



**Government of Kerala**

***Report On  
Cost of Cultivation 2002-03***

**Department of Economics & Statistics  
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## Chapter I

### GENERAL

#### 1.1 Introduction

The agricultural income in Kerala has not been consistent during the last decade. The gain or loss of cultivation of a crop is determined on the basis of the cost of various inputs used and the value of the main product and by products received from it. In order to chalk out various schemes in Agricultural sector and for fixing the floor and support prices, proper assessment of the cost of cultivation and value of product is necessary. With this end in view, Government of Kerala in G.O. (Rt) 466/79/Plg. Dated: 27/10/1979 sanctioned a scheme for an annual survey on cost of cultivation of important crops in Kerala. The present report relates to the 23<sup>rd</sup> round of survey conducted during 2002-03.

The crops covered during the period under study are given below:-

- 1 Paddy (3 seasons)
- 2 Coconut
- 3 Tapioca
- 4 Banana
- 5 Pepper
- 6 Arecanut
- 7 Ginger
- 8 Turmeric

#### 1.2 Objectives

The main objective of this survey was to estimate the cost of cultivation per hectare of important crops in Kerala and to compare the cost under different concepts, over a period

#### 1.3. Period of the Survey

The period of the survey was from 1/7/2002 to 30/6/2003.

#### 1.4. Design of the Survey

The survey covered all the districts of Kerala by selecting 38 Taluks, which are important growing centres of the different selected crops. From each selected Taluk two investigator zones were selected using circular systematic sampling method.

#### Selection of cultivators

In selected Investigator zone a list of cultivators growing paddy in the previous autumn season is prepared from the last year's Form I Diary of the EARAS. From this a list of 5 cultivators are selected at random for the current year cost of cultivation study on autumn paddy. Similar procedure is adopted for the selection of cultivators for winter and summer paddy also.

In case the cultivators selected for cost of cultivation study on Autumn Paddy possess suitable number of plots with other specified crops in stipulated area they may be selected for the cost of cultivation study on other crops like Coconut, Pepper, Arecanut Banana, Tapioca, etc.

If sufficient number of suitable plots are not available with the cultivators selected for Autumn paddy the required number of plots for crops other than paddy will be selected from the list of wet and dry land plots of the same investigator zone in last year. If the selected investigator zone in a Taluk does not provide the required number of plots for these crops another Investigator zone in the same Taluk will be selected at random for selection of the remaining required number of plots/cultivators for the study on other crops.

**The number of holdings selected for each crops in a Taluk was as follows:**

1	Paddy	Autumn	10 (5 holdings each from one Investigator zone)
		Winter	10 (5 holdings each from one Investigator zone)
		Summer	10 (5 holdings each from one Investigator zone)
2	Coconut		10 (5 holdings each from one Investigator zone)
3	Arecanut		10 (5 holdings each from one Investigator zone)
4	Pepper		5 (Minimum 2 holdings in one Investigator zone)
5	Banana		5 (Minimum 2 holdings in one Investigator zone)
6	Tapioca		5 (Minimum 2 holdings in one Investigator zone)
7	Ginger		5 (Minimum 2 holdings in one Investigator zone)
8	Turmeric		5 (Minimum 2 holdings in one Investigator zone)

A holding was considered for the study only if it contained at least 25 cents under the crops in the case of paddy, and 10 cents for tapioca, banana, ginger and turmeric. In the case of perennial crops like coconut and pepper the holdings should have 25 trees/plants of which a minimum of 50% should be bearing trees/plants.

The holding size group of a crop was determined on the basis of the area under the crops under study in the holding as shown below:

Size Group	Holding size	
	Paddy	Other crops
Small	< 0.40 hectare	<0.2 hectare
Medium	0.40 to < 2 hectare	0.20 to < 0.80 hectare
Large	? -2 hectare	? -0.80 hectare

Note:- < Less than ? - Greater than or Equal to

**1.5 Schedules**

Five schedules were designed for the survey

- Schedule -1 Selected Investigator zone
- Schedule -2 Summary of Form I Dairy
- Schedule -3 List of selected cultivators
- Schedule -4 General Particulars
- Schedule -5 In this schedule the cultivation expenses incurred for a crop in each fortnight is reported.

**1.6 Field work**

Fieldwork was done by 38 Investigators in 38 selected Taluks, one investigator in each Taluk. The investigators visited the selected holdings every fortnight and recorded fortnightly operations on schedule 5. The fieldwork was supervised by Taluk Statistical Officer at the Taluk level and Deputy Director/ District officer at the District level.

## 1.7 Processing and Analysis of Data

The compilation and tabulation were done at the district level by the investigators posted for the survey. The state level consolidation of the data is done at the Directorate and the report writing and analysis are done at the Directorate.

## 1.8 Method of Estimation of Cost

### (a) Concepts of Cost.

Different cost concepts, cost 'A' cost 'B<sup>1</sup>', Cost 'B' and Cost "C" have been followed in the analysis as shown below:

#### Cost 'A'

Cost 'A' consists of cash and kind expenses (paid out costs) actually incurred by the cultivators. This includes -

- i. Hired human labour
- ii. Animal labour
- iii. Machine labour
- iv. Seed/ seed lings
- v. Farm yard manure and Chemical fertilizers
- vi. Plant protection
- vii. Land tax and Irrigation Cess
- viii. Repair and maintenance charges of implements, machinery and buildings
- ix. Interest on working capital
- x. Other expenses

**Cost 'B<sup>1</sup>':** Cost 'A' + Interest on fixed assets (excluding land)

**Cost 'B':** Cost 'B<sup>1</sup>' + interest on land value

**Cost 'C':** Cost 'B' + Imputed value of family labour

### (b) Procedure for imputation of values of owned inputs

In the production process certain inputs from home stocks are used. In order to estimate the cost of cultivation it is necessary to impute the value of these inputs. The procedure used for the imputation of values of such home stock inputs are indicated below:

- |     |                                   |  |
|-----|-----------------------------------|--|
| i   | Family labour                     | Imputed on the basis of average wage rate per work hour of hired labour.   |
| ii  | Owned and Exchange human labour   | The rate of wages per hour for hired human labour is taken for imputing the value of own stock and exchange human labour           |
| iii | Owned and Exchange animal labour  | The charges paid per hour for hired animal labour is taken for imputing the value of owned and exchange animal labour.             |
| iv  | Owned and Exchange machine labour | The hire charges per hour for machine labour has been taken  |
| v   | Implements                        | Repair and maintenance charges of implements   |
| vi  | Owned seed                        | Farm produced (house grown) seed has been imputed at the prices prevalent in the investigator zone concerned at the time of sowing |
| vii | Farm produced manure              | Imputed at the rate prevalent in the zone concerned.   |

viii	Interest on fixed capital	Interest on the present value of fixed assets such as land, farm, building, implements, machinery, irrigation structure, equipments and livestock (only draught animals) at the rate of 10 % per annum has been calculated.
ix	Interest on working capital	Interest has been charged at the rate of 10% per annum on the working capital, cash and kind expenses excluding items in respect of which payments are generally made after harvest (i.e. rent, land tax , etc) incurred during the period of cultivation
x	Payments of kind	The payments in kind have been evaluated at the market prices prevalent in the locality at the time of payment. Perquisites have been included in the payments in kind calculated at the market prices.

