



Government of Kerala

**REPORT ON
COST OF CULTIVATION
OF IMPORTANT CROPS
IN KERALA
2016-17**

**Department of
Economics and Statistics
2019**



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PREFACE

The growth trend in the agricultural sector is not consistent in Kerala. decreasing. The contribution of agriculture to State Income has been on the decline. For formulating proper price policies and for achieving economic efficiency in the crop production sector, studies on Cost of Cultivation of Important Crops in Kerala is essential. In connection with this, department conducts annual survey on Cost of Cultivation of Important Crops in Kerala.

This report is based on the field survey on Cost of Cultivation of Important Crops conducted during the year 2016-17. The crops covered are Paddy (3 seasons), Coconut, Arecanut, Pepper, Banana, Tapioca, Ginger, Turmeric, Bitter Gourd (3seasons), Cowpea (3 seasons), Pineapple and Cardamom.

The first chapter of this report deals with introduction, concepts and definitions of the survey. The chapter two of the report gives state wise information. The district wise tables based on the survey are given in appendix.

The field work of the survey was carried out by the Statistical Investigator/ Enumerators posted in the concerned Taluk Statistical Offices. The report was prepared in the Cost of Cultivation Division of the Directorate of Economics and Statistics. The dedicated efforts made by all officers to bring out this publication are very much appreciated. I hope the report will be useful to Planners, Policymakers ,Researchers and other data users.

Suggestions and comments for improvement of this report are most welcome.

Sd/

Thiruvananthapuram.
14-03 -2019

**V.Ramachandran
Director General**

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Chapter I

GENERAL

1.1 Introduction

Government of Kerala accorded sanction for conducting annual survey of cost of cultivation of important crops in the State from 1980-81 onwards vide G.O.(Rt) 466/79/plg dated 27/10/1979 .The present report relates to the 37th round of survey conducted during the agricultural year 2016-17.

The crops covered under the round are given below:-

1.	Paddy (3 seasons)
2.	Coconut
3.	Arecanut
4.	Tapioca
5.	Banana
6.	Pepper
7.	Ginger
8.	Turmeric
9.	Pineapple
10.	Bitter gourd (3 seasons)
11.	Cowpea (3 Seasons)
12.	Cardamom

Objectives

The main objective of this survey is 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 the Agricultural Year (July to June) 2016-17

1.4. Design of the Survey

The survey covered all the districts in the state by considering taluk as a stratum. From each Taluk, required number of investigator zones were selected using circular systematic sampling method. Crop wise details and number of zones are given below.

Sl. No	Name of crop	Number of Zones
1	Coconut, Areca nut	4
2	Paddy, Tapioca, Banana, Pepper, Ginger, Turmeric Pineapple, Cardamom.	3
3	Cowpea, Bitter gourd	2

Selection of cultivators

In selected Investigator zones, list of cultivators growing paddy in the previous autumn season is prepared based on the last year's Form I Diary connected with the EARAS survey. From this, 5 cultivators who are likely to be engaged in paddy cultivation during the current year are selected at random for the study for the autumn paddy. Similar procedure is adopted for the selection of cultivators for winter and summer season.

In case the cultivators who are selected for cost of cultivation study in Autumn Paddy possess suitable number of plots and engaged in cultivation of other specified crops in stipulated area/numbers will also be selected for the study for other crops like Coconut, Pepper, Areca nut, Banana, Tapioca etc.

If sufficient numbers of suitable plots of other crops are not available with in the cultivators selected for the study of Autumn Paddy, the required number of plots growing crops other than paddy will be selected from the list of wet and dry land plots of the same investigator zone during the previous 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.

Number of holdings selected for each crops in a Taluk:

1	Paddy	Autumn	15 (5 holdings each from one Investigator zone)
		Winter	15 (5 holdings each from one Investigator zone)
		Summer	15 (5 holdings each from one Investigator zone)
2	Coconut		20 (5 holdings each from one Investigator zone)
3	Arecanut		20 (5 holdings each from one Investigator zone)
4	Pepper		15 (Minimum 2 holdings in one Investigator zone)
5	Banana		15 (Minimum 2 holdings in one Investigator zone)
6	Tapioca		15 (Minimum 2 holdings in one Investigator zone)
7	Ginger		15 (Minimum 2 holdings in one Investigator zone)
8	Turmeric		15 (Minimum 2 holdings in one Investigator zone)
9	Pineapple		15 (5 holdings each from one Investigator zone)
10	Bitter gourd	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)
11	Cowpea	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)
12	Cardamom		15 (5 holdings each from one Investigator zone)

A holding is to be considered for the study normally if the crop coverage is at least 25 cents in the case of Paddy and Cardamom, 10 cents for Tapioca, Banana and Pineapple and 5 cents for Ginger, Turmeric, Cowpea and Bitter gourd. In the case of perennial crops like Coconut, Arecanut and Pepper the holdings should have 25 trees/plants of which a minimum of 50% should be bearing trees/plants in the selected holding.

The holdings are grouped under three size classes (small, medium and large) for each crop on the basis of the area under the crops in the holding as:

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

1.5 Schedules

Schedules used for the survey

Schedule -1	Selected Investigator zone
Schedule -2	Summary of Form I Diary
Schedule –3	List of selected cultivators
Schedule –4	General Particulars
Schedule –5	Recorded cost incurred for growing the selected crop in each fortnight.

1.6 Field work

Fieldwork was done in 61 Taluks. One Investigator /enumerators is posted in each Taluk for this purpose. The investigators visited the selected holdings/cultivators every fortnight/three weeks/one month/two month and recorded fortnightly details of agricultural operations in schedule 5. Periodicity of visit will be vary according to the type of crop. Periodicity of visit are given below

Sl. No	Name of crop	Periodicity
1	Cowpea, Bittergourd	Fortnight
2	Paddy	Three weeks
3	Cardamom	One month
4	Coconut, Areca nut, Pepper, Tapioca, Banana, Ginger, Turmeric, Pineapple.	Two months

The fieldwork was supervised by Taluk Statistical Officer/Statistical Inspector at the Taluk level and Deputy Director/ District officer /other district level supervisory officer at the District level.

1.7 Processing and Analysis of Data

The compilation and tabulation were done at the district and consolidation of data, the report writing and analysis were done at the Directorate.

1.8 Method of Estimation

(a) Concepts of Cost.

Cost incurred for growing the selected crops are classified under, cost ‘A’ cost ‘B1’, Cost ‘B’ and Cost ‘C’ and the analysis of the data is made as: **Cost „A“**

Cost „A“ All kind of expenses (paid out costs) actually incurred by the cultivators. includes:

- i. Hired human labour
- ii. Animal labour
- iii. Machine labour
- iv. Seed/ seedlings
- 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 „B1“:Cost ‘A’ + Interest on fixed assets (excluding land)

Cost „B“: Cost ‘B1’ + interest on Fair value of land

Cost „C“: Cost ‘B’ + Imputed value of family labour

As per the recommendation of the Expert Committee for Agricultural Statistics, instead of taking interest on Land value, Fair value of land reported by the Land Revenue Department has been taken for calculating Cost B of each crop.

