands	907	1146	1102	1221	1267	1635	1834	2474	2872	
14	Heads and legs	516	651	666	699	727	920	1056	1415	1628	
15	Edible offals	2400	3037	3105	3248	3385	4383	4905	6628	7670	
16	Fats	72	96	97	107	108	144	161	238	264	
17	Other products	86	120	122	130	134	174	194	266	274	
III	Hides and skins Total	4065	5343	5470	5782	5796	7051	8534	9859	8820	
18	Cattle hide	2097	2877	2936	3043	3111	4050	4885	5903	4874	
19	Buffaloe hide	761	801	873	1013	952	1000	1302	1551	1685	
20	Goat and sheep skins	1207	1665	1668	1726	1733	2001	2347	2405	2261	
IV	Eggs Total	32951	39677	45338	46913	54745	65179	75022	89926	86737	
21	Hen eggs	30291	36192	41640	43267	50474	59809	69513	84216	81484	
22	Duck eggs	2658	3483	3696	3644	4269	5367	5507	5708	5244	
23	Other eggs	2	2	2	2	2	3	2	2	2	
	Poultry meat Total	5234	5694	6777	8271	8865	9476	10098	11065	11808	
24	Do. adult	4663	5082	6059	7409	7958	8532	9116	10017	10722	
25	Do. chicken of ducklings	571	612	718	862	907	944	982	1048	1086	
V	Dung Total	39147	42074	42409	40151	40210	42968	45694	51351	56946	
26	Dung fuel (dry cakes)	703	709	745	782	752	754	756	979	1077	
27	Dung manure	38444	41365	41664	39369	39458	42214	44938	50372	55869	
VI	Other products Total	589	832	969	1196	1688	2037	2029	2499	3246	
28	Bones, hoofs & horns	412	540	540	573	552	765	856	1117	1260	
29	Honey and wax	177	292	429	623	1136	1272	1173	1382	1986	
30	Increment in stock	1703	1767	1134	661	275	(-)-325	305	(-)-220	(-)-601	
31	Value added by slaughter of imported (slaughter animals)	2030	2599	2633	3034	2998	4010	4292	5547	5524	
32	Value of output from hunting and trapping	153	184	271	89	75	203	205	198	371	
	Gross value of output	227752	264188	284345	303902	321551	376086	429976	495656	530803	

\* Rs. per, 000.,



2.4 ESTIMATES OF LIVESTOCK FEED BY CATEGORIES OF ANIMAL  
1960-61 TO 1968-69 AT CURRENT PRICES

Quantity-tonnes  
Value. Rs. 000

Items

Items	1960-61		1961-62		1962-63		1963-64		1964-65	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
<b>Non-working</b>										
<b>Bovines</b>										
Green fodder	863454	11087	880826	12288	89772	11778	919654	12829	930170	19059
Dry fodder	830226	42325	845085	46759	858783	44708	878431	48604	885792	72068
Concentrates	126991	57908	129315	62071	131554	77485	134814	68620	135796	78626
Salt & medicine		3914		3979		4572		4706		4746
Goat and sheep										
Green fodder	660430	8480	672330	9379	683341	8965	693470	9674	702714	14399
Concentrates	60474	28846	61562	32197	62568	40231	63493	35556	64836	40725
Pigs and poultry		2249		2444		3054		2686		3120
<b>Total</b>		<b>154809</b>		<b>169117</b>		<b>190793</b>		<b>182675</b>		<b>232743</b>
<b>Working Bovines (Agriculture)</b>										
Green fodder	332466	4269	330616	4612	328236	4306	325328	4538	321893	6596
Dry fodder	350137	17850	348091	19260	345553	17989	342524	18952	339002	27581
Concentrates	96717	20891	96161	22406	95462	24247	94623	22520	93641	25751
Salt & Medicine		1300		1290		1467		1452		1434
<b>Total</b>		<b>44310</b>		<b>47568</b>		<b>48009</b>		<b>47462</b>		<b>61362</b>

2.4 ESTIMATES OF LIVESTOCK FEED BY CATEGORIES OF ANIMAL  
1960-61 TO 1968-69 AT CURRENT PRICES

Quantity-tonnes  
Value. Rs. 000

Items

Items	1965-66		1966-67		1967-68		1968-69	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
<b>Non-working</b>								
<b>Bovines</b>								
Green fodder	945655	25826	960856	28749	975706	29808	990131	31199
Dry fodder	897853	97399	909439	108005	921398	111692	932256	116607
Concentrates	137790	91906	139746	106486	141636	112742	143456	114908
Salt & medicine		5380		6018		6001		6060
Goat and sheep								
Green fodder	711074	19419	718551	21499	725145	22153	730853	23029
Concentrates	65099	47718	65781	55256	66380	56224	66898	57064
Pigs and poultry		3628		4169		4349		4424
<b>Total</b>		<b>291276</b>		<b>330182</b>		<b>342969</b>		<b>353291</b>
<b>Working Bovines (Agriculture)</b>								
Green fodder	317984	8684	313594	9383	308768	9433	304572	9597
Dry fodder	335035	36345	330618	39264	325792	39493	321493	40212
Concentrates	92532	30073	91292	34143	89937	42990	88738	41973
Salt & medicine		1590		1735		1712		1717
<b>Total</b>		<b>76692</b>		<b>84525</b>		<b>93628</b>		<b>93499</b>



2.5 ESTIMATE OF LIVESTOCK POPULATION—KERALA  
1960-61 TO 1968-69

Sl. No.	Items	Population in numbers									
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
<b>I CATTLE</b>											
<b>A Males over 3 years</b>											
1	Used for breeding only	Urban 752	689	619	540	451	354	248	133	133	133
2	Used for breeding & work	Rural 9258	8963	8568	8072	7476	6780	5983	5087	4089	2991
3	Used for work only	U 679	654	633	618	606	600	598	598	598	598
4	Not used for breeding or work	R 18967	18083	17054	15878	14536	13089	11476	9716	7811	5760
		U 17930	16995	16102	15251	14441	13673	12947	12263	11621	11020
		R 498373	491739	491739	488178	484453	480365	476513	472298	467920	463379
		U 2489	2057	1613	1156	687	205	205	205	205	205
		R 23516	21280	18785	16031	13017	9744	6212	6212	6212	6212
<b>B Females over 3 years</b>											
<b>(i) Breeding cows</b>											
1	In milk	U 46033	46448	46756	46959	47054	47044	46927	46703	46374	45938
2	Dry	R 388011	397057	405675	419865	421629	428964	435873	442354	448407	454033
3	Not calved even once	U 33902	34633	35180	36441	37524	38721	40035	41465	43011	44673
		R 461470	474516	489147	505362	523160	542543	563511	586062	610196	635916
		U 12043	11921	11686	11337	10875	10299	9610	8807	7890	6861
		R 158951	157989	155648	151929	146831	140355	132499	123266	112653	100662
		U 648	587	511	420	315	195	60	60	60	60
		R 8928	8522	7913	7100	6085	4866	3445	1820	1820	1820
		U 1057	969	861	732	582	411	219	219	219	219
		R 13770	12594	11184	9540	7662	5549	3201	3201	3201	3201
<b>C Young stock</b>											
i	Under one year	U 49367	50075	50504	50950	51116	51102	50906	50531	49973	49235
ii	One to three years	R 467043	478406	488288	496688	503607	509045	513002	515478	516472	515986
		U 30494	31029	31488	31871	32179	32409	32567	32646	32650	32578
		R 487615	498024	507006	514560	520688	525388	528662	530508	530927	529919
<b>Total Cattle</b>											
		T 2731296	2766629	2797360	2829481	2844994	2861901	2874699	2889632	2902442	2911399
		U 195394	196057	196353	196278	195830	195013	194322	193630	192734	191520
		R 2535902	2570572	2601007	2633203	2649164	2666888	2680377	2696002	2709708	2719879



## 2.5. ESTIMATES OF LIVESTOCK POPULATION—KERALA

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
<b>II BUFFALOES</b>											
<b>A male over 3 years</b>											
1	used for breeding only	U 261	183	100	76	76	76	76	76	76	76
		R 2380	2180	1948	1683	1387	1059	1011	1011	1011	1011
2	used for breeding & work	U 349	323	298	271	245	217	189	160	132	101
		R 7598	7301	6935	6501	6000	5430	4792	4087	3312	2471
3	used for work only	U 10383	9540	8679	7800	6903	5988	5056	4106	3137	2151
		R 244516	244934	244341	243637	242522	240994	239056	236707	233966	230774
4	not used for breeding or work	U 425	339	283	256	259	292	354	446	568	718
		R 5163	5256	5431	5689	6031	6455	6963	6637	7230	7906
<b>B females over 3 years breeding buffaloes</b>											
1	in milk	U 10792	10519	10211	9867	9488	9073	8622	8136	7614	7056
		R 51186	52184	53199	54231	55278	56343	57423	58520	59633	60764
2	dry	U 3976	3879	3770	3647	3543	3366	3206	3033	2848	2650
		R 47050	47330	47633	47961	48312	48687	49087	19509	49957	50427
3	not calved even once	U 1082	990	886	770	641	499	346	180	180	180
		R 13340	13012	12529	11892	11099	10151	9048	7790	6378	4810
(ii)	females used for work only	U 853	702	548	390	230	158	158	158	158	158
		R 7217	6853	6429	5944	4122	4790	4122	3393	2602	1751
(iii)	not used for work or breeding	U 526	438	349	257	164	106	106	106	106	106
		R 1940	1875	1802	1720	1630	1532	1425	1309	1186	1054
<b>C young stock</b>											
(i)	under one year	U 3256	2999	2740	2473	2201	1925	1641	1641	1641	1641
		R 33615	33530	33382	33173	32898	32562	32164	32702	31178	30590
(ii)	one to three years	U 487517	415993	483785	480939	477465	473368	469058	464096	459537	454375
		R 35944	36641	37419	38274	39211	40229	41324	42500	43755	45091
	Total Buffaloe	U 37568	35197	32737	30235	27699	25136	22643	20931	19349	17726
		R 449949	450796	451048	450704	449766	448232	446415	443165	440188	436649
		T 3218813	3252622	3281145	3310420	3322459	3335269	3343757	3353728	3361979	3365774
<b>BOVINES (total)</b>											
		U 232962	231254	229090	226513	223529	220149	216965	214561	212083	209246
		R 2985851	3021368	3052055	3083907	3098930	3115120	3126792	3139167	3149896	3156528
<b>D SHEEP &amp; GOATS</b>											
<b>A One year and over</b>											
1	male	U 12738	11871	10780	9465	7926	6163	4176	4176	4176	4176
		R 117353	111853	104919	96551	86748	75511	62840	62840	62840	62840
2	Female	U 65013	65456	65685	65709	65524	65132	64535	6730	62718	61498
		R 601029	612592	623469	633661	643163	651992	66011	667587	674356	680441
(i)	Sheep	U 504	512	514	515	513	510	506	500	492	483
		R 5108	5206	5299	5385	5465	5540	5609	5672	5729	5780
(ii)	goats	U 64509	64944	65171	65194	65011	64622	64029	63280	62226	61015
		R 595921	607386	618170	628276	637703	646452	654522	661915	668627	674661
a	goats in milk	U 28965	29161	29264	29276	29196	29023	23759	28402	27954	27413
		R 221374	225613	229639	233393	236395	24045	243143	245889	248382	250624
b	dry	U 25638	25812	25903	25914	25242	25689	25455	25139	24742	24263
		R 277318	232653	287672	292375	296762	300834	304589	308030	311154	313962
c	others	U 9906	9971	10004	10004	9973	9910	9815	9689	9530	9339
		R 97229	99100	100859	102508	104046	105473	106790	107996	109091	110075
		T 1256922	1267057	1270193	1266339	1255489	1237651	1212821	1197317	1176477	1150304
	sheep & goats (total)	U 128104	127742	126365	123984	120591	116192	110785	106584	101597	95826
		R 1128818	139315	1143828	1142355	1134898	1121459	1102035	1090733	1074880	1054478
	(including under 1 year)										
<b>PIGS (total)</b>											
		U 116801	116239	115695	115168	114611	114173	113703	113252	112819	112405
		R 4226	4366	4497	4617	4728	488	4918	4999	5068	5128
		R 112575	111873	111198	110551	109933	109345	108785	108253	107751	107277



## 2.5 ESTIMATES OF LIVESTOCK POPULATION

Sl. No.	Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
<b>POULTRY</b>											
Cocks	U	100074	105228	110232	115086	119790	124344	128748	133002	137106	141061
	R	1131376	1163398	1188602	1206984	1218548	1223290	1221214	1212317	1196600	1174062
Hens	U	381926	409981	438449	467327	496617	526319	556432	586957	617894	660253
	R	3594317	3752200	3902413	4043155	4175028	4298028	4412160	4517419	4613809	4701328
Chicken	U	255306	267076	278060	288257	297667	306289	314124	321174	327434	332908
	R	2931438	3000609	3050304	3080521	3091262	3082528	3054315	3006627	2939492	2852820
Ducks	U	13180	13513	13801	14047	14250	14110	14527	14690	14631	14618
	R	252310	252123	250172	246458	240981	233741	224738	213971	201441	187149
Drakes	U	4352	4434	4494	4533	4550	4545	4518	4469	4399	4307
	R	42247	41539	40589	39396	37960	36281	34360	32196	29790	27140
Ducklings	U	3142	3238	3323	3398	3463	3518	3564	3598	3624	3638
	R	56545	54628	52019	48718	44724	40037	34658	34658	34658	34658
Other poultry	U	574	579	572	553	522	479	423	423	423	423
	R	5695	5637	5425	5060	4540	3867	3041	3041	3041	3041
Total	T	8772482	9074783	9338455	9563493	9749902	9897676	10006822	10084452	10124312	10127406

## 2.6 NET STATE DOMESTIC PRODUCT FROM ANIMAL HUSBANDRY—KERALA

1960-61 to 1968-69 at current prices

Rs. 000

Sl. No.	Items	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	1968-69
1	Gross value of output from livestock	227599	264004	284074	303813	321476	375883	429771	495458	530502
2	Value of output from hunting & trapping	153	184	271	89	75	203	205	198	371
3	Total gross value	227752	264188	284345	303902	321551	376086	429976	495656	530873
4	Less cost of feed of livestock †	154809	169117	190793	182675	232743	291276	330182	342969	353291
5	Less marketing charges †	3840	4589	5006	5430	5848	6862	8008	9538	10095
6	Less current repairs and maintenance of fixed assets and other operational costs	1397	1595	1748	1874	1647	1714	1912	1833	2121
7	Total inputs	160046	175301	197547	189979	240238	299852	340102	354340	365507
8	Gross product from livestock & hunting and trapping	67706	88887	86798	113923	81313	76234	89874	141316	165366
9	Less allowance for depreciation	3622	4188	4676	5160	4745	5177	5788	5631	6509
10	Net product	64084	84699	82122	108763	76568	71057	84086	135685	158857
	Index of net product %	100.00	132.17	128.15	169.72	119.48	110.88	131.21	211.17	247.89



## 2.7 NET STATE DOMESTIC PRODUCT FROM ANIMAL HUSBANDRY—KERALA

1960-61 to 1968-69 AT CONSTANT (1960-61) PRICES

Items	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Gross value of output from livestock	227599	231813	236249	240812	243692	253321	256787	266002	273210
Value of output from hunting and trapping	153	124	190	103	174	182	203	73	197
<b>Total Gross value</b>	<b>227752</b>	<b>231937</b>	<b>236439</b>	<b>240915</b>	<b>243866</b>	<b>253503</b>	<b>256990</b>	<b>266075</b>	<b>273407</b>
Less cost of feed of livestock	154809	157645	160258	163757	165307	167566	169717	171736	173530
Less marketing charges	3840	3932	4025	4121	4178	4461	4488	4721	4839
Less current repairs and maintenance of fixed assets and other operational cost	1397	1469	1504	1539	1533	1612	1557	1554	1599
<b>Total inputs</b>	<b>160046</b>	<b>163046</b>	<b>165787</b>	<b>169417</b>	<b>171018</b>	<b>173639</b>	<b>175762</b>	<b>178011</b>	<b>179968</b>
Gross product from Livestock and Hunting and trapping	67706	68891	70652	71498	72848	79864	81228	88064	93439
Less allowance for Depreciation	3622	3876	4126	4345	4592	5075	5200	5514	5663
<b>Net Product</b>	<b>64084</b>	<b>65015</b>	<b>66526</b>	<b>67153</b>	<b>68256</b>	<b>74789</b>	<b>76028</b>	<b>82550</b>	<b>87776</b>
<b>Index of net Product</b>	<b>100.00</b>	<b>101.45</b>	<b>103.81</b>	<b>104.79</b>	<b>106.51</b>	<b>116.70</b>	<b>118.64</b>	<b>128.82</b>	<b>136.97</b>



### 3. FORESTRY AND LOGGING

Forestry sector includes (i) forestry (planting, replanting and conservation of forests; gathering of uncultivated material; charcoal burning carried out in the forests etc.) and (ii) logging (felling and rough cutting of trees; hewing or rough shaping of poles, blocks etc., and transportation of logs up to the permanent lines of transport).

The various forest products are classified into two groups viz., (i) major forest products and (ii) minor forest products. Major forest products consist of industrial wood and fuelwood. Industrial wood covers timber in round logs, timber in rough poles, railway sleepers and other sawn and squared timber. Fuelwood includes firewood sold as such and wood burnt for production of charcoal.

Minor forest products consist of a large number of heterogeneous items such as bamboos, reeds, rattans, sandalwood, ivory, honey wax seeds etc.

More than 84 per cent of the area under forests in the state is owned and managed by the Government. The principal source of data on the out-turn of forest products is the annual administration report of the Forest Department. Forest products are removed by Government agency as well as authorised purchasers including free grantees and right holders. The administration reports give detailed statements of out-turn of major products by Government agency and total removals by purchasers. Data on production and auction value are furnished for some of the minor products while auction value alone is available for others.

The total annual production is estimated under two heads namely (i) recorded out-turn i. e., out-turn from Government forests and (ii) unrecorded out-turn consisting of production from non-Government forests and unauthorised and illegal removals from regularly worked forests.

The out-turn of forest products given in the administration reports forms the total recorded out-turn. Average wholesale prices of major forest products supplied by the department are used for evaluation after deflating them to allow for trade and transport margins. Out-turn from non-Government forests is worked out in proportion to the area under such forests. The economic value of minor forest products is estimated from their auction value at the rates suggested by the Central Statistical Organisation. The gross value of all production is adjusted to include value of unrecorded production. The income from new plantations estimated according to standard methodology is also added to the income from forestry.

From the gross value of all major and minor products deductions are made for the cost of repairs, maintenance and other operational costs at rates given in the standard methodology. Depreciation is deducted from the gross product to arrive at the net product from forestry and logging.

All major and minor products are revalued at 1960-61 prices to get their gross value at constant prices. The costs of repairs and maintenance and depreciation estimated at the same rates as for current prices are deducted from the gross value for deriving the net product at constant prices.

#### OUT-TURN OF FOREST PRODUCTS

##### Timber in round logs

The out-turn of timber in round logs by species is furnished in Table 3.1. For the years 1960-61 to 63-64 actual out-turn by species is available only for items 1 to 16. The out-turn of other items (17 to 31) is worked out by applying the proportion of their total out-turn for the year 64-65 and 65-66 to the quantity of 'other jungle wood' during 1960-61 to 1963-64.

##### Timber in rough poles

Timber in rough poles includes teak and black wood saplings, teak poles and junglewood poles. Their out-turn is given in numbers in the administration reports. Out-turn of poles by Government agency and purchasers is given in Table No. 3.2. The volume of timber in rough poles is estimated at the rate of 0.118m<sup>3</sup> per pole.

##### Railway sleepers

The out-turn of sleepers available in number of B. G. units is converted into cubic metres at the rate of 0.08938m<sup>3</sup> per B. G. Unit.

##### Other sawn and squared wood

Complete data on species wise out-turn is available only for the years 60-61 to 62-63. Also as out-turn of this item is very small the total production alone is estimated.

The production of firewood is given in tonnes and that of charcoal in number of bags. It is converted into tonnes at the average rate of 30 bags per tonne.

##### Unrecorded out-turn of forest products

Unrecorded out-turn consists of unauthorised or illegal removals from regularly worked forests and out-turn from non-Government forests.

Unauthorised removals from regularly worked forests is estimated at 10 per cent of recorded out-turn from Government forests.

The total area under private forests (1961-65) is 18 per cent of the area under Government forests. Therefore, out-turn from private forests is estimated at 18 per cent of the total production from Government forests.

The gross output of major forest products is given in Table 3.3. It includes recorded out-turn from Government forests as well as unauthorised removals and out-turn from non-Government forests.

##### Minor forest products

Quantities of bamboos, and rattans sold as such are available for all the years. But they are also auctioned as coups (i. e. forest areas containing bamboos and rattans) and only the amounts realised by Government are furnished in the annual returns. From these value, the approximate quantity involved is estimated. Other items for which out-turn is available are reeds, sandalwood, ivory, honey, wax, seeds, granite, laterite, sand etc. As in the case of major forest products, unauthorised removals is estimated at 10 per cent of recorded out-turn. Out-turn from private forests is estimated at 18 per cent of that from Government forests.



3.1 VALUE OF OUT-TURN OF TIMBER IN LOGS BY GOVERNMENT AGENCY AT WHOLESALE PRICES  
1960-61 TO 1967-68

Sl. No.	Items	1960-61			1961-62			1962-63			1963-64		
		Qty.	Price	Value	Qty.	Price	Value	Qty.	Price	Value	Qty.	Price	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Teak	33607	330	110.90	37646	270	101.64	26472	240	63.53	33989	290	98.57
2	Black wood (Rose)	3538	280	9.91	3215	300	9.65	3105	335	10.40	4946	370	18.30
3	Ebony	1	335	0.00	..	..	..	..	..	..	..	..	..
4	Kambagom	1765	260	4.59	2369	240	5.69	2037	210	4.38	3123	240	7.50
5	Anjili	1758	250	4.39	3017	230	6.94	2910	190	5.53	3081	220	6.78
6	Venga	4567	180	8.22	4172	190	7.93	7683	160	12.29	7589	150	11.38
7	Thembaru	10391	150	15.89	13072	160	20.92	24341	200	48.68	13216	170	22.47
8	Manja Kadambu	1408	160	2.25	1124	190	2.14	1226	150	1.84	930	140	1.30
9	Akil	532	150	0.80	753	160	1.20	629	190	1.20	525	180	0.95
10	Myla	564	166	0.94	829	147	1.22	1019	141	1.44	1117	152	1.70
11	Irul	7596	130	9.87	7569	160	12.11	7534	140	10.55	6677	150	10.02
12	Maruthy	17751	140	24.85	25075	120	30.09	19327	140	27.06	23344	120	28.01
13	Venteak	15043	100	15.04	17351	100	17.35	20131	100	20.13	19695	100	19.70
14	Elavu	8662	100	8.66	5628	90	5.07	7292	110	8.02	5686	90	5.12
15	Gheeni	2580	90	2.32	2199	80	1.76	890	70	0.62	2257	60	1.35
16	Nanku	247	100	0.25	133	160	0.22	392	140	0.55	298	140	0.42
17	Chadachi	1005	90	0.90	3692	80	2.95	4437	90	3.99	3647	110	4.01
18	Jack	14	190	0.03	51	270	0.14	61	220	0.13	50	210	0.11
19	Vella pine	1203	60	0.72	4418	70	3.09	5309	80	4.25	4364	100	4.36
20	Thanni	24	80	0.02	89	90	0.08	107	90	0.10	88	70	0.06
21	Pali	911	126	1.15	3348	81	2.71	4024	78	3.14	3307	84	2.78
22	Kalpinc	5	118	0.01	19	104	0.02	23	99	0.02	10	107	0.02
23	Chora pine	9	60	0.01	32	60	0.02	38	65	0.02	30	70	0.02
24	Kayini	..	120	..	1	120	..	2	110	0.00	..	120	..
25	Pala	76	60	0.05	280	70	0.20	337	40	0.13	277	70	0.19
26	Punna	211	53	0.11	776	47	0.36	933	45	0.42	767	49	0.38
27	Kolamavu	114	94	0.11	420	83	0.35	505	80	0.40	415	87	0.36
28	Vaka	140	100	0.14	516	100	0.52	620	100	0.62	509	60	0.31
29	Nirventeak	23	147	0.03	83	130	0.11	99	125	0.12	82	135	0.11
30	Vellagil	107	150	0.16	315	160	0.63	474	190	0.90	390	180	0.70
31	Other jungle woods	13483	100	13.48	49338	96	47.56	59536	108	64.30	48930	103	50.40
	Total	127535	184.89	235.80	187815	150.50	282.67	201543	146.25	294.76	189348	157.05	297.38

Quantity—m<sup>3</sup>  
Price —Rs. per m<sup>3</sup>  
Value —Rs. in lakhs



3.1 VALUE OF TIMBER IN LOGS BY GOVERNMENT AGENCY AT WHOLESALE PRICES  
1960-61 TO 1967-68

Sl No.	Items	1964-65			1965-66			1966-67			1967-68		
		Qty.	Price	Value	Qty.	Price	Value	Qty.	Price	Value	Qty.	Price	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Teak	30346	255	77.38	38563	230	88.69	36549	230	84.06	46672	316	147.48
2	Black wood (rose)	4097	335	13.72	3721	333	12.39	3794	337	12.79	4267	510	21.76
3	Ebony	2	335	0.01	..	..	..	3	335	0.01	..	..	..
4	Kombagom	2632	211	5.55	2667	208	5.55	4577	208	9.52	9127	251	22.91
5	Anjili	3398	255	8.66	3037	225	6.83	4097	230	9.42	5011	289	14.48
6	Venga	6113	190	11.61	8264	220	18.18	9017	220	19.84	10478	210	2.20
7	Thenbavu	29894	160	47.83	10633	173	18.40	23094	173	39.95	19847	146	28.98
8	Manja Kadambu	1198	149	1.79	805	158	1.27	1347	158	2.13	1643	182	2.99
9	Akil	1098	136	1.48	1554	265	4.12	4031	265	10.68	3616	217	7.85
10	Myla	1275	137	1.75	1219	137	1.67	2149	136	2.92	2059	165	3.40
11	Irul	9820	155	15.22	13183	170	22.41	13394	170	22.77	21414	173	37.05
12	Maruthy	29310	125	36.64	36552	146	53.37	40179	106	42.59	40568	151	61.26
13	Venteak	22150	94	20.82	20666	115	23.77	23637	115	27.18	27509	131	36.04
14	Elavu	6626	96	6.36	8173	111	9.07	10389	111	12.09	12944	116	15.02
15	Cheeni	2560	60	1.54	3146	68	2.14	3532	68	2.40	3955	70	2.77
16	Nanku	854	95	0.81	220	107	0.24	598	107	0.64	424	135	0.57
17	Chadachi	5015	113	5.67	1011	129	1.30	1847	130	2.40	1555	131	2.04
18	Jack	38	169	0.06	41	197	0.08	44	197	0.09	1378	217	2.99
19	Vella pine	3718	69	2.57	3498	72	2.52	1195	72	0.86	2386	89	2.12
20	Thanni	15	90	0.01	136	103	0.14	115	103	0.12	111	108	0.12
21	Puli	3908	76	2.97	15556	95	1.48	985	114	1.12	861	130	1.12
22	Kalpina	..	97	..	29	104	0.03	288	98	0.28	..	115	..
23	Chora pine	16	73	0.01	36	72	0.03	13	72	0.01	..	63	0.06
24	Kayini	2	120	0.00	..	166	..	..	166	..	36	134	0.05
25	Pala	196	66	0.13	267	60	0.16	446	60	0.27	55	91	0.05
26	Punna	625	44	0.28	640	78	0.50	3267	78	2.55	524	125	0.66
27	Kolamavu	332	78	0.26	355	52	0.18	147	96	0.14	200	92	0.18
28	Vaka	555	69	0.38	289	82	0.24	599	137	0.82	..	87	..
29	Nirvanteak	35	121	0.04	96	130	0.12	77	124	0.10	148	144	0.21
30	Vellagil	213	136	0.29	434	265	1.15	150	220	0.33	..	217	..
31	Other jungle woods	34216	80	27.37	46669	104	48.54	78976	104	82.14	53236	114	60.69
Total		200247	145.43	291.21	207460	156.45	324.57	269036	145.04	390.22	270028	175.90	474.99



3.2 OUT TURN OF MAJOR FOREST PRODUCTS—KERALA (RECORDED)  
1960-61 TO 1968-69.

Year	Timber in round logs	Rough poles	Railway sleepers	Other sawn and squared	Total	Firewood	Charcoal
	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	Tonnes	Tonnes
1960-61	223290	29777	2102	151	255320	182253	..
1961-62	238009	44445	..	9	282463	197037	..
1962-63	287601	28485	1747	137	317970	121691	2426
1963-64	271601	18025	4126	284	294036	85878	947
1964-65	284662	29451	3250	56	317419	137370	1956
1965-66	437677	29620	5303	4495	477095	163255	3439
1966-67	534432	49913	8275	139	592759	257160	4108
1967-68	554163	32974	2502	196	589835	313016	9475
1968-69	482864	34049	6904	1473	525290	229734	10734

3.3 GROSS OUT TURN OF MAJOR FOREST PRODUCTS  
(RECORDED AND UNRECORDED)

Year	Industrial wood	Fire wood	Charcoal
	m <sup>3</sup>	tonnes	tonnes
1960-61	331916	236929	..
1961-62	367203	256148	..
1962-63	413361	158198	3154
1963-64	382247	111641	1231
1964-65	412645	178841	2543
1965-66	620224	212232	4471
1966-67	770587	334308	5340
1967-68	766786	406921	12318
1968-69	682877	298654	13954

## II. GROSS VALUE OF FOREST PRODUCTS

### Major Forest Products:—

Data on wholesale prices of most of the species of timber are supplied by the Forest Department. They are annual average prices estimated for different species sold by the Department. Producer's prices are derived from the wholesale prices by adjusting them downwards at a rate of 25 p. c. to allow for trade and transport margins.