**(C) Allocation of joint costs to different crops**

Some of the inputs used for the cultivation of one crop are common for many other crops also . For the purpose of computing the cost share of individual crops, the cost of such inputs is apportioned in the following manner.

I	Repair and maintenance charges of implements	In proportion to the area under the crop
ii	Interest on fixed capital (excluding land)	In proportion to the area under the crop
iii	Interest on land value	Interest on the value of land under the crop

**(D) Procedure for valuation of farm assets**

i	Own farm buildings (cattle sheds, storage shed etc)	Valuated at prices prevailing in the locality
ii	Implements and other machinery	Valuated at prevalent market prices
iii	Livestock (only draught animals)	Valuated at prevalent market prices

## CHAPTER 2

### RESULTS OF THE SURVEY

#### 1. Autumn Paddy

The total number of holdings selected for the cost of cultivation study on autumn paddy were 319. Details of these holdings are given below:

**Table 1 - Area under autumn paddy during 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	176	42.01	18.93	0.24
Medium	119	90.23	40.66	0.76
Large	24	89.67	40.41	3.74
<b>Total</b>	<b>319</b>	<b>221.91</b>	<b>100.00</b>	<b>0.70</b>

The holdings selected under report period had a total operational area of 221.19 hectare and the average size of holdings was 0.70 hectare.

#### A. Cost of cultivation

**Table 2- Cost of Cultivation per hectare of paddy (autumn) during 2002-03**

Sl No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost
1	Hired human labour	10642	53.81
2	Animal labour	493	2.49
3	Machine labour	1745	8.82
4	Seed / seedlings	1460	7.38
5	Farmyard manure and chemical fertilizers	2535	12.82
6	Plant protection	120	0.61
7	Land tax and irrigation cess	36	0.18
8	Repair and maintenance charges	562	2.84
9	Interest on working capital	913	4.62
10	Other expenses	1271	6.43
11	Total cost 'A' (1-10)	19777	100.00
12	Interest on fixed capital	1050	
13	Cost 'B1' (11+12)	20827	
14	Interest on land value	24940	
15	Cost 'B' (13+14)	45767	
16	Imputed value of household labour	1392	
17	Cost 'C' (15+16)	47159	

Among the various cost components of autumn paddy cultivation labour input constitutes to the largest share which is accounted as 66%.

The following table illustrates the percentage of hired labour hours engaged in autumn paddy cultivation to total labour hours.

**Table 3: Percentage of Hired human labour hours to total human labour hours**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	23.34	16.60	16.42	16.11
Female	59.02	72.94	74.20	64.06
<b>Total</b>	<b>82.36</b>	<b>89.54</b>	<b>90.62</b>	<b>80.17</b>

In autumn paddy cultivation per hectare cost towards seed/seedlings comes to rs.1460/- (7%) and farmyard manure and chemical fertilizers shares to Rs.2535/- (12.82%). Plant protection cost in Autumn Paddy cultivation is nominal i.e. below 1% to Cost 'A'.

#### Cost 'B1'

Cost 'B1' is estimated by adding the interest on fixed capital (excluding land) to cost 'A'. The estimated interest on fixed capital for 2002-03 is Rs1050/- and cost 'B1' is Rs.20827/-

#### Cost 'B' and cost 'C'

Cost 'B' and cost 'C' is estimated by adding the interest on land value to Cost 'B1'. Cost 'C' is derived by adding the imputed value of household labour to cost 'B'. Accordingly cost 'B' is estimated as Rs.45767 and cost 'C' is Rs. 47159/- respectively.

#### Cost of production of paddy per quintal

Cost of production of paddy per quintal is estimated by dividing the cost of cultivation per hectare (after deducting the value of by-product per hectare from the cost of cultivation per hectare) divided by the quantity of paddy produced per hectare.

**Table: 4 Cost of production of paddy per quintal during autumn season during 2001-02 & 2002-03**

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2001-02	646	483	399	527
	2002-03	500	434	447	601
Cost 'B'	2001-02	1634	1279	741	1180
	2002-03	1466	1181	1075	1234
Cost 'C'	2001-02	1706	1324	766	1223
	2002-03	1529	1225	1096	1274

**Table: 5 Cost of Cultivation of paddy per quintal during autumn season during 2001-02 & 2002-03**

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2001-02	22167	19643	21984	20484
	2002-03	21313	20593	18089	19777
Cost 'B'	2001-02	61389	33070	31380	36438
	2002-03	52025	46772	41576	45767
Cost 'C'	2001-02	63351	33734	31458	37095
	2002-03	54375	48315	42368	47159



**B. Output**

The value of product and by-product of Autumn Paddy cultivation for the year 2002-03 is given in the following table.

**Table: 6 Value of product and by-product per hectare during 2002-03**

(in Rs.)

Product/ By product	Holding size class			
	Small	Medium	Large	All size
Paddy	19771	39844	25864	30395
Straw	5264	5393	1358	3738
<b>Total</b>	25035	45237	27222	34133

**II. Winter paddy**

During 2002-03 the study on cost of cultivation of winter paddy was conducted in 379 holdings. The sample area under winter paddy according to size class of holdings are given below:

**Table 7 – Area under winter paddy during 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	182	43.24	14.16	0.24
Medium	156	117.98	38.63	0.76
Large	41	144.19	47.21	3.52
Total	379	305.41	100.00	0.81

The holdings under winter paddy cultivation had a total operational area of 305.41 hectares and the average size of holding was 0.81 hectare.