(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, the value of input used out of home stock are imputed. The procedures used for the imputation of values of such home stock inputs are:

- | | | |
|-----|-----------------------------------|--|
| 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 in 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 costs to different crops

Some of the inputs used for the cultivation of one crop are common for 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 Fair value of land under the crop

(d) Procedure for valuation of farm assets

- | | | |
|-----|---|-----------------------------------|
| I | Own farm buildings (cattle sheds, storage shed etc) | prices prevailing in the locality |
| II | Implements and other machinery | prevalent market prices |
| III | Livestock (only draught animals) | prevalent market prices |

In calculating the cost of production of paddy crop in each season the interest on fair value of land at the rate of 10% per annum for the period of 6 months is taken in to account. The land value is estimated at the fair value rate of agricultural land

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CHAPTER 2

RESULTS OF THE SURVEY

The crops selected for this round of study are Paddy, Cowpea and Bitter gourd (autumn, winter and summer) seasons and the remaining crops Coconut, Tapioca, Banana, Pepper, Arecanut, Ginger, Turmeric, Pineapple and Cardamom for the whole year. The cost of cultivation of crops are calculated under three different cost concepts viz Cost ‘A’, Cost ‘B’, and Cost ‘C’ respectively.

2.1.1 Paddy- Autumn (Virippu) during 2016-17

For this study details of holding selected and area coverage are given below. The data collected from 707 holdings according to the size class by covering 449.30 hectares of land. It is observed that the average area per holding is 0.64 hectares in all classes while area per holding in large size class, ie more than two hectares is 3.14 hectares per holdings. But in small size class, ie, less than 0.40 hectare which comprises 19.14 holdings, the average area per holding is only 0.21 hectare.

Table 1: Area and number of holdings under Autumn Paddy

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	416	86.00	19.14	0.21
Medium	237	193.80	43.13	0.82
Large	54	169.50	37.73	3.14
Total	707	449.30	100	0.64

Cost of cultivation

Under the Cost A ie; paid out cost actually incurred by the cultivators 48.23 percent of cost incurred against hired human labour is the highest. Machine labour cost shares 15.60% and farmyard manure and chemical fertilizers accounts to 12.13% respectively. In holdings size class less than 0.40 hectare, cost under hired human labour is more, ie, 55.67% against total cost under Cost A while in size class above two hectares, the cost percentage under hired human labour is coming down to 49.11 percent. Similarly per hectare cost difference between large and small size class is Rs 8557.

Table 2: Cost of Cultivation per hectare (in Rs.) of Paddy (Autumn)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	33390	24974	22011	25474
2	Animal labour	208	1159	0	539
3	Machine labour	8508	7734	8684	8241
4	Seed / seedlings	3119	2491	2770	2717
5	Farmyard manure and chemical fertilizers	7010	6332	6180	6405
6	Plant protection	444	469	632	526
7	Land tax and irrigation cess	152	373	133	240
8	Repair and maintenance charges of implements, machinery and building	788	189	633	472
9	Interest on working capital	2811	2394	2412	2481
10	Other expenses	3548	4729	7966	5723
11	Total cost „A“ (1+10)	59978	50844	51421	52818
12	Interest on fixed capital	1069	503	288	531
13	Cost „B1“ (11+12)	61047	51347	51709	53349
14	Interest on land value	58832	51298	48809	51808
15	Cost „B“ (13+14)	119879	102645	100518	105157
16	Imputed value of household labour	14556	7233	4753	7705
17	Cost „C“ (15+16)	134435	109878	105271	112862

Percentage Distribution of “COST A” per hectare of Autumn Paddy during 2016-17

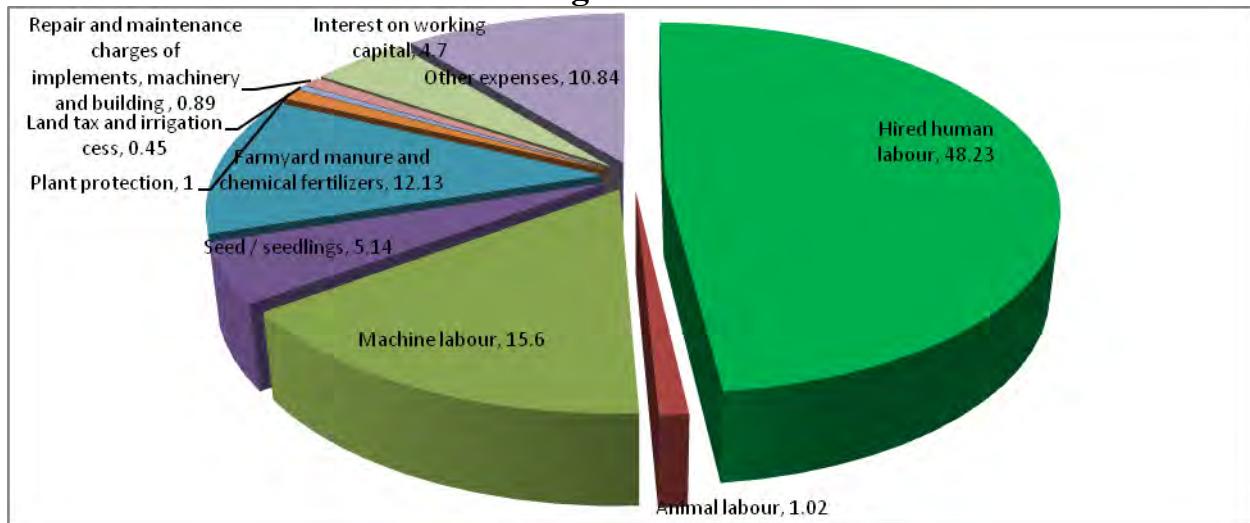


Table 3: Percentage of hired human labour hours to total human labour hours

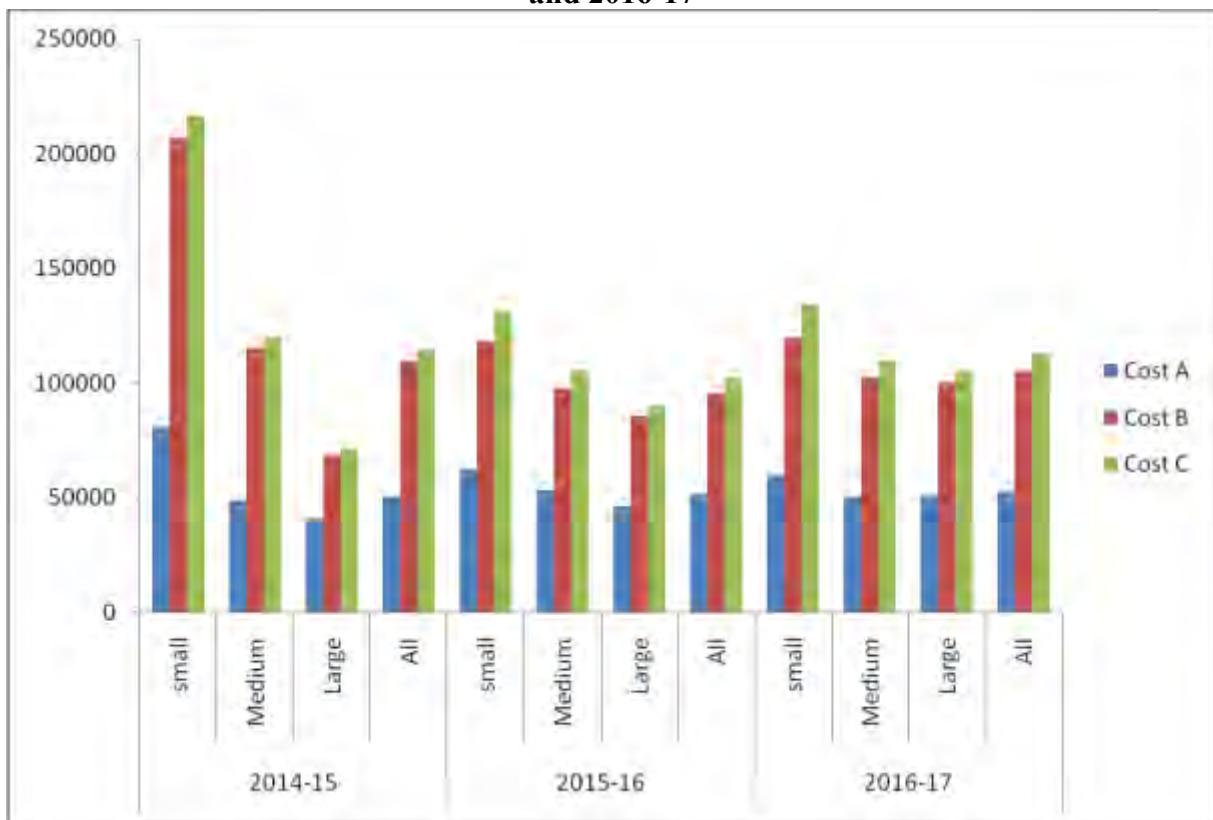
Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	20.90	25.05	18.47	21.46
Female	50.42	53.11	71.24	59.61
Total	71.32	78.16	89.71	81.07