Timber in round logs is evaluated at the weighted average price estimated from species-wise data on out-turn of timber by Government agency and wholesale prices supplied by the Forest Department (Table No. 3.1). Prices are not available for some of the species of timber for which production data are furnished in administration reports. Suitable estimates of prices are made use of in such cases.

### Price of Rough Poles:

The wholesale prices of rough poles are available only for the years 1966-67 and 1967-68. But the average value of the stock of rough poles at the beginning of each year is furnished in the administration reports. The rate of change in average value of stock is applied to the prices for 1966-67 to estimate the wholesale prices for earlier years. Producer's prices are derived by deflating the wholesale prices by 25 per cent.

### Sawn and squared timber:

(i) *Railway sleepers*.—Annual average price of sleepers supplied by the Forest Department for 1967-68 is adjusted for other years with the aid of the index of price of class III teak wood. They are deflated by 25 per cent to approximate them to producer's price.



(ii) *Other Swan Timber*.—Species wise out-turn of sawn timber is available only for 1960-61 to 62-63. The species-wise out turn for other years is worked out from the data for the above years. The average price of round logs used is calculated as weighted average price of the different items of wood involved, weight being the percentages of the different species for 1960-61 to 62-63. The average price is inflated by 10 per cent to allow for sawing charges and then deflated by 25 per cent to get producer's prices.

#### Firewood and Charcoal:

*Firewood*.—Average wholesale prices of fuelwood collected from Divisional Forest Offices are adopted for the years 1960-61 to 1963-64. Prices for later years are estimated by applying the index of prices worked out from the data given in the administrative reports. The average whole sale price is deflated by 25 per cent to get producer's price.

*Charcoal*.—Whole sale prices supplied by Divisional Forest Offices are available for the years 1960-61 to 63-64. Prices for succeeding years are estimated by

applying the index of price of firewood. Wholesale prices are deflated by 25 percentage to get producers price.

Producer's prices of industrial wood, firewood and charcoal are given in Table No. 3.4. Gross value of recorded out-turn and gross out-turn (including value of unrecorded out-turn) are furnished in Tables 3.5 and 3.6 respectively for all major forest products.

#### Minor Forest Products

A large number of miscellaneous items come under 'minor forest products'. Value realised by auction and the tree quantity auctioned are available for some of the products such as bamboos, sandalwood, ivory, reeds, rattans seeds, honey, etc. All other minor items are considered together. They are for the most part value realised by sale of numerous miscellaneous products, lease amounts of plantations, grazing fee etc. The total reported value of all minor products is adjusted to include value of unrecorded production. Four times the estimated auction value is adopted as the economic value of minor products. Table 3.7 gives the gross value of all minor products at current prices.

### 3.4 PRODUCERS PRICE OF MAJOR FOREST PRODUCTS—KERALA 1960-61 to 68-69

Year	Round logs Rs./m3	Rough poles Rs./m3	Industrial wood		Average (weighted) Rs. m3	Firewood Rs./Tonne	Charcoal Rs./Tonne
			Sleepers Rs./m3	Other Sawn & sward timbers Rs./m3			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1960-61	138.67	128.78	264.74	173.15	138.57	23.25	80.32
1961-62	112.88	97.43	216.41	149.93	110.45	23.27	88.59
1962-63	109.69	78.88	193.50	139.12	107.40	23.90	88.59
1963-64	117.79	110.21	234.20	165.96	119.01	24.66	97.15
1964-65	109.07	98.58	206.26	143.48	116.57	24.66	97.45
1965-66	117.34	87.02	185.87	145.47	116.48	24.17	95.05
1966-67	108.78	116.00	185.87	145.82	110.40	24.17	95.09
1967-68	131.93	169.00	254.59	182.688	134.53	30.58	120.19
1968-69	142.54	181.37	275.06	206.74	146.97	30.23	118.81

### 3.5 VALUE OF RECORDED OUT-TURN OF INDUSTRIAL WOOD, FIREWOOD & CHARCOAL AT CURRENT PRICES

Value : Rs. in lakhs

1960-61 to 68-69

Year	Industrial wood					Fuel			Grand total
	Round logs	Rough poles	Sleepers	Other sawn & sward timber	Total	Firewood	Charcoal	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960-61	309.64	38.35	5.56	0.26	353.81	42.37	—	42.37	396.12
1961-62	268.66	43.30	—	0.01	311.97	43.85	—	45.85	357.82
1962-63	315.47	22.47	3.38	0.19	341.51	29.08	2.15	31.23	372.74
1963-4	319.92	19.87	9.66	0.47	349.92	21.18	0.92	22.10	372.02
1964-65	310.48	29.03	6.70	0.04	346.26	33.92	1.90	35.82	382.08
1965-66	513.57	25.78	9.86	6.51	555.72	39.46	3.27	42.73	598.45
1966-67	581.36	57.90	15.38	0.04	654.68	62.16	3.91	66.07	720.75
1967-68	731.11	55.73	6.37	0.07	793.28	95.72	11.39	107.11	900.39
1968-69	688.27	61.75	18.99	3.05	772.06	69.45	12.75	82.20	854.26



## 3.6 GROSS VALUE OF MAJOR FOREST PRODUCTS AT CURRENT PRICES

Value Rs. in lakhs 1960-61 to 1968-69 (Recorded and un-recorded)

Year	Industrial Wood			Fire wood Charcoal		All Major forest products)			
	Recorded	un-recorded	Total	Un-recorded	Total	Recorded	un-recorded	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960-61	353.81	106.13	459.94	42.37	12.72	55.09	396.18	118.85	515.03
1961-62	311.97	93.61	405.58	45.85	13.76	59.61	357.82	107.37	465.19
1962-63	341.51	102.44	443.95	31.23	9.37	40.60	372.74	111.81	484.55
1963-64	349.92	104.99	454.91	22.10	6.63	28.73	372.02	111.62	483.64
1964-65	346.26	103.88	450.14	35.82	10.75	46.57	382.08	114.63	496.71
1965-66	555.72	166.72	722.44	42.73	12.82	55.55	598.45	179.54	777.99
1966-67	654.68	196.59	851.27	66.07	19.81	85.88	720.75	216.40	937.15
1967-68	793.28	238.28	1031.56	107.11	32.13	139.24	900.39	270.41	1170.80
1968-69	772.06	231.63	1003.69	82.20	24.66	106.86	854.26	256.29	1110.55

3.7 GROSS VALUE OF MINOR FOREST PRODUCTS  
(RECORDED & UN-RECORDED) AT CURRENT PRICES

1960-61 to 1968-69

Year	Auction value of minor forest products Rs. Lakhs	Economic value		
		Recorded Rs. lakhs	Un-recorded Rs. Lakhs	Gross Value Rs. lakhs
(1)	(2)	(3)	(4)	(5)
1960-61	15.91	63.63	19.09	82.72
1961-62	13.12	52.47	15.74	68.21
1962-63	12.35	49.41	14.82	64.23
1963-64	12.38	77.50	23.25	100.75
1964-65	30.40	149.59	44.88	194.47
1965-66	39.78	159.11	47.73	206.84
1966-67	45.05	180.19	54.06	234.25
1967-68	41.61	166.43	49.93	216.36
1968-69	38.22	152.89	45.87	198.76

III. NET PRODUCT FROM FORESTRY AND  
LOGGING AT CURRENT PRICES

The net product from forestry and logging is estimated by adopting the rates suggested by the Central Statistical Organisation in their notes on standard methodology. The following items are deducted from the gross value to arrive at the net product.

- Expenditure on repairs and maintenance of roads and other assets at 4 per cent of the gross value;
- Allowance for depreciation of fixed assets 1 p. c. of gross value.

Net product from new plantations is estimated at 75 p. c. of the outlay on new plantations furnished in the administration reports

Gross product and net product from forestry and logging are given in table 3.11 and 3.12.

IV. NET STATE DOMESTIC PRODUCT  
FROM FORESTRY AND LOGGING  
AT 1960-61 CONSTANT PRICES

## Major Products

Value of species-wise outturn of timber in round logs by Government agency is estimated at 1960-61 prices. The weighted average price of timber for each year is used to evaluate the total outturn of round timber for the year, after being deflated to account for trade and transport margins.

For sawn and squared timber other than sleepers, average prices obtained by weighting-wise species prices for 1960-61 by corresponding outturn are used for finding the gross value at constant prices. Producer's prices for 1960-61 are used to evaluate timber in rough poles, railway sleepers, firewood and charcoal. Value of recorded outturn and gross outturn of major products are shown in Table 3.8.

## Minor products

Data on auction value and outturn are available for some important minor products. They are evaluated at their auction prices for 1960-61. Their index with 1960-61 as base is applied to the total economic value of minor products during 1960-61 to derive value estimates at constant prices for other years (Table 3.9.)

Net value of forest products is estimated by making deductions from the gross value at the rate used for estimation of net value at current prices.

Net income from new plantations at 1960-61 prices is estimated by using average wages of agricultural workers. Average wages of male and female workers are weighted by the number of male and female workers engaged in forestry and logging. Net income from new plantations at current prices for each year is converted into approximate number of mandays using average daily wages for the year and the mandays are revalued at 1960-61 wages (Table 3.10.)

The sum total of net income from forest product and net income from new plantations gives the net income from forestry at constant prices (Table 3.12.)



**3.8 GROSS VALUE OF MAJOR FOREST PRODUCTS (RECORDED & UN-RECORDED)  
AT CONSTANT PRICES  
1960-61 TO 1968-69**

Value: Rs. in lakhs.

Year	Industrial Wood			Fire Wood & charcoal			All major forest products		
	Recorded	Un-recorded	Total	Recorded	Un-recorded	Total	Recorded	Un-recorded	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
60-61	353.81	106.14	459.95	42.37	12.71	55.08	396.18	118.85	515.03
61-62	352.41	105.72	458.13	45.81	13.74	59.55	398.22	119.46	517.68
62-63	366.70	110.01	476.71	30.24	9.07	39.31	396.94	119.08	516.02
63-64	368.04	110.41	478.45	20.73	6.22	26.95	388.77	116.63	505.40
64-65	389.74	116.92	506.66	33.56	10.07	43.63	423.30	126.99	550.29
65-66	601.97	180.59	782.56	40.72	12.22	52.94	642.69	192.81	835.50
66-67	703.34	211.00	914.34	60.09	18.03	78.12	763.43	229.03	992.46
67-68	745.08	223.52	968.60	80.39	24.12	104.51	825.47	247.64	1073.11
68-69	693.76	208.12	901.88	62.03	8.61	70.64	755.79	216.73	972.52

**3.9 VALUE OF MINOR FOREST PRODUCTS AT 1960-61 CONSTANT PRICES**

Year	Important minor forest products		Economic value of minor forest products		
	Auction value Rs. lakhs	Index of value	Recorded Rs. lakhs	Un-recorded Rs. lakhs	Gross value Rs. lakhs
(1)	(2)	(3)	(4)	(5)	(6)
1960-61	11.07	100	63.63	19.09	82.72
1961-62	11.20	101	64.27	19.28	83.55
1962-63	14.27	129	82.08	24.62	106.70
1963-64	16.04	145	92.26	27.68	119.94
1964-65	15.25	138	87.81	26.34	114.15
1965-66	17.91	162	103.08	30.92	134.00
1966-67	15.68	142	90.35	27.11	117.46
1967-68	11.63	105	66.81	20.04	86.85
1968-69	15.54	140	89.08	26.72	115.80

**3.10 NET INCOME FROM NEW PLANTATIONS AT 1960-61 PRICES**

1960-61 TO 1968-69

Year	Gross outlay on new plantations	Net income from new plantations at current prices	Average daily wages of field labour	No. of mandays corresponding to net income at current prices	Net income at 60-61 prices
	Rs. lakhs	Rs. lakhs	Rs.	Nos.	Rs. lakhs
(1)	(2)	(3)	(4)	(5)	(6)
1960-61	4.13	3.10	1.84	168478	3.10
1961-62	2.76	2.07	2.16	95833	1.76
1962-63	2.73	2.05	2.36	86864	1.60
1964-64	4.37	3.28	2.44	134426	2.47
1964-65	22.11	16.58	2.78	596763	10.98
1965-66	28.25	21.19	3.12	678846	12.49
1966-67	35.08	26.31	3.62	726796	13.37
1967-68	42.00	31.50	4.35	724138	13.32
1968-69	23.64	17.73	4.57	387978	7.14



## 3.11 NET PRODUCT FROM FORESTRY AND LOGGING—KERALA

1960-61 to 1968-69 at current prices

Items	(Rs. '000)								
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Gross value of major products recorded	39618	35782	37274	37202	38208	59845	72075	90039	85426
Do. in recorded	11885	10737	11181	11162	11463	17954	21640	27041	25629
Total	51503	46519	48455	48364	49671	77799	93715	117080	111055
Gross value of all minor products recorded	6363	5274	4941	7750	14959	15911	18019	16643	15289
Do. in recorded	1909	1574	1482	2325	4488	4773	5406	4993	4587
Total	8272	6821	6423	10075	19447	20684	23425	21636	19876
Gross value of output recorded	45981	41029	42215	44952	53167	75756	90094	106682	100715
Do. in recorded	13794	12311	12663	13487	15951	22727	27046	32034	30216
Total	59775	53340	54878	58439	69118	98483	117140	138716	130931
Less cost of repairs, maintenance etc.	2391	2134	2195	2338	2765	3939	4686	5549	5237
Gross product	57384	51206	52683	56101	66353	94544	112454	133167	125694
Less allowance for depreciation	598	533	549	584	691	985	1171	1387	1309
Net product	56786	50673	52134	55517	65662	93559	111283	131780	124385
Net income from new Plantations	310	207	205	328	1658	2119	2633	2344	1773
Net product from forestry	57096	50880	52339	55845	67320	95678	113914	134124	126158

## 3.12 NET PRODUCT FROM FORESTRY AND LOGGING—KERALA

1960-61 to 1968-69 at constant (60-61) prices

Item	(Rs. '000)								
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Gross value of major products recorded	39618	19822	39694	38877	42330	64269	76343	82540	75579
Do. in recorded	11885	11946	11908	11663	12699	19281	22903	24764	21673
Total	51503	51768	51602	50540	55029	83550	99246	107311	97252
Gross value of all minor products recorded	6363	6427	8208	9226	8781	10308	9035	6681	8908
Do. in recorded	1909	1928	2462	2768	2634	3092	2711	2004	2672
Total	8272	8355	10670	11994	11415	13400	11746	8685	11580
Gross value of output recorded	45981	46249	47902	48103	51111	74577	85378	89228	84487
Do. in recorded	13794	13874	14370	14431	15333	22373	25614	26768	24345
Total	59775	60123	62272	62534	66444	96950	110992	115996	108832
Less cost of repairs, maintenance etc.	2391	2405	2491	2501	2658	3878	4440	4640	4353
Gross product	57384	57718	59781	60033	63786	93072	106552	111356	104479
Less allowance for depreciation	598	601	623	625	664	970	1110	1160	1088
Net product	56786	57117	59158	59408	63122	92102	105442	110196	103391
Net income from new plantations	310	176	160	247	1098	1249	1337	992	
Net product from forestry	57096	57293	59318	59655	64220	93351	106779	111188	104105



#### 4. FISHING

Fishing industry includes commercial and subsistence fishing in (i) ocean, coastal and off-shore waters and gathering of sea-shells, sea-weeds and other marine products, (ii) inland water fishing which consists of catching fish from rivers, lakes, canals, tanks, etc., non-mechanised collection of limeshells for meat purposes and preparation of lime, catching frogs from swamps, tanks etc., and (iii) fish curing activities such as salting and sun drying of fish.

Data on out-turn from fishing are available in administration reports of the Fisheries Department. Marine products are evaluated at prices implicit in the value furnished by the Department. For the evaluation of inland fish such prices are properly deflated to account for trade and transport margins. Production of limeshells by fishermen from Vembanad Lake is adjusted to include production in other areas. It is evaluated at the price implicit in the value given in administration reports. Annual production and value of raw frog legs are estimated by utilising data on exports and that available in Annual Survey of Industries schedules. Minor products such as tortoise meat, tortoise shells, sea weeds etc., are also taken into account.

Value added by salting and sun drying of fish is included in the gross value of fishing products. Costs of repair and maintenance of boats, nets, etc., other operational costs and depreciation of fixed assets worked out at rates suggested by the Central Statistical Organisation are deducted from the gross value in order to obtain the net product.

The net product from fishing at constant prices is derived by evaluating the various products and input at their 1960-61 prices.

#### OUT-TURN FROM FISHING

##### Marine Fish:

Annual estimates of marine fish catches by non-mechanised crafts are given in the administration reports for the years 1960-61 to 1962-63. Catches by mechanised boats under departmental control as well as those made by Indo Norwegian Project (INP) vessels are separately furnished in the reports. Fish landings made in the project area by mechanised boats issued to fishermen (by government) and their number of days of absence from the area (owing to their operation in other places) are also available in the reports.

Mechanised catches for the years 1960-61 to 1962-63 are estimated as the sum of (i) the recorded catches by departmentally controlled vessels, INP vessels and government-issued fishermen's boats in INP area and (ii) the estimated catches by fishermen's boats outside the INP area, boats issued to fishermen in other areas and private boats.

##### Mechanised fishing boats:

Data are available on the total (cumulative) number of boats acquired or issued by government upto the end of each year, number of boats issued during each year, etc. Information on the total number of boats (owned by all agencies) operating during the years 1965-66 to 1967-68 are supplied by the Department. The number of private boats operated during 1960-61 to 1964-65, is estimated from that for 1965-66 by applying the index of number of boats issued by Government.

##### Un-recorded catches :

The quantity and value of average catch per trip for fishermen's boats in INP area by types of vessels are used to estimate their catches from places outside the project area during their absence from project area. Details of average annual catches by boats issued to fishermen in INP area are utilised for the estimation of landings by other boats (Government issued and private) for which catches are not recorded. For the years 1963-64 to 1968-69, total marine landings including catches by mechanised boats are available in the administration reports.

##### Inland fish :

Data on inland fish landings furnished in the administration reports for the years 1960-61 to 1965-66 appear to be under estimates, especially, in respect of prawns. Large quantities of prawns are filtered from paddy fields known as 'pokkali fields'. The information on area under prawn filtration, yield rate of prawns etc., supplied by the Fisheries Department indicates that there is considerable annual production of prawns. But the total quantity of prawns shown in the species-wise inland fish catches is too small to include prawns filtered from paddy fields. The annual number of stake nets, china nets etc., licensed by the Department also discloses the likelihood of under estimation in the out-turn of inland fish catches during the years previous to 1966-67. Therefore, adopting the departmental estimates for the years 1966-67 to 1968-69, out-turn for previous years is estimated from that for 1966-67 by employing a suitable index of production of inland fish.

##### Index of production :

As the license fees from china nets, stake nets and other nets are based on their productivity, the average tax revenue per net is taken to indicate the yield per net to a considerable extent. In order to construct the index, the number of nets of each type licensed during an year is multiplied by the average revenue per net for the years 1965-66 to 1967-68. The sum of such products for the year is expressed as the percentage of similar figure for 1966-67. The annual estimates of inland fish landings for 1960-61 to 1965-66 are derived by applying the indices for the years to the production during 1966-67.

##### Lime shells :

Annual production of limeshell by fishermen from Vembanad lake is available in the administration reports of the Fisheries Department for the years 1965-66, 1967-68 and 1968-69. These figures are exclusive of limeshell produced by dredgers (for the factories Travancore cements Ltd., and Electro Chemicals in Kottayam) but they include production by individuals for the use of other factories (e.g. Pallathra Bricks and tiles). The latter quantity is separately available in the administration reports of the Department of Geology. As it is included under the sector of mining and quarrying it is deducted from the total production given by the Fisheries Department.

Data on production of limeshells from Vembanad lake by major co-operative societies are available for the years 1960-61 to 1966-67. The indices of these figures, taking the production for 1965-66 as the base are used to estimate the total production by fishermen for other years.



**Un-recorded production :**

The annual number of licenses issued for 1965-66 to 1968-69 shows that the average number of persons engaged in collection of limeshells in places other than Vembanad lake is about 20 per cent of those in Vembanad. But in other places shells are collected mostly for meat purposes and the rate of collection may be much less. Taking the rate of collection in other places as 25 per cent of that in Vembanad the total production from such places comes to 5 per cent of the recorded production. Unrecorded production is worked out at 10 per cent of the production from Vembanad lake so as to include collection by unlicensed workers also.

**Chanks :**

The annual number of chanks collected is taken from the administration reports.

**Sea-shells :**

Data on sea-shells collected along with chanks is furnished by the Director of Fisheries for the years 1963-64 to 1966-67. The average production during the first two years is used for 1960-61 to 1962-63 and the average for the next two years for 1967-68 and 1968-69. The total production of sea-shell is included under chanks.

**Frogs :**

The quantity of processed frog legs exported is furnished in the administration reports of the Fisheries Department for the years 1960-61, 1961-62 and 1965-66 to 1968-69. The production of raw frogs is estimated from the quantity of processed frog legs by applying the ratio of quantity of input of raw frogs to the corresponding output of processed frog legs worked out from A. S. I. results for each year. The ratio for 1966-67 is used for 1967-68 and 1968-69 also. The index of output of processed frog legs (1965-66=100) is used for the estimation of out-turn of frog legs for the years 1962-63 to 1961-65.

**Inland fish :**

The prices implicit in the values given in the administration reports are used for evaluation after being deflated by 25 per cent to allow for trade and transport margins.

**Lime-shells :**

The annual output and value of limeshells are supplied by co-operative societies, for the years 1960-61 to 1966-67. Prices implicit in the value of limeshells shown in the administration reports are adopted for 1965-66, 1967-68 and 1968-69. For other years prices are estimated from that for 1965-66 by applying the index of price of limeshells collected by co-operative societies.

**Chanks and seashells :**

The royalty for collection of chanks is fixed per chank collected. The annual number of chanks collected is evaluated at twice the rate of royalty.

**Frogs :**

Average purchase price of raw frog legs is worked out from A. S. I. results for the years 1960-61 to 1966-67. Export prices are available for 1967-68 and 1968-69 in the administration reports of the Fisheries Department. They are deflated to represent purchase

price of frog legs by applying the ratio of purchase price to export price calculated from A. S. I. results for 1965-66 and 1966-67. The purchase prices are again deflated by 30 per cent to allow for trade and transport margin.

**Other minor products :**

Export values are available for some minor items such as tortoise meat, tortoise shell, seaweeds, etc. Their producer's value is estimated at 47 per cent of the export value.

**Subsistence fishing :**

Value of products of subsistence fishing is estimated at 25 per cent of the gross value of inland fish as suggested by the Central Statistical Organisation.

Value added by salting and sundrying of fish is estimated at 5 per cent of the gross value of marine fish on the basis of the departmental data for 60-61 to 62-63.

**Gross value at constant prices :****Marine fish**

Species-wise out-turn and value of marine fish is available for 60-61 to 68-69. The production for 60-61 to 67-68 is revalued at 60-61 species-wise prices. As the production in the administration reports for the years 1960-61 to 62-63 does not include catches by mechanised boats, value of mechanised catches at 60-61 prices is added to the value estimated as above for those years.

**Inland fish :**

Species-wise out-turn available in the administration reports are evaluated at 60-61 prices. The weighted average annual prices are used to evaluate the total production of inland fish for all the years.

All other items are evaluated at their 60-61 prices to get the value at constant prices.

**Net product from fishing :**

In order to derive the net product from fishing industry, deductions are made for value of inputs, namely cost of repairs, maintenance of boats, nets, etc., and other operational cost and allowance for depreciation. The value of inputs are worked out at the following rates.

Item	Value of input as percentage of gross value		
	Repairs and maintenance	Depreciation	Source
	%	%	
Marine fish	10	10	Central Statistical Organisation
Inland fish	6	4	do.
Subsistence fishing	1	..	do.
Limeshells and chanks	5	1	Data given by Co-operatives
Frogs	1	..	..