**A Cost of cultivation**

The various cost components of winter paddy cultivation is given below:

**Table 8 – Cost of cultivation per hectare of paddy (winter) during the year 2002-03**

Sl.No	Component of different cost concept	Cost per hectare (in Rs)	Percentage distribution of Cost 'A'
1.	Hired human labour	9544	51.00
2.	Animal labour	500	2.68
3.	Machine labour	2038	10.69
4.	Seed/ Seedlings	1097	5.86
5.	Farmyard manure and Chemical fertilizers	2772	14.81
6.	Plant Protection	290	1.55
7.	Land tax and Irrigation cess	57	0.30
8.	Repair and maintenance charges of implements, machinery and buildings	654	3.49
9.	Interest on working capital	857	4.58
10.	Other expenses	906	4.84
11.	Cost A (1-10)	18715	100.00
12.	Interest on fixed capital	955	
13.	Cost 'B1' (11+12)	19670	
14.	Interest on land value	21760	
15.	Cost 'B' (13+14)	41430	
16.	Imputed value of household labour	1174	
17.	Cost C (15+16)	42604	

The above table reveals that the per hectare cost towards hired human labour in winter paddy cultivation comes to Rs. 9544. It accounts to 51% of the total cost 'A'. Animal labour cost is only about 3% of total cost 'A'. Whereas machine labour cost component is 11% of Cost 'A'

The percentage of hired human labour hours to the total human labour hours is given below:

**Table 9 – Percentage of hired human labour hours to total human labour hours**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	22.51	25.11	16.40	20.39
Female	62.14	66.41	74.15	66.66
<b>Total</b>	<b>84.65</b>	<b>91.52</b>	<b>90.55</b>	<b>87.15</b>

Out of the total human labour hours engaged in winter paddy cultivation 87% is accounted by hired human labour of which female labour constitutes 67%.

Seed/Seedlings cost shares to largest percentage in large size class (6.67%) when compared to other size class.

Among the various agricultural inputs used for paddy cultivation Farmyard manure and chemical fertilizers attains 2<sup>nd</sup> place (14.8%)

#### **Cost 'B1' and Cost 'B'**

In winter paddy cultivation per hectare interest on fixed capital is calculated as Rs.955/-. And Cost 'B1' is estimated as Rs. 19670/- Interest on land value is estimated as Rs.21760/- and Cost 'B' is estimated as Rs.41430/-

#### **Cost 'C'**

Cost 'C' is estimated by adding imputed the value of house hold labour to Cost 'B'. Cost 'C' is estimated as Rs.42604/-

#### **Cost of production of winter paddy**

**Table: 10 Cost of production of winter paddy per Quintal during 2002-03**

Concept of cost	Holding Size Class			
	Small	Medium	Large	All Sizes
Cost 'A'	518	448	454	528
Cost 'B'	1487	1428	920	1257
Cost 'C'	1558	1469	945	1284

The cost of production of winter paddy per quintal for 2001-02 and 2002-03 are presented below for comparison.

**Tale: 11 Cost of production of winter paddy per Quintal (Rs/Ha) for 2001-02 and 2002-03**

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2001-2002	505	432	295	434
	2002-2003	518	448	454	528
Cost 'B'	2001-2002	1281	1401	846	1191
	2002-2003	1487	1428	920	1257
Cost 'C'	2001-2002	1367	1446	870	1233
	2002-2003	1558	1459	945	1284

**C. Output**

The estimated value of paddy and straw obtained from winter paddy cultivation is given below:

**Table 12 - Value of output (Rs/ha)**

Product/By-product	Holding size class			
	Small	Medium	Large	All Sizes
Paddy	20823	19627	19942	19945
Straw	7419	5942	1787	4189
<b>Total</b>	<b>28242</b>	<b>25569</b>	<b>21729</b>	<b>24134</b>

**(iii) Summer (Punja) Paddy**

The total number of holdings selected for the study on cost of cultivation of summer paddy was 302 during 2002-03. The details of these holdings are given below:

**Table 13 : Area under Summer Paddy during 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	161	40.30	17.20	0.25
Medium	115	94.40	40.29	0.82
Large	26	99.60	42.51	3.83
Total	302	234.29	100.00	0.78

During the period under report the selected holdings had a total operational area of 234.29 hectares. The average size of holding was 0.78 hectare.

**A. Cost of Cultivation**

The various cost component of summer paddy cultivation is given below:

**Table 14: Cost of Cultivation per hectare of summer paddy during 2002-03**

Sl. No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost 'A'
1	Hired human labour	10705	53.23
2	Animal labour	356	1.77
3	Machine labour	1971	9.8
4	Seed / seedlings	1046	5.2
5	Farmyard manure and chemical fertilizers	2119	10.54
6	Plant protection	779	3.87
7	Land tax and irrigation cess	330	1.64
8	Repair and maintenance charges of implements, machinery and building	518	2.58
9	Interest on working capital	917	4.56
10	Other expenses	1370	6.81
11	Total cost 'A' (1-10)	20111	100.00
12	Interest on fixed capital	802	
13	Cost 'B1' (11+12)	20913	
14	Interest on land value	14200	
15	Cost 'B' (13+14)	35113	
16	Imputed value of household labour	1462	
17	Cost 'C' (15+16)	36575	

From the above table it is seen that in summer paddy cultivation per hectare hired human labour cost comes to Rs. 10705/- The percentage scheme of this input to total cost 'A' is estimated as 53% seedling cost shares to 5% whereas farmyard manure and chemical fertilizers accounts to about 11% total Cost 'A'. Cost towards repair and maintenance charges of implements, machinery and buildings also calculated and as such it shares to 2.58 % of the total Cost 'A'.

**Table 15: Percentage of hired human labour hours engaged in summer paddy cultivation**

Holding size class	Male	Female	Total
Small	21.88	54.38	76.26
Medium	16.73	71.75	88.48
Large	20.02	73.81	93.83
<b>Total</b>	<b>17.22</b>	<b>64.88</b>	<b>82.10</b>

During the year 2002-03 in summer paddy cultivation female participation is more (65%) than that of male (17%) participation.

### Output

Value of product and by-product received from summer paddy cultivation per hectare is Rs.23239, which is shown as below:

**Table 16: Value of Out (Rs./ha)**

Product/ By-product	Holding Size Class			
	Small	Medium	Large	All Sizes
Paddy	19677	14844	24879	19941
Straw	4794	3530	2474	3298
Total	24471	18374	27353	23239

### Cost of Production of Paddy per Quintal

During summer paddy cultivation for producing one quintal of paddy an amount of Rs. 467 is expended when Cost 'A' is considered. Details are given below:

**Table 17: Cost of production of summer paddy per quintal during 2002-03**

	Holding Size Class			
	Small	Medium	Large	All Sizes
Cost 'A'	418	461	489	467
Cost 'B'	1152	880	773	883
Cost 'C'	1241	923	792	924

A comparison between the cost of production during 2001-02 and 2002-03 is given in the following table.