In Autumn Paddy cultivation 59.61 % of total labour hours shares to female participation

Table 4: Cost of cultivation of Autumn Paddy per hectare (in Rs.) during 2014-15, 2015-2016 and 2016-17

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost ‘A’	2014-15	80834	49331	41198	50895
	2015-16	62547	53693	46428	51823
	2016-17	59978	50844	51421	52818
Cost ‘B’	2014-15	206775	115497	68766	109607
	2015-16	118218	97999	85647	95647
	2016-17	119879	102645	100518	105157
Cost ‘C’	2014-15	216750	120253	71632	114378
	2015-16	131527	105748	90008	102740
	2016-17	134435	109878	105271	112862

Cost of cultivation of Autumn Paddy per hectare (in Rs.) - during 2014-15, 2015-2016 and 2016-17



The last three years data shows a slight fluctuation in cost of paddy cultivation in the state. Cost A per hectre of Autumn Paddy in 2016-17 is increased by Rs.995 as compared to cost in 2015-16.

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) by the quantity of paddy produced per hectare. The survey results show that during 2016-17 for producing one quintal of paddy Rs.1470/- has been expended by the farmer when Cost 'A' is considered. Details are given below:

Table 5: Per Quintal Cost (In Rs.) of Production of Autumn Paddy during 2014-15, 2015-16 and 2016-17

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2014-15	2110	1822	1283	1630
	2015-16	2019	1698	1738	1763
	2016-17	1795	1438	1356	1470
Cost 'B'	2014-15	5398	4265	2142	3511
	2015-16	3817	3098	3204	3254
	2016-17	3580	2903	2651	2926
Cost 'C'	2014-15	5658	4441	2231	3664
	2015-16	4247	3343	3367	3495
	2016-17	4016	3108	2776	3140

Out put

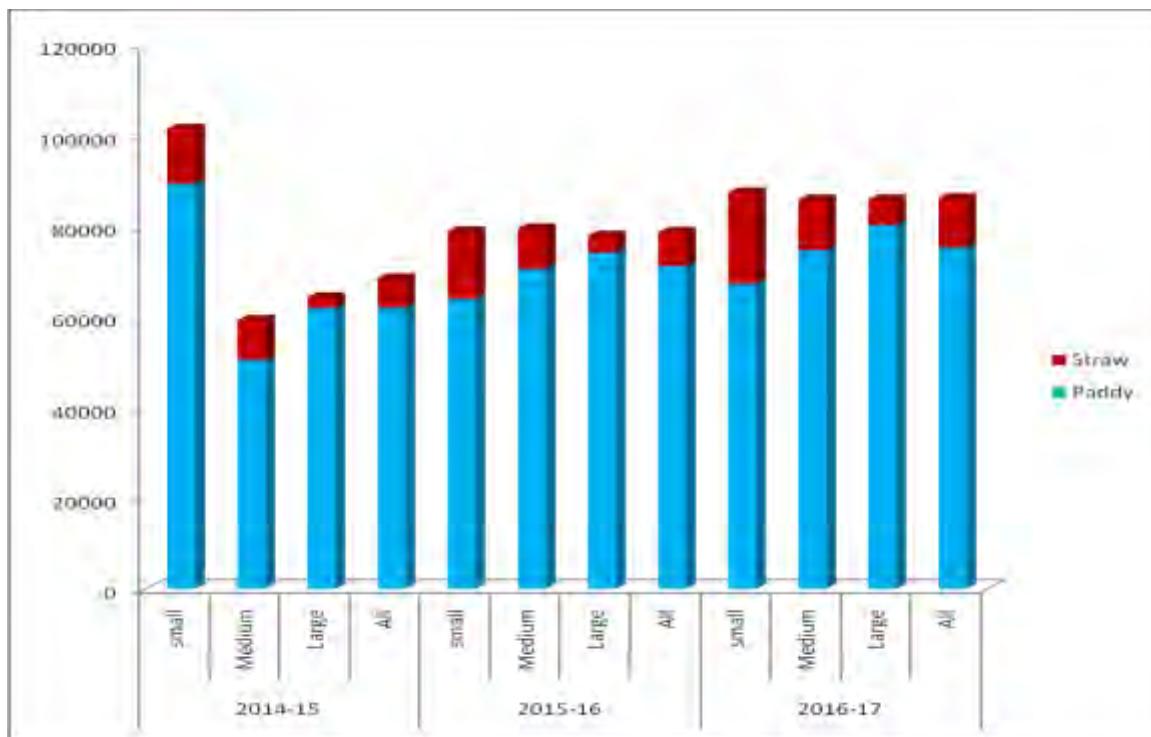
Details of product and by-product per hectare in Autumn Paddy during the last three years are given below.

Table 6: Value of product and by-product per hectare (in Rs.) of Autumn Paddy during 2014-15, 2015-16 and 2016-17

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2014-15	Paddy	89394	50481	61966	62099
	Straw	12079	8765	2315	6413
	Total	101473	59246	64281	68512
2015-16	Paddy	63951	70589	74180	71172
	Straw	14873	8900	3689	7503
	Total	78824	79489	77870	78675
2016-17	Paddy	67315	74690	80311	75392
	Straw	20139	11162	5573	10780
	Total	87454	85852	85883	86172

Per hectare value of product and by product in Autumn season shows an increasing trend during 2016-17 when compared to last two years. Percentage change in value of product and by product between the year 2015-16 and 2016-17 is 25.78% .

VALUE PRODUCT AND BY PRODUCT PER HECTARE OF AUTUMN PADDY DURING 2014-2015, 2015-2016 & 2016-2017



2.1.2 Paddy-Winter (Mundakan) during 2016-17

During 2016-17 cost of cultivation study on winter paddy was conducted in 822 holdings according the size class by covering 709.60 hectare of land. The average area per holding during the season under study is 0.86 hectare. In winter season area per holding in large size class is 4.02 hectare and in small size class it is only 0.21 hectare, area per holding is increased slightly when compared to autumn season.