## 4.1. Out-turn of Fishery products

1960-61 to 1968-69

Year	Marine fish landings tonnes	Inland fish landings tonnes	Total tonnes	Lime shell tonnes	Chanks 100 nos.	Sea shells tonnes	Frog legs tonnes
1960-61	402654	5631	408285	79600	240	8000	414
1961-62	260804	5552	266356	87498	213	8000	176
1962-63	220414	8963	229377	86703	117	8000	253
1963-64	167363	8170	175533	78209	55	3932	220
1964-65	359500	7853	367353	88653	83	12163	171
1965-66	215528	7773	223301	85644	119	6902	488
1966-67	227485	7933	235418	96965	115	15073	581
1967-68	244078	9191	253269	123531	100	11000	404
1968-69	356184	9757	365941	124393	145	11000	485

## 4.2. Producer's Price of Fishery Products

1960-61 to 1968-69

Year	Marine fish Rs./tonne	Inland fish Rs./tonne	Lime shell Rs./tonne	Chanks Rs./100 nos.	Frog legs Rs./tonne
1960-61	125.96	451.35	8.60	100.02	1785.00
1961-62	143.32	582.93	9.57	100.00	1709.00
1962-63	169.86	551.36	11.29	101.41	2746.00
1963-64	246.26	556.00	11.70	525.09	2162.00
1964-65	174.69	473.82	13.99	241.88	2860.00
1965-66	254.73	430.36	15.23	111.88	2520.00
1966-67	316.99	536.03	16.65	156.54	3183.00
1967-68	379.97	735.19	20.04	260.14	3725.00
1968-69	324.13	924.07	21.36	113.78	4248.00

## 4.3 Net Product from Lime shells, Chanks, Frogs &amp; other Products

1960-61 to 1968-69 at Current prices

(Rs. in thousands)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1.	Lime shells	685	837	979	915	1240	1304	1614	2476	2657
2.	Chanks and Sea shells	85	97	101	116	127	133	155	251	258
3.	Frogs	739	300	695	475	490	1230	1851	1505	2062
4.	Others	..	..	..	..	..	1	159	81	21
5.	Gross value of output	1509	1234	1775	1506	1857	2668	3779	4313	4998
6.	Less repairs, maintenance and other operational costs	46	50	61	57	73	84	107	151	167
7.	Gross product	1463	1184	1714	1449	1784	2584	3672	4162	4831
8.	Less allowance for depreciation	8	99	11	10	14	14	18	27	29
9.	Net product	1455	1175	1703	1439	1770	2570	3654	4135	4802

## 4.4 Net product from Fishing at current prices

1960-61 to 1968-69

(Rs. in thousands)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1.	Inland fish	2542	3236	4942	4543	3721	3345	4252	6757	9016
2.	Marine fish	50719	37378	37439	41215	62801	54902	72110	92743	115451
3.	Subsistence fishing	636	809	1236	1136	930	836	1063	1689	2254
4.	Fish curing	2536	1869	1872	2061	3140	2745	3606	4637	5773
5.	Gross value of output	56433	43292	45489	48955	70592	61828	81031	105826	132494
6.	Less repairs, maintenance & other operational costs	5231	3940	4053	4406	6512	5699	7477	9696	12109
7.	Gross product	51202	39352	41436	44549	64080	56129	73554	96130	120385
8.	Less allowance for depreciation	5174	3867	3942	4304	6429	5624	7381	9544	11906
9.	Add net product from lime shells, chanks, frogs etc.	1455	1175	1703	1439	1770	2570	3654	4135	4802
10.	Total net product	47483	36660	39197	41684	59421	53075	69827	90721	113281



4.5 Net product from lime shells, chanks, frogs and other products  
1960-61 to 1968-69 at constant (60-61) prices.

Sl. No.	Items	Rs. in Thousands.								
		60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
1	lime shells	685	752	746	673	762	737	834	1062	1070
2	Chanks and sea shells	85	90	79	69	74	79	82	107	112
3	Frogs	739	314	452	392	306	871	1038	721	867
4	Others	..	..	..	..	..	..	89	39	9
5	Gross value of output	1509	1156	1277	1134	1142	1687	2043	1929	2058
6	Less repairs, maintenance & other operational cost.	46	45	46	41	45	50	56	65	68
7	Gross product	1463	1111	1231	1093	1097	1637	1987	1864	1990
8	Less allowance for depreciation	8	8	8	7	8	8	9	12	12
9	Net product.	1455	1103	1223	1086	1089	1629	1978	1852	1978

4.6 Net product from Fishing at constant (60-61) prices  
1960-61 to 1968-69.

Sl. No.	Items	Rs. in thousands.								
		60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
1	Inland fish.	2542	2073	3796	4036	3967	399	3950	4094	4428
2	Marine fish.	50719	36575	34836	34333	43183	29152	35647	38225	41894
3	Subsistence fishing.	636	518	949	1009	992	999	988	1024	1107
4	Fish curing.	2536	1829	1742	1717	2159	1458	1782	1911	2095
5	Gross value of output.	56433	40995	41323	41095	50301	35606	42367	45254	49524
6	Less repairs, maintenance & other operational costs.	5231	3787	3721	3685	4566	3165	3812	4079	4466
7	Gross product.	51202	37208	37602	37410	45735	32441	38555	41175	45058
8	Less allowance for depreciation.	5174	3741	3636	3594	4477	3075	3723	3987	4366
9	Add net product from lime shells, chanks, frogs etc.	1455	1103	1223	1086	1089	1629	1978	1852	1978
10	Total net product.	47483	34570	35189	34902	42347	30995	36810	39040	42670

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## 5. MINING AND QUARRYING

Kerala is backward in mineral output compared to most other states in India. The contribution of the state to the total mineral production in India is only about one percent.

**Coverage**

The mining and quarrying covers extraction of minerals which occur in nature as either solids, liquids or gases underground and surface mines, quarries and oil wells with all supplemental activities for dressing and beneficiating ores and other crude minerals such as breaking, milling, washing, cleaning, grading etc. to the extent that these activities are carried out at the mine site.

The important minerals of the state are China clay, Ilmenite, Rutile, Monozite, Zircon, Silliminite, Quartz and Silica, Lime shell and ordinary clay. Monozite and zircon being atomic minerals are excluded from the estimation. Deposits of iron are occur in the state but have not been exploited so far. Deposits of graphite, gold and lignite are known to occur in the state, but they are not much economic significance. A small quantity of salt is recovered from seawater. Salt thus produced is excluded from this sector and is included in the manufacturing sector.

The estimates of income originating from this sector is prepared by the inventory or value added method. According to this method the gross value of production is estimated first and then deductions are made for mining expenses such as fuels electricity supplies and raw materials and various services purchased from outside and depreciation of fixed assets used in the productive activity. The data on output and value of minerals are available from the following sources.

1. State Department of Geology.
2. Indian Mineral year Book of I B.M.
3. Monthly Bulletin of Mineral Statistics and information published by the I B.M.

Date on production from the State Department of Geology and the average pit head value from the I B.M. publications are used for the estimation.

**Gross value of output at current prices**

The gross value of output of the different minerals is presented in table 5.1. To compute these figures the productwise figures available with the State Department of Geology and the average pithead value calculated from the monthly bulletin of Mineral Statistics (I. B. M.) are used. The total value of minor minerals of other than limeshell has been computed on the basis of the working force in quarrying.

*Note*:—The figures published in the Mineral Year Book (I. B. M.) are not used for the following reasons:—

1. These figures relate to calendar years.
2. There is considerable time lag for the publication of the figures.
3. The difference between the figures available in the Year Book and those kept in the State Department of Geology is quite negligible.

**Mining inputs**

The rates of mining expenses for the state of Kerala furnished by the Indian Bureau of Mines have been utilised for arriving at the net product. The rates used is shown in table 5.2.

**Estimates at constant prices**

Gross value of output at constant prices for the different years is calculated by revaluing the quantity of output of the different constituent minerals at the pit head prices of 1960-61. These figures are given in table 5.3. For arriving at the estimates of gross/net S. D. P. at constant prices, the same input-output rates as used for the current price series are applied. The estimates of gross/net state domestic product at constant prices for the years 1960-61 to 1968-69 are presented in table 5.4.

Net product from mining and quarrying for the years 1960-61 to 1968-69 both at current and constant prices are presented in tables 5.5 and 5.6 respectively.



5.1 Gross value of Minerals (at current Prices)

Value : Rs.  
Quantity : Mt.

Minerals	1960-61			1961-62			1962-63			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Quantity	Quantity	Price	Value	Quantity	Price	Value	Quantity	Price	Value
<b>1. Metallic minerals</b>										
(a) Ilmenite	204763		59.06	120933803	158028	59.06	9333134	116617	5905	6886234
(b) Rutile	980		984.73	965035	898	985.28	884781	17149	984.53	1721943
	..	..	..	13058338	..	..	10217915	..	..	8608177
<b>Total metallic minerals</b>										
<b>2. Non-metallic minerals</b>										
(a) China clay (saleable crude)	..		..	..	426	14.08	5998	1835	17.44	32002
(b) China-clay (Processed)	10554		37.60	396830	12176	35.65	434074	10637	42.56	452711
(c) Ball clay	..		..	..	..	..	..	..	..	..
(d) Fire clay	..		..	..	..	..	..	..	..	..
(e) Mica (crude)	95		305.26	29000	..	..	..	..	..	..
(f) Quartz and silica	3626		1.18	4279	7171	1.94	13912	8166	1.96	16005
(g) Sil imenite	1		318.18	318	5	318.18	1591	..	..	..
	..		..	430427	..	..	455575	..	..	500718
<b>Total non-metallic minerals</b>										
<b>3. Minor minerals</b>										
(a) Lime shell	83719		8.54	714960	101384	9.57	970245	104531	11.02	1151932
(b) Others	..		..	10329248	..	..	11341746	..	..	11768500
	..		..	11644268	..	..	12311991	..	..	12920432
<b>Total minor minerals</b>										
<b>Grand total</b>										
	..		..	25132973	..	..	22985481	..	..	22029327

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



## 5.1 Gross value of minerals (at current Prices)

	Value: Rs.						Quantity: Mt.					
	1963-64			1964-65			1965-66					
	Quantity (11)	Price (12)	Value (13)	Quantity (14)	Price (15)	Value (16)	Quantity (17)	Price (18)	Value (19)	Quantity (17)	Price (18)	Value (19)
<b>Minerals</b>												
(1)												
<b>1. Metallic minerals</b>												
(a) Ilmenite	7346	43.42	318963	3684	49.40	181990	3847	57.18	219971			
(b) R. tile	1901	984.22	1871002	1775	985.35	1748996	1231	984.57	1212006			
			2189965						1431977			
<b>Total metallic minerals</b>												
<b>2. Non-metallic minerals</b>												
(a) China clay (saleable crude)	1165	18.88	21995	4700	15.74	73978	10640	15.88	168963			
(b) China-clay (Processed)	10790	40.31	434945	12531	45.54	570662	10069	63.71	641496			
(c) Ball clay	..	..	..	1111	9.90	10999	281	10.63	3001			
(d) Fire clay	..	..	..	..	..	..	..	..	..			
(e) Mica (crude)	..	..	..	..	..	..	..	..	..			
(f) Quartz and silica	10525	2.60	27365	4507	2.13	9600	7502	2.53	18980			
(g) Silliminite	..	..	..	..	..	..	..	..	..			
			484305			665239			832440			
<b>Total non-metallic minerals</b>												
<b>3. Minor minerals</b>												
(a) Lime shell	104661	11.81	1236046	186449	13.17	2455533	65518	14.52	9513242			
(b) Others	..	..	12210286	..	..	12666368	..	..	13087824			
			13446332			15121901			14039146			
<b>Total minor minerals</b>												
			16120602			17718126			16303563			
<b>Grand total</b>												

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.1 Gross value of minerals (at current Prices)

Value: Rs.  
Quantity: Mt.

Minerals	1966-67			1967-68			1968-69		
	Quantity (20)	Price (21)	Value (22)	Quantity (23)	Price (24)	Value (25)	Quantity (26)	Price (27)	Value (28)
(1)									
Total metallic minerals									
1. Metallic minerals									
(a) Ilmenite	6650	61.05	405982	12184	56.59	689493	13116	54.76	718231
(b) Rutile	1319	984.86	1299030	1407	985.39	1386444	1336	984.81	1315706
	..	..	1715012	..	..	2075937	..	..	2033937
Total non-metallic minerals									
2. Non-metallic minerals									
(a) China clay (saleable crude)	5805	1583	92183	2867	13.54	38819	16102	112.99	1819365
(b) China-clay (Processed)	14156	8881	1257194	23765	98.49	2340615	..	..	..
(c) Ball clay	663	1278	8473	672	13.79	9267	293	13.79	4040
(d) Fire clay	96	10.42	1000	222	13.27	2946	326	13.27	4326
(e) Mica (crude)	..	..	..	..	..	..	..	..	..
(f) Quartz and silica	4854	2.47	11989	12822	2.55	32696	13327	2.55	39084
(g) Sillimentite	..	..	..	24	318.18	7636	45	318.18	15318
	..	..	1370839	..	..	2431979	..	..	1881133
Total minor minerals									
3. Minor minerals									
(a) Lime shell	69164	18.41	1273309	72398	18.23	1319816	84605	18.23	1542349
(b) Others	..	..	13678630	..	..	14557452	..	..	15472742
	..	..	14951939	..	..	15877268	..	..	17015091
Total minor minerals	..	..	18027790	..	..	20385184	..	..	20930169
Grand total	..	..	..	..	..	..	..	..	..

Others—Quarrying of tile clay, brick clay, granite, laterite, etc.



## 5.2 Gross Product, Depreciation, Net Product Etc. of Minerals (at Current Prices)

in (Rs.)

Minerals	1960-61				1961-62						
	Gross value	Inputs percentage of gross value		Gross product	depreciation percentage of gross value		Net Product	Gross value	inputs percentage of gross value		
		(2)	(3)		(4)	(5)			(6)	(7)	(8)
(1)	Rs.	%	Amount	Rs.	%	Amount	Rs.	%	Amount		
1. metallic minerals											
(a) ilmenite	12093303	1.0	120933	11972370	1.7	205886	11766784	9333134	3.0	279994	
(b) rutile	965035	1.0	9650	955385	1.7	16406	938979	884781	3.0	26543	
Total metallic minerals	13058338	..	130583	12927755	..	221992	12705763	10217915	..	306537	
2. non-metallic minerals											
(a) china clay (saleable crude)	396830	12.0	47620	349210	4.4	17461	331749	5998	12.0	720	
(c) china clay (processed)	..	..	..	..	..	..	..	434074	24.7	107216	
(d) ball clay	..	..	..	..	..	..	..	..	..	..	
(e) fire clay	..	..	..	..	..	..	..	..	..	..	
(f) mica (crude)	29000	..	..	29000	6.9	2001	26999	..	..	..	
(g) quartz & silica	4279	..	..	4279	1.7	73	4206	13912	..	..	
(h) sillimentite	318	11.0	35	283	4.0	13	270	1591	11.0	175	
total non-metallic minerals	430427	..	47655	382772	..	19548	363224	455575	..	108111	
3. minor minerals											
(a) lime shell	714960	11.0	78646	636314	4.0	28598	607716	970245	11.0	106727	
(b) others	10929248	11.0	..	10929248	4.0	..	10929248	11341746	..	..	
total minor mineral	11644208	..	78646	11565562	..	28598	11536964	12311991	..	106727	
grand total	25132973	..	256884	24876089	..	270138	24605951	22985481	..	521375	

Others—quarrying of tile clay, brick clay, granite, laterite etc.



5.2 Gross Product, Depreciation, Net Product Etc. of Minerals (at Current Prices)

in (Rs.)

1962-63

Minerals	Depreciation per-			Gross value	inputs percentage			Gross product	Depreciation per-			Net product
	centage of gross value		Rs.		of gross value		Amount		centage of gross value		Amount	
	(12)	(13)			(14)	(15)			(16)	(17)		
(1)												
1. metallic minerals												
(a) ilmenite	9053140	1.4	130664	8922476	6886234	3.0	206587	6679647	1.4	96407	6583240	
(b) rutile	858238	1.4	12387	845851	1721943	3.0	51568	1670285	1.4	24107	1646178	
Total metallic minerals	9911378	..	143051	9768327	8608177	..	258245	8349932	..	120514	8229418	
2. non-metallic minerals												
(a) china clay (saleable crude)	5278	4.4	264	5014	32002	24.7	7904	24098	6.8	2176	21922	
(c) china clay (processed)	326858	6.8	29517	297341	452711	24.7	111820	340891	6.8	30784	310107	
(d) ball clay	..	..	..	..	..	..	..	..	..	..	..	
(e) fire clay	..	..	..	..	..	..	..	..	..	..	..	
(f) mica (crude)	13912	1.7	237	13675	16005	..	..	16005	1.7	272	15738	
(g) quartz & silica	1416	4.0	1352	..	..	..	..	..	..	..	..	
(h) silliminite	..	..	..	..	..	..	..	..	..	..	..	
total non-metallic minerals	347464	..	30082	317382	500718	..	119724	380994	..	33232	347762	
3. minor minerals												
(a) lime shell	863518	4.0	38809	824709	1151932	11.0	126713	1025219	4.0	46077	979142	
(c) others	11341746	..	..	11341746	11768500	..	..	11768500	..	..	11768500	
total minor mineral	12205264	..	38809	12166455	12920432	..	126713	12793719	..	46077	12747642	
grand total	22464106	..	211942	22252164	22029327	..	504682	21524645	..	199823	21324822	

Others—quarrying of tile clay, brick clay, granite, laterite etc.



5.2 Gross product, Depreciation, Net product etc. of Minerals (at current prices)

(in Rs.)

Minerals	1963-'64										1964-'65			
	Gross value		Inputs percentage of gross value		Gross product		Depreciation percentage of gross value		Net product		Gross value		Inputs percentage of gross value	
	(Rs.)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	
(1)														
<b>1. Metallic minerals</b>														
(a) Ilmenite	..	318963	4.6	14672	304291	1.4	4465	299826	181990	4.1	7462			
(b) Rutile	..	1871002	4.6	86066	1784936	1.4	26194	1738742	1748996	4.1	71709			
Total metallic minerals	..	2189965	..	100738	2089227	..	30659	2058568	1930986	..	79171			
<b>2. Non-metallic minerals</b>														
(a) China clay (sale able crude)	..	21995	10.71	2356	19639	4.68	1029	18610	73978	7.7	5696			
(c) China clay (processed)	..	434945	26.60	115695	319250	7.2	31316	287934	570662	22.1	126116			
(d) Ball clay	..	..	..	..	..	..	..	..	10999	22.1	2431			
(e) Fire clay	..	..	..	..	..	..	..	..	..	..	..			
(f) Mica (crude)	..	..	..	..	..	..	..	..	..	..	..			
(g) Quartz & silica	..	27365	..	..	27365	1.6	438	26927	9600	..	..			
(h) Silimemite	..	..	..	..	..	..	..	..	..	..	..			
Total non-metallic minerals	..	484305	..	118061	366254	..	32783	333471	665239	..	134243			
<b>3. Minor minerals</b>														
(a) Lime shell	..	1236046	11.0	135965	1100081	4.0	49442	1050639	2455533	11.0	270109			
(c) Others	..	12210296	..	..	12210296	..	..	12210286	12666368	..	..			
Total minor minerals	..	13446332	..	135965	13310367	..	49442	13260925	15121901	..	270109			
Grand Total	..	16120602	..	354754	15765848	..	112884	15652964	17718126	..	483523			

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.2 Gross product, Depreciation, Net product etc. of Minerals (at current prices)

(in Rs.)

1965-66

Minerals	Gross product		Depreciat' on		Net product	Gross value (Rs.)	Inputs		Gross product	Depreciation		Net product				
	(33)	(34)	pe. centage of gross value	Amount			(36)	(37)		(38)	Amount		(40)	(41)	Am. unit	(43)
(1)																
1. Metallic minerals																
(a) Ilmenite	174528	1.4	2548		171980	219971	4.1	9019	210952	1.4	3080	207872				
(b) Rutile	1677287	1.4	24486		1652891	1212006	4.1	49692	1162314	1.4	16968	1145346				
Total metallic minerals	1851815	..	27034		1824781	1431977	..	58711	1373266	..	20048	1353218				
2. Non-metallic minerals																
(a) China clay (sale able crude)	68282	5.0	3699		64583	168963	7.7	13010	155953	5.0	8448	147505				
(c) China clay (processed)	444546	7.2	41088		403458	641496	22.1	141771	499725	7.2	46188	453537				
(d) Ball clay	8568	7.2	792		7776	3001	22.1	663	2338	7.2	216	2122				
(e) Fire clay	..	..	..		..	..	..	..	..	..	..	..				
(f) Mica (crude)	..	..	..		..	..	..	..	..	..	..	..				
(g) Quartz & silica	9600	2.0	192		9408	18980	..	..	18980	2.0	380	18600				
(h) Sillimentite	..	..	..		..	..	..	..	..	..	..	..				
Total non-metallic minerals	530996	..	45771		485225	832440	..	155444	676996	..	55232	621764				
3. Minor minerals																
(a) Lime shell	2185424	4.0	98221		2087203	951322	11.0	104645	146677	4.0	38053	808624				
(c) Others	12666368	..	..		12666368	13087824	..	..	13087824	..	..	13087824				
Total minor minerals	14851792	..	98221		14753571	14039146	..	104645	13934501	..	38053	13896448				
Grand Total	17234603	..	171026		17063577	16303563	..	318800	15984763	..	113333	15871430				

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.2 Gross product, Depreciation, Net Product etc. of Minerals (at current prices)

(in Rs.)

1967-68

1966-67

Minerals	Gross value (Rs.)		Inputs percentage of gross value		Gross product		Depreciation percentage of gross value		Net product		Gross value (Rs.)		Inputs percentage of gross value	
	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	
<b>1. Metallic minerals:</b>														
(1) Metallic minerals:														
(a) Ilmenite	.. 405982	7.0	28419	377563	1.4	5684	371879	689493	7.0	48265				
(b) Rutile	.. 1299030	7.0	90932	1208098	1.4	18186	1189912	1386444	7.0	97051				
Total metallic mineral:	.. 1705012	..	119351	1585661	..	23870	1561791	2075937	..	145316				
<b>2. Non-metallic mineral:</b>														
(a) China clay (saleable crude)	.. 92183	2.0	1844	90339	3.0	2765	87574	38819	2.0	776				
(b) China clay (processed)	.. 1257194	5.0	62860	1194334	2.0	25144	1169190	2340615	5.0	117031				
(c) Ball clay	.. 8743	5.0	424	8049	2.0	169	7880	9267	5.0	463				
(d) Fire clay	.. 1000	5.0	50	950	2.0	20	930	2946	5.0	147				
(e) Mica (crude)	..	..	..	..	..	..	..	..	..	..				
(f) Quartz & Silica	.. 11989	1.0	120	11869	2.0	240	11629	32696	1.0	327				
(g) Sillimentite	..	..	..	..	..	..	..	7636	11.0	840				
Total non-metallic minerals	.. 1370839	..	65298	1305541	..	28338	1277203	2431979	..	119584				
<b>3. Minor minerals:</b>														
(a) Lime shell	.. 1273309	11.0	140064	1133245	4.0	50932	1082313	1319816	11.0	145180				
(b) Others	.. 13678630	..	..	13678630	..	..	13678630	14557452	..	..				
Total minor minerals	.. 14951939	..	140064	14811875	..	50932	14760943	15877268	..	145180				
Grand total	.. 18027790	..	324713	17703077	..	103140	17599937	20385184	..	410080				

Others—quarrying of tile clay, brick clay, granite, laterite etc.



5.2 Gross product, Depreciation, Net product etc. of Minerals (at current prices)

(in Rs.)

1968-69

Minerals	Gross product		Depreciation		Net product		Input		Gross product		Depreciation		Net product			
	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	%		Amount		
												%	Amount	%	Amount	
(1)																
1. Metallic minerals :																
(a) Ilmenite	641228	1.4	9653	631575	718231	12.0	86188	632043	..	..	632043	..	..	..	..	632043
(b) Rutile	1289393	1.4	19410	1269983	1315706	12.0	157885	1157821	..	..	1157821	..	..	..	..	1157821
Total metallic minerals	1930621	..	29063	1901558	2033937	..	244073	1789864	..	..	1789864	..	..	..	..	1789864
2. Non-metallic minerals :																
(a) China clay (alcuble crude)	38043	3.0	1165	36878	1819365	5.0	90968	1728397	..	..	1692010	..	..	..	..	1692010
(b) China clay (processed)	2223584	2.0	46812	2176772	4040	..	..	4040	..	..	4040	..	..	..	..	4040
(c) Ball clay	8804	2.0	185	8619	4326	..	..	4326	..	..	4326	..	..	..	..	4326
(d) Fire clay	2799	2.0	59	2740	..	..	..	..	..	..	..	..	..	..	..	..
(e) Mica (crude)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(f) Quartz & Sillica	32369	2.0	654	31715	39084	2.0	782	33302	..	..	33302	..	..	..	..	33302
(g) Sillimentite	6796	4.0	305	6491	14318	..	..	14318	..	..	14318	..	..	..	..	14318
Total non-metallic minerals	2312395	..	49180	2263215	1881133	..	91750	1789383	..	..	1789383	..	..	..	..	1752605
3. Minor minerals :																
(a) Lime shell	1174636	4.0	52793	1121843	1542349	18.0	277623	1264726	7.0	..	107964	1156762	..	..	..	1156762
(b) Others	14557452	..	..	14557452	15472742	..	..	15472742	..	..	15472742	..	..	..	..	15472742
Total minor minerals	15732088	..	52793	15679295	17015091	..	277623	16737468	..	..	107964	16629504	..	..	..	16629504
Grand total	19975104	..	131036	19844068	20930161	..	613446	20316715	..	..	144742	20171973	..	..	..	20171973

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.3 Cross Value of Minerals (At Constant 1960-61 Prices)

Value: Rs.  
Quantity: Mt.

Minerals	1960-'61			1961-'62			1962-'63			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Quantity	Price	Value	Quantity	Price	Value	Quantity	Price	Value	Value
<b>1. Metallic minerals</b>										
(a) Ilmenite	204763	59.06	12093303	158028	59.06	9333134	116617	59.06	6887400	
(b) Rutile	980	984.73	965035	898	984.73	884288	1749	984.73	1722293	
	..	..	13038338	..	..	10217422	..	..	8609693	
<b>Total metallic minerals</b>										
<b>2. Non-Metallic minerals</b>										
(a) China clay (Saleable crude)	..	..	..	426	14.08	5998	1835	14.08	25837	
(b) China clay (Processed)	10554	37.60	396830	12176	37.60	457818	10637	37.60	399951	
(c) Ball clay	..	..	..	..	..	..	..	..	..	
(d) Fire clay	..	..	..	..	..	..	..	..	..	
(e) Mica (crude)	95	305.26	29000	..	..	..	..	..	..	
(f) Quartz and silica	3626	1.18	4279	7171	1.18	8462	8166	1.18	9636	
(g) Sillimentite	1	318.18	318	5	318.18	1591	..	..	..	
	..	..	430427	..	..	473869	..	..	435424	
<b>Total Non-metallic minerals</b>										
<b>3. Minor minerals:</b>										
(a) Lime shell	83719	8.54	714960	101384	8.54	865819	104531	8.54	892695	
(b) Others	..	..	10929248	..	..	11203992	..	..	11486056	
<b>Total minor minerals</b>	..	..	11644208	..	..	12069811	..	..	12378751	
<b>Grand total</b>	..	..	25132973	..	..	22761102	..	..	21423868	

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



## 5.3 Gross Value of Minerals (At Constant 1960-61 Prices)—Contd.

Value: Rs.  
Quantity: Mt.