**Table 18: Cost of production of summer paddy per quintal during 2001-02 and 2002-03**

Concept of cost	2001-02	2002-03
Cost 'A'	303	467
Cost 'B'	337	883
Cost 'C'	388	924

## 2.2 Coconut

During 2002-03 for the study on Cost of Cultivation holdings were selected. The details of these holdings are given below:

**Table 19: Number of Holdings and Area under coconut**

Holding size class	No of selected holdings	Area under the coconut in the sample (ha)	Percentage	Area per holding (ha)
Small	104	17.60	9.13	0.17
Medium	206	86.96	45.10	0.42
Large	70	88.24	45.77	1.28
<b>Total</b>	<b>380</b>	<b>192.80</b>	<b>100.00</b>	<b>0.51</b>

During the year under report the 380 holdings selected holdings had total area of 192.80 hectare and average size of a holding was 0.51 hectare.

Number of bearing and Non-bearing Trees

**Table 20: Number of bearing and Non-bearing Trees per hectare**

Type of trees	No. of trees per ha.	Percentage
Bearing	197	77.55
Non-bearing	57	22.45
<b>Total</b>	<b>254</b>	<b>100.00</b>

**A. Cost of Cultivation****Table 21–Cost of Cultivation Per hectare of coconut during the year 2002-03**

Sl. No	Components of different cost concepts	Cost per hectare (Rs)	% distribution of cost 'A'
1	Hired human labour	8284	52.03
2	Animal labour	23	0.14
3	Machine labour	161	1.01
4	Seed / seedlings	27	0.17
5	Farmyard manure and chemical fertilizers	4538	26.5
6	Plant protection	32	0.2
7	Land tax and irrigation cess	83	0.52
8	Repair and maintenance charges	624	3.92
9	Interest on working capital	1363	8.69
10	Other expenses	768	4.82
11	Total cost 'A' (1-10)	15923	100.00
12	Interest on fixed capital	1745	
13	Cost 'B1' (11+12)	17668	
14	Interest on land value	185581	
15	Cost 'B' (13+14)	203249	
16	Imputed value of household labour	1851	
17	Cost 'C' (15+16)	205100	

During 2002-03 per hectare Cost of Cultivation of coconut is Rs.15923/- when Cost 'A' is considered. It showed a 34% increase in cost when compared to the previous year. For the cost of cultivation on hired labour cost is the major share (52%) coming to the different agricultural inputs. The second largest agricultural input is the farm yard manure and chemical fertilizer. About 27% of Cost 'A' is spent for this input.

**Table 22: Percentage Distribution of hired human labour hours to the total human hours**

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	56.34	59.61	64.66	56.30
Female	8.99	30.55	14.70	13.78
<b>Total</b>	<b>65.33</b>	<b>90.16</b>	<b>79.36</b>	<b>70.08</b>

In Coconut cultivation about 70% of the total human labour hours has been shared by hired human labour.

**Cost 'B<sup>1</sup>' and Cost 'B'**

When considering the interest on fixed capital (excluding land) Cost 'B<sup>1</sup>' is found to be Rs.17668/-

Interest on land value is estimated as Rs.185581/- during this year. Accordingly Cost 'B' arrived a Cost of Rs.203249/-

**Cost 'C'**

Cost 'C' is estimated by adding the imputed value of household labour to Cost 'B'. Per hectare imputed value of household labour to is estimated as Rs. 1851/-. Thereby cost 'C' is Rs.205100/-

The following table illustrates a comparison of cost of cultivation per hectare with previous years.

**Table 23: Cost of Cultivation of Coconut per hectare during 2001-02 & 2002-03**

Sl No	Concept of Cost	Cost Per hectare (Rs)	
		2001-02	2002-03
1	Cost 'A'	11903	15923
2	Cost 'B'	164235	203249
3	Cost 'C'	165502	205100

**B. Value of Out put**

In Coconut cultivation, value of out put per hectare is seen as Rs. 30700/-

**Table 24 : Value of Out put / Hectare**

Out Put	Value (Rs)
Product	27989
By-Product	2711
Total	30700

**2.3 Tapioca**

During 2002-03 for the Cost of Cultivation study on tapioca 190 holdings were selected. Details of these holdings are given below:

**Table 25: Area and Number of Holdings Selected**

Size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to total area of Selected holdings	Area per holding (ha)
Small	121	10.68	24.29	0.09
Medium	57	17.68	40.20	0.31
Large	12	15.62	35.51	1.30
<b>All Size</b>	<b>190</b>	<b>43.98</b>	<b>100</b>	<b>0.23</b>

The selected holdings had a total operational area of 43.98 hectares. The average size of holding is 0.23 hectare.

**A. Cost of Cultivation**

The Cost of cultivation per hectare of tapioca under different cost concepts are given below: -

**Table 26: The Cost of cultivation per hectare of tapioca during the year 2002-03**

Sl. No	Components of different cost concepts	Cost per hectare (Rs)	% distribution of cost 'A'
1	Hired human labour	11966	55.12
2	Animal labour	-	-
3	Machine labour	-	-
4	Seed / seedlings	778	3.58
5	Farmyard manure and chemical fertilizers	4903	22.66
6	Plant protection	97	0.45
7	Land tax and irrigation cess	70	0.32
8	Repair and maintenance charges	262	1.16

9	Interest on working capital	1948	8.96
10	Other expenses	1713	7.88
11	Total cost 'A' (1-10)	21747	100.00
12	Interest on fixed capital	1927	
13	Cost 'B1' (11+12)	23674	
14	Interest on land value	135705	
15	Cost 'B' (13+14)	159379	
16	Imputed value of household labour	3458	
17	Cost 'C' (15+16)	162837	

During 2002-03 for cultivating one hectare of tapioca an amount of Rs.11966/- (i.e. 55% of Cost A) is expended as hired human labour cost. The next major cost component for tapioca cultivation is farmyard manure and chemical fertilizer (23%). Seed/Seedling cost accounts to 4% to total cost 'A'. Total cost 'A' i.e. cash and other kind expenses comes to Rs.21747/- during 2002-03 for cultivating one hectare of tapioca.