Table 7: Area and number of holdings under Winter Paddy

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Area per holding (ha)
Small	418	88.70	12.50	0.21
Medium	309	238.60	33.62	0.77
Large	95	382.30	53.88	4.02
Total	822	709.60	100	0.86

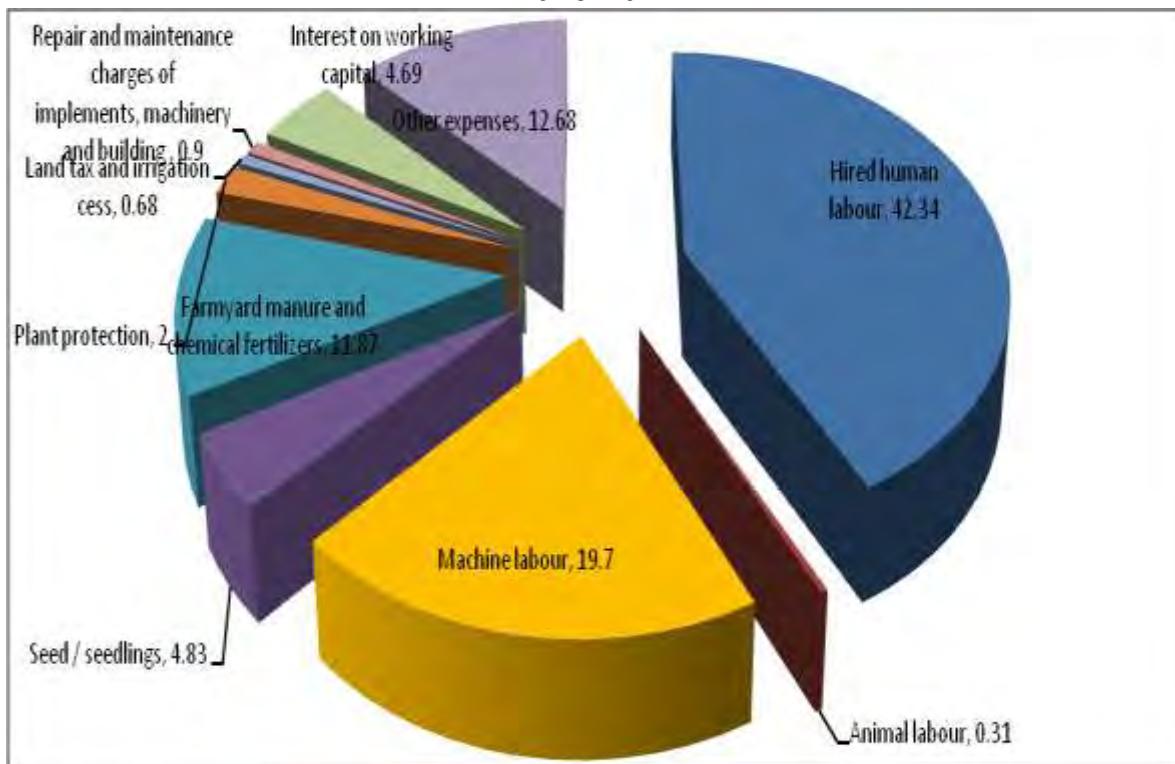
Cost of Cultivation

In Cost A, the paid out cost actually incurred by the cultivator, the major share of the cost component was hired human labour. It constitutes 42.34% per cent. Another two major contributing factor in cost are machine labour and other expences which constitutes 19.70 % and 12.68 % respectively. Farmyard manure and chemical fertilizers accounts was 11.87 %. By considering the various cost component of winter- paddy cultivation of total Cost A, it can be seen that per hectare cost for cultivating paddy is Rs.59600/-. Considerable variation in hired human labour component is reported in winter season during 2016-17, when small and large size classes are compared. Cost difference in human hired labour between small and large size class is Rs 13494/-.

Table 8: Cost of cultivation per hectare (in Rs.) of Paddy (Winter)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	34567	28411	21073	25234
2	Animal labour	85	188	203	183
3	Machine labour	11896	10884	12244	11743
4	Seed / seedlings	2997	2759	2924	2877
5	Farmyard manure and chemical fertilizers	9037	8061	5998	7073
6	Plant protection	673	755	1583	1190
7	Land tax and irrigation Cess	298	441	405	404
8	Repair and maintenance charges of implements, machinery and building	2342	518	128	538
9	Interest on working capital	3207	2828	2675	2793
10	Other expenses	4881	5496	9483	7565
11	Total Cost „A“ (110)	69983	60341	56716	59600
12	Interest on fixed capital	1798	781	510	763
13	Cost „B1“ (11+12)	71781	61122	57226	60363
14	Interest on land value	65820	56163	50446	54298
15	Cost „B“ (13+14)	137601	117285	107672	114661
16	Imputed value of household labour	16276	9387	2775	6693
17	Cost „C“ (15+16)	153877	126672	110447	121354

Percentage Distribution of “COST A” per hectare of Winter Paddy during 2016-2017



Sex wise work participation in hired human labours for winter paddy cultivation reveals that 51.65% of work shared by Female whereas 31.20% shared by male workers.

The following table reveals the percentage of hired human labours hours to total human labour hours.

Table 9: Percentage of hired human labour hours to total human labour hours

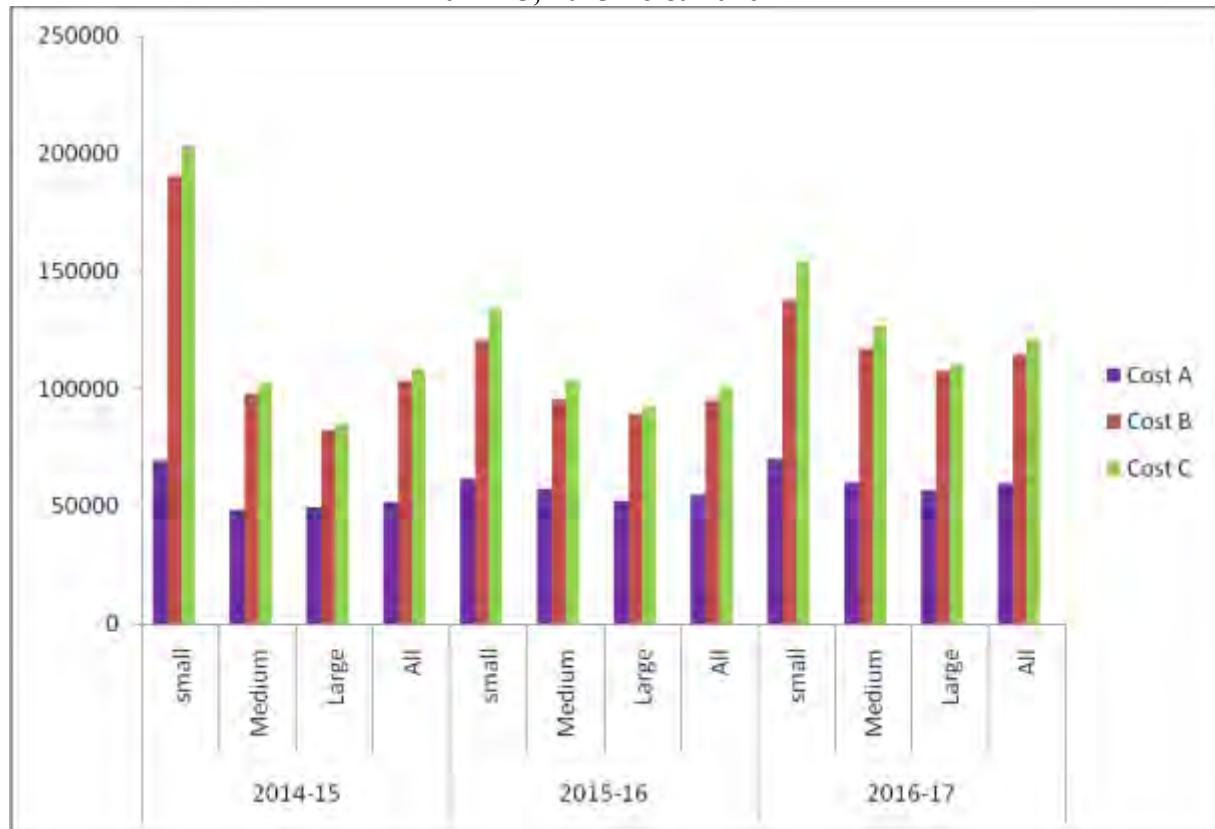
Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	25.51	31.97	30.66	31.20
Female	43.70	44.73	59.63	51.65
Total	69.21	76.70	90.29	81.85