Minerals	1963-'64			1964-'65			1965-'66		
	Quantity (11)	Price (12)	Value (13)	Quantity (14)	Price (15)	Value (16)	Quantity (17)	Price (18)	Value (19)
<b>1. Metallic minerals</b>									
(a) Ilmenite	7346	59.06	433855	3684	59.06	217577	3847	59.06	227204
(b) Rutile	1901	984.73	1871972	1775	984.73	1747896	1231	984.73	1212203
	..	..	2305827	..	..	1965473	..	..	1439407
<b>Total metallic minerals</b>									
<b>2. Non-metallic minerals</b>									
(a) China clay (Sale able crude)	1165	14.08	16403	4700	14.08	66176	10640	14.08	149811
(b) China clay (processed)	10790	37.60	405704	12531	37.60	471166	10060	37.60	378594
(c) Ball clay	..	..	..	1111	9.90	10999	281	9.90	2782
(d) Fire clay	..	..	..	..	..	..	..	..	..
(e) Mica (crude)	..	..	..	..	..	..	..	..	..
(f) Quartz and silica	10525	1.18	12420	4507	1.18	5318	7502	1.18	8852
(g) Sillimencate	..	..	..	..	..	..	..	..	..
	..	..	434527	..	..	53659	..	..	540039
<b>Total non-metallic minerals</b>									
<b>3. Minor minerals</b>									
(a) Lime shell	104661	8.54	893805	186449	8.54	1592274	65518	8.54	559524
(b) Others	..	..	11775928	..	..	12072632	..	..	12377632
	..	..	12669733	..	..	13664906	..	..	12937156
<b>Total minor minerals</b>									
	..	..	15410087	..	..	16184038	..	..	14916602
<b>Grand total</b>									

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.3 Gross Value of Minerals at Constant (1960-'61) Prices

Value: \$  
Quantity: mt.

	1965-'67			1967-'68			1968-'69		
	Quantity	Price	Value	Quantity	Price	Value	Quantity	Price	Value
19	20	21	22	23	24	25	26	27	28
1. Metallic minerals	6650	59.06	392947	12184	59.06	719587	13116	59.06	774631
Rutile	1319	984.73	1298859	1407	984.73	1385515	1336	984.73	1315599
	..	..	1691608	..	..	2105102	..	..	2090230
Total metallic minerals									
2. Non-metallic minerals	5805	14.08	81734	2867	14.08	40367	16102	37.60	605435
China Clay (saleable crude)	14156	37.60	532266	23765	37.60	893564	293	9.90	2901
Ball Clay	663	9.90	6564	672	9.90	6653	326	10.42	3397
Fire Clay	96	10.42	1000	222	10.42	2313	..	..	..
Mica	..	..	..	..	..	..	..	..	..
Quartz and Silica	4854	1.18	5728	12822	1.18	15130	15327	1.18	18086
Silluminite	..	..	..	24	318.28	7636	45	318.18	14318
	..	..	627292	..	..	965663	..	..	644137
Total non-metallic minerals									
3. Minor minerals	69164	8.54	590661	72398	8.54	618279	84605	8.54	722527
Lime shell	..	..	12690440	..	..	13011056	..	..	13340456
Others	..	..	..	..	..	..	..	..	..
	..	..	13281101	..	..	13629335	..	..	14062983
Total minor minerals									
	..	..	15600001	..	..	16700100	..	..	16797350
Grand Total									



5.4 Gross, Product, Depreciation, Net Product, etc., of Minerals (At Constant 1960-61 Prices)

(in Rs.)

Minerals	1960-61				1961-62								
	(1)	Gross value		Inputs percentage of gross value		Gross product	Depreciation percentage of gross value		Net product	Gross value		Inputs percentage of gross value	
		(2)	(3)	(4)	(5)		(6)	(7)		(8)	(9)	(10)	(11)
		%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount
<b>1. Metallic minerals</b>													
(a) Ilmenate	12093303	1.0	120933	11972370	1.7	205586	11766784	9333134	3.0	279994			
(b) Rutile	965035	1.0	9650	955385	1.7	16406	938979	384288	3.0	26529			
Total metallic minerals	13058338	..	130583	12927755	..	221992	12705753	1027422	..	306523			
<b>2. Non-metallic minerals</b>													
(a) China clay (Saleable crude)	396830	12.0	47620	349210	4.4	17461	331749	5998	12.0	720			
(b) China clay (Processed)	..	..	..	..	..	..	..	457818	24.7	113081			
(c) Ball clay	..	..	..	..	..	..	..	..	..	..			
(d) Fire clay	..	..	..	..	..	..	..	..	..	..			
(e) Mica (crude)	29000	..	..	29000	6.9	2001	26999	..	..	..			
(f) Quartz & sillimanite	4279	..	..	4279	1.7	73	4206	8462	..	..			
(g) Sillimanite	318	11.0	35	283	4.0	13	270	1591	11.0	175			
Total metallic non-minerals	430427	..	47655	382772	..	19548	363224	473869	..	113976			
<b>3. Minor minerals</b>													
(a) Lime shell	714960	11.0	78646	636314	4.0	28598	607716	865819	11.0	95240			
(b) Others	10929248	..	..	10929248	..	..	10929248	11203992	..	..			
Total minor minerals	11644208	..	78646	11565562	..	28598	11536964	12069811	..	95240			
Grand Total	25132973	..	256884	24876089	..	270138	24605951	22761102	..	515739			

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



34. Gross Product, Depreciation, net Product, etc. of Minerals (at constant 1963-61 Prices)

(in Rs.)

1963-64

Minerals	(1)	Gross product		Depreciation percentage of gross value		Inputs percentage of gross value		Gross product		Depreciation percentage of gross value		Net product	
		(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
		amount	%	amount	%	amount	%	amount	%	amount	%	amount	%
<b>1. Metallic Minerals</b>													
(a) Ilmenite		9053140	1.4	130664	8922476	6887400	3.0	206622	6680778	1.4	96424	6584354	
(b) Rutile		857759	1.4	12380	845379	1722293	3.0	51669	1670624	1.4	24112	1646512	
<b>Total metallic minerals</b>		9910899	..	143044	9767855	8609693	..	258291	8351402	..	120536	8230866	
<b>2. Non-metallic minerals</b>													
(a) China clay (saleable crude)		5278	4.4	264	5014	25837	24.7	6382	19455	6.8	1757	17698	
(c) China clay (processed)		344737	6.8	31132	313605	399951	24.7	98788	301163	6.8	27197	273966	
(d) Ball clay		..	..	..	..	..	..	..	..	..	..	..	
(e) Fire clay		..	..	..	..	..	..	..	..	..	..	..	
(f) Mica (crude)		..	..	..	..	..	..	..	..	..	..	..	
(g) Quartz & silica		8462	1.7	144	8318	9636	..	..	9636	1.7	164	9472	
(h) Sillimentite		1416	4.0	64	1352	..	..	..	..	..	..	..	
<b>Total non-metallic minerals</b>		359893	..	31604	328289	435424	..	105170	330254	..	29118	301136	
<b>3. Minor Minerals</b>													
(a) Lime shell		770579	4.0	34633	735946	892695	11.0	98196	794499	4.0	35708	758791	
(b) Others		1120392	..	..	1120392	11486056	..	..	11486056	4.0	..	11486056	
<b>Total minor minerals</b>		11974571	..	34633	11939938	12378751	..	98196	12280555	..	35708	12244847	
<b>Grand Total</b>		22245363	..	209281	22036082	21423868	..	461657	20962211	..	185362	20776849	

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



## 5.4 Gross Product, Depreciation, net product, etc. of Minerals (at constant 1960-61 Prices)

(in Rs.)

Minerals	1963-64				1964-65									
	Gross value		Inputs percentage of gross value		Gross product		depreciation percentage of gross value		Net product		Gross value		Inputs percentage of gross value	
	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
(1)														
<b>1. Metallic Minerals</b>														
(a) Ilmenite	433855	4.6	19957	413898	1.4	6074	407824	217577	4.1	8921				
(b) Rutile	1871972	4.6	86111	1735861	1.4	26208	1759653	1747896	4.1	71664				
Total metallic minerals	2305827	..	106068	2199759	..	32282	2167477	1965473	..	80585				
<b>2. Non-metallic minerals</b>														
(a) China clay (sale able crude)	16403	10.71	1757	14646	4.68	768	13878	66176	7.7	5096				
(b) China clay (processed)	405704	26.60	107917	297787	7.2	29211	268576	471166	22.1	104128				
(c) Ball clay	..	..	..	..	..	..	..	10999	22.1	2431				
(d) Fire clay	..	..	..	..	..	..	..	..	..	..				
(e) Mica (crude)	..	..	..	..	..	..	..	..	..	..				
(f) Quartz and silica	12420	..	..	12420	1.6	199	12221	5318	..	..				
(g) Siliminite	..	..	..	..	..	..	..	..	..	..				
Total non-metallic minerals	434527	..	109674	324853	..	30178	294675	553659	..	111665				
<b>3. Minor Minerals</b>														
(a) Lime shell	898805	11.0	98319	795486	4.0	35752	759734	1592274	11.0	175150				
(b) Others	11775928	..	..	11775928	..	..	11775928	12072632	..	..				
Total Minor minerals	12669733	..	98319	12571414	..	35752	12535662	13664906	..	175150				
Grand Total	15410087	..	314061	15096026	..	98212	14997814	16184038	..	367390				

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.4 Gross Product, Depreciation, net Product, etc. of Minerals (at constant 1960-61 Prices)

(in Rs.)

1965-66

Minerals	Gross product		Depreciation p:centage of gross value		Net product		Gross value		Inputs percentage of gross value		Gross product		Depreciation percentage of gross value		Net product	
	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
1. Metallic Minerals																
(a) Ilmenite	298656	1.4	3046	205610	227204	4.1	9315	217889	1.4	3181	214708					
(b) Rutile	1676232	1.4	24471	1651761	1212203	4.1	49700	1162503	1.4	16971	1145532					
Total metallic minerals	1884888	..	27517	1857371	1439407	..	59015	1380392	..	20152	1360240					
2. Non-metallic minerals																
(a) China clay (sale able crude)	61080	5.0	3309	57771	149811	7.7	11535	138276	5.0	7491	130785					
(b) China clay (processed)	367038	7.2	33924	333114	378594	22.1	83669	294925	7.2	27259	267666					
(c) Ball clay	8568	7.2	792	7776	2782	22.1	615	2167	7.2	200	1967					
(d) Fire clay	..	..	..	..	..	..	..	..	..	..	..					
(e) Mica (crude)	..	..	..	..	..	..	..	..	..	..	..					
(f) Quartz and silica	5318	2.0	106	5212	8852	..	..	8852	2.0	177	8675					
(g) Sillimentite	..	..	..	..	..	..	..	..	..	..	..					
Total non-metallic minerals	442004	..	38131	403873	540039	..	95819	444220	..	35127	409093					
3. Minor Minerals																
(a) Lime shell	1417124	4.0	63691	1353433	559524	11.0	61548	497976	4.0	22381	475595					
(b) Others	12072632	..	..	12072632	12377632	..	..	12377632	..	..	12377632					
Total minor minerals	13489756	..	63691	13426065	12937156	..	61548	12875608	..	22381	12859227					
Grand Total	15816648	..	129339	15687309	14916602	..	216382	14700220	..	77660	14622560					

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



5.4 Gross product, Depreciation, Net product, etc. of Minerals at Constant (1960-61) Prices

(in Rs.)

1965-67

Minerals	Inputs percentage of gross value		Depreciation percentage of gross value		Net product		Inputs percentage of gross value		
	Gross value (44)	%	Gross product (47)	%	Net product (50)	Gross value (51)	%	Inputs percentage of gross value (52)	
									amount
(1)		(45)	(46)	(48)	(49)	(50)	(51)	(52)	(53)
<b>1. Metallic Minerals</b>									
(a) Ilmanite	392749	7.0	365257	1.4	3498	359759	719587	7.0	50371
(b) Rutile	1298859	7.0	1207939	1.4	18184	1189755	1385515	7.0	96986
Total metallic minerals	1691608	..	1573196	..	23682	1549514	2105102	..	147357
<b>2. Non-metallic minerals</b>									
(a) China clay (sale abel crude)	81734	2.0	80099	3.0	2452	77647	40367	2.0	807
(b) China clay (processed)	532266	5.0	505653	2.0	10645	495008	893564	5.0	44678
(c) Ball clay	6564	5.0	6236	2.0	131	6105	6653	5.0	333
(d) Fire clay	1000	5.0	950	2.0	20	930	2313	5.0	116
(e) Mica (crude)	..	..	..	..	..	..	..	..	..
(f) Quartz & silica	5728	1.0	5671	2.0	115	5556	15130	1.0	151
(g) Sillimantite	..	..	..	..	..	..	7636	11.0	840
Total non-metallic minerals	627292	..	598609	..	13363	585246	965663	..	46925
<b>3. Minor minerals</b>									
(a) Lime shell	590661	11.0	525688	4.0	23626	502062	618279	11.0	68011
(b) Others	12690440	..	12690440	..	..	12690440	13011056	..	..
Total minor minerals	13281101	..	13216128	..	23626	13192502	13629335	..	68011
G-and total	15600001	..	15387933	..	60671	15327262	16700100	..	262293

Others—Quarrying of tile clay, brick clay, granite, laterite etc.



## 5-4 Gross product, Depreciation, Net product etc. of Minerals at Constant (1960-61) Prices

(in Rs.)

Minerals	1967-'68				1968-'69							
	(54)	Depreciation percentage of gross value		Gross product	(58)	Inputs percentage of gross value		Gross product	Depreciation percentage of gross value		Net product	
		(55)	(56)			(57)	(59)		(60)	(61)		(62)
		%	amount		%	amount		%	amount		%	amount
(I)												
<b>1. Metallic minerals</b>												
(a) Ilmenite	669216	1.4	10074	659142	774631	12.0	92956	681675	..	..	..	681675
(b) Rutile	1288529	1.4	19397	1269132	1315599	..	157872	1157727	..	..	..	1157727
Total metallic minerals	1957745	..	29471	1928274	2090230	..	250828	1839402	..	..	..	1839402
<b>2. Non-metallic minerals</b>												
(a) China clay (sale abel crude)	39560	3.0	1211	38349	..	..	30272	575163	..	..	..	..
(b) China clay (processed)	848886	2.0	17871	831015	605435	5.0	..	..	2.0	12109	..	563054
(c) Ball clay	6320	2.0	133	6187	2901	..	..	2901	..	..	..	2901
(d) Fire clay	2197	2.0	46	2151	3397	..	..	3397	..	..	..	3397
(e) M.ca (crude)	..	..	..	..	..	..	..	..	..	..	..	..
(f) Quartz & silica	14979	2.0	303	14676	18086	2.0	362	17724	..	..	..	17543
(g) Sillimentite	6796	4.0	305	6491	14318	..	..	14318	..	..	..	14318
Total non-metallic minerals	918738	..	19869	898869	644137	..	30634	613503	..	..	..	601213
<b>3. Minor minerals</b>												
(a) Lime shell	550268	4.0	24731	525537	722527	18.0	130055	592472	7.0	50577	..	541895
(b) Others	13011056	..	..	13011056	13340456	..	..	13340456	..	..	..	13340456
Total minor minerals	13561324	..	24731	13536593	14062983	..	130055	13932928	..	..	..	13882351
Grand total	16437807	..	74071	16363736	16797350	..	411517	16383833	..	..	..	62867 16322966

Others—Quarryin of tile clay, bride clay, granite, laterite etc.



## 5.5 Net product from mining and quarrying (at current prices)

(Rs. 000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Gross value of output	25133	22985	22029	16120	17718	16303	18028	20385	20930
1.1	Major minerals	..	..	..	..	..	..	..	..	..
a	Coal and lignite	..	..	..	..	..	..	..	..	..
b.	Metallic minerals	13058	10218	8608	2190	1931	1432	1705	2076	2034
c	Non-metallic minerals	430	455	501	484	665	832	1371	2432	1881
1.2	Minor minerals	11645	12312	12920	13446	15122	14039	14952	15877	17015
2.	Less inputs	257	521	505	354	483	319	325	410	613
3.	Gross product	24876	22464	21524	15766	17235	15984	17703	19975	20317
4.	Less allowance for depreciation	270	212	200	113	171	113	103	131	145
6.	Net product	24606	22252	21324	15653	17064	15871	17600	19844	20172

## 5.6 Net product from mining and quarrying (at 60-61 prices)

(Rs. 000)

Year	Gross product	Allowance for depreciation	Net product
(1)	(2)	(3)	(4)
1960-61	24876	270	24606
1961-62	22245	209	22036
1962-63	20962	185	20777
1963-64	15096	98	14998
1964-65	15816	129	15687
1965-66	14700	78	14622
1966-67	15388	61	15327
1967-68	16438	74	16364
1968-69	16386	63	16323

## REGISTERED SECTOR

## Coverage:

Large scale manufacturing sector covers all manufacturing and processing establishments which are registered under section 2 m (i) and 2m (ii) of the Indian Factories Act, 1948. Establishments registered under section 85, are however excluded. Likewise establishments though registered under section 2m (i) and 2m (ii) b it not engaged in manufacturing activities such as those providing water and Sanitary Services and those engaged in generation transmission and distribution of electricity or manufacturing of gas in gas works and distribution of manufactured or natural gas to domestic and industrial consumers are also excluded. Similarly operation of cold storage is outside the scope of the large scale manufacturing industry, Railway workshops, State Transport Work shops and other manufacturing establishment like salt factories are considered to form part of the large scale manufacturing sector

## Estimates at current prices:

The value added by manufacture is considered as the contribution to the state domestic product. The estimate of gross and net product originating in this industries is prepared by twenty industry groups on the basis of the data thrown up by the Annual Survey of Industries. The Annual Survey of Industries is conducted in two parts the census sector and the sample sector. The census sector comprises factories employing on an average 50 or more workers with the aid of power or 100 or more workers with out the aid of power and is completely enumerated. The sample sector comprises factories which employ on an average 10 to 49 workers with the aid of power or 20 to 99 workers with out the aid of power is covered on probability sample basis. The Annual Survey of Industries gives estimates of value added by manufacture for census part and sample part separately. The value added represents that part of the value of the product which is created in the factory and is computed by deducting from the gross ex-factory value of output,



the gross value of input. In other words value added is obtained as value of products and bye-products additions in stocks of semi finished products and work done for customers less value of fuels, electricity, lubricants etc. consumed, materials consumed, work done by other concerns and depreciation, incidental expenditure on purchase of materials and non-industrial services purchased (like audit fees, legal expenses, insurance charges, factory license etc.). The value added figures as obtained from the census sector of the Annual Survey of Industries have been adjusted for non-reporting units.

The Annual Survey of Industries data do not correspond to financial years. The State Domestic Product for the calendar years are assumed as such for the financial years, without making any adjustment.

The estimates of gross/net value added as obtained above have been further adjusted for imputed bank charges. In the absence of information on banking

services purchased by the manufacturing establishments at the State level, the estimate for the state has been worked out by distributing the overall imputed bank charges at the all India level, in proportion to the net value added by the large scale manufacturing sector in the State.

The estimate of State Domestic Product from this sector for the years 1960-61 to 1968-69 at current prices are given in tables 6.1 and 6.2.

#### State Domestic Product at Constant (1960-61) Prices:

An index of industrial production with 1960-61 as base have been constructed for estimating at constant prices. The index numbers of industrial productions are given in table 6.3. The State Domestic Products at constant prices is estimated by projecting the estimates for the year 1960-61 on the basis of the index numbers of industrial production and are furnished in tables 6.4 and 6.5.

### INDEX NUMBERS OF INDUSTRIAL PRODUCTION

The index numbers of industrial production (at constant price) are calculated employing the following formula.

$$I(Q)_{r,(r-1)} = \frac{\sum_j [V_{j,r} \times I(Q)_{j,r,(r-1)}]}{\sum_j V_{j,r}}$$

$I(Q)_{r,(r-1)}$  = index number of industrial production of the  $r^{\text{th}}$  year to base  $(r-1)^{\text{th}}$  year.

where

$V_{j,r}$  = the value added of the  $j^{\text{th}}$  industry in  $r^{\text{th}}$  year.

$$I(Q)_{j,r,(r-1)} = \frac{W_{j,r} + I(P)_{j,r,(r-1)}}{W_{j,(r-1)}}$$

where

$I(Q)_{j,r,(r-1)}$  = index number of production in the  $j^{\text{th}}$  industry in the  $r^{\text{th}}$  year to the base  $(r-1)^{\text{th}}$  year

$W_{j,r}$  = the gross value of out put in the  $j^{\text{th}}$  industry in the  $r^{\text{th}}$  year.

$W_{j,(r-1)}$  = the gross value of out put in the  $j^{\text{th}}$  industry in the  $(r-1)^{\text{th}}$  year.

$$I(P)_{j,r,(r-1)} = \frac{\sum_i [q_{j,i,r} \times p_{j,i,r}]}{\sum_i [q_{j,i,r} \times p_{j,i,(r-1)}]}$$

where

$I(P)_{j,r,(r-1)}$  = index number of prices in the  $j^{\text{th}}$  industry in the  $r^{\text{th}}$  year to base  $(r-1)^{\text{th}}$  year.

$q_{j,i,r}$  = quantity of the  $i^{\text{th}}$  commodity in the  $j^{\text{th}}$  industry in the  $r^{\text{th}}$  year.

$p_{j,i,r}$  = exfactory price of the  $i^{\text{th}}$  commodity in the  $j^{\text{th}}$  industry in the  $r^{\text{th}}$  year.

$p_{j,i,(r-1)}$  = exfactory price of the  $i^{\text{th}}$  commodity in the  $j^{\text{th}}$  industry in the  $(r-1)^{\text{th}}$  year.

Note:—1. For computing the index numbers of prices, commodities which are common to the two years only are considered.

2. The gross value of out put is the total of A. S. I. census and sample sectors.



## 6.1 Net Product from Large Scale Manufacturing (At Current Prices)

(Rs. '000)

Sl. No.	Industry group	1960-61			1961-62			1962-63		
		Gross Product (3)	Allowance for depreciation (4)	Net product (5)	Gross product (6)	Allowance for depreciation (7)	Net product (8)	Gross product (9)	Allowance for depreciation (10)	Net product (11)
1.	Food	96213	7588	88625	104860	7680	97180	90398	7510	82888
2.	Beverages	277	60	217	277	60	217	513	131	382
3.	Tobacco	1493	15	1478	1991	19	1972	2364	17	2347
4.	Textiles	46051	3930	42121	49003	4134	44874	58481	4070	54411
5.	Foot wear, wearing apparel and made up textile goods	917	12	905	971	10	961	989	10	979
6.	Wood and wood products (except furniture)	14128	1495	12633	16288	1431	14857	16354	1529	14825
7.	Furniture and fixtures	1301	128	1173	893	116	777	1270	116	1154
8.	Paper and paper products	4553	1165	3388	6477	1947	4530	7718	1947	5771
9.	Printing, publishing and allied industries	7634	614	7020	8823	653	8170	9710	616	9094
10.	Leather and leather products (except foot wear)	20143	2081	18062	19351	1015	18336	16326	1929	14397
11.	Rubber products	56040	12807	43233	71049	14275	56774	65554	15076	50478
12.	Chemicals and chemical products	..	..	..	..	..	..	..	..	..
13.	Products of petroleum and coal	21829	2017	19812	29967	2485	21482	30997	2525	28472
14.	Non-metallic mineral products (except products of petroleum & coal)	10486	1461	9025	15017	1461	13556	22763	1741	21022
15.	Basic metal industries	2825	164	2661	4513	183	4331	3495	154	3341
16.	Metal products except machinery and transport equipments	4209	311	3898	4523	305	4218	5502	354	5148
17.	Machinery except electrical machinery	7329	524	6805	17011	489	10222	15497	501	14996
18.	Electrical machinery apparatus and appliances	5503	471	5032	6632	485	6147	8626	435	8191
19.	Transport equipments	2485	242	2243	3281	232	3049	3184	218	2966
20.	Miscellaneous manufacturing industries	303416	35085	268331	348633	36980	311653	359741	38879	320862
	Total	645	..	645	843	..	843	811	..	811
	Less imputed bank charges	302771	..	267686	347790	..	310810	358930	..	320051
	Gross/net product									

\*Provisional



6.1 Net Product from Large Scale Manufacturing (At Current Prices)

(Rs. '000)

1965-66

1964-65

1963-64

Sl. No.	Industry group	1963-64			1964-65			1965-66		
		Gross Product (12)	Allowance for depreciation (13)	Net product (14)	Gross product (15)	Allowance for depreciation (16)	Net product (17)	Gross Product (18)	Allowance for depreciation (19)	Net product (20)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1.	Food	110976	7126	103850	123294	7945	115349	140291	8849	131442
2.	Beverages	585	149	436	1305	161	1144	2231	299	1932
3.	Tobacco	1726	14	1712	1344	13	1331	1600	14	1586
4.	Textiles	56810	4807	52003	63133	5039	58094	75486	7464	68022
5.	Foot wear, wearing apparel and made up textile goods	1005	17	988	1071	14	1057	1337	34	1303
6.	Wood and wood products (except furniture)	19780	1657	18123	18162	1751	16411	18532	2180	16352
7.	Furniture and fixtures	1152	97	1055	1344	94	1250	1535	118	1417
8.	Paper and paper products	6142	1946	4196	22070	12647	9423	32713	10850	21863
9.	Printing, publishing and allied industries	10069	750	9319	12326	890	11436	14102	1026	13076
10.	Leather and leather products (except foot wear)	..	..	..	..	..	..	..	..	..
11.	Rubber products	16390	2339	14051	20689	3422	17267	23699	2489	21210
12.	Chemicals and Chemical products	64920	15932	48988	76244	15605	60639	74370	11461	55909
13.	Products of petroleum and coal	..	..	..	..	..	..	..	..	..
14.	Non-metallic mineral products (except products of petroleum & coal)	27510	2552	24959	26539	2851	23688	30790	3369	27421
15.	Basic metal industries	18645	1762	16883	22499	2849	19650	31230	3915	27315
16.	Metal products except machinery and transport equipments	3092	246	2846	5456	647	4809	7207	1054	6153
17.	Machinery except electrical machinery	4257	367	3890	5408	451	4957	6941	2890	4051
18.	Electrical machinery apparatus and appliances	20967	529	20438	22838	950	21888	28953	1149	27804
19.	Transport equipments	9226	569	8657	11391	689	10702	11847	626	11221
20.	Miscellaneous manufacturing industries	4058	384	3674	3784	411	3373	3713	397	3316
	Total	377310	41243	336067	438897	56429	382468	506577	65184	441393
	Less imputed bank charge	755	..	755	998	..	998	1205	..	1205
	Gross/net product	376555	..	335312	437899	..	381470	505372	..	440188



Net Product From Large Scale Manufacturing (At Current Prices)  
(Rs. '000)

Sl. No.	Industry group	1966-67			1967-68			1968-69		
		Gross product (21)	Allowance for depreciation (22)	Net product (23)	Gross product (24)	Allowance for depreciation (25)	Net product (26)	Gross product (27)	Allowance for depreciation (28)	Net product (29)
(1)	(2)									
1.	Food	185018	11026	173992	196002	11680	184322	198702	11841	186861
2.	Beverages	2315	301	2014	2237	291	1946	2043	266	1777
3.	Tobacco	2201	13	2193	1252	7	1245	1190	7	1133
4.	Textiles	66459	8437	58022	63329	8040	55289	59326	7531	51795
5.	Foot wear, wearing apparel and made up, textile goods	1573	101	1472	1210	78	1132	1222	78	1144
6.	Wood and wood products (except furniture)	24417	2498	21919	23789	2434	21355	24421	2498	21923
7.	Furniture and fixtures	1746	144	1602	1738	143	1595	1692	140	1552
8.	Paper and paper products	42386	9689	32697	44326	10132	34194	52760	12060	40700
9.	Printing, publishing and allied industries	15371	1249	14322	14766	1184	13582	14999	1203	13796
10.	Leather and leather products (except foot wear)	29939	2891	27048	22	2	20	22	2	20
11.	Rubber products	94360	23598	70962	93350	2828	70202	29030	2803	26227
12.	Chemicals and chemical products	..	..	..	..	..	..	..	..	..
13.	Products of petroleum and coal	..	..	..	..	..	..	..	..	..
14.	Non-metallic mineral products except products of petroleum and coal	30003	2563	27440	29561	2525	27036	29187	2493	26694
15.	Basic metal industries	59552	4617	54935	61161	4742	56419	60534	4693	55841
16.	Metal products except machinery and transport equipments	4014	1047	2967	3655	953	2702	3470	905	2565
17.	Machinery except electrical machinery	12279	3472	8807	12690	3588	9102	12213	3453	8760
18.	Electrical machinery apparatus and appliances	22866	4016	18850	27075	4755	22320	27666	4859	22807
19.	Transport equipments	12884	589	12295	13443	701	12742	13867	723	13144
20.	Miscellaneous manufacturing industries	5130	385	4745	5407	406	5001	6516	489	6027
	Total	612720	76436	536284	624296	77637	546659	645739	82546	563194
	Less imputed bank charges	1498	..	1498	1500	..	1500	1545	..	1545
	Gross/Net product	611222	..	534786	622796	..	545159	644194	..	561648



## 6.2 Net product from large scale manufacturing (at current prices)

(Rs. 000)

Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1-66-67	1967-68	1968-69*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Gross product before imputed deduction	303416	348633	359741	377310	438897	506577	612720	624296	645739
2. Less imputed bank charges	645	843	811	755	998	1205	1498	1500	1545
3. Gross product	302771	347790	358930	376555	437899	505372	611222	622796	644194
4. Less allowance for depreciation	35085	36980	38879	41243	56429	65184	76436	77637	82546
5. Net product	267686	310810	320051	335312	381470	440188	534786	545159	561648

\* Provisional.