The proportion of hired human labour hours to total human labour is seen as increasing with the size of holding as shown below:

**Table 27: Percentage distribution of hired human labour hours**

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	44.87	52.46	46.58	37.07
Female	16.39	18.22	29.67	20.57
Total	61.26	70.68	76.25	57.64

#### Cost 'B<sup>1</sup>' and Cost 'B'

Per hectare interest in fixed capital is Rs.1927/- during 2002-03. Accordingly Cost 'B1' is estimated as Rs.23674/-. At the same time when considering the interest on land value Cost 'B' arrived at Rs.159379/-

#### Cost 'C'

Cost 'C' is estimated by adding the imputed value of house holding labour to cost 'B'. Per hectare imputed value of household labour is calculated as Rs.3458/- There by Cost 'C' is estimated as Rs. 162837/-

#### B. Value of out put.

In tapioca cultivation per hectare value of output received is seen Rs. 42334/- which is shown as below:

**Table 28 : Value of Out put / Hectare**

Out Put	Value (Rs)
Product	40461
By-Product	1873
Total	42334

#### 2.4 Banana

During 2002-03 for the estimated of cost of cultivation of banana 190 holdings were selected. The details of these holdings in each, size class is given in the following table.



**Table 29: Area and Number of holdings selected**

Size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Selected holdings	Area per holding (ha)
Small	139	11.50	34.21	0.08
Medium	38	11.29	33.58	0.30
Large	13	10.83	32.21	0.83
All Size	190	33.62	100.00	0.18

The selected holding has a total operational area of 33.62 hectare. The average size of holding is 0.18 hectare.

**A. Cost of Cultivation**

The cost per hectare of banana cultivation under different items and their percentage distribution to the total cost 'A' is given in the following table.

**Table: 30 Cost of Cultivation per hectare of Banana during 2002-03**

Sl. No	Components of different cost concepts	Cost per hectare (Rs)	% distribution of cost 'A'
1	Hired human labour	29282	34.69
2	Animal labour	152	0.18
3	Machine labour	1091	1.29
4	Seed / seedlings	7158	8.48
5	Farmyard manure and chemical fertilizers	23169	27.45
6	Plant protection	1079	1.28
7	Land tax and irrigation cess	345	0.42
8	Repair and maintenance charges	172	0.20
9	Interest on working capital	7626	9.03
10	Other expenses	14332	16.98
11	Total cost 'A' (1-10)	84406	100.00
12	Interest on fixed capital	1642	
13	Cost 'B1' (11+12)	86048	
14	Interest on land value	141641	
15	Cost 'B' (13+14)	227689	
16	Imputed value of household labour	11006	
17	Cost 'C' (15+16)	238695	

Above table reveals that when compared to previous year in banana cultivation expenditure towards hired human labour input has been increased from 28% to 35%. Farmyard manure and chemical fertilizers (27%) rank second.

The percentage of hired human labour hours engaged in Banana cultivation to the total labour hours is given below:

**Table: 31 Percentage distributions of hired human labour hours to the total human labour hour**

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes

Male	54.47	49.07	68.65	55.38
Female	6.20	14.59	20.03	12.72
Total	60.67	63.66	88.68	68.10

In Banana cultivation about 68% of the total human labour hours constituted for hired human labour and the remaining towards household labour hours.

#### Cost 'B1' and Cost 'B'

Cost 'B1' is estimated by adding the interest on fixed capital to cost 'A'. It is Rs. 86048/- Cost 'B' is estimated by adding the interest on land value to cost 'B1'. Accordingly Cost 'B' is calculated as Rs.227689/-

#### Cost 'C'

Cost 'C' is calculated by adding imputed value of household labour to cost 'B' during this round imputed value of household labour is calculated as Rs. 11006/- and Cost 'C' is estimated as Rs. 238695/-

#### B. Value of out put

Per hectare value of output received from banana cultivation is Rs.138639 during 2002-03

#### 2.5 Pepper

The number of holdings selected for the study on cost of cultivation of pepper was 190 during 2002 –2003. The details of these holdings are given below:

**Table 32 - Area and number of holdings selected 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Are per holding (ha)
Small	141	14.60	48.02	0.12
Medium	41	13.88	40.15	0.34
Large	8	4.09	11.83	0.51
Total	190	34.57	100.00	0.10

The holdings selected had a total operational area of 34.57 hectares. The average size of holding was 0.10 hectare.

#### A. Cost of cultivation

The cost of cultivation per hectare of pepper is given in the following table.

**Table 33- Cost of cultivation per hectare of pepper during 2002-03**

Sl No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost 'A'
1	Hired human labour	8627	62.06
2	Animal labour	-	-
3	Machine labour	16	0.12
4	Seed / seedlings	172	1.24
5	Farmyard manure and chemical fertilizers	2729	19.63
6	Plant protection	191	1.37
7	Land tax and irrigation cess	63	0.45
8	Repair and maintenance charges	244	1.76
9	Other expenses	623	4.48
10	Interest on working capital	1236	8.89
11	Total cost 'A' (1-10)	13901	100.00
12	Interest on fixed capital	1712	
13	Cost 'B1' (11+12)	15613	
14	Interest on land value	203518	
15	Cost 'B' (13+14)	219131	
16	Imputed value of household labour	2595	
17	Cost 'C' (15+16)	221726	

In pepper cultivation about 62% of the total cost 'A' constitutes to hired labour cost. The percentage of hired human labour hours engaged in the cultivation of pepper during 2002-03 is given below.

**Table 34 – Percentage of hired human labour hours engaged in pepper cultivation**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	59.37	70.87	83.45	41.43
Female	7.37	9.04	6.90	7.59
Total	66.74	79.91	90.35	49.02

### Value of out put

The value of output of pepper received from one hectare is found to be Rs. 29227/- per hectare during 2002-03.

### 2.6 Arecanut

For the study on cost of cultivation of Arecanut during 2002-03, 374 holdings were selected. The details of these holdings are as follows:

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Are per holding (ha)
Small	267	23.55	28.34	0.09
Medium	79	36.16	43.53	0.48
Large	28	23.37	28.13	0.83
All size	374	83.08	100.00	0.22

From the above table it is seen that the selected holdings land total operational area of 83.08 hectare and average size of a holding was 0.22 hectare.