Table 10: Cost of cultivation of Winter Paddy per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	69658	48750	49652	51851
	2015-16	61873	57258	52191	55044
	2016-17	69983	60341	56716	59600
Cost 'B'	2014-15	190291	98108	82319	103514
	2015-16	120619	95513	89087	94977
	2016-17	137601	117285	107672	114661
Cost 'C'	2014-15	203047	102363	85074	108251
	2015-16	133934	103231	92408	100962
	2016-17	153877	126672	110447	121354

The result of the survey shows an increase of 8.02 percentage of cost during 2016-17 from the year 2015-16. Also the bottom size class (small) the cost increased by 13.02 percentage during the same period.

COST OF CULTIVATION PER HECTARE OF WINTER PADDY DURING 2014-15, 2015-16 & 2016-17



Cost of production of Winter Paddy

Table 11: Per Quintal Cost (in Rs.) of production of Winter Paddy during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2014-15	2017	1637	1223	1486
	2015-16	1996	1917	1497	1680
	2016-17	2118	1874	1463	1664
Cost 'B'	2014-15	5511	3296	2027	2965
	2015-16	3890	3198	2555	2901
	2016-17	4154	3643	2779	3201
Cost 'C'	2014-15	5880	3439	2095	3101
	2015-16	4320	3456	2650	3084
	2016-17	4647	3935	2851	3388

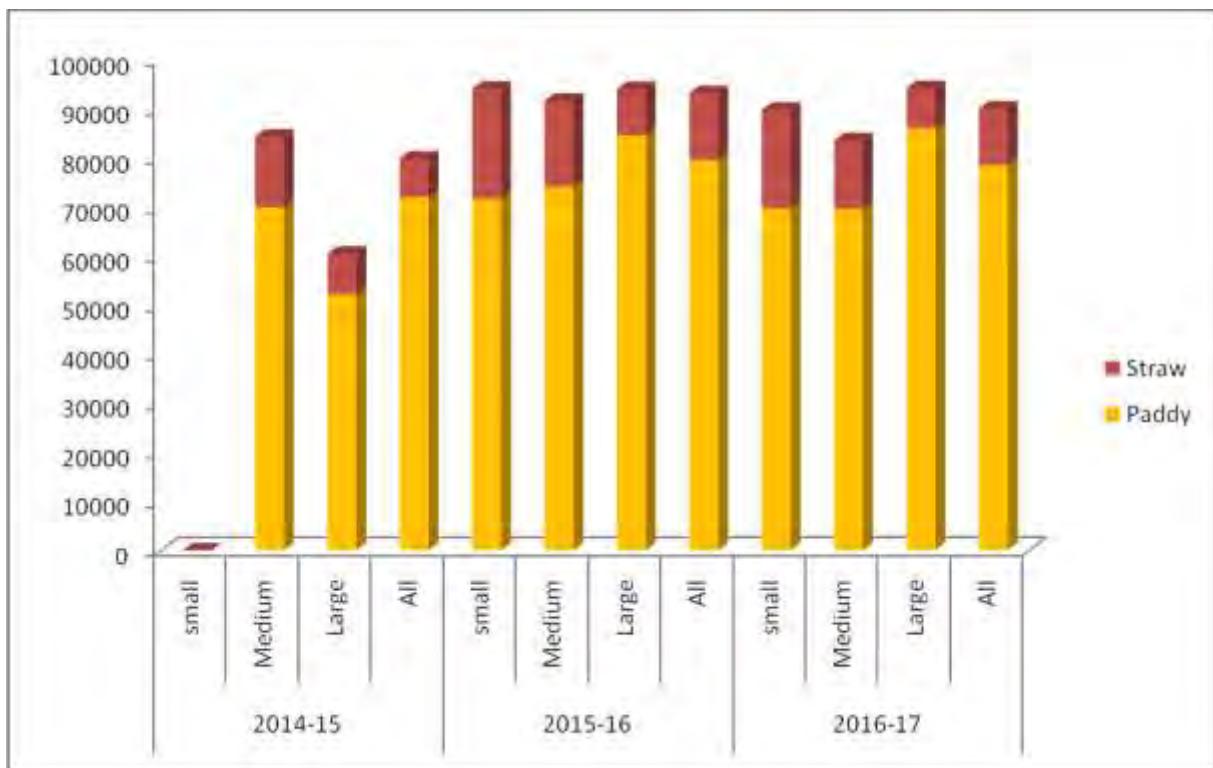
Output

Table 12: Value of Product and Byproduct per hectare (in Rs) of Winter Paddy during 2014-15, 2015-16 and 2016-17

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2014-15	Paddy	69948	52204	72038	62808
	Straw	14386	8269	7823	8879
	Total	84334	60473	79862	71687
2015-16	Paddy	71691	74171	84616	79564
	Straw	22379	17457	9397	13650
	Total	94070	91627	94012	93214
2016-17	Paddy	69788	69610	86155	78537
	Straw	20006	13968	8039	11535
	Total	89794	83578	94194	90072

Compared to autumn 2016-17 value of product and by product per hectre increased marginally during the winter season. Similarly per hectare value of product and by product increased by 25.65 percentage in 2016-17 winter season against the value of 2014-15 in the same season.

**Value of Product and By product per hectare (in Rs) of Winter Paddy during 2014-15,
2015-16 and 2016-17**



2.1.3 Paddy - Summer (Puncha) during 2016-17

For the cost of cultivation study on summer paddy during 2016-17 the total number of holdings selected was 636 . Number of holdings selected in large holding size is 80. The details of these holdings are presented below:

Table 13: Area and number of holdings under Summer Paddy

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	336	66.20	10.64	0.20
Medium	220	189.90	30.52	0.86
Large	80	366.20	58.85	4.58
All Size	636	622.30	100.00	0.98

The above table reveals that the total area under cultivation in the selected sample holdings covers to 622.30 hectares and the average size of a holding is 0.98 hectare. In the large size class the average area per holding is 4.58 hectare where as in small size class area per holding is 0.20 hectare only.