## 6.3 Index numbers of Industrial production

Sl. No.	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Food	100.00	106.45	115.19	118.66	117.49	121.72	148.08
2.	Beverages	100.00	100.00	128.90	255.93	490.30	582.37	796.28
3.	Tobacco	100.00	123.35	115.06	91.44	82.48	91.64	88.27
4.	Textiles	100.00	114.84	118.41	114.33	111.28	112.63	105.62
5.	Footwear, other wearing apparel and made up textile goods	100.00	93.46	85.07	99.76	98.15	89.49	82.59
6.	Wood and wood products except furniture	100.00	78.99	93.12	128.52	118.51	109.81	124.16
7.	Furniture and fixtures	100.00	72.67	67.42	94.13	96.83	122.81	125.53
8.	Paper and paper products	100.00	106.61	124.45	97.28	388.64	497.31	589.16
9.	Printing publishing and allied Industries	100.00	126.20	157.19	156.38	187.18	187.96	187.75
10.	Leather and leather products except foot-wear	..	..	..	..	..	..	..
11.	Rubber products	100.00	108.58	107.80	158.37	181.79	167.85	181.50
12.	Chemicals and Chemical products	100.00	111.68	126.68	130.72	152.00	144.13	166.91
13.	Products of petroleum and coal	..	..	..	..	..	..	..
14.	Non-metallic mineral products except products of petroleum and coal	100.00	107.43	125.41	120.85	130.43	124.11	133.05
15.	Basic metal industries	100.00	124.59	177.17	161.20	210.71	272.73	405.64
16.	Metal products except machinery and transport equipments	100.00	95.21	110.11	92.22	142.87	152.36	124.34
17.	Machinery except electrical machinery	100.00	62.75	87.68	67.81	92.54	150.82	225.33
18.	Electrical machinery apparatus and appliances	100.00	148.36	234.83	301.09	284.85	357.61	356.96
19.	Transport equipment	100.00	128.49	120.34	129.64	148.61	192.55	208.21
20.	Miscellaneous manufacturing Industry	100.00	123.98	128.98	182.88	161.88	188.49	238.60



TABLE  
6-4 Net product from large scale manufacturing (At 1960-61 Prices)

Rs. '000

Sl. No.	Industry group	1960-61			1961-62			1962-63		
		Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product
1	2	3	4	5	6	7	8	9	10	11
1	Food	96213	7588	88625	102021	7680	94341	109597	7510	102087
2	Beverages	277	60	217	277	60	217	411	131	280
3	Tobacco	1493	15	1478	1842	19	1823	1718	17	1701
4	Textiles	46051	3930	42121	52506	4134	48372	53945	4070	49875
5	Foot wear, other wearing apparel and made up textile goods	917	12	905	856	10	846	780	10	770
6	Wood and wood products (except furniture)	14128	1495	12633	11410	1431	9979	13293	1329	11764
7	Furniture and fixtures	1301	128	1173	968	116	852	1258	116	1142
8	Paper and paper products	4553	1165	3388	5558	1947	3611	6163	1947	4216
9	Printing publishing & allied industries	7634	614	7020	9513	653	8860	11651	616	11035
10	Leather and Leather products (except footwear)	..	..	..	..	..	..	..	..	..
11	Rubber products	20143	2081	18062	20627	1015	19612	21400	1929	19471
12	Chemicals and Chemical products	56040	12807	43233	62557	14275	48282	69843	15076	54767
13	Products of petroleum and coal	..	..	..	..	..	..	..	..	..
14	Non-metallic mineral products except products of petroleum and coal	21829	2017	19812	23770	2485	21285	27372	2325	24847
15	Basic metal industries	10486	1461	9025	12705	1461	11244	17730	1741	15989
16	Metal products (except machinery and transport equipment)	2825	164	2661	2717	183	2534	3084	154	2930
17	Machinery (except electrical machinery)	4209	311	3898	2751	305	2446	3772	334	3438
18	Electrical machinery apparatus and appliances	7329	524	6805	10384	489	10095	16480	501	15979
19	Transport equipment	5503	471	5032	6951	485	6466	6491	435	6056
20	Miscellaneous manufacturing industries	2485	242	2243	3013	232	2781	3111	218	2893
..	Total	303416	35085	268331	330626	36980	293646	368099	38879	329220
..	Less imputed bank charges	645	..	645	843	..	843	811	..	811
..	Gross/net product	302771	..	267686	329783	..	292803	367288	..	328409



## 6.4 Net product from large scale manufacturing (At 1960-61) Prices

Sl. No.	Industry group	1963-64			1964-65			1965-66		
		Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1.	Food	112288	7126	105162	112070	7945	104125	116723	8849	107874
2.	Beverages	704	149	555	1225	161	1044	1563	299	1264
3.	Tobacco	1366	14	1352	1232	13	1219	1369	14	1355
4.	Textiles	52964	4807	48157	51911	5039	46872	54905	7464	47441
5.	Foot wear, other wearing apparel and made up textile goods	920	17	903	902	14	888	844	34	810
6.	Wood and wood products (except furniture)	17894	1637	16237	16723	1751	14972	16053	2180	13873
7.	Furniture and fixtures	1201	97	1104	1229	94	1135	1538	118	1440
8.	Paper and paper products	5241	1916	3295	25812	12647	13165	27696	10850	16846
9.	Printing and publishing and allied industries	11728	750	10978	14030	890	13140	14707	1026	13681
10.	Leather and leather products (except footwear)	30944	2339	28605	36257	3422	32835	32802	2485	30313
11.	Rubber products	72446	15932	56514	81319	15605	65714	81772	18461	62311
12.	Chemicals and chemical products	..	..	..	..	..	..	..	..	..
13.	Products of petroleum and coal	26495	2552	23943	28692	2851	25841	27938	3369	24589
14.	Non-metallic mineral products except products of petroleum and coal	16310	1762	14548	21865	2849	19016	28329	3915	24614
15.	Basic Metal industries	2700	246	2454	4449	647	3802	5109	1054	4055
16.	Metal products (except machinery and transport equipment)	3011	367	2644	4059	451	3603	8770	2890	5880
17.	Machinery (except electrical machinery)	21017	529	20488	20333	950	19383	25483	1149	24334
18.	Electrical machinery apparatus and appliances	7093	369	6524	8168	689	7479	10316	626	9690
19.	Transport equipment	4486	384	4102	4042	411	3631	4625	397	4228
20.	Miscellaneous manufacturing industries	388808	41243	347565	434318	56429	377889	459792	65184	394598
	Total	755	..	735	998	..	998	1205	..	1205
	Less imputed bank charges	..	..	..	..	..	..	..	..	..
	Gross net product	388053	..	346810	433320	..	376091	458577	..	393393



## 6.4 Net product from large scale manufacturing (At 196-061) Prices

Sl. No.	Industry group	1966-67				1967-68*				1968-99*			
		(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
(1)	(2)	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product
1.	Food	142261	11026	131235	150706	11680	139026	152782	11841	140941	152782	11841	140941
2.	Beverages	2029	301	1728	1961	291	1670	1791	266	1525	1791	266	1525
3.	Tobacco	1318	13	1305	747	7	740	710	7	703	710	7	703
4.	Textile	52925	8437	44488	50432	8040	42392	47245	7531	39714	47245	7531	39714
5.	Foot wear, other wearing apparel and made up textile goods	848	101	747	652	78	574	659	78	581	659	78	581
6.	Wood and wood product (except furniture)	18184	2498	15686	17716	2434	15282	18187	2498	15689	18187	2498	15689
7.	Furniture and fixtures	1616	144	1472	16029	143	1466	1571	140	1431	1571	140	1431
8.	Paper and paper products	29646	9689	19957	31003	10132	20871	36902	12060	24842	36902	12060	24842
9.	Printing and publishing and allied industries	14429	1249	13180	13684	1184	12500	13898	1203	12695	13898	1203	12695
10.	Leather and leather products (except footwear)	..	..	..	22	2	20	22	2	20	22	2	20
11.	Rubber products	35673	2891	32782	34891	2828	32063	34590	2803	31787	34590	2803	31787
12.	Chemicals and chemical products	95558	23398	72160	94535	23148	71387	108237	26502	81735	108237	26502	81735
13.	Products of petroleum and coal	..	..	..	..	..	..	..	..	..	..	..	..
14.	Non-metallic mineral products except products of petroleum and coal	28903	2563	26360	28497	2525	25972	28136	2493	25643	28136	2493	25643
15.	Basic Metal industries	41226	4617	36609	42340	4742	37598	41906	4693	37213	41906	4693	37213
16.	Metal products (except machinery and transport equipment)	4356	1047	3309	3966	953	3013	3765	905	2860	3765	905	2860
17.	Machinery (except electrical machinery)	12256	3472	8784	12666	3388	9078	12190	3453	8737	12190	3453	8737
18.	Electrical machinery apparatus and appliances	28306	4016	24290	33517	4755	28762	34247	4859	29388	34247	4859	29388
19.	Transport equipment	11067	589	10478	13179	701	12478	13595	723	12872	13595	723	12872
20.	Miscellaneous manufacturing industries	5737	385	5252	6047	406	5641	7287	489	6798	7287	489	6798
	Total	526358	76436	449922	538170	77637	460533	557720	82546	476174	557720	82546	476174
	Less imputed bank charges	1498	..	1498	1500	..	1500	1545	..	1545	1545	..	1545
	Gross/net product	524860	..	448424	526670	..	459033	556175	..	474629	556175	..	474629



## 6.5 Net product from large scale manufacturing (at 1960-61 prices)

(Rs. 000)

Years	Gross product	Allowances for depreciation	Net product
(1)	(2)	(3)	(4)
1960-61	302771	35085	267686
1961-62	329783	36980	292803
1962-63	367288	38879	328409
1963-64	388053	41243	346810
1964-65	433320	56429	376891
1965-66	458577	65184	393393
1966-67	524860	76436	448424
1967-68*	536670	77637	459033
1968-69*	556175	82546	473629

\*Provisional.



## MANUFACTURING-UN-REGISTERED SECTOR

### Coverage:

The sector 'Small Scale Manufacturing' covers all types of manufacturing and processing activities, including repair and maintenance services undertaken by household and non-household small scale manufacturing units which are not registered under the Indian Factories Act 1948. The factories covered under section 85 of the Factories Act are included under small scale manufacturing sector for the purpose of the estimation of State Domestic Product. However hand pounding of rice, conversion of sugarcane into gur, slaughtering of animals for meat and preparation of milk products are excluded from this sector.

### Method of estimation:

For the purpose of estimation of the State Domestic Product all industries have been grouped into seven separately for household and non-household sectors. The seven groups of industries are given below.

Industry	major groups of S.I.C.
1. Textile, tailoring and leather foot wear	23 and 24
2. Leather and leather products except leather foot wear	29
3. Wood, glass, stone and ceramic	25, 26 and 33
4. Metal manufacturing and engineering	34, 35, 36, 37 and 38
5. Chemicals and chemical products	31
6. Food, drink and tobacco	20, 21 and 22
7. Other industries	27, 28, 30, 32 and 39

The estimates of State Domestic Product are obtained as product of working force and value added per worker by each of the above industry group.

### Working force:

Comparable estimates of working force in both the sub-sectors are built up on the basis of 1961 population census economic data. The details of estimation of the working force are given below.

### Household sector:

The census data on working force in household industries are first adjusted to exclude activities like hand pounding of rice, conversion of sugarcane into gur, slaughtering of animals for meat and preparation of milk products. Then the working force is projected separately for rural and urban on the basis of observed growth rate of comparable figures of major groups for the 1951 and 1961 census data. The working force is then adjusted to mid financial year using the rate of growth of working force between 1951 and 1961.

### Non-household sector:

Comparable estimates of working force engaged in manufacturing activities have been prepared first on the basis of 1961 population census economic data. The working force is projected on the basis of observed growth rate of comparable figures of 1951 and 1961 census data. The working force is then adjusted to mid financial years. For estimating the workers in non-household industry, the sum of the working force used in respect of the household manufacturing sector and the working force employed in large scale

manufacturing has been deducted from the total working force in manufacturing. The working force in large scale manufacturing as obtained from the Annual Survey of Industries reports have been adjusted for non-reporting units.

### Secondary workers:

The working force estimates relate to principal workers only. Therefore adjustment has been made for secondary workers in the household industry. The N. S. S. report No. 94 (Tables with notes on small scale manufacture. Rural and Urban household enterprises smaller than Registered factories), gives the estimates of workers engaged in small scale manufacturing as principal and subsidiary means of livelihood. The ratio between principal and subsidiary means of livelihood for each group of industries separately for rural and urban for the state of Kerala available in the N. S. S. report No. 94 has been used for estimating the number of subsidiary workers. In the non-household small scale sector the secondary workers have not been estimated since the number of such workers are negligible.

### VALUE ADDED PER WORKER

### Household sector:

Gross value added per worker engaged in household industry separately for rural and urban according to seven industry groups is available for the year (1958-59) from the N. S. S. report No. 94. This gross value added per worker for the year 1958-59 has been moved to the other years with the help of the index numbers of value added per worker of the sample sector of the Annual Survey of Industries.

### Non-Household industry:

In the non-household sector there are no reliable data at present. The average annual value added per worker in the non-household sector is calculated for the year 1960-61 based on the gross product per principal worker in the household sector and the ratio of value added per person in the household and non-household sectors. This is moved to the later years on the basis of the index number of the value added per person of the Sample Sector of the Annual Survey of Industries. Gross Product at current prices is given in table 7.1 and 7.2.

### State Domestic Product at constant (1960-61) prices:

The estimates of State Domestic Product at constant (60-61) prices are prepared by moving the base year estimate for each group of industries separately for household and non-household industries according to the number of persons engaged in the small enterprises. Gross product at constant prices as given in table 7.3.

### Net Domestic Product:

The information available on value added is gross of depreciation. Hence an allowance of 2.5 per cent has been made to arrive at the net product both at current and constant prices.

The State Domestic Product from Small Scale Manufacturing both at current and constant (1960-61) prices is presented in the table 7.4.



7.1 Gross product from small scale manufacturing  
(At current Prices)

1960-61

Sl. No.	Industry groups	Household			Non-household			Total
		Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Gross product (col. 5+8) ('000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot wear	4020	103.31	43543	1032	364.01	337552	81095
2.	Leather & Leather products (except foot wear)	11	180.49	200	26	326.15	844	1044
3.	Wood glass, stone and ceramic	1045	123.44	12901	1052	550.95	57989	70890
4.	Metal manufacturing and engineering	237	248.16	5874	275	629.30	17308	23182
5.	Food drink and tobacco	971	217.88	21156	1050	538.30	56495	77651
6.	Chemicals and chemical products	54	187.09	1009	71	347.57	2478	3487
7.	Other industries	308	173.07	5331	245	707.81	17319	22650
Total		6646	135.43	90014	3751	506.55	189985	279999

7.1 (Contd.)

1961-62

(1)	(2)	Household			Non-household			Total
		(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring, and leather foot wear	4055	105.08	42602	1019	353.16	35989	78591
2.	Leather and leather products (except foot wear)	11	221.04	246	26	399.63	1046	1292
3.	Wood, glass, stone and ceramic	1055	163.12	17211	1100	727.97	80049	97260
4.	Metal manufacturing and engineering	235	306.73	7203	306	777.94	23801	31004
5.	Food drink and tobacco	1018	195.69	19919	1044	483.12	50442	70361
6.	Chemicals and chemical products	58	349.55	2030	62	649.43	4005	6035
7.	Other industries	307	183.23	5632	253	749.36	18958	24590
Total		6739	142.23	94843	3810	562.51	214290	309133



## 7.1 (Contd.)

		1962-63						
		Household			Non-household			Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring, and leather foot wear	4089	103.79	42436	1005	348.83	35057	77493
2.	Leather and leather products (except foot wear)	11	145.39	163	26	262.91	694	857
3.	Wood, glass, stone and ceramic	1065	135.83	14469	1087	606.10	65867	80336
4.	Metal manufacturing and engineering	233	231.08	5386	296	773.28	22870	28256
5.	Food drink and tobacco	1068	206.28	22027	1190	508.91	60572	82599
6.	Chemicals and chemical products	62	349.57	2184	61	649.43	3957	6141
7.	Other industries	305	162.91	4965	261	665.70	17378	22344
Total		6833	134.09	91631	3926	525.70	206395	298026

		1963-64						
		Household			Non-household			Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textiles, tailoring and leather foot wear	4124	97.79	40327	983	328.81	32319	72646
2.	Leather and leather products (except foot wear)	11	158.08	178	27	285.90	763	941
3.	Wood, glass stone & ceramic	1076	159.19	17125	1109	710.28	78774	95899
4.	Metal Manufacturing and engineering	232	302.95	7012	318	768.56	24443	31455
5.	Food drink, and tobacco	1121	250.81	28117	1309	618.29	80932	109049
6.	Chemicals and chemical products	67	359.21	2416	76	667.16	5074	7490
7.	Other industries	303	128.60	3901	260	525.27	13656	17557
Total		6934	142.89	99076	4082	578.10	235961	335137

7.1 Gross Product from Small Scale Manufacturing (Contd.)  
(at current prices)

		1964-65						
		Household			Non-household			Total
Sl. No.	Industry groups	Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Gross product (col. 5+8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot-wear	4159	127.91	53198	982	429.97	42212	95410
2.	Leather and leather products except foot-wear	11	164.96	187	27	298.39	804	991
3.	Wood, glass, stone & ceramic	1087	149.36	16229	1136	666.32	75739	91968
4.	Metal manufacturing and engineering	230	534.27	12285	319	1355.64	43225	55510
5.	Food, drink and tobacco	1178	278.44	32798	1370	685.85	93981	126779
6.	Chemicals and chemical products	72	283.71	2055	85	526.95	4472	6527
7.	Other industries	302	121.43	3666	251	495.68	12433	16099
Total		7039	171.07	120418	4170	651.33	272866	393234



## 7.1 (Contd.)

		1965-66						
		Household			Non-household			Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot-wear	4194	133.54	56015	976	448.90	43791	99806
2.	Leather and leather product (except foot-wear)	11	175.82	201	27	318.13	865	1066
3.	Wood, glass stone & ceramic	1099	169.90	18670	1179	757.89	89392	108062
4.	Metal manufacturing and engineering	229	608.34	13903	303	1543.86	46779	60682
5.	Food, drink and tobacco	1239	291.73	36137	1437	718.04	103161	139298
6.	Chemicals and chemical products	78	283.75	2214	77	526.95	4064	6278
7.	Other industries	301	134.72	4050	256	549.61	14090	18140
Total		7151	183.47	131190	4255	710.02	302142	433332

7.1 Gross product from Small Scale Manufacturing  
(at current prices)  
1966-67

		Household			Non-household			Total
Sl. No.	Industry groups	Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Working force ('00)	Gross product per worker (Rs.)	Gross product ('000)	Gross product (col. 5+8) ('000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot-wear	4230	133.54	56494	986	448.90	44244	10738
2.	Leather and leather products except foot-wear	12	171.17	197	27	309.81	851	1048
3.	Wood, glass, stone & ceramic	1109	166.19	18434	1192	741.19	88345	106779
4.	Metal manufacturing and engineering	227	383.63	8720	309	973.78	30072	38792
5.	Food, drink and tobacco	1304	291.97	38064	1727	718.04	123977	162041
6.	Chemical and chemical products	84	283.69	2383	88	526.95	4625	7008
7.	Other industries	299	124.31	3721	260	506.86	13208	16929
Total		7265	176.19	128013	4589	665.37	305322	433335

## 1967-68 \*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot-wear	4267	133.54	56980	969	448.90	43480	100460
2.	Leather and leather products (except foot-wear)	12	171.09	198	28	309.81	857	1055
3.	Wood, glass, stone & ceramic	1121	166.22	18633	1227	741.19	90970	109603
4.	Metal manufacturing and engineering	226	383.55	8676	313	973.78	30521	39197
5.	Food, drink, and tobacco	1373	292.22	40129	1759	718.04	126329	166458
6.	Chemical and chemical products	91	283.72	2568	118	526.95	6195	8763
7.	Other industries	298	121.33	3708	298	506.86	15121	18829
Total		7388	177.18	130892	4712	665.23	313473	444365

\* Provisional



1968-69 \*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Textile, tailoring and leather foot-wear	4304	133.54	57471	975	448.90	43768	101239
2.	Leather and leather products except foot-wear	12	171.03	200	28	309.81	864	1064
3.	Wood, glass, stone & ceramic	1133	166.24	18840	1256	741.19	93092	111932
4.	Metal manufacturing and engineering	225	383.47	8639	336	973.78	32707	41346
5.	Food, drink and tobacco	1448	292.47	42342	1938	718.04	139140	181482
6.	Chemicals and chemical products	97	283.75	2766	121	526.95	6412	9178
7.	Other industries	297	124.46	3696	302	506.86	15312	19008
	To-a	7516	178.22	133954	4956	668.43	331295	465249

\* Provisional



7.2 GROSS PRODUCT FROM SMALL SCALE MANUFACTURING  
(at current prices)

Sl. No.	Industry groups	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	Textile, tailoring and leather footwear.	81095	78591	77493	72646	95110	99876	100738	100460	101239
2	Leather and leather products except footwear.	1044	1292	857	941	991	1066	1048	1055	1064
3	Wood, glass, stones and ceramic.	70890	97260	80336	95899	91968	108062	105779	109603	111932
4	Metal manufacturing and engineering.	23132	31004	28256	31455	55510	60682	38792	39197	41346
5	Food, drink and tobacco.	77651	70361	82599	109049	126779	139298	162041	166158	181482
6	Chemicals and chemical products.	3487	6075	6141	7490	6527	6278	7008	8763	9178
7	Other industries	22650	24590	22344	17557	16099	18140	15929	18829	19008
	Total	279999	309133	298026	335037	393284	433332	433335	441365	465249

7.3 GROSS PRODUCT FROM SMALL SCALE MANUFACTURING  
(at constant (1961-61) Prices)

Sl. No.	Industry groups	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	Textile, tailoring and leather and footwear	81095	81005	80864	80437	80775	80933	81688	81463	82094
2	Leather & leather products except footwear	1044	1054	1064	1073	1083	1093	1104	1110	1121
3	Wood, glass, stone & ceramic	70890	73609	73026	74387	76044	78555	79372	81471	83202
4	Metal manufacturing & engineering	23182	25580	24394	25755	25768	247568	25069	25331	26720
5	Food, drink and tobacco	77651	78397	87370	94942	99505	104430	121480	124791	136054
6	Chemicals and chemical products	3487	3230	3286	3902	4305	4141	4622	5780	6054
7	Other industries	22650	23227	23757	23658	22988	23361	23640	26294	26543
	Total	279999	285602	293761	304154	310468	317248	336975	346240	361788



## 7.4 STATE DOMESTIC PRODUCT FROM SMALL SCALE MANUFACTURING

(Rs. '000)

Year	at current prices		at constant (1960-61) prices	
	Gross Product	Net Product	Gross Product	Net Product
1960-61	279999	272999	279999	272999
1961-62	309133	301405	285602	278462
1962-63	298026	290575	293761	286417
1963-64	335037	326661	301154	296550
1964-65	393284	383452	310458	302706
1965-66	433332	422499	317248	309317
1966-67	433335	422502	336975	328551
1967-68	444365*	433256*	346210	317584
1968-69	465249*	453618*	361788	352743

## (8) CONSTRUCTION

## Coverage:

The activities considered in this industry include construction, repair and demolition of buildings, highways, streets and culverts, heavy construction of such projects as sewers and water mains, roadway road beds, rail roads, piers, tunnels, subways, elevated highways, bridges, viaducts, dams, drainage projects, sanitation projects, aqueducts, irrigation and flood control projects, hydro-electric plants, water power projects, gas mains, pipelines, and all other types of heavy construction, marine construction such as dredging, under-water-rock removal, pile driving, land draining and reclamation, construction of harbours and waterways, water wells, air ports, athletic fields, golf courses, swimming pools, tennis courts, parking areas, communication systems such as telephone and telegraph lines and all other construction, whether undertaken by private bodies or governmental authorities. It also includes construction, repair and demolition work undertaken as an ancillary activity by the staff and for the use of an enterprise classified in any other industry. Thus the scope of this industry covers all own account construction activity in addition to the construction activity carried out by special trade contractors such as carpenters, plumbers, plasterers and electricians. This sector covers I. S. I. C. code Nos. 400-403.

\* Provisional

## State Domestic Product at current prices:

The estimates of State domestic product from construction are prepared by following income approach, i. e. as the product of the estimated working force and corresponding estimated average income per person engaged. The working force on construction is worked out separately for rural and urban by projecting the 1961 census figures of persons engaged in construction using the 1951 and 1961 rate of growth. The projected working force is then adjusted for mid financial years. The average income per person in construction sector for the year 1967-68 (for rural and urban separately) is worked out from the data thrown up by a Socio-Economic survey conducted in the State. This rate is used for the estimation of income from this sector. An index number has been constructed on the basis of the wage rates of carpenter, Mason unskilled men and unskilled women engaged in construction. The average income per person for the year 1967-68 has been moved to the remaining years with the aid of the above index number. This is shown in table 8-3. The per head earnings has been multiplied with the working force to arrive at the net value added from this sector. This is shown in table 8-1.

## State Domestic Product at constant (1960-61) prices:

For estimating state domestic product at constant price, the base year figure is adjusted with the change in employment. The State Domestic Product at constant prices are given in table 8-2.