## A. Cost of Cultivation

The cost of cultivation per hectare of arecanut under different cost concepts are given below:

**Table 36: Cost of Cultivation per hectare of Arecanut during the year 2002-03**

SI No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost
1	Hired human labour	7672	42.12
2	Animal labour	87	0.48
3	Machine labour	420	2.31
4	Seed / seedlings	15	0.08
5	Farmyard manure and chemical fertilizers	5488	30.13
6	Plant protection	206	1.13
7	Land tax and irrigation cess	75	0.41
8	Repair and maintenance charges of implements, machinery and building	1477	8.11
9	Interest on working capital	1514	8.31
10	Other expenses	1259	6.91
11	Total cost 'A' (1-10)	18213	100.00
12	Interest on fixed capital	1451	
13	Cost 'B1' (11+12)	19664	
14	Interest on land value	141560	
15	Cost 'B' (13+14)	161224	
16	Imputed value of household labour	3356	
17	Cost 'C' (15+16)	164580	

For cultivating one hectare of arecanut an amount of Rs.7672/- i.e. 42% of Cost 'A' is expended as hired human labour cost. Whereas machine labour is only 2% of Cost 'A'. Expenditure towards farmyard manure and chemical fertilizers accounts to 30% of Cost 'A'. Seedling cost shares only a nominal amount, i.e. below 1% of Cost 'A'.

The percentage of hired human labour hours engaged in arecanut cultivation to the total labour hours is given below:

**Table 37: Percentage distribution of hired human labour hours to total human labour hours**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	25.72	44.28	51.54	40.51
Female	60.93	12.34	25.46	32.91
Total	86.65	56.62	77.00	73.42

In arecanut cultivation 73% of the total human labour hours has been shared by hired human labour.

## Output

Value of product and by-product received from arecanut cultivation per hectare during 2002-03 is Rs.33434 which is shown as below:

**Table 38 : Value of Out put / Hectare**

Product/By product	Holding size class			
	Small	Medium	Large	All size
Product	27125	34059	38333	33296
By-Product	412	23	39	138
Total	27537	34082	38372	33434

## 2.7 Ginger

Details of the number of holdings selected for the cost of cultivation study during 2002-2003 is given below.

**Table 39 - Area and number of holdings under Ginger cultivation 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to total Area	Average per holding (ha)
Small	139	9.02	49.66	0.06
Medium	21	6.52	35.86	0.31
Large	3	2.63	14.48	0.88
All sizes	163	18.17	100.00	0.11

The total number of holdings selected for Ginger cultivation study was 163. It covered an area of 18.17 hectares. The average size per holding was 0.11 hectare.

### A. Cost of cultivation

Per hectare cost of cultivation of ginger under various component of cost concept are given below

**Table 40 - Cost of cultivation per hectare of Ginger during the year 2002-03**

SI No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost
1	Hired human labour	16367	36.13
2	Animal labour	6	0.01
3	Machine labour	429	0.95
4	Seed / seedlings	9133	20.14
5	Farmyard manure and chemical fertilizers	9345	20.61
6	Plant protection	797	1.75
7	Land tax and irrigation cess	249	0.55
8	Repair and maintenance charges of implements, machinery and building	4012	8.85
9	Interest on working capital	3736	8.24
10	Other expenses	1258	2.77
11	Total cost 'A' (1-10)	45352	100.00
12	Interest on fixed capital	816	
13	Cost 'B1' (11+12)	46170	
14	Interest on land value	194551	
15	Cost 'B' (13+14)	240721	

16	Imputed value of household labour	5621	
17	Cost 'C' (15+16)	246342	

From the above table it is seen that the major inputs in ginger cultivation are hired human labour (36%), seed/seedling (20%) and farmyard manure and chemical fertilizer (21%)

The percentage distribution of hired human labour hours engaged in ginger cultivation is shown below:

**Table 41 – Percentage of hired human labour hours engaged in Ginger cultivation**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	42.46	36.81	73.42	50.89
Female	9.53	32.34	23.01	21.63
Total	51.99	69.15	96.43	72.52

The percentage distribution of hired human labour hours engaged in ginger cultivation shows that large size class is mainly depended for hired human labour and it is about 96% of the total human labour hours.

#### Cost 'B<sup>1</sup>' cost B and cost C

While considering the interest on fixed capital cost B' is estimated as Rs. 46170/-. Where as when we considered interest on land value cost 'B' arrived at Rs.240721/- Cost 'C' is calculated by adding imputed value of household labour to cost 'B'. Accordingly cost 'C' is Rs.246342/- during 2002-03.

#### Out put

The per hectare value of output received from Ginger cultivation is seen as Rs..70296/- during 2002-03.

#### 2.8 Turmeric

During 2002-03, 137 number holdings selected for the study on cost of cultivation of turmeric. Details are given below.

**Table 42 – Area and Number of holdings selected for Turmeric cultivation 2002-03**

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to total area	Average per holding (ha)
Small	121	6.82	51.50	0.06
Medium	14	4.60	34.74	0.33
Large	2	1.82	13.76	0.91
<b>All size</b>	<b>137</b>	<b>13.24</b>	<b>100.00</b>	<b>0.10</b>

From the above table it is seen that the total operational area of the selected holding was 13.24 and the average size per holding comes 0.10 hectare

**A. Cost of cultivation**

The estimated cost of cultivation of turmeric under different cost concepts are given below:

**Table 43 – Cost of cultivation per hectare of Turmeric during the year 2002-03**

Sl.No	Component of different cost concept	Cost per hectare (in Rs)	Percentage distribution of Cost 'A'
1.	Hired human labour	12692	34.58
2.	Animal labour	204	0.56
3.	Machine labour	4556	12.41
4.	Seed/Seedlings	4566	12.44
5.	Farmyard manure and Chemical fertilizers	7044	19.19
6.	Plant Protection	151	0.41
7.	Land tax and Irrigation cess	103	0.28
8.	Repair and maintenance charges of implements, machinery and buildings	2550	6.95
9.	Interest on working capital	3096	8.43
10	Other expenses	1743	4.75
11	Cost A (1-10)	36705	100.00
12	Interest on fixed capital	1844	
13	Cost 'B1' (11+12)	38549	
14	Interest on land value	170421	
15	Cost 'B' (13+14)	208970	
16	Imputed value of household labour	7201	
17	Cost C (15+16)	216171	

The cost of cultivation of turmeric is estimated under different cost concepts viz. Cost 'A', 'B1', 'B' and 'C' Cost 'A' consists of cash and other kind of expenses, which is worked out to Rs.36705/- per hectare during 2002-03. In percentage terms it constitutes to 35% of the total cost 'A'. Next major item is farmyard manure and chemical fertilizers which shares to 69% of the total cost 'A'.

The following table reveals the percentage distribution of hired human labour participation in turmeric cultivation to total labour hours.