Cost of Cultivation

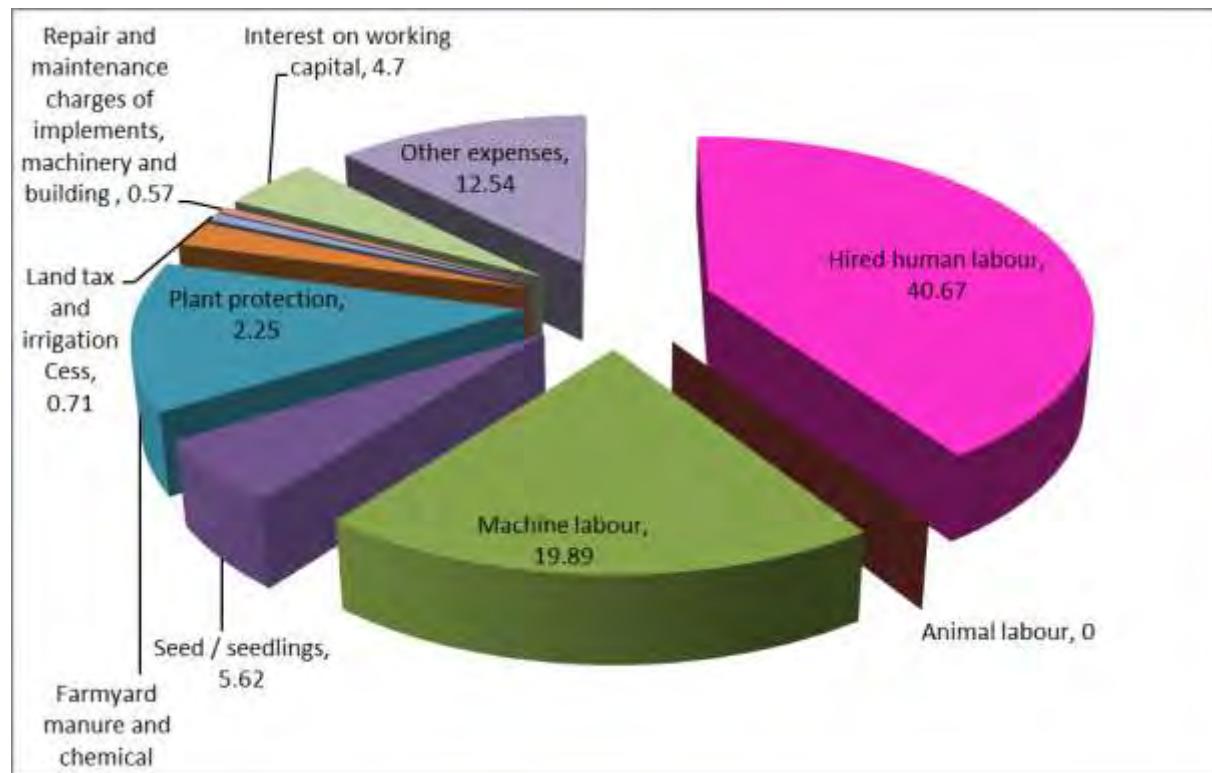
Cost of cultivation of summer paddy per hectare is estimated as Rs.54109 /- when cost ‘A’ is considered. Component wise holding size class details are presented below:

Table 14: Cost of Cultivation per hectare (in Rs.) of Paddy (Summer)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	32626	26495	17734	22006
2	Animal labour	0	0	0	0
3	Machine labour	9513	11219	10752	10762
4	Seed / seedlings	3059	2773	3175	3040
5	Farmyard manure and chemical fertilizers	9547	7671	6291	7061
6	Plant protection	945	1129	1315	1218
7	Land tax and irrigation Cess	282	643	269	385
8	Repair and maintenance charges of implements, machinery and building	1719	349	29	308
9	Interest on working capital	3021	2785	2331	2544
10	Other expenses	4720	6413	7355	6785
11	Total Cost „A“ (1+10)	65432	59477	49251	54109
12	Interest on fixed capital	1760	894	192	575
13	Cost „B1“ (11+12)	67192	60371	49443	54684
14	Interest on land value	47044	50844	39991	44061
15	Cost „B“ (13+14)	114236	111215	89434	98745
16	Imputed value of household labour	16852	7948	2656	5794
17	Cost „C“ (15+16)	131088	119163	92090	104539

Out of the total cost incurred for crop husbandry more than 40.67 percent cost goes to human labour component. Similarly compare to winter seasons a slight decrease in total cost A during the summer season is reported.

Percentage Distribution of “COST A” per hectare of Summer Paddy during 2016-17



In summer paddy cultivation hired female labour participation accounted as 39.74 % and that of male labour participation is 38.73 % to the total labour hours. Details are given below:

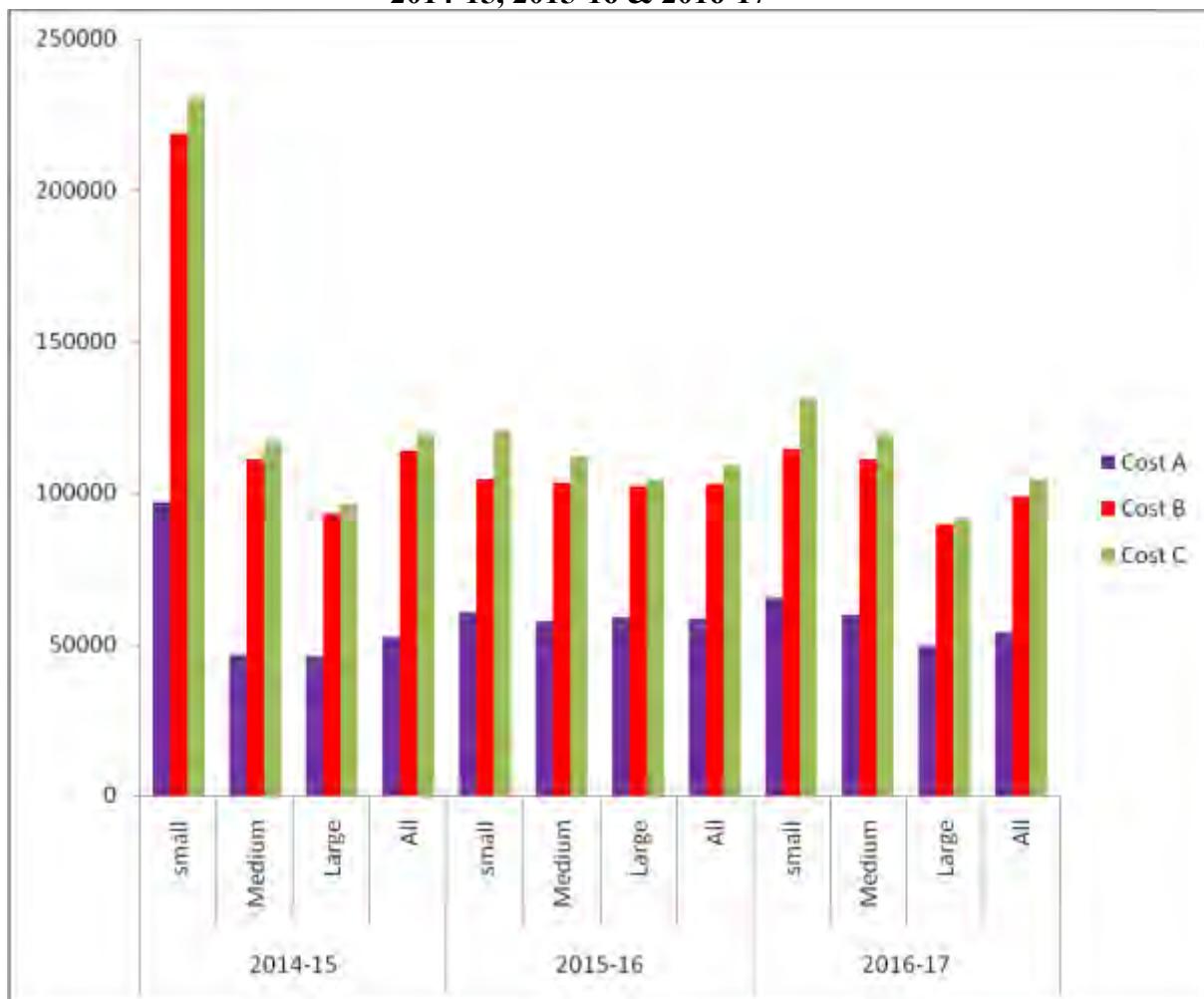
Table 15: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	26.01	33.59	50.66	38.73
Female	40.58	43.71	35.32	39.74
Total	66.59	77.29	85.98	78.47