8.1 State domestic product from construction at current prices.

Years	Rural			Urban			Total	
	Working force	Average income per person	Total income [Rs. 000]	Working force	Average income per person	Total income (Rs. 000)	Working force	Income (Rs. 000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960-61	69501	773.25	53742	16946	927.34	15715	86447	69457
1961-62	72467	789.96	57246	17672	947.56	16745	90139	73991
1962-63	75559	804.26	60769	18426	967.87	17834	93985	78603
1963-64	78786	820.96	64680	19213	985.30	18931	97999	83611
1964-65	82152	835.27	68619	20036	1005.61	20148	102188	88767
1965-66	85662	842.46	72167	20857	1017.20	21216	106519	93383
1966-67	89324	844.78	75459	21787	1034.54	22540	111111	97999
1967-68	93145	909.27	84694	22722	1106.97	25153	115867	109847
1968-69	97133	973.68	94576	23695	1179.39	27946	120828	122522

8.2 State domestic product from construction at constant (60-61) prices.

Years	Rural			Urban			Total	
	Working force	Average income per person	Total income (Rs. 000)	Working force	Average income per person	Total income (Rs. 000)	Working force	Income (Rs. 000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960-61	69501	773.25	53742	16946	927.34	15715	86447	69457
1961-62	72467	..	56035	17672	..	16388	90139	72473
1962-63	75559	..	58426	18426	..	17087	93985	75513
1963-64	78786	..	60921	19213	..	17817	97999	78738
1964-65	82152	..	63524	20036	..	18580	102188	82104
1965-66	85662	..	66238	20857	..	19342	106519	85580
1966-67	89324	..	69070	21787	..	20204	111111	89274
1967-68	93145	..	72024	22722	..	21071	115867	93095
1968-69	97133	..	75108	23695	..	21973	120828	97081

8.3 Average income per person in the Construction Sector.

Year	Rural		Urban	
	Index number of wages of skilled and unskilled workers in construction	Average income per person of the skilled and unskilled workers in construction	Index number of wages of skilled and unskilled workers in construction	Average income per persons of the skilled and unskilled workers in construction
(1)	(2)	(3)	(4)	(5)
1960-61	100.00	773.25	100.00	927.34
1961-62	102.16	789.96	102.18	947.56
1962-63	104.01	804.26	104.37	967.87
1963-64	106.17	820.96	106.25	985.30
1964-65	108.02	835.27	108.44	1005.61
1965-66	108.95	842.46	109.69	1017.20
1966-67	109.25	844.78	111.56	1034.54
1967-68	117.59	909.27	119.37	1106.97
1968-69	125.92	973.68	127.18	1179.39



## 9. ELECTRICITY, GAS AND WATER SUPPLY

Separate estimates have been prepared for Electricity and water supply. There is no gas manufacturing unit in the State.

### 9.1 ELECTRICITY

The activities considered for the estimation of State Domestic Product in this industry group include generation, transmission and distribution of electric energy for sale to household, industrial and commercial users. The estimates of income from this sector are derived by adopting the income approach.

The Kerala State Electricity Board covers the major portion of activity in this industry and about 95% of the gross income is generated through the activities of the Board. There are 8 licensees or sanction holders engaged in the distribution of electricity in the State.

They are:

1. Kottayam Electric Supply Agency, Kottayam
2. West Coast Electric Supply Corporation, Kozhikode.
3. Cochin State Power & Light Corporation, Ernakulam.
4. Cochin Electric Company, Mattancherry.
5. Trichur Municipality,
6. Messrs. K.D.H.P. & Company, Munnar.
7. Chennamangalam Electric Supply Agency and
1. Cochin Port Trust.

The contribution to State Income from the Kerala State Electricity Board has been estimated by analysing the annual accounts of the Board. Gross Income has been estimated as an aggregate of factor payments such as compensation paid to employees, including basic wages, dearness allowances, overtime payments, gratuity, contribution to Provident Fund, Pension and other Social security and staff welfare expenses managing agent's remuneration and Directors fees, interest, rent, operating surplus including transfer to reserve and depreciation. The net income is derived on subtracting depreciation from gross income. In respect of licensees and sanction holders the value added data as furnished in the Annual survey of Industries reports for the State of Kerala have directly been used.

#### State Domestic Product at current prices

##### 1. Kerala State Electricity Board.

As stated earlier about 95% of the State Domestic product from this industry is generated through the activities of the Board. The gross income and the net income are calculated from the annual revenue accounts for the Kerala State Electricity Board for the years 1960-61 to 1968-69. The figures are furnished below in table 9.1.1

##### 2. Licensees and sanction holders.

The estimation of gross and net income generated by them are given in table 9.1.2. The income for the year 1966-67 and onwards has been estimated on the basis of the quantity of electricity these undertakings purchased from the Board.

The State domestic product from Electricity at current prices is presented in table 9.1.3

#### State Domestic Product (at constant prices).

##### Kerala State Electricity Board

The net income at current prices of the K. S. E. Board, for the various years from 1960 to 1968 was calculated on the analysis of the annual account of the K. S. E. Board. Taking the gross income for the year 1960 as the base, the gross income at constant prices for the years 1961 to 1968 are estimated applying the index numbers of production. The index numbers of production of electricity is calculated using the following formula.

Where  $I(P)_j$  the index of production (consumption) of electricity for the  $j$ th year.

$q_{ji}$  is the quantity of Electricity consumed by the  $i$ th type of consumer during the  $j$ th year.

$q_{0i}$  is the quantity of electricity consumed by the  $i$ th type of consumer during the base year and

$P_{0i}$  is the price charged on the  $i$ th type of consumer during the base year.

##### 2. Licensees and sanction holders

Details of electricity purchased by the licensees and sanction holders are calculated. The quantity purchased for the year 1960 is taken as the base and the indices of quantity of electricity purchased during 61 to 68 are prepared. These indices are applied to the gross income in the base year viz. 1960 to get the gross income at constant prices for the years 1961 to 1968.

The state domestic product from Electricity at constant prices is presented in table 9.1.4

#### Limitations

The figures of value added drawn up by the annual Survey of Industries correspond to the calendar year, while the figures of the remaining units, correspond to financial years. These two sets of figures are not strictly additive. However the error caused is negligible.

The method of calculation of depreciation by the Kerala State Electricity Board is not the same throughout. From the year 1966-67 the straight line method is adopted.

The income generated by the licensees and sanction holders from 1966-67 and onwards are estimated based on Electricity purchased from the Board.



TABLE  
9.1.1 STATE DOMESTIC PRODUCT FROM ELECTRICITY (K. S. E. B.) FOR THE YEARS 1960-61 TO 1968-69.  
(at current prices)

Items	In Rs. lakhs.									
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
1	2	3	4	5	6	7	8	9	10	
Gross Income	254.63	303.08	328.67	396.34	458.41	559.21	732.02	800.93	948.75	
Depreciation	69.2	78.82	84.72	92.65	105.40	115.42	161.51	238.51	284.93	
Net Income	185.38	221.26	243.95	303.69	353.01	443.79	570.51	562.42	663.82	

9.12 NET STATE DOMESTIC PRODUCT FROM ELECTRICITY (LICENSEES & SANCTION HOLDERS)  
FOR THE YEARS 1960-61 TO 1968-69.  
(at current prices)

Items	(In Rs. lakhs)									
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
1	2	3	4	5	6	7	8	9	10	
Gross Income	27.27	29.48	30.19	27.73	27.09	30.05	32.11	36.37	41.24	
Depreciation	5.96	6.02	6.13	5.55	5.31	5.18	5.69	5.69	5.69	
Net Income	21.31	23.46	24.06	22.18	21.78	24.87	26.42	30.68	35.55	

9.1.3 NET INCOME FROM (ELECTRICITY)  
(at Current Prices)

Electricity	In Rs. lakhs									
	Years									
1	2	3	4	5	6	7	8	9	10	
Gross Income	254.63	300.08	328.67	396.34	458.41	559.21	732.02	800.93	948.75	
Licenses	27.27	29.48	30.19	27.73	27.09	30.05	32.11	36.37	41.24	
Total	281.90	329.56	358.86	424.07	485.50	589.26	764.13	837.30	989.99	
Depreciation	69.25	78.82	84.72	92.65	105.40	115.42	161.51	238.51	284.93	
Ticenses	5.96	6.02	6.13	5.55	5.31	5.18	5.69	5.69	5.69	
Total	75.21	84.84	90.85	98.20	110.71	120.60	167.20	244.20	290.62	
Net Income	206.69	244.72	268.01	325.87	374.79	468.66	596.93	593.10	699.37	



9.4 NET INCOME FROM ELECTRICITY  
(at constant prices)

In Rs. lakhs.

Electricity	Years									
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	
Gross Income	254.63	291.17	307.54	317.80	356.18	416.17	441.10	559.01	651.11	
Licenses	27.27	29.96	30.78	27.46	27.26	33.28	35.08	39.73	45.05	
Total	281.90	321.13	338.32	345.26	383.44	449.45	476.18	598.74	704.16	
Depreciation	69.25	78.82	84.72	92.65	105.40	115.42	161.51	238.51	284.93	
Licenses	5.96	6.02	6.13	5.55	5.31	5.18	5.69	5.69	5.69	
Total	75.21	84.84	90.85	98.20	110.71	120.60	167.20	244.20	290.62	
Net Income	206.69	236.29	247.47	247.06	272.73	328.85	308.98	354.54	413.54	



## 9.2 WATER SUPPLY

**Overview:**

The activities covered in this industry group includes collection, purification and distribution of water to domestic and industrial consumers excluding the operation of irrigation systems.

**Approach:**

The estimates are prepared by income approach. The working force estimates are prepared separately for rural and urban on the basis of growth rate observed between adjusted figures for 1951 and 1961 censuses. The estimates are computed on the basis of the data on employment and compensation of employees obtained directly from various municipal corporations and

municipalities. From 1960-61 onwards data on wages and salaries, money value of benefits and total employment are being collected from all the municipalities and corporations of the State. The average income per person is worked out for the urban area. The same figure is taken as the average income per person in the rural areas also. Similarly it is assumed that there may not be any subsidiary workers. Net product at current prices is given in table 9.2.1.

**At constant (1960-61) Prices:**

The base years estimates were adjusted with the changes in estimated employment to prepare the estimates at constant prices. Net product at (1960-61) price is given in table 9.2.2.

## NET DOMESTIC PRODUCT FROM WATER SUPPLY (At Current Prices)

Year	Working force			Average income per person	Total Income ('000)
	Rural	Urban	Total		
1	2	3	4	5	6
1960-61	613	416	1029	1290	1327
1961-62	631	428	1059	1328	1406
1962-63	651	442	1093	1330	1454
1963-64	671	456	1127	1431	1613
1964-65	693	472	1165	1579	1840
1965-66	715	487	1202	1728	2077
1966-67	739	503	1242	2031	2523
1967-68	762	526	1282	2176	2790
1968-69	788	538	1326	2661	3528

## NET DOMESTIC PRODUCT FROM WATER SUPPLY (At Constant Prices)

Year	Working force			Average income per person	Total Income ('000)
	Rural	Urban	Total		
1	2	3	4	5	6
1960-61	613	416	1029	1290	1327
1961-62	631	428	1059	..	1366
1962-63	651	442	1093	..	1410
1963-64	671	456	1127	..	1454
1964-65	693	472	1165	..	1503
1965-66	715	487	1202	..	1551
1966-67	739	503	1242	..	1602
1967-68	762	520	1282	..	1654
1968-69	788	538	1326	..	1711



## 10.—TRANSPORT AND COMMUNICATIONS :

The activities covered under this sector are (1) Railways (2) Communications and (3) Other Transport including Air Transport. The working group on State Income (W. G. S. I.) in its 11th meeting has recommended that the central Statistical Organisation (C. S. O.) will prepare and supply to State Statistical Bureau's estimates in respect of Railways, Communications, Banking and Insurance, Air Transport and Central Government administration in the State since the activities of these sectors are spread all over India and since Statewise details for estimating the State Domestic Product are not available. The method of estimation at the National level and the allocation procedure is given below :

### 1. RAILWAYS :

Five percent of the income from wages and salaries of a Railway is assumed to pertain to its Headquarters staff. After deducting five percent, the remaining national product from Railways is divided into two parts, namely, value added from passenger traffic and value added from goods traffic on the basis of gross earnings of Railways from passenger and goods traffic. The allocation of the value added from passenger traffic is done on the basis of track kilometres and the value added from goods traffic is allocated on the basis of freight tonne kilometres. From 60-61 to 67-68 the figures supplied by Central Statistical Organisation are taken, for estimating State Domestic Product of 68-69, the growth rate from 66-67 to 67-68 is applied to 68-69 figure and this will be revised when Central Statistical Organisation gives the figures.

*Estimates at constant (60-61) prices :*

The ratio of all India Constant Price estimate to current price estimate for each year is applied to the current price estimates of the State to get the constant price estimates for these years.

### 2. COMMUNICATIONS :

This industry comprises of (i) Communication Services rendered by the Post and Telegraph Department (P & T) and (ii) The Overseas Communication Service (OCS). The method of allocation of the National Total to the States is described briefly below:

The net national product from communication is measured as the aggregate of compensation to employees, interest payment, rent and operating surplus. Circlewise data on wages and salaries in respect of employees in the Post and Telegraph have been supplied by Accountant General, Post and Telegraph, Simla. The estimates of compensation of employees in net national product which were derived from analysis of budget and included pay, allowances (except TA) pensionary benefits, contribution to PF, and other facilities were distributed among postal circles on the basis of data on wages and salaries of staff obtained as noted above. The estimates for the P & T circles were allocated where necessary among the constituent State and Union Territories on the basis of data on employment for the respective years obtained from D. G. E. and T. and Directorate of Post and Telegraph.

The total interest has been allocated among circles in proportion to the circle wise capital expenditure over the years 1961-62 to 1965-66, data on which were obtained from Accountant General, Post and Telegraph,

Simla. The circle wise total revenue and expenditure were used to allocate the overall surplus at national level. The surplus has been allocated for the years 1961-62 to 1965-66 among the circles in proportion to the circle wise differences between revenues and expenditure in the respective years. The allocation for 1960-61 has done on the basis of 1961-62 data. From 1960-61 to 1967-68, the figures supplied by Central Statistical Organisation is taken. The All India growth rate from 1967-68 to 1968-69 is applied to the 1967-68 figure of the State to get the State Domestic Product for 1968-69 and this will be revised when Central Statistical Organisation makes available the figures.

### Overseas Communication Service (OCS)

The Overseas Communication Service has its offices situated only in four cities, namely, Bombay, Delhi, Calcutta and Madras and the refore the entire income from it has been taken to have originated in the four states Maharashtra, Delhi, West Bengal and Tamil Nadu.

### Estimates at Constant (1960-61) Prices:

The all India ratio of constant price to current price for the various years has been applied to the current price estimates of the State to get the constant price estimates.

### 3. Other Transport:

*Coverage :* The activities included in the industry 'Other Transport' are Mechanised and Non-mechanised Road Transport, Organised and un-organised Water Transport, Air Transport and Services incidental to Transport. According to the 1961 census Industrial classification, the activities are noted under the minor groups 701 to 710 as follows.

- I—701 Transporting by train way and Bus Service.
- 702 Transporting by motor-vehicles (other than Omni bus)
- II—703 Transporting by road through other means of transport such as hackney carriage, bullock Cart, Ekka etc.
- 704 Transporting by animals such as horse, elephant, Mule, Camel.
- 705 Transporting by man such as carrying of luggage hand cart driving, rickshaw pulling cycle rickshaw driving.
- III—706 Transporting by boat, steamer, ferry etc. by river, canal.
- 707 Transporting by boat, steamer, ship, cargo boat by sea or ocean.
- IV—708 Transporting by Air.
- V—709 Transporting by other means not covered above.
- 710 Services incidental to transport such as packing carting, travel agency etc.

### Method of Estimation :

The Income Method has been adopted to estimate the State Domestic product from this sector, namely, the product of the workforce (WF) and average earnings per person (VA). Workforce has been worked out for each of the above categories (urban and rural) from this Bureau's publication 'Working Force Estimates 1951 and 1961'. The method of estimation for each category of transport is given below.



### 1. Mechanised Road Transport (Public) :

The State Domestic Product comprised of compensation of employees, interest, rent paid and operating surplus and these details plus the number of persons employed were taken from the Administration Report of the Kerala State Road Transport Corporation. From the gross product worked out this depreciation is deducted to get the net product.

### 2. Mechanised Road Transport (Private) :

The total Work Force in Mechanised Road Transport estimated for 1960-61 is projected to other years with the help of an index based on the number of vehicles and average employment per vehicle in the different categories.

From this the public sector employment is deducted to get the number of persons employed in the Private Sector. The average earnings per person in the Private Sector is taken to be 50 percent of the Wages and salaries in the Public Sector.

### 3. Non-Mechanised Road Transport :

This comprised of 703, 704 and 705 of the census Industrial classification. 50 percent of the average earnings per persons in the Mechanised Road Transport (Private) has been taken to be the average earnings per person in the case of Non-Mechanised Road Transport.

### 4. Water Transport (706 & 707) :

The Income method is used. The average earning per person (VA) for both rural and urban has been taken from the Socio-Economic Survey of Kerala for the reference period 67-68. The average earnings per person for the other years have been adjusted by an

index based on wages of skilled labour. Adjustment for company earnings have been made. Estimates have been prepared for rural and urban break-up.

### 5. Air Transport (708) :

As per the Working Group on State Income recommendation the Central Statistical Organisation has to allocate state wise estimates of State Domestic Product from Air Transport. Since estimates have not been received from Central Statistical Organisation, the following procedure is adopted. The All India average earnings per person for 60-61 is taken for the State also and adjusted for other years with the aid of an index based on the per head earnings, in Mechanised Road Transport (Public). For Constant (60-61) price estimates the All India net per head earnings for 60-61 is moved in combination with the Work force of the subsequent years.

### 6 and 7. Transport n. e. c. and services incidental to Transport (709 and 710) :

The average earning per person for 67-68 is taken from the Socio-Economic Survey of Kerala. The average earnings per person for the other years have been adjusted by an index based on the wages of skilled labour. Estimates have been prepared for rural and urban separately. Adjustment for company earnings is also made.

### Estimates at Constant (60-61) Price :

The estimates at constant (60-61) prices have been worked out by using an index based on the working force of the above categories for the respective years. The estimates prepared are presented in Table 10.1 to 10.13.

10.1 WORK FORCE IN OTHER TRANSPORT

Sl. No.	Category	1951			1961		
		Urban	Rural	Total	Urban	Rural	Total
1	2	3	4	5	6	7	8
1	Transport-Mechanised	12898	20627	33525	13673	21885	35558
2	Transport-Non-Mechanised	17133	40741	57874	17726	41104	58830
3	Water Transport	12241	17015	29256	12966	18064	31030
4	Air Transport	112	58	170	119	62	181
5	Transport n. e. c.	519	787	1306	547	830	1377

Source : Working Force Estimates 1951 and 1961. Published by Bureau of Economics & Statistics, Trivandrum.



10-2 STATE DOMESTIC PRODUCT FROM MECHANISED TRANSPORT AT CURRENT PRICES 1960-61 TO 1968-69.

(Rs. '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8	9	10	11
<b>PUBLIC SECTOR</b>										
1	Employment (No.)	5840	6072	6107	6216	6962	7121	7646	9005	10420
2	Wages and Salaries (Rs. '000)	8839	9715	11677	11661	13353	16062	19108	25149	29958
3	Operating surplus	600	3200	3500	2100	2400	4500	6300	(-)	700
4	Bonus, Pension, Gratuity etc.	1345	1690	2092	2363	2388	2823	4693	5949	17533
5	Interest paid and Rent paid	1416	1455	1878	2175	2625	3391	3679	4150	4658
6	Total	12200	16060	19147	18300	20766	26776	33780	34548	36549
7	Depreciation	3427	3752	4258	4521	4444	4088	4582	5426	6437
8	Net total	8773	12308	14889	13779	16322	22688	29198	29122	30112
<b>PRIVATE SECTOR</b>										
9	Employment (No.)	29629	37641	42564	46161	47845	48214	51729	59883	66221
10	Average per head earnings (Rs)	759.68	799.99	956.04	937.99	958.99	1127.79	1249.54	1396.39	1437.53
11	Total earnings	22509	30112	40693	43299	54883	54375	64637	83620	95195
12	State Domestic Product from Mechanised Transport (8 + 11)	31282	42420	55582	57078	62205	77063	93835	112742	125307

10. 3—STATE DOMESTIC PRODUCT FROM NON-MECHANISED ROAD TRANSPORT, WATER TRANSPORT, AND TRANSPORT N.E.C. AT CURRENT PRICES FROM 1960-61 TO 1968-1969.

Sl. No.	Item	1960-61			1961-62			1962-63			
		Urban/Rural	Work Force (No.)	Average earnings (Rs. P)	Urban/Rural	Work force (No.)	Average earnings (Rs.)	Urban/Rural	Work force (No.)	Average earnings (Rs.)	
1	2	3	4	5	6	7	8	9	10	11	
<b>Non-Mechanised Road Transport</b>											
	Total		58700	379.84	22297	59016	399.99	23606	59334	472.02	28007
	Urban		12929	1120.83	14491	13015	1145.92	14914	13102	1173.70	15378
	Rural		18018	812.89	14647	18128	831.90	15081	18237	848.89	15481
<b>Water Transport</b>											
	Total		30947	..	29138	31143	..	29995	31339	..	30859
	Urban		545	754.46	411	549	771.35	423	553	790.05	437
	Rural		827	611.93	506	833	626.24	522	839	639.03	536
<b>Transport N. E. C.</b>											
	Total		1372	..	917	1382	..	945	1392	..	973



## OTHER TRANSPORT 10.3 (Contd.)

Sl. No.	Item	Urban/Rural	1963-64			1964-65			1965-66		
			Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)	Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)	Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)
1	2	3	13	14	15	16	17	18	19	20	21
1	Non-Mechanised Road Transport	Total	59655	468.99	27978	59977	479.50	28759	60301	563.89	34003
		Urban	13189	1198.79	15811	13277	1226.58	16285	13366	1240.48	16580
2	Water Transport	Rural	18347	867.91	15924	18457	884.90	16333	18568	891.17	16547
		Total	31536	31735	31734	31934	32618	32618	31934	32618	33127
3	Transport N. E. C.	Urban	557	806.94	449	561	825.64	463	565	835.00	472
		Rural	845	653.35	552	851	666.14	567	857	670.86	575
		Total	1402	1001	1001	1412	1030	1030	1422	1030	1047

## OTHER TRANSPORT 10.3 (Contd.)

Sl. No.	Item	Urban/Rural	1966-67			1967-68			1968-69		
			Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)	Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)	Work force (No)	Average earnings (Rs.)	Total earnings (Rs. '000)
1	2	3	22	23	24	25	26	27	28	29	30
1	Non-Mechanised Road Transport	Total	60627	624.77	37903	60956	698.20	42559	61286	718.77	44051
		Urban	13455	1267.73	17057	13545	1348.93	18271	13636	1374.02	18736
2	Water Transport	Rural	18679	891.17	16646	18792	965.31	18140	18906	984.33	18610
		Total	32134	33703	33703	32337	36411	36411	32542	37346	37346
3	Transport N. E. C.	Urban	569	849.98	484	573	908.00	520	577	924.89	534
		Rural	863	670.86	579	869	726.67	631	876	740.99	649
		Total	1432	1063	1063	1442	1151	1151	1453	1183	1183



## 10-4 State Domestic Product from Air Transport at current &amp; constant (60-61) Price 1960-61 to 1968-69

Sl. No.	Particulars	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
1	2	3	4	5	6	7	8	9	10	11
1	Index of net per head earning in Road Transport (Public)	100.00	105.31	125.85	123.47	126.24	148.46	164.48	183.81	189.23
2	Per head earnings in Air Transport (Rs)	6084	6407	7657	7512	7680	9032	10007	11183	11513
3	Work force in Air Transport	181	181	182	183	184	185	186	187	188
4	Estimate of State domestic product at current prices (Rs. '000)	1101	1160	1394	1375	1413	1671	1861	2091	2164
5	Index of work force in Air Transport	100.00	100.00	100.55	101.10	101.66	102.21	102.76	103.31	103.87
6	Estimates of state domestic product at constant (60-61) prices (Rs. '000)	1101	1101	1107	1113	1119	1126	1132	1138	1144

Note :—All India net per head earning for 60-61 is adopted. For per head earnings of subsequent years the index of per head earnings of Road Transport (Public) is utilised. For constant price estimates the All India net per head earnings of 60-61 is moved in combination with the work force of the subsequent years.

## 10-5. Index of Work force in other Transport

Sl. No.	Item	60-61		61-62		62-63		63-64		64-65	
		work force	Index	work force	Index	work force	Index	work force	Index	work force	Index
1	2	3	4	5	6	7	8	9	10	11	12
1	Road Transport Mechanised	5840	100.00	6072	103.97	6107	104.57	6216	106.44	6962	119.21
	(a) Public	29629	100.00	37641	127.04	42564	143.66	46161	155.80	47845	161.48
	(b) Private	58700	100.00	59016	100.54	59334	101.08	59655	101.63	59977	102.18
2	Road Transport-non mechanised	12929	100.00	13015	100.67	13102	101.34	13189	102.01	13277	102.69
3	Water Transport (a) Urban	18018	100.00	18128	100.61	18237	101.22	18347	101.83	18457	102.44
	Rural										
4	Transport N. E. C. & Services incidental to Transport	545	100.00	549	100.73	553	101.47	557	102.20	561	102.94
	(a) Urban	827	100.00	833	100.73	839	101.45	845	102.18	851	102.90
	(b) Rural										



Sl. No.	Item	65-66		66-67		67-68		68-69	
		work force	Index	work force	Index	work force	Index	work force	Index
1	2	13	14	15	16	17	18	19	20
1.	Road Transport Mechanised								
	(a) Public	7121	121.93	7646	130.92	9005	154.20	10420	178.42
	(b) Private	48214	162.73	51729	174.59	59883	202.11	66221	223.50
2.	Road Transport non mechanised	60301	102.73	60627	103.28	60956	103.84	61286	104.41
3.	Water Transport								
	(a) Urban	13366	103.38	13455	104.07	135.45	104.76	13636	105.47
	(b) Rural	18568	103.05	18679	103.67	18792	104.30	18909	104.93
4.	Transport N. E. C. & Services incidental to Transport	565	103.67	569	104.40	573	105.14	577	105.87
	(a) Urban								
	(b) Rural	857	103.63	863	104.35	869	105.08	876	105.93

## 10-6 STATE DOMESTIC PRODUCT FROM OTHER TRANSPORT AT CONSTANT (1960-61) PRICES-1960-61 TO 1968-69

(Rs. '000)

Sl. No.	Item	1960-61		1961-62		1962-63		1963-64		1964-65		1965-66		1966-67		1967-68		1968-69	
		3	4	5	6	7	8	9	10	11									
1	2																		
I.	Road Transport Mechanised	31282	37716	41510	44407	46833	47326	50784*	59021	65961									
	(a) Public	8773	9121	9174	9338	10458	10697	11486	13528	15653									
	(b) Private	22509	28595	32336	350.69	36348	36629	39298	45493	50308									
II.	Road Transport Non-mechanised	22297	22417	22538	22660	22783	22906	23028	23153	23280									
III.	Water Transport	29138	29324	29511	29697	29885	30075	30266	30458	30653									
	(a) Urban	14491	14588	14685	14782	14881	14981	15081	15181	15284									
	(b) Rural	14647	14736	14826	14915	15004	15094	15185	15277	15369									
IV.	Transport N. E. C.	917	924	930	937	944	950	957	964	971									
	(a) Urban	411	414	417	420	423	426	429	432	435									
	(b) Rural	506	510	513	517	521	524	528	532	536									
	GRAND TOTAL	83634	90381	94489	97701	100445	101257	105035	113596	120865									



## 10-7- Other Transport-Income of Companies (Rs.'000)

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69				
		Comp.	Non-Comp.	Comp.	Non-Comp.	Comp.	Non-Comp.	Comp.	Non-Comp.	Comp.				
1	2	(3)	(4)	5	6	7	8	9	10	11				
1	Transport by Road	6081	2429	3357	397	7545	509	8572	711	7742	711	7742	711	7742
2	Transport by Water	800	231	974	1459	705	285	538	62	1239	62	1239	62	1239
3	Other Transport	520	..	864	22	647	85	660	194	291	194	291	194	291

\* For Road Transport the operating surplus is deducted from company earnings and adjusted.