**Table 44 – Percentage distribution of Hired human labour hours to the total human hours**

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	35.28	42.85	49.06	45.39
Female	23.80	33.99	38.89	34.22
<b>Total</b>	<b>59.08</b>	<b>76.84</b>	<b>87.95</b>	<b>79.61</b>

**Cost B<sup>1</sup>, Cost B and Cost C**

Per hectare cost 'B<sup>1</sup>' of turmeric cultivation is found to be Rs. 38549/- cost 'B' includes land value and it is accounted as Rs.208970/- While considering the imputed value of household labour cost 'C' arrived at Rs.216171/-

**Value of out put**

The per hectare value of output received from Turmeric cultivation is worked out to Rs. 53596/- during the year 2002-03.



## Chapter – 3

### Summary of findings

The data furnished in this report are collected through the cost of cultivation Survey 2002-03. The crops covered in this study are paddy (Autumn, Winter and Summer), Coconut, Tapioca, Banana, Pepper, Arecanut, Ginger and Turmeric.

#### 1. Autumn Paddy

Cost of production of one quintal of paddy during Autumn season was Rs.601/- under cost concept 'A'. It showed 14% increase when compared to the previous year.

#### 2. Winter Paddy

During Winter paddy cultivation, cost of production of paddy per quintal exhibits 22% increase when considered cost 'A' concept. Cost 'A' was Rs. 528/- during 2002-03.

#### 3. Summer Paddy

Cost of production of summer paddy per quintal during 2002-03 increased from Rs.303 to 467/- when compared to the previous year. The percentage increase recorded 54 according to the cost 'A' concept.

#### 4. Coconut

Cost of cultivation of coconut per hectare during 2002-03 increased from Rs.11903 to Rs.15923 when Cost 'A' considered. The increase was 34%.

#### 5. Banana

In banana cultivation during the period under review expenditure towards hired human labour input has been increased from 28% to 35% when the cost 'A' considered.

#### 5. Tapioca

During 2002-03 for cultivating one hectare of tapioca an amount of Rs. 11966/- (i.e. 55% of cost 'A') is expended as hired human labour cost.

#### 6. Pepper

In pepper cultivation about 62% of the total cost 'A' constitutes to hired human labour cost.

#### 7. Arecanut

For the study on cost of cultivation of Arecanut during 2002-03, 374 holdings were selected. Per hectare cost of cultivation of arecanut during the period under review was Rs.18213/- when the Cost 'A' considered.

#### 8. Ginger

The estimated per hectare cost of cultivation of Ginger was Rs. 45352/- when considered the cost concept 'A'.

#### 9. Turmeric

During 2002-03, 137 number of holding were selected for the study on cost of cultivation of turmeric. Per hectare cost of cultivation of turmeric during the period under review was Rs. 36705/- when considered the cost 'A' concept.

**Appendix – 1****Cost of Cultivation of Autumn Paddy during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	11164	10724	10316	10642
2	Animal labour	1198	490	167	493
3	Machine labour	1766	2002	1478	1745
4	Seed / seedlings	1208	2179	866	1460
5	Farmyard manure and chemical fertilizers	2990	2836	2018	2535
6	Plant protection	210	127	71	120
7	Land tax and irrigation cess	38	54	18	36
8	Repair and maintenance charges of implements, machinery and building	1196	355	320	562
9	Interest on working capital	956	961	845	913
10	Other expenses	587	865	2000	1271
11	Total cost 'A' (1-10)	21313	20593	18089	19777
12	Interest on fixed capital	1242	1079	830	1050
13	Cost 'B1' (11+12)	22555	21672	18919	20827
14	Interest on land value	29470	25100	22657	24940
15	Cost 'B' (13+14)	52025	46772	41576	45767
16	Imputed value of household labour	2350	1543	792	1392
17	Cost 'C' (15+16)	54375	48315	42368	47159

**Appendix – 2****Cost of Cultivation of Winter Paddy during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	11738	10345	8229	9544
2	Animal labour	1181	614	203	500
3	Machine labour	2699	2275	1646	2038
4	Seed / seedlings	1138	1085	1094	1097
5	Farmyard manure and chemical fertilizers	2779	2807	2742	2772
6	Plant protection	295	221	345	290
7	Land tax and irrigation cess	93	65	39	57
8	Repair and maintenance charges of implements, machinery and building	2183	228	182	654
9	Interest on working capital	1028	900	771	857
10	Other expenses	731	656	1163	906
11	Total cost 'A' (1-10)	23865	19196	16414	18715
12	Interest on fixed capital	1055	1183	637	955
13	Cost 'B1' (11+12)	24920	20379	17051	19670
14	Interest on land value	29738	27849	14386	21760
15	Cost 'B' (13+14)	54658	48228	31437	41430
16	Imputed value of household labour	2263	1228	804	1174
17	Cost 'C' (15+16)	56921	49456	32241	42604

**Appendix – 3****Cost of Cultivation of Summer Paddy during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	9692	11210	10636	10705
2	Animal labour	716	438	133	356
3	Machine labour	2104	1691	2182	1971
4	Seed / seedlings	1000	1138	978	1046
5	Farmyard manure and chemical fertilizers	2458	2106	1995	2119
6	Plant protection	679	829	773	779
7	Land tax and irrigation cess	186	278	437	330
8	Repair and maintenance charges of implements, machinery and building	1442	271	260	518
9	Interest on working capital	868	932	923	917
10	Other expenses	706	1233	1769	1370
11	Total cost 'A' (1-10)	19851	20126	20076	20111
12	Interest on fixed capital	1331	693	614	802
13	Cost 'B1' (11+12)	21182	20819	20690	20913
14	Interest on land value	25081	14393	9615	14200
15	Cost 'B' (13+14)	46263	35212	30305	35113
16	Imputed value of household labour	3191	1544	685	1462
17	Cost 'C' (15+16)	49454	36756	30990	36575

**Appendix – 4****Cost of Cultivation of Coconut during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	8434	8468	8073	8284
2	Animal labour	0	46	6	23
3	Machine labour	135	179	149	161
4	Seed / seedlings	9	41	17	27
5	Farmyard manure and chemical fertilizers	6415	4340	4358	4538
6	Plant protection	27	40	24	32
7	Land tax and irrigation cess	68	104	65	83
8	Repair and maintenance charges of implements, machinery and building	896	751	339	624
9	Interest on working capital	1569	1386	1344	1383
10	Other expenses	673	742	813	768
11	Total cost 'A' (1-10)	18226	16097	15188	15923
12	Interest on fixed capital	2265	1652	1676	1745
13	Cost 'B1' (11+12)	20491	17749	16864	17668
14	Interest on land value	298955	211295	137607	185581
15	Cost 'B' (13+14)	319446	229044	154471	203249
16	Imputed value of household labour	3114	1889	1562	1851
17	Cost 'C' (15+16)	322560	230933	156033	205100