Table 16: Cost of Cultivation of Summer Paddy per hectare (in Rs) during 2014-15, 2015-16 and 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	96904	46645	45958	52312
	2015-16	60331	57484	58781	58555
	2016-17	65432	59477	49251	54109
Cost 'B'	2014-15	218342	110982	93102	114070
	2015-16	104591	103450	102071	102857
	2016-17	114236	111215	89434	98745
Cost 'C'	2014-15	230377	116972	96259	119230
	2015-16	120740	111877	104630	109126
	2016-17	131088	119163	92090	104539

COST OF CULTIVATION PER HECTARE OF SUMMER PADDY DURING 2014-15, 2015-16 & 2016-17



Output

Table 17: Per Quintal Cost (in Rs.) of production of Summer Paddy during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2014-15	2098	1592	1594	1681
	2015-16	1748	1414	1291	1379
	2016-17	1899	1591	1337	1474
Cost 'B'	2014-15	4724	3787	3228	3667
	2015-16	3027	2543	2242	2422
	2016-17	3316	2976	2429	2690
Cost 'C'	2014-15	4984	3991	3337	3833
	2015-16	3495	2750	2298	2570
	2016-17	3805	3189	2501	2848

Above table reveals that for producing one quintal of paddy in summer season an amount of Rs 1474/- is required when cost 'A' is considered. Per hectare value of paddy produced during the season is calculated as **Rs.78674/-** and the value of by-product viz. straw is estimated as **Rs.7938/-**

Table 18: Value of Product and by product per hectare (in Rs) of Summer Paddy during 2014-15, 2015-16 and 2016-17

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2014-15	Paddy	100589	61570	63455	67296
	Straw	16882	6944	2789	5857
	Total	117471	68514	66245	73153
2015-16	Paddy	70195	83683	96492	88832
	Straw	18337	8817	5071	8037
	Total	88531	92501	101563	96869
2016-17	Paddy	72826	80544	78769	78674
	Straw	17119	9693	5350	7938
	Total	89945	90237	84120	86612

Value of Product and Byproduct per hectare (in Rs) of Summer Paddy during 2014-15, 2015-16 and 2016-17



2.2 Coconut during 2016-17

The area as well as production of coconut in the state has been declining. The data regarding the cost of cultivation of Coconut is significant. As there is a general feeling among the cultivators that the profitability of the crop is decreasing due to the prevalence of high cost involved to the cultivation. To conduct the study 1220 sample holdings selected in the state from the different holdings size classes, the average area per holding was 0.41 hectare. Details of the study conducted during 2016-17 are presented below.

Table 19: Area and number of holdings under Coconut cultivation

Holding size class	No of selected holdings	Area under the coconut in the sample (ha)	Percentage	Area per holding (ha)
Small	443	59.20	11.82	0.13
Medium	587	208.40	41.60	0.36
Large	190	233.40	46.59	1.23
Total	1220	501.00	100.00	0.41

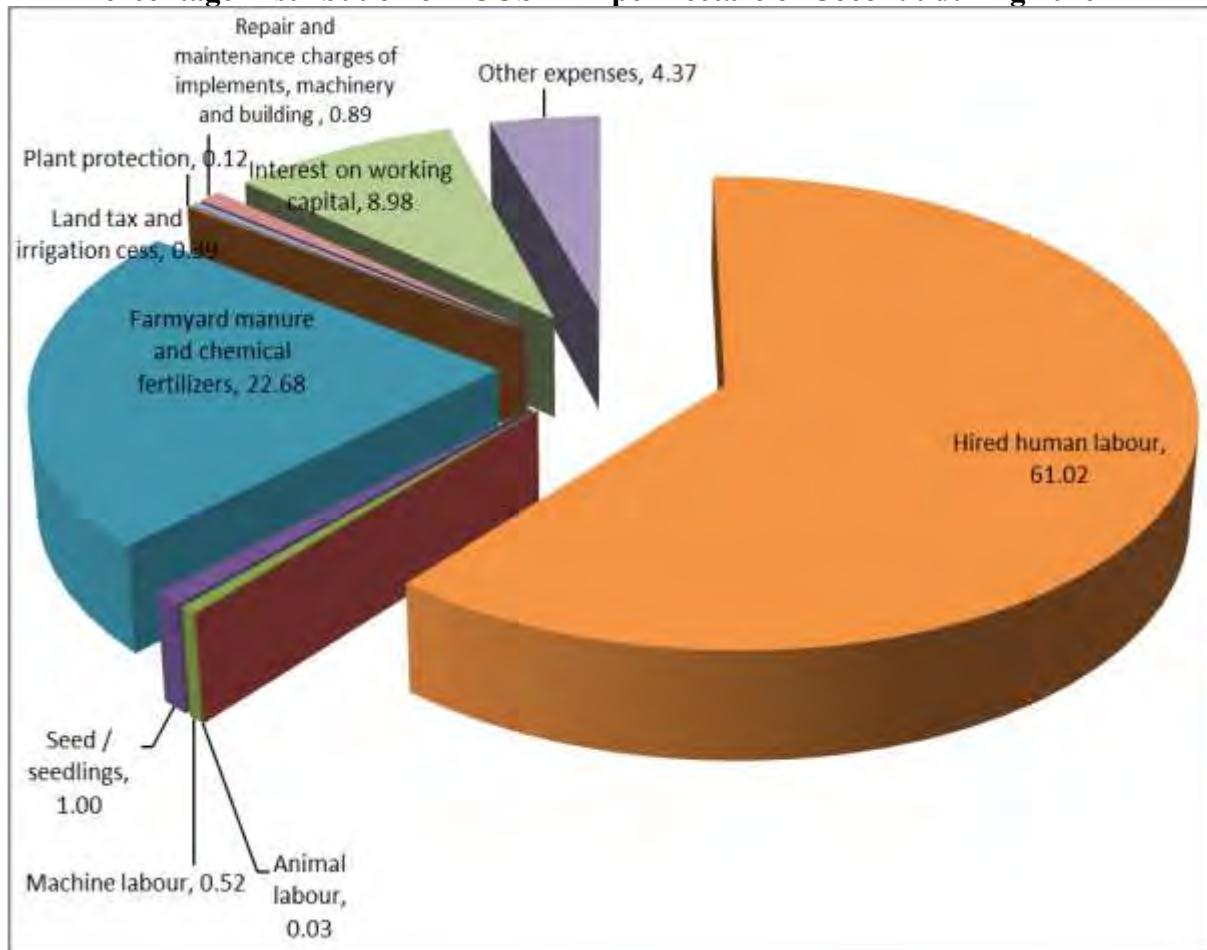
Cost of Cultivation

Cost per hectare for cultivating coconut during 2016-17 was Rs . 67062/- excluding interest on fixed capital, land value and value of household labour. Out of this 61.02% of total cost is for the component of hired human labour and 22.68 % for farmyard manure and chemical fertilizer.