## 10-8. State Domestic Product from other Transport at Current Prices 1960-61 to 1968-69 (Rs. '000)

Sl.No.	Item	1960-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
1	2	3	4	5	6	7	8	9	10	11
1	Road Transport mechanised	31282	42420	55382	57078	62205	77063	93835	112742	125307
2	Do. non-mechanised	22297	23606	28007	27978	28759	34003	37903	42559	44051
3	Company earnings	5481	7586	4442	6981	6053	3953	2153	9053	24053
4	Road Transport Sub total (1)	59060	73612	88031	92037	97017	115019	133891	164394	193411
5	Water Transport	29138	29995	30859	31735	32618	33127	33703	36411	37346
6	Company earnings	800	1205	2164	823	1301	1301	1301	1301	1301
7	Water Transport sub total (2)	29938	31200	33023	32558	33919	34428	35004	36712	38647
8	Air Transport Sub Total (3)	1101	1160	1394	1375	1413	1671	1861	2091	2164
9	Transport n. e. C.	917	945	973	1001	1030	1047	1063	1151	1183
10	Company earnings	520	864	669	745	485	485	485	485	485
11	Transport n. e. C. Sub Total (4)	1437	1809	1642	1746	1515	1532	1548	1636	1668
	GRAND TOTAL (1+2+3+4)	91536	107781	124090	127716	133864	152650	172304	204833	235890

## 10-9 STATE DOMESTIC PRODUCT FROM OTHER TRANSPORT AT CONSTANT (60-61) PRICES 60-61 TO 68-69

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
1	2	3	4	5	6	7	8	9	10	11
1	Road Transport Mechanised	31282	37716	41510	44407	46833	47326	50784	59021	65961
2	do. non-mechanised	22297	22644	22781	22919	23056	23193	23333	23475	23614
3	Company earnings	5481	7587	4442	6981	6053	3953	2153	9053	24053
4	Road Transport Sub-Total (1)	59060	67946	68733	74307	75942	74472	76270	91549	113628
5	Water Transport	29138	29324	29511	29697	29885	30075	30266	30488	30653
6	Company earnings	800	1205	2164	823	1301	1301	1301	1301	1301
7	Water Transport Sub-Total (2)	29938	30529	31675	30520	31186	31376	31567	31789	31954
8	Air Transport n. e. c.	1101	1101	1107	1113	1119	1126	1132	1138	1144
9	Transport n. e. c.	917	924	930	937	944	950	957	964	971
10	Company earnings	520	864	669	745	485	485	485	485	485
11	Transport n. e. c. Sub-Total (4)	1437	1788	1599	1682	1429	1435	1442	1449	1456
	Grand Total (1)+(2)+(3)+(4)	91536	101364	103114	107622	109676	108409	110411	125925	148182

(Rs.' 000)



## 10.10 STATE DOMESTIC PRODUCT FROM OTHER TRANSPORT AT CURRENT PRICES FROM 1960-61 TO 1968-69.

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	(Rs. '000)
1	2	3	4	5	6	7	8	9	10	11
1	Road Transport	59060	73612	88031	92037	97017	115019	133891	164394	193411
2	Water Transport	29938	31200	33023	32558	33919	34428	35004	36712	38647
3	Air Transport	1101	1160	1394	1375	1413	1671	1861	2091	2164
4	Transport not elsewhere classified	1437	1809	1642	1746	1515	1532	1548	1636	1668
	TOTAL	91536	107781	124090	127716	133864	152650	172304	204833	235890

## 10.11 STATE DOMESTIC PRODUCT FROM OTHER TRANSPORT AT CONSTANT (60-61) PRICES 1960-61 TO 1968-69

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	(Rs. '000)
1	2	3	4	5	6	7	8	9	10	11
1	Road Transport	59060	67946	68733	74307	75942	74482	76270	91549	113628
2	Water Transport	29938	30529	31675	30520	31186	31376	31567	31789	31954
3	Air Transport	1101	1101	1107	1113	1119	1126	1132	1138	1144
4	Transport not elsewhere classified	1437	1738	1599	1682	1429	1435	1442	1449	1456
	TOTAL	91536	101364	103114	107622	109676	108409	110411	125925	148182

## 10.12 STATE DOMESTIC PRODUCT FROM TRANSPORT AND COMMUNICATIONS

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8	9	10	11
1	Railways	29400	32400	32800	38100	38500	35600	35600	36200	36812
2	Communications	15360	19040	24230	31520	29170	33560	51570	58170	68856
3	Other Transports.	91536	107781	124090	127716	133864	152650	172304	204833	235890
	Total	136296	159221	181120	197336	201534	221810	259474	299203	341558

## 10.13 STATE DOMESTIC PRODUCT FROM TRANSPORT AND COMMUNICATIONS

Sl. No.	Item	1960-61 to 1968-69	At Constant (1960-61) Prices	(Rs. '000)						
1	2	3	4	5	6	7	8	9	10	11
1	Railways	29400	31133	30074	33566	33580	30260	28914	29836	28666
2	Communications	15360	18246	23019	29443	25670	28513	39848	43133	44715
3	Other Transports	91536	101364	103114	107622	109676	108409	110411	125925	148182
	Total	136296	150743	156207	170631	168926	167182	179173	198894	221563



## 11. TRADE, STORAGE, HOTELS AND RESTAURANTS

### Coverage :

The activities covered in this Industry are (i) Wholesale and Retail Trade including importing and exporting of goods and commodities, auctioneering, hiring out of durable goods and other allied activities (ii) Operation of storage facilities, for example, warehouses (including bonded warehouses), cold storage, furniture, repositories and safe deposits when such storage is offered as an independent service and (iii) services rendered by hotels, boarding houses, eating houses, cafes, restaurants etc.

### Method of Estimation :

The Income Method, namely, product of the Working Force (WF) and average earnings per person (VA) has been adopted to estimate the State Domestic Product from this sector. The Work Force for the years 1960-61 onwards has been estimated by making use of this Bureau's publication "Work Force Estimates 1951 and 1961" and assuming Geometric growth rate. The average earnings per person in Trade for the year 1967-68 is taken from the Socio-economic Survey of Kerala conducted by the Bureau of Economics and Statistics. For both, wholesale Trade, Retail Trade and other Trade the same average earnings per person as that in Retail Trade is taken. From the Wage Structure Survey conducted by this Bureau every year, the average wage rates of shop attenders and shop assistants in wholesale and Retail Trade both rural and urban are available. An index based on the wage rate of shop attenders and shop assistants combined

has been prepared. The average earnings per person in Trade for the other years backwards and forwards is worked out by making use of these indices. Adjustment for company earnings also has been made in the estimates by making use of the publication "Income Tax Revenue Statistics".

For storage and warehousing, the average income per person is assumed to be the same as that of Retail Trade. For Hotels and Restaurants, the average earnings per person is taken as that in Retail Trade.

### Estimates at Constant (60-61) Prices :

The estimates of S. D. P. at constant (60-61) prices have been worked out by moving the base year estimates with the help of an index based on the gross value of output at 1960-61 prices of the commodity producing sectors except for hotels and restaurants for which the index of Work Force has been adopted.

The estimates prepared as on the above lines are presented in Tables 11.1 to 11.9.

- NOTE :—1. The VA per person in Hotels and Restaurants for all India and also in Maharashtra State comes nearly between 50 and 60 per cent of that in Retail Trade.
2. The V. A. obtained from the socio-economic survey is inclusive of subsidiary income. Therefore no adjustment for subsidiary workers is necessary.

TABLE 11.1.  
11.1 Work force, Average earning and Total earnings from Trade Storage  
Hotels and Restaurants at current prices from 1960-61 to 1968-69.

Sl. No.	Category	1960-61			1961-62			1962-63		
		Work force	Average earnings (Rs.)	Total earnings (Rs.'000)	Work force	Average earnings (Rs.)	Total earnings (Rs.'000)	Work force	Average earnings (Rs.)	Total earnings (Rs.'000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I.	Wholesale Trade	16850	--	20978	17251	--	23815	17628	..	26746
	(i) Urban	10601	1575.25	16699	10828	1748.52	18933	11064	1921.80	21263
	(ii) Rural	6249	684.70	4279	6423	760.01	4882	6564	835.32	5483
II.	Retail Trade	350535	--	328111	361137	--	375211	372064	..	424868
	(i) Urban	98928	1575.25	155836	101915	1748.52	178200	104996	1921.80	201781
	(ii) Rural	251607	684.70	172275	259222	760.01	197011	267068	835.32	223087
III.	Other Trade	6167	--	7460	6372	--	8559	6586	..	9727
	(i) Urban	3635	1575.25	5726	3760	1748.82	6574	3889	1921.80	7474
	(ii) Rural	2532	684.70	1734	2612	760.01	1985	2697	835.32	2253
IV.	Storage and warehousing	1853	--	2667	1875	--	2995	1895	..	3329
	(i) Urban	1570	1575.75	2473	1588	1748.52	2777	1607	1921.80	3088
	(ii) Rural	283	684.70	194	287	760.01	218	288	835.32	241
V.	Hotels & Restaurants	134198	--	121874	137504	--	138619	140896	..	156122
	(i) Urban	33674	1575.25	53045	34511	1748.52	60343	35370	1921.80	67974
	(ii) Rural	100524	684.70	68829	102993	760.01	78276	105526	835.32	88148
	GRAND TOTAL	509603	..	481090	524139	..	549199	539069	..	620792



TABLE 11.1 — (Contd.)

Sl. No	Category	1963-64			1964-65			1965-66		
		Work force	Average earnings (Rs.)	Total earnings (Rs.'000)	Work force	Average earnings (Rs.)	Total earnings (Rs.'000)	Work force	Average earnings (Rs.)	Total earnings (Rs.' 00)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
I.	Wholes Trade	18012	..	29853	18401	..	33411	18801	..	37175
	(i) Urban	11305	2095.08	23685	11549	2299.86	26561	11799	2504.64	29552
	(ii) Rural	6707	919.65	6168	6852	999.66	6850	7002	1088.65	7623
II.	Retail Trade	383319	..	479663	394914	..	539668	406862	..	605490
	(i) Urban	108167	2095.08	226619	111435	2299.86	256285	114801	2504.64	28753 <sup>5</sup>
	(ii) Rural	275152	919.65	253044	283479	999.66	283383	292061	1088.66	31795 <sup>5</sup>
III.	Other Trade	6805	..	10985	7033	..	12439	7267	..	14003
	(i) Urban	4022	2095.08	8426	4160	2299.86	9567	4302	2504.64	10775
	(ii) Rural	2783	919.65	2559	2873	999.66	2872	2965	1088.66	3228
IV.	Storage and warehousing	1916	..	3675	1940	..	4081	1959	..	4490
	(i) Urban	1627	2095.08	3409	1647	2299.86	3788	1665	2504.64	4170
	(ii) Rural	289	919.65	266	293	999.66	293	294	1088.66	320
V.	Hotels & Restaurants	144376	..	175386	147947	..	196209	151610	..	218984
	(i) Urban	36252	2095.08	75950	37158	2299.86	85458	38088	2504.64	95397
	(ii) Rural	108124	919.65	99436	110789	999.66	110751	113522	1088.66	123587
	GRAND TOTAL	554428	..	699562	570235	..	785808	586499	..	880142

TABLE—11.1 (Concl'd.)

Sl: No.	Category	1966-67			1967-68			1967-68		
		Work force	Average earnings (Rs.)	Total earnings (Rs.'000)	Work force	Average earnings (Rs.)	Total earnings (Rs.)	Work force	Average earnings (Rs.)	Total earnings (Rs.'000)
(1)	(2)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
I.	Wholesale Trade	19210	..	42044	19627	..	43451	20054	..	47132
	(i) Urban	12055	2772.44	33422	12317	2803.94	34542	12584	2977.22	37465
	(ii) Rural	7155	1205.06	8622	7310	1218.76	8909	7470	1294.08	9667
II.	Retail Trade	419171	..	690499	431858	..	719482	444925	..	787047
	(i) Urban	118269	2772.44	327894	121844	2803.94	341649	125526	2977.22	373719
	(ii) Rural	300902	1205.06	362605	310014	1218.76	377833	319399	1294.08	413328
III.	Other Trade	7509	..	16022	7760	..	16758	8018	..	18385
	(i) Urban	4449	2772.44	12335	4602	2803.94	12909	4758	2977.22	14166
	(ii) Rural	3060	1205.06	3687	3158	1218.76	3849	3260	1294.08	4219
IV.	Storage and warehousing	1982	..	5031	2004	..	5150	2025	..	5524
	(i) Urban	1686	2772.44	4674	1705	2803.94	4786	1725	2977.22	5136
	(ii) Rural	296	1205.06	357	299	1218.76	364	300	1294.08	388
V.	Hotel & Restaurants	155370	..	248424	159228	..	257504	163185	..	280230
	(i) Urban	39042	2772.44	108242	40023	2803.94	112222	41028	2977.22	122149
	(ii) Rural	116328	1205.06	140182	119205	1218.76	145282	122157	1294.08	158081
	GRAND TOTAL	603242	..	1002020	620477	..	1042345	638207	..	1138353



**11.2 Gross Value of out put at (60-61) Prices of Commodity Producing sectors**  
(Rs. '000)

Sl. No.	Sectors	1960-61	1961-62	1962-63	1963-64	1964-1965	1965-66	1966-67	1967-68	1963-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Agriculture	2461998	2417679	2499864	2634340	2673366	2666680	2831569	2970283	3150231
2.	Animal Husbandry	227599	231813	236249	240812	243692	253321	256787	266002	273407
4.	Forestry and Logging	59775	60123	62272	62534	66444	96950	110992	115996	108174
4.	Fishing	56433	40995	41323	41095	50301	35606	42367	45254	49524
5.	Mining and Quarrying	17000	14961	13794	5484	6028	4481	4742	6680	6646
	Total	2822805	2765571	2853502	2984265	3039831	3057038	3246457	3404215	3537982
	Index	100.00	97.97	101.09	105.72	107.69	108.30	115.01	120.60	127.11

**11.3 Index of work force in Hotels and Restaurants.**

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1.	Urban	100.00	102.49	105.04	107.66	110.35	113.11	115.94	118.85	121.84
2.	Rural	100.00	102.46	104.98	107.56	110.21	112.93	115.72	118.58	121.52

**11.4. State Domestic product from Trade Storage Hotels and Restraunts at constant (1960-61) prices 1960-61 to 1968-69.**

(Rs. '000)

Sl. No.	Category	1960-61		1961-62		1962-63		1963-64	
		Index	Constant price estimate	Index	Constant price estimate	Index	Constant price estimate	Index	Constant price estimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	Whole sale Trade	100.00	20978	97.97	20554	101.09	21209	105.72	22180
II.	Retail Trade	100.00	328111	97.97	321483	101.09	331720	105.72	346912
III.	Other Trade	100.00	7460	97.97	7309	101.09	7542	105.72	7883
IV.	Storage and wear Housing	100.00	2667	97.97	2613	101.09	2696	105.72	2820
V.	Hotels and Restaurants	..	121874	..	124888	..	127975	..	131140
(1)	Urban	100.00	53045	102.49	54366	105.04	55718	107.66	57108
(2)	Rural	100.00	68829	102.46	70522	104.98	72257	107.56	74032
	Grand Total	..	481090	..	476847	..	491142	..	51990

**11.4. (Contd.)**

Sl. No.	Category	1964-65		1965-66		1966-67		1967-68		1968-69	
		Index	Constant price estimate	Index	Constant price estimate	Index	Constant price estimate	Index	Constant price estimate	Index	Constant price estimate
(1)	(2)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
I.	Whole sale Trade	107.69	22593	108.30	22721	115.01	24129	120.60	25302	127.11	26667
II.	Retail Trade	107.69	353376	108.30	355377	115.01	377393	120.60	395735	127.11	417095
III.	Other Trade	107.69	8035	108.30	8081	115.01	8581	120.60	8998	127.11	9484
IV.	Storage and wear housing	107.69	2872	108.30	2888	115.01	3067	120.60	3216	127.11	3390
V.	Hotels and Restaurants	..	134391	..	137728	..	141149	..	144661	..	148271
(1)	Urban	110.35	58535	113.11	59999	115.94	61500	118.85	63044	121.84	64600
(2)	Rural	110.21	75856	112.93	77729	115.72	79649	118.58	81617	121.52	83641
	Grand Total	..	521267	..	526795	..	554319	..	567912	..	604907



## 11.5 Income of Companies assessed to income tax

(Rs. '000)

Sl. No.	Item	1960-61		1961-62		1962-63		1963-64		1964-65	
		Compa- nies	Non Company	Compa- nies	Non Company	Compa- nies	Non Company	Compa- nies	Non Company	Compa- nies	Non Company
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Whole sale Trade	17224		2884	42281	4763	36952	1379	32034	4179	45323
2.	Retail Trade	46938		982	57711	326	58501	337	59752	1948	64992

Sl. No.	Item	1965-66		1966-67		1967-68		1968-69	
		Companies	Non Company	Companies	Non Company	Companies	Non Company	Companies	Non Company
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1.	Whole sale Trade	4179	45323	4179	45323	4179	45323	4179	45323
2.	Retail Trade	1948	64992	1948	64992	1948	64992	1948	64992

11.6 State Domestic from Trade Storage Hotels and Restaurants  
at current Prices — 1960-61 to 1968-69.

(Rs. '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8	9	10	11
1.	Whole sale Trade	20978	23815	26746	29853	33411	37175	42044	43451	47132
2.	Company earnings	17224	45165	41715	33413	49502	49502	49502	49502	49502
3.	Sub Total	38202	68980	68461	63266	82913	86677	91546	92953	96634
4.	Retail Trade	328111	375211	424868	479663	539668	605490	690499	719482	787047
5.	Company earnings	46938	58693	58827	60089	66940	66940	66940	66940	66940
6.	Sub Total	375049	433904	483695	539752	606608	672430	757439	786422	853987
7.	Other Trades	7460	8559	9727	10985	12439	14003	16022	16758	18385
8.	Company earnings	..	..	..	..	..	..	..	..	..
9.	Sub Total	7460	8559	9727	10985	12439	14003	16022	16758	18385
10.	Storage and wear housing	2667	2995	3329	3675	4081	4490	5031	5150	5524
11.	Hotels and Restaurants	121874	138619	156122	175386	196209	218984	248424	257504	280230
12.	Grand total	545252	653057	721334	793064	902250	996584	1118462	1158787	1254760

11.7. State Domestic Product from Trade Storage Hotels and Restaurants  
at constant (1960-61) Prices 1960-61 to 1968-69.

(Rs. '000)

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Whole sale Trade	20978	20554	21209	22180	22593	22721	24129	25302	26667
2.	Adjustment for com- pany earnings	17224	45165	41715	33413	49502	49502	49502	49502	49502
3.	Sub Total	38202	65719	62924	55593	62095	72223	73631	74804	76169
4.	Retail Trade	328111	321483	331720	346912	353376	355377	377393	395735	417095
5.	Adjustment for com- pany earnings	46938	58613	58827	60089	66940	66940	66940	66940	66940
6.	Sub Total	375049	380096	390547	407001	420316	422317	444333	462675	484035
7.	Other Trades	7460	7309	7542	7888	8035	8081	8581	8998	9484
8.	Adjustment for com- pany earnings	..	..	..	..	..	..	..	..	..
9.	Sub Total	7460	7309	7542	7888	8035	8081	8581	8998	9484
10.	Storage and wear housing	2667	2613	2696	2820	2872	2888	3067	3216	3390
11.	Hotels and Restaurants	121874	124888	127975	131140	134391	137728	141149	144661	148271
	Grand Total	545252	580625	591684	604442	627709	643237	670761	694354	721349



**State Domestic Product from Trade Storage, Hotels and Restaurants  
at Current Prices 60-61 to 68-69**

(Rs. '000)

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Wholesale Trade	38202	68980	68461	63266	82913	86677	91546	92953	96634
2.	Retail Trade	375049	433904	483695	539752	606608	672430	757439	786422	853987
3.	Other Trades	7460	8559	9727	10985	12439	14003	16022	16758	18385
4.	Storage and wear housing	2667	2995	3329	3675	4081	4490	5031	5150	5524
5.	Hotels and Restaurants	121874	138619	156122	175386	196209	218984	248424	257504	280230
	<b>Total</b>	<b>545252</b>	<b>653057</b>	<b>721334</b>	<b>793064</b>	<b>902250</b>	<b>996584</b>	<b>1118462</b>	<b>1158787</b>	<b>1254760</b>

**State Domestic Product from Trade Storage, Hotels and Restaurants  
at constant (60-61) Prices—1960-61 to 1968-69**

(Rs. '000)

Sl. No.	Item	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Wholesale Trade	38202	65719	62924	55593	62095	72223	73631	74804	76169
2.	Retail Trade	375049	380096	390547	407001	420316	422317	444333	462675	484035
3.	Other Trade	7460	7309	7542	7888	8035	8081	8581	8998	9484
4.	Storage and wear housing	2667	2613	2696	2820	2872	2888	3067	3216	3390
5.	Hotels and Restaurants	121874	124888	127975	131140	134391	137728	141149	144661	148271
	<b>Total</b>	<b>545252</b>	<b>580625</b>	<b>591684</b>	<b>604442</b>	<b>627709</b>	<b>643237</b>	<b>670761</b>	<b>694354</b>	<b>721349</b>

## 12—BANKING AND INSURANCE

**Coverage.**—The following activities are included in the Industry Group, Banking and Insurance.

### A. Banking:

1. Commercial Banks (Scheduled and non-scheduled)
2. Banking Department of the Reserve Bank of India.
3. Post Office Savings Bank Accounts, Cumulative Time Deposits and National Savings Certificates.
4. Non-Banking financial Institutions.
5. Co-operative Credit Societies.

### B. Insurance:

1. Life Insurance (other than Postal Life Insurance)
2. Postal Life Insurance.
3. Non-life Insurance, namely Fire, Marine and Miscellaneous Insurance, Co-operative Insurance Societies, Deposit Insurance and Export Credit and Guarantee etc.

4. **Method of Estimation**—The Estimates from the sector are not prepared at the State level because of non-availability of data regarding the various factor payments statewide. The Central Statistical Organisation (CSO) Government of India, has given the State-wise estimates from this sector by allocating the National total to the various states on the basis of relevant indicators. The estimates at current prices

for the years 1960-61 to 1966-67 supplied by Central Statistical Organisation are taken. For 1967-68 and 1968-69 the figures for 1966-67 have been projected using all India growth rate in the sector.

The estimates of National total from this Industry Group are compiled by the Income approach, that is, the estimates of factor incomes viz. estimates of wages and salaries, rent, Director's fee and operating surplus are added together to arrive at the net product.

The main sources of data on banking are the Reserve Bank of India publications:—

- (1) Statistical Tables relating to Banks in India.
- (2) Annual Report on the Trend and progress of Banking in India.
- (3) Monthly Bulletin of Reserve Bank of India.
- (4) Annual Report of the Central Board of Directors of the Reserve Bank of India.

Data on Insurance are obtained from

- (1) The Annual Report and Accounts of the Life Insurance Corporation of India.
- (2) Abstract and statement in respect of valuation of Assets and Liabilities of Life Insurance Corporation.
- (3) Annual Report and Balance Sheets of the Deposit Insurance Corporation and Export Credit and Guarantee Corporation.
- (4) The Indian Insurance year Book (for non-Life Insurance)



In case of Post Office Savings Bank, National Savings Certificates and Postal Life Insurance the details have been taken from the data of Cost of Management available from the "Detailed Annual Reports of the P and T Department". "Statistical statement relating to Co-operative movement in India" published by Reserve Bank of India gives extensive data on the Co-operative Societies.

#### Estimates at (1960-61) Prices:

The estimates at constant (1960-61) prices have not been supplied by central Statistical Organisation. Therefore the ratio of the estimates of State Domestic Products from Banking and Insurance at constant prices to current prices at the National Level has been used for estimating the net State Domestic Product at constant prices in this state.

#### 12.1 State Domestic Product from Banking and Insurance from 1960-61 to 1968-69 at current prices

(Rs. in '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Banking & Insurance	39493	46676	62594	73007	90505	107680	111610	128262	141524

#### 12.2 State Domestic Product from Banking and Insurance 1960-61 to 1968-69 at constant (1960-61) prices

(Rs. in '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Banking & Insurance	39493	45673	53649	60399	65996	68840	67212	68453	76777

### 13 REAL ESTATE AND OWNERSHIP OF DWELLINGS

#### A. Real Estate

**Coverage.**—Real Estate includes land estates companies and similar organisations deriving their income from the owning and letting of houses, flats lock-up garages and similar properties and all types of dealers such as operators, developers and agents connected with real estate. These have been classified as division 6.2 real estate in the Quarterly Blue Book 'Joint Stock Companies' by the Department of Company Affairs.

#### Method of Estimation:

The standard methodology suggested by Central Statistical Organisation has been followed for the estimation of State Domestic Product from this sector.

(1) **Organised Part.**—The net product in respect of the Real Estate comprises of compensation to employees, interest, rent and profits. The required details were collected from the office of the Registrar of Companies, Ernakulam analysing the balance sheets of the Joint Stock Companies (Public/Private) for 1960-61 onwards.

(2) **Unorganised Part.**—The net product in respect of the un-organised Part is estimated by following the Income Method, namely, as the product of the Work Force (WF) and average earnings per person per annum (VA).

#### Work Force (WF):

The total number of Workers in 'Real Estate' for 1960-61 was taken from the 1961 census. The number of workers in the organised part have been taken as 20 persons in each public limited company and 10 persons in each private limited company as suggested by CSO. The WF in the un-organised part is the difference between the total WF and WF in the organised part.

#### Average Earnings (VA):

The net product per workers in the un-organised part has been taken as 1/3 of the corresponding estimate of net product per worker in the organised part for the year 1960-61 as suggested by CSO. The SDP of the organised part for the respective years from 1961-62 onwards have been multiplied by the ratio of the SDP of un-organised part of SDP of organised part for the year 1960-61 to get the SDP of the un-organised part for these years.

#### Estimate of constant (1960-61) prices:

SDP at constant (1960-61) prices for the years 1960-61 to 1968-69 have been estimated by moving forward the 1960-61 estimates with the help of an index base on the year-wise number of urban dwellings.

#### B. Ownership of Dwellings:

The standard methodology prescribed by CSO has been followed to estimate income from this sector with slight modifications. The SDP from ownership of dwellings consists of the net rental income from ownership of buildings used for residential purposes. The rental value assessed by Municipalities and Panchayaths for purposes of levying house tax is likely to be under estimated. But there is every possibility that a number of houses taxed may be used for non-residential purposes also. Therefore, the under estimation of rental value of residential portion may get off-set by the inclusion of the rental value of buildings used for non-residential purposes. The estimates are prepared for both rural and urban separately.