**Appendix – 5****Cost of Cultivation of Tapioca during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	12132	11854	12036	11986
2	Animal labour	-	-	-	-
3	Machine labour	-	-	-	-
4	Seed / seedlings	945	691	763	778
5	Farmyard manure and chemical fertilizers	5285	4397	5213	4903
6	Plant protection	101	63	133	97
7	Land tax and irrigation cess	80	71	61	70
8	Repair and maintenance charges of implements, machinery and building	295	249	160	252
9	Interest on working capital	1912	1781	2161	1948
10	Other expenses	656	803	3465	1713
11	Total cost 'A' (1-10)	21406	19909	23992	21747
12	Interest on fixed capital	2148	1418	2286	1927
13	Cost 'B1' (11+12)	23554	21327	26278	23674
14	Interest on land value	188856	122964	113780	135705
15	Cost 'B' (13+14)	212410	144291	140058	159379
16	Imputed value of household labour	7655	2762	1376	3458
17	Cost 'C' (15+16)	220065	147053	141434	162837

**Appendix – 6****Cost of Cultivation of Banana during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	41489	26957	18740	29282
2	Animal labour	117	332	0	152
3	Machine labour	1055	1901	286	1091
4	Seed / seedlings	7591	9094	4679	7158
5	Farmyard manure and chemical fertilizers	23714	24040	21683	23169
6	Plant protection	968	1214	1057	1079
7	Land tax and irrigation cess	316	291	432	345
8	Repair and maintenance charges of implements, machinery and building	162	224	140	172
9	Interest on working capital	8314	8143	6357	7626
10	Other expenses	8210	17888	17127	14332
11	Total cost 'A' (1-10)	91936	90084	70501	84406
12	Interest on fixed capital	1891	1438	962	1642
13	Cost 'B1' (11+12)	93827	91522	71463	86048
14	Interest on land value	250163	141964	26049	141641
15	Cost 'B' (13+14)	343990	233486	97512	227689
16	Imputed value of household labour	14459	14488	3708	11006
17	Cost 'C' (15+16)	358449	247974	101220	238695

**Appendix – 7****Cost of Cultivation of Pepper during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	7616	9408	10077	8627
2	Animal labour				
3	Machine labour	25	11	0	18
4	Seed / seedlings	113	159	459	172
5	Farmyard manure and chemical fertilizers	2316	2720	4442	2729
6	Plant protection	133	142	597	191
7	Land tax and irrigation cess	40	79	103	63
8	Repair and maintenance charges of implements, machinery and building	273	252	37	244
9	Interest on working capital	1062	1289	1760	1236
10	Other expenses	420	452	2029	623
11	Total cost 'A' (1-10)	11998	14512	19504	13901
12	Interest on fixed capital	1484	2546	1221	1712
13	Cost 'B1' (11+12)	13482	17058	20725	15613
14	Interest on land value	184624	244266	141897	203518
15	Cost 'B' (13+14)	198106	261324	162622	219131
16	Imputed value of household labour	3374	1973	1543	2595
17	Cost 'C' (15+16)	201480	263297	164165	221726



**Appendix – 8****Cost of Cultivation of Arecanut during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	6399	6878	10182	7672
2	Animal labour	0	0	308	87
3	Machine labour	122	592	454	420
4	Seed / seedlings	36	3	11	15
5	Farmyard manure and chemical fertilizers	4280	6911	4504	5486
6	Plant protection	103	198	321	206
7	Land tax and irrigation cess	52	79	93	75
8	Repair and maintenance charges of implements, machinery and building	2872	222	231	1477
9	Interest on working capital	1244	1570	1701	1514
10	Other expenses	1500	1121	1228	1259
11	Total cost 'A' (1-10)	16608	17574	19033	18213
12	Interest on fixed capital	1283	1379	2117	1451
13	Cost 'B1' (11+12)	17891	18953	21150	19664
14	Interest on land value	219624	127568	84561	141560
15	Cost 'B' (13+14)	237515	146521	105711	161224
16	Imputed value of household labour	2530	4302	2724	3355
17	Cost 'C' (15+16)	240045	150823	108435	164580

**Appendix – 9****Cost of Cultivation of Ginger during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	17196	14582	18084	16387
2	Animal labour	11	0	0	6
3	Machine labour	864	0	0	429
4	Seed / seedlings	8886	8773	10872	9133
5	Farmyard manure and chemical fertilizers	10643	8140	7878	9345
6	Plant protection	1379	257	133	797
7	Land tax and irrigation cess	402	86	129	249
8	Repair and maintenance charges of implements, machinery and building	2933	5523	10660	4012
9	Interest on working capital	4073	3254	3771	3736
10	Other expenses	1750	785	741	1258
11	Total cost 'A' (1-10)	48137	41400	52268	45352
12	Interest on fixed capital	851	703	859	818
13	Cost 'B1' (11+12)	48988	42103	63127	46170
14	Interest on land value	260839	90730	224288	194551
15	Cost 'B' (13+14)	309827	132833	277415	240721
16	Imputed value of household labour	8964	2825	1078	5621
17	Cost 'C' (15+16)	318791	135658	278493	246342

**Appendix – 10****Cost of Cultivation of Turmeric during the year 2002-03**

(Per Hectare)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	12534	10330	19246	12692
2	Animal labour	0	326	659	204
3	Machine labour	7099	1992	1510	4556
4	Seed / seedlings	4885	4009	4777	4566
5	Farmyard manure and chemical fertilizers	8398	4344	8795	7044
6	Plant protection	77	138	461	151
7	Land tax and irrigation cess	48	202	63	103
8	Repair and maintenance charges of implements, machinery and building	614	5771	30534	2550
9	Interest on working capital	3400	2404	3704	3096
10	Other expenses	1003	2901	1592	1743
11	Total cost 'A' (1-10)	38058	32417	71341	36705
12	Interest on fixed capital	1175	4098	9060	1844
13	Cost 'B1' (11+12)	39233	36515	80401	38549
14	Interest on land value	228596	139445	30915	170421
15	Cost 'B' (13+14)	267829	175960	111316	208970
16	Imputed value of household labour	7397	6543	8127	7201
17	Cost 'C' (15+16)	275226	182503	119443	216171