#### Method of Estimation:

**Urban.**—The required information, namely, the total number of houses, number of houses exempted from tax, basis of taxation, reason for exemption of taxation, number of houses taxed, rental value of houses taxed, imputed rental value of houses exempted from tax, rate of house tax, demand for house tax, cost



of repair and maintenance, depreciation etc., were collected from all the Municipalities and Corporations of the State through a proforma prepared exclusively for this purpose. (In case there are non-reporting municipalities, the rental value may be estimated by using the rental value per person of the reporting municipalities falling in the same population group).

The gross rental value of buildings has been worked out for each group separately by grouping the municipalities according to population as follows:

1. Population less than 20000
2. Above 20000 and below 50000
3. Above 50000 and below 1 lakh
4. Above 1 lakh and below 2 lakhs
5. Above 2 lakhs

The gross rental worked out like this for each population category was added together to get the gross rental for the State. 10% of the gross rental value was deducted as repair and maintenance to get the gross product. Depreciation is worked out by assuming the average life of building in the urban areas to be 60 years as suggested by CSO. 26.6% of the Gross product was deducted towards depreciation to arrive at the net product.

#### Estimates at constant (1960-61) prices

Estimates at constant prices (1960-61 prices) are worked out by moving the base year estimates (1960-61) with the help of an index based on the number of houses in the urban area for each of the years 1960-61 and onwards.

#### Rural:

The same procedure as adopted in the case of Municipalities and Corporations have been followed in this case also with slight variation. The Panchayats in the State have been grouped in to 5 categories on the basis of population as follows:—

1. Below 10000
2. 10000 to 15000
3. 15000 to 20000
4. 20000 to 25000
5. 25000 and above.

A sample of 20 per cent panchayats in the State is selected for the State as a whole; this 20 per cent sample is then allocated among the 9 districts of the State (Malappuram district is included in Kozhikode District) in proportion to the number of Panchayats in each District. Again, the number of Panchayats sampled in each district are allocated to the different population ranges in the district in proportion to the number of Panchayats in each range. The number of Panchayats sampled in each population range in the district has been selected by simple random sampling. All the details collected in the case of Municipalities namely, total number of houses, number of houses exempted from house-tax, reason for exemption from taxation, number of houses taxed, basis of taxation, number of houses taxed imputed rental value of houses exempted from tax, rental value of houses taxed,

rate of house tax, demand of house tax, cost of repair and maintenance and allowance for depreciation, were collected through a prescribed proforma in the case of the selected Panchayats. The per-capita rental is then worked out for each population range and the per capita rental for the State has been taken as the weighted average, weights being the respective total population in each range. The per capita rental for the State is then multiplied by the estimated population for each of the years to get the gross rental for the State. The rural population from 1960-61 to 1968-69 has been estimated from 1961 and 1971 census figures by assuming geometric growth rate. 10 per cent of the gross rental was deducted towards repair and maintenance to get the gross product. Depreciation is worked out by assuming the average life of a building in the rural areas to be 40 years as suggested by CSO. 40% of the gross product was deducted towards depreciation to arrive at the net product.

#### Estimates at constant (1960-61) prices:

Estimates at constant prices (1960-61) prices are worked out by moving the base year estimates (1960-61) with the help of an index based on the number of houses in the Panchayat area (rural) for each of the years 1960-61 and onwards.

The number of houses in the Panchayat Area for the years 1960-61 to 1967-68 in the State has been estimated as follows. The total number of houses in the selected panchayats in each population range in the district was multiplied by the ratio

total number of Panchayats in the range

to get the number of Panchayats sampled in the range number of houses in that population range. The estimated number of houses for each population range was added to get the number of houses in the district and so on. The sum total of the houses in the district so estimated give the number of houses in the State. The estimates prepared are presented in Tables 13.1 to 13.5.

#### 13.1 State Domestic Product from Real Estate at current prices 1960-61 to 1968-69 (Rs. 600)

Sl. No.	Years	SDP of unorganised part	SDP of organised part	Total
(1)	(2)	(3)	(4)	(5)
1	1960-61	93	28	121
2	61-62	102	31	133
3	62-63	120	36	156
4	63-64	108	33	141
5	64-65	110	33	143
6	65-66	107	33	140
7	66-67	131	40	171
8	67-68	192	58	250
9	68-69	274	83	357



**13.2 Rental value of Buildings etc. from the Municipalities/Corporations in the State  
at current prices 1960-61 to 1968-69**

Urban

(Rs. 000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Gross rental value	61862	64396	70928	73420	80521	94065	102684	107612	116979
2.	Repairs and maintenance	6186	6440	7093	7342	8052	9407	10268	10761	11698
3.	Gross product	55676	57956	63835	66078	72469	81659	92416	96851	105281
4.	Depreciation	14810	15416	16980	17577	19277	22519	24583	25762	28005
5.	Net product	40866	42540	46855	48501	53192	62140	67833	71089	77276

**83.3 Rental value of Buildings etc. from Panchayats in the State at current  
prices 1960-61 to 1968-69**

(Rural)

(Rs. 000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Gross rental value	129558	133651	146375	184733	193561	201835	211055	237617	306699
2.	Repairs and maintenance	12956	13365	14638	18473	19356	20184	21106	23762	30670
3.	Gross product	116602	120286	131737	166260	174205	181651	189949	213855	276029
4.	Depreciation	46641	48114	52695	66504	69682	72661	75980	85542	110412
5.	Net product	69961	72172	79042	99756	104523	108990	113969	128313	165617

**13.4 Estimates of State Domestic Product from Real Estate and Ownership of Dwellings  
at current prices—1960-61 to 1968-69.**

(Rs '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Real Estate	121	133	156	141	143	140	171	250	357
2.	Ownership of Dwellings	110827	114712	125897	148257	157715	171131	181803	199402	242893
	(a) Urban	40866	42540	46855	48501	53192	62140	67833	71089	77276
	(b) Rural	69961	72172	79042	99756	104523	108991	113970	128313	165617
	Total (1+2)	110948	114845	126053	148398	157858	171271	181974	199652	243250

**13.5 Estimates of State Domestic Product from Real Estate and Ownership of Dwellings  
at constant (1960-61) Prices—1960-61 to 1968-69**

(Rs. '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Real Estate	121	122	126	134	135	138	139	144	150
2.	Ownership of dwellings	110827	112599	115855	121231	124948	127849	129744	133846	138392
	(a) Urban	40866	42113	42934	43784	46612	48324	49477	50417	51549
	(b) Rural	69961	70486	72921	77447	78336	79525	80267	83429	86843
	Total (1+2)	110948	112721	115981	121365	125083	127987	129883	133990	138542



## PUBLIC ADMINISTRATION

## Coverage:

The scope of the Industry "Government Services" (Administration only) is defined in the International Industrial classification of All Economic Activities as follows:—

"Central, Provincial or State, and local Governments including such organisations as the armed forces, police and other regular administrative departments and offices of Governments. This group does not include government activities other than administrative and regulatory in such fields as transport, communication, education, health, production, marketing and the operation of financial institutions each of which together with other similar activities is classified in the appropriate industry group".

The coverage of the Industry defined as above and the coverage defined in the standard industrial classification (SIC) by Central Statistical Organisation (namely, Standard Industrial Classification groups 811 to 814 and 843) are almost the same. Since the scope of this industry "Government Services" as adopted by the various State Statistical Bureau's for the estimation of State Domestic Product is not uniform, Central Statistical Organisation has recommended that the coverage should conform to Standard Industrial Classification groups 811 to 814 and 843. Accordingly Central Statistical Organisation has suggested, at "Standard Methodology" to be followed by all State Statistical Bureau's for the estimation of State Domestic Product from "Public Administration and Defence" in order to have comparable series of figures.

*Method of Estimation:* (At current prices)

Estimates of State Domestic Product from "Public Administration" are prepared and presented separately for

1. State Government Administration.
2. Central Government administration in the State.
3. Local Bodies consisting of Municipalities, Corporations and Panchayats.

*State Government Administration:*

With regard to the incomes of persons in Government Services, the conventions of treating the wages and salaries, payments as the value of Government Services has been adopted for the estimation of State Domestic Product. The wages and salaries include remuneration of Government employees shown under

pay of officer, pay of establishment, allowances and honoraria (other than T. A.) as also wage payments to contingency Staff employed by administrative departments. Wages and salaries also include the pension actually paid to Government employees, employees contribution to P.F., if any, and any other supplement to wages and salaries in cash or kind.

Data on expenditure on wages and salaries etc. are taken from the budget estimates of the State Government. The budget estimates for a year contain the estimates for the ensuing year, revised estimates for the current year, and accounts for the previous year. The wages and salaries etc. taken relate only to the administration part of the general Government activities.

*Central Government Administration*

The activities of Central Government extend to all States in India and therefore it is difficult to prepare estimates relating to the activities of Central Government within a State. The Central Statistical Organisation, prepare the estimates of State Domestic Product from Central Government Administration for India as a whole and allocates the national total to the various states on the basis of appropriate indicators. The estimates prepared and supplied by Central Statistical Organisation for the years 1960-61 to 1966-67 in respect of this State is accepted as such. For estimates of 1967-68 and 1968-69, the all India growth rate from 1966-67 to 1967-68 and from 1967-68 to 1968-69 was applied to the 1966-67 and 1967-68 figures respectively of the State.

*Local Bodies:*

1. *Municipalities:*—Data on expenditure on wages and salaries etc. of persons engaged in general administration is collected from all the Municipalities and Corporations of the State.
2. *Panchayats:*—The ratio of the expenditure on general administration to the total expenditure of Panchayats, has been prepared based on a sample study. This ratio is applied to the total expenditure of the Panchayats in the State to get the expenditure on general administration of Panchayats in the State.

*Estimates at (1960-61) Prices:*

For the time being, current price estimates are adopted as constant price estimates also.

The estimates at current and constant prices are presented in Table 14.1 and 14.2.

14.1 State Domestic Product from Public Administration from 1960-61 to 1968-69 at Current Prices

Sl. No.	Item	(Rs. in '000)								
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	State Government Administration	94339	112430	121009	125591	133361	185346	190872	213753	225717
2.	Central Government Administration	11900	14100	14100	14300	16200	16000	18800	21300	23700
4.	Local Bodies	4719	5160	5615	6959	7900	9710	10863	13265	16022
	1. Municipalities & Corporations	1472	1797	1945	2237	2895	3091	3562	3846	5329
	2. Panchayats	3247	3363	3670	4722	5005	6619	7301	9419	10693
	Total	110958	131690	140724	146850	157461	211056	220535	248418	265439



**14.2 State Domestic Product from Public Administration 1960-61 to 1968-69  
at Constant (1960-61) Prices**

(Rs. in '000)

Sl. No.	Item	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	State Government Administration	94339	112430	121009	125591	133361	185346	190872	213753	225717
2.	Central Government Administration	11900	14100	14100	14300	16200	16000	18800	21300	23700
3.	Local Bodies	4719	5160	5615	6959	7900	9713	10863	13265	16022
	1. Municipalities & Corporations	1472	1797	1945	2237	2895	3091	3562	3846	5329
	2. Panchayats	3247	3363	3670	4722	5005	6619	7301	9419	10693
	<b>Total</b>	<b>110958</b>	<b>131690</b>	<b>140724</b>	<b>146850</b>	<b>157461</b>	<b>211056</b>	<b>220535</b>	<b>248418</b>	<b>265439</b>

**15. OTHER SERVICES**

Other revised estimates of State Domestic Product from 'Other Services' are prepared according to the standard methodology suggested by Central Statistical Organisation with slight modifications.

**Coverage.**

The activities covered under this group are :

1. Education
2. Medical and Health Services (excluding Veterinary Services)
3. Sanitary Services
4. Religious and Welfare Services
5. Community Services
6. Legal Services
7. Business Services
8. Recreation and Entertainment Services
9. Personal Services comprising domestic services, Laundry, Cleaning and Dyeing, Barbers and beauty Shops, and other personal services.

13. Services/activities not elsewhere classified.

Estimates have been prepared for all the above sub sectors separately. The coverage and method of estimation of each sector are given below:—

**1. Education.**

The extended coverage of the Industry 'Education' in the comparable series of State Domestic Product comprises the group 821 and 823 of the Standard Industrial classification (S.I.C.) and cover Government and Private educational institutions of all types, namely:—

**821**

1. Universities
2. Colleges and Institutions for higher education
3. Secondary Schools
4. Middle Schools (Upper Primary)
5. Primary Schools
6. Nursery and Kindergarten Schools
7. Technical Institutes and Training Centres such as Technical, Vocational and Commercial Schools, Correspondence Schools, Music, Dancing and other Art Schools, Continuation Schools, Automobile Schools and others
8. Tutorial and coaching Institutes
9. Educational Services not elsewhere classified.

**823**

Research and scientific Institutes namely:—

1. Agricultural
2. Biological
3. Physical and Social Services
4. Meteorological Institutes
5. Medical Research Institutes and
6. Research carried out in association with teaching.

All the above Institutions have been grouped as follows and estimates have been prepared for all these group separately.

1. University
2. Colleges for General Education
3. Colleges for Professional Education
4. Colleges for Special Education
5. Non Teaching staff—Colleges
6. School for General Education
  - (a) Secondary Schools
  - (b) Middle Schools
  - (c) Primary Schools
7. Schools for Professional Education
8. Schools for Special Education
9. Non Teaching staff—Schools.

**Method of Estimation (At current Prices)**

The State Domestic Product is taken to be comprising of salaries and allowances paid to teaching staff and non-teaching staff and remuneration paid to the staff. Income from private tuition and coaching has been omitted for the present as per Central Statistical Organisation's suggestion. The required details for the estimation of State Domestic Product from Education sector were collected from the 'Educational Statistics' prepared by the Director of Public Instruction in the case of School Education and from the Statistics Department of the Kerala University in the case of University and College education. The details collected include number of Institution, number of teachers and students, salary of teaching staff and salary of non-teaching staff for the various Institutions. In the case of non-teaching staff since no ready data are available, the State domestic Product is estimated based on adhoc enquiry.



### State Domestic Product at Constant (1960-61) Prices.

The State Domestic Product at 1960-61 prices has been framed by using such physical indicators as the number of students on roll and the number of teachers engaged. That is, the simple arithmetic average of the two ratios namely:—

1. The number of students on roll in the current year to that in the base year and
2. The number of teachers in the current year to that in the base year has been calculated for each type of Institution separately and estimates of the base year have been moved to the current year on the basis of the ratio. The State Domestic Product for 1968-69 at current and constant prices is provisional. The estimates prepared as on the above lines as presented in the tables attached.

*Note on the estimation of salaries and allowances paid to the non-teaching staff in schools.*

(1) The number of non-teaching staff working in schools is taken as follows:—

1. For High Schools having a strength of more than 1000 students: 2 Clerks, 3 Peons and 3 Part-time employees per high school.
2. For High Schools having a strength of less than 1000 students: 1 Clerk, 2 peons and 3 Part-time employees.
2. For Upper Primary Schools: One Peon and one Part-time employee.
4. For Lower Primary Schools: One part-time employee.

The number of non-teaching staff is obtained thus. The salaries and allowances paid to them are calculated for each year from the grades of pay and D.A. rates prevalent in the respective year.

(2) The salaries and allowances paid to non-teaching staff in colleges and university are collected from the Statistics Department, Kerala University.

## 2. MEDICAL AND HEALTH SERVICES

### Coverage:

According to the standard Industrial and Occupational classification, the activities covered under the sector 'Medical and Health Services' are Hospitals, Sanatorium and Nursing Homes, Maternity and child welfare clinics, dispensaries and consultation services, dental services, optical services, health and sanitary services, family planning clinics, pathological laboratories and medical and other health services n. e. c. This does not include veterinary services because it is included under agricultural sector. This sector also includes Insane asylums and care of the mentally defective.

The activities covered under this sector fall under the groups 03 and 04 as per 1961 census occupational classification, namely:—

- |    |     |  |
|----|-----|--|
| I. | 03  | Physicians, Surgeons and Dentists            |
|    | 030 | Physicians and Surgeons—Allopathy            |
|    | 031 | Physicians—Ayurveda                          |
|    | 032 | Physicians—Homeopathy                        |
|    | 033 | Physicians—Others                            |
|    | 034 | Physiologists                                |
|    | 035 | Dentists                                     |
|    | 036 | Physicians, Surgeons, Dentists etc. n. e. c. |

- |     |    |   |
|-----|----|---|
| II. | 04 | Nurses, Pharmacists and other Medical and Health Technicians. |
|-----|----|---|

- |  |     |  |
|--|-----|--|
|  | 040 | Nurses   |
|  | 041 | Midwives and Health Visitor                      |
|  | 042 | Nursing attendants and related workers           |
|  | 043 | Pharmacists and Pharmaceutical technicians.      |
|  | 044 | Vaccinators                                      |
|  | 045 | Physiotherapists, nurses and related technicians |
|  | 046 | Sanitation Technicians                           |
|  | 047 | Opticians  |
|  | 049 | Medical and Health Technicians n. e. c. and      |

### III. Other non-medical personnel.

Estimates of State Domestic Product from this sector has been prepared for both public and private sectors separately grouping all the above in the nine categories as follows:

1. (030) Physicians and Surgeons—Allopathy
2. (031) Physicians—Ayurveda
3. (032) Physician—Homeopathy
4. (033, 044, 035, 039—Others
5. (040) Nurses
6. (041) Midwives, auxiliary — midwives and Health Visitors
7. (043) Pharmacists
8. 042, 044, 045, } Other medical personnel.  
046, 047, 049. } and
9. non medical personnel

### Method of Estimation: (at current prices)

The Income method, namely product of WF X VA is used for the estimation of State Domestic Product from this sector.

### Work Force: (WF)

The total number of persons engaged in the industry group 'medical and health services' for the year 1961 is available in the Census reports. The break down of this figure into the nine categories is worked out with the aid of the census occupational classification. The number of persons engaged in the public sector is subtracted from this figure to get the employment in the private sector. These figures are projected to later years as follows:

### Physicians, Surgeons etc.—Allopathy

The data on output of medical graduates from the medical colleges and registered with the Medical Council are available for all these years. The employment for the years 1961 is moved to later years with the aid of the number of registrations each year. As the register of medical council is not upto-date in regard to removal of names necessitated by death, retirement migration etc. a deduction of 1% is made to account for the depletion of the stock. The employment figures in public sector are available for all the years. The private sector employment is arrived at on subtracting the public Sector employment from the total.

2. Others:—The data on employment in the Public sector are available. For private sector, the 61 figures are projected to later years assuming 1651-61 growth rate.



**Average Earnings (VA)**

The wages, salaries and allowances etc. of the staff engaged in the various categories of medical personnel are culled out of the budget estimates of the State Government. The average earnings per person per annum of the various categories of medical personnel in Government Service has been adjusted and made use of in the case of medical personnel in private sector as follows:—

Category	Percentage of average earnings Govt. Service adopted for Private Sector
1- Physician, Surgeons etc. Allopathy	100%
2. Do. Ayurveda	50 "
3. Do. Homeopathy	50 "
4. Do. Others	50 "
5. Nurses	50 "
6. Pharmacists	50 "
7. Midwives/Auxiliary Nurses/ Health Services	50 "
8. Other medical personnel	50 "
9. Non-medical personnel	50 "

**Estimates at Constant (1960-61) Prices:**

The estimates of State Domestic Product at constant prices (60-61) prices have been worked out with the help of an index based on the number of persons engaged for the various categories separately from 1960-61 onwards (as suggested by Central Statistical Organisation).

The estimates at current and constant prices worked out on the above lines are presented in the tables attached.

**3. SANITARY SERVICES**

The standard methodology prescribed by Central Statistical Organisation has been adopted for the estimation of State Domestic Product from this sector.

**Coverage:**

Garbage and sewage disposal, operation of drainage systems, chimney and window cleaning, fumigating, disinfecting and similar services, ash collecting service, ash disposal service, ash removal service, debris removal service, drainage system, operation except on agricultural land, garbage removing service, refuse collecting service and disposal plant scavenging, contracting, sewage disposal service, sewage treatment and disposal plant, show shovelling service, viz. show shovelling street or high way, street cleaning and street sweeping.

**Method of Estimation (At current prices):**

Income method is used, namely, product of the work force (WF) and Average earnings per worker (VA). The Work Force has been estimated from 1960-61 onwards from the Bureau's publication 'Comparable Work Force'. The number of persons working in 'Sanitary Services' and their earnings were collected from the Municipalities in the State and the per head earnings (VA) has been calculated. The estimated Work Force is then multiplied by the estimated per head earnings to get the net State Domestic Product.

**Estimates at constant (60-61) prices:**

The estimates at constant prices have been obtained by moving the estimates for 1960-61 with the help of an index based on the Work Force for each year engaged in these activities. The details have been presented in the Tables attached.

**4 to 10 :** Religious and community Services, Legal Service, Business Services, Recreation and Entertainments, Personal services and services not elsewhere classified.

The Income method namely, the product of Work Force and Average Earnings is used to get the State Domestic Product from these sub-sectors as per the methodology suggested by Central Statistical Organisation.

**ESTIMATES AT CURRENT PRICES****Work Force (WF)**

The work force in these sub sectors for the years 60-61 onwards, is estimated from the 'Comparable Work Force' published by this Bureau assuming geometric growth rate between '51 & '61.

**Average Earnings (VA)**

The average earnings (VA) of the persons engaged in these industries for the year 63-64 has been calculated by using the N. S. S. 18th round data—State Sample as follows:—The earnings of persons having this industry as their principal occupation as obtained by multiplying the number of persons with the average earnings. The earnings of the person having the industry as subsidiary occupation is also obtained in a similar way. The Average Earnings per person is taken as below.

VA (63-64)—Principal workers x average earnings from principal occupation + subsidiary workers x average earnings from subsidiary occupation.

**PRINCIPAL WORKERS**

The estimated Work Force in each category is multiplied by the average earnings (VA) thus obtained to get the gross State Domestic Product from all these industries for the year 63-64. The Average Earnings for the other years, back wards and forwards, has been worked out by making use of an index based on the average wage-rate of skilled labour taken from the Wage-structure Survey conducted by the Bureau every year for both rural and urban areas. (Even though it is desirable to take 1/3 of the Wage rate of factory workers. Earnings less than Rs. 200 p. m<sup>2</sup> for the urban area as per Central Statistical Organisation's suggestion owing to paucity of data, the urban wage rate has been utilised for urban area). 2.5 per cent of the gross product is deducted towards depreciation to get the net product. A adjustment for company earnings also has been made in the estimates.

**Estimates at Constant [(60-61) Prices:**

Estimates of State Domestic Product for the year 1960-61 have been moved to the other years with the help of Work Force of the year concerned as related to Work-Force of the year 1960-61.

The estimates prepared on the above lines are presented in the tables attached.



**15-1—State Domestic Product from other services (Net Productat) current price  
from 1960-61 to 1968-69**

(Rs, 000)

Sl. No.	Sector	60-61	61-62	62-63	63-64	64-65	65-66	66-67	67-68	68-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Education	142386	155609	169481	183741	223925	2,8689	330006	404656	480001
2.	Medical Health	40046	45595	52931	60750	64857	76490	94349	108989	115572
3.	Sanitary services	5620	608	6552	6705	7235	8096	8513	11500	11776
4.	Religious & Welfare	18906	19906	20912	21994	24086	23943	24713	27470	28820
5.	Community services	5164	5899	6748	7749	8913	10163	11624	14291	16660
6.	Legal services	24083	25837	27449	28669	29886	30691	31610	34171	34937
7.	Business Services	4869	5494	6147	6878	7688	8494	9367	11054	12346
8.	Recreation services	9482	10067	10481	10907	11303	11671	12059	13248	13815
9.	Domestic & personal	77589	82099	86805	91889	97028	101309	105530	117782	124334
10.	Other services n.e.c.	71855	75053	78044	81263	84937	87262	89116	98315	102257
	Total	400000	431643	465550	500545	558858	626813	717387	841483	940518

**15-2 State Domestic Product from other Services (Net product) at constant price (1960-61)  
from 1960-61 to 1968-69**

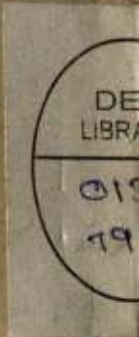
Rs. '000

Sl. No.	Sector	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Education	142386	154122	162206	171157	190302	202606	215905	228975	272581
2.	Medical and Health	40046	43502	47008	50335	53460	60020	64188	66894	71016
3.	Sanitary Services	5620	5674	5785	5859	5954	6060	6190	6320	6459
4.	Religious & Welfare	18906	19453	20015	20592	21187	21799	22428	23076	23745
5.	Community Services	5164	5765	6455	7252	8171	9243	10500	11976	13696
6.	Legal Services	24083	25338	26402	27080	27704	28191	28689	29194	29357
7.	Business Services	4869	5333	5840	6393	7000	7667	8400	9199	10078
8.	Recreation Services	9482	9848	10032	10220	10362	10598	10842	11091	11346
9.	Domestic & personal	77589	80245	83049	85014	88975	92111	95364	98740	102251
10.	Other Services n. e. c.	71855	73340	74723	76213	78024	79571	81150	82766	84443
	Total	400000	422620	441515	461115	491140	51786	543656	568231	624972

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15-1 - State Domestic Production - (continued) - (1952) - (1953)

State	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Alabama	12230	13100	13800	14500	15200	16000	16800	17500	18200	19000	19800	20500	21200	22000	22800	23500	24200	25000	25800
Alaska	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600
Arizona	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000
Arkansas	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000
California	20000	21000	22000	23000	24000	25000	26000	27000	28000	29000	30000	31000	32000	33000	34000	35000	36000	37000	38000
Colorado	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000
Connecticut	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000
Delaware	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600
District of Columbia	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000
Florida	18000	19000	20000	21000	22000	23000	24000	25000	26000	27000	28000	29000	30000	31000	32000	33000	34000	35000	36000
Georgia	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000
Hawaii	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000	6200	6400	6600
Idaho	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000
Illinois	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000
Indiana	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000
Iowa	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000
Kansas	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000
Kentucky	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000
Louisiana	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000
Maine	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600	8800	9000	9200	9400	9600
Maryland	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000
Massachusetts	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000	25500	26000
Michigan	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000
Minnesota	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000
Mississippi	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000
Missouri	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000
Montana	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000
Nebraska	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000
Nevada	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000
New Hampshire	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600	8800	9000	9200	9400	9600
New Jersey	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000	25500	26000	26500	27000
New Mexico	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000
New York	22000	22500	23000	23500	24000	24500	25000	25500	26000	26500	27000	27500	28000	28500	29000	29500	30000	30500	31000
North Carolina	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000
North Dakota	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000
Ohio	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000
Oklahoma	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000
Oregon	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000
Pennsylvania	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000	25500	26000	26500	27000	27500	28000	28500	29000
Rhode Island	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600
South Carolina	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000
South Dakota	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000
Tennessee	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	22000
Texas	19000	19500	20000	20500	21000	21500	22000	22500	23000	23500	24000	24500	25000	25500	26000	26500	27000	27500	28000
Utah	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000
Vermont	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600
Virginia	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000	20500	21000
Washington	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000
West Virginia	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000
Wisconsin	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000	16500	17000	17500	18000	18500	19000	19500	20000
Wyoming	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000

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