Table 20: Cost of Cultivation per hectare (in Rs.) of Coconut

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	45007	41776	39103	40918
2	Animal labour	0	42	9	22
3	Machine labour	92	86	654	351
4	Seed / seedlings	683	519	800	669
5	Farmyard manure and chemical fertilizers	17334	14834	15007	15212
6	Plant protection	119	95	52	78
7	Land tax and irrigation Cess	297	258	251	260
8	Repair and maintenance charges of implements, machinery and building	1213	844	211	594
9	Interest on working capital	6698	6056	5812	6019
10	Other expenses	3749	3207	2493	2939
11	Total Cost „A“(1-10)	75192	67717	64392	67062
12	Interest on fixed capital	7098	3575	2896	3679
13	Cost ,B1“(11+12)	82290	71292	67288	70741
14	Interest on land value	351537	360536	265851	315430
15	Cost ,B“(13+14)	433827	411828	333139	386171
16	Imputed value of household labour	17512	11760	6153	9838
17	Cost ,C“(15+16)	451339	443588	339292	396009

Percentage Distribution of “COST A” per hectare of Coconut during 2016-17



The following table reveals the percentage distribution of hired human labour hours to the total human labour hours. The percentage share of female participation in total human labour hours are 10.26 percentage.

Table 21: Percentage of hired human labour hours to the total human labour hours

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	57.55	64.09	68.93	65.07
Female	6.51	9.44	12.54	10.26
Total	64.06	73.53	81.47	75.33

Table 22: Cost of cultivation of Coconut per hectare (in Rs.) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	59792	53123	50449	52588
	2015-16	63392	65321	69757	66997
	2016-17	75192	67717	64392	67062
Cost 'B'	2014-15	1009360	825707	451798	666642
	2015-16	408191	516572	328939	421216
	2016-17	433827	431828	333139	386171
Cost 'C'	2014-15	1023974	833855	456227	673729
	2015-16	425980	527414	335397	431050
	2016-17	451339	443588	339292	396009

Value of output

Table 23: Value of Output per hectare (in Rs) of Coconut

Product/By-product	Holding Size Class			
	Small	Medium	Large	All Sizes
Product	124929	125199	118288	121952
By-Product	8998	7447	5045	6515
Total	133927	132646	123333	128467

The study reveals that the value of output is Rs 128467/- per hectare were as the cost of cultivation per hectare is Rs 67062/-

2.3 Arecanut during 2016-17

Arecanut is one among the cash crops cultivating in the state. Similar to some other crops the area of this crop is shrinking on varied reason especially the cost of cultivation. For this study 1218 sample holding were selected under three holdings size classes namely small, medium and large. The average area per holding was 0.16 hectare and the total area under the crop in the sample was 199.10 hectare.

Table 24: Area and Number of holdings under Arecanut cultivation

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	940	57.80	29.03	0.06
Medium	213	71.40	35.86	0.34
Large	65	69.90	35.11	1.08
All size	1218	199.10	100.00	0.16

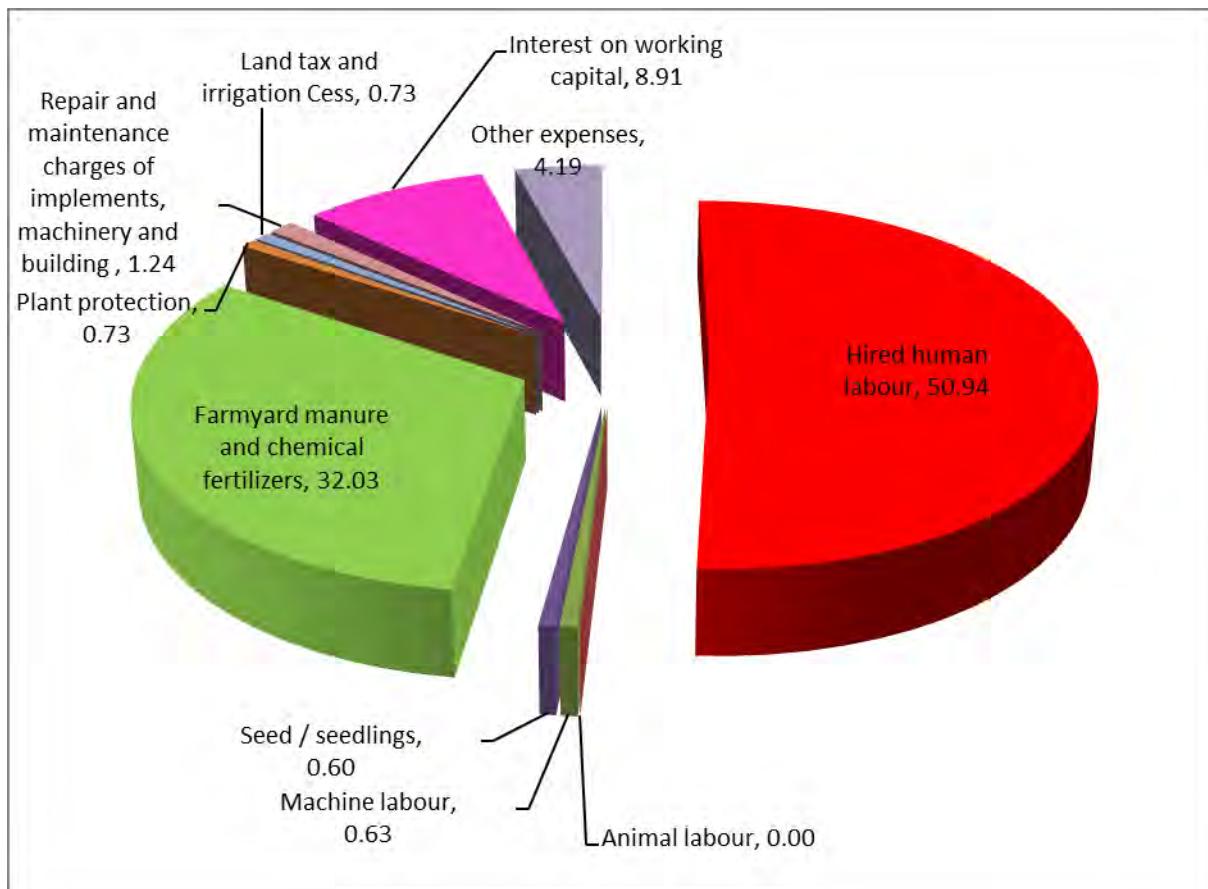
Cost of Cultivation

The different cost components of Arecanut cultivation is given below: Per hectare cost expenses is worked out as Rs.72041/- excluding interest on fixed capital, interest on land value and household labour components. Out of this 50.94 % cost is for hired human labour and 32.03% for farmyard manure and chemical fertilizers.

Table 25: Cost of Cultivation per hectare (in Rs.) of Arecanut

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	38363	33642	38451	36698
2	Animal labour	0	0	0	0
3	Machine labour	85	338	881	454
4	Seed / seedlings	661	432	243	433
5	Farmyard manure and chemical fertilizers	15442	20433	32140	23072
6	Plant protection	194	590	745	529
7	Land tax and irrigation Cess	313	476	754	526
8	Repair and maintenance charges of implements, machinery and building	1869	646	328	892
9	Interest on working capital	5736	5904	7521	6420
10	Other expenses	2615	3604	2750	3017
11	Total Cost „A“ (1+10)	65278	66065	83813	72041
12	Interest on fixed capital	1331	6254	4727	7781
13	Cost „B1“ (11+12)	78609	72319	88540	79822
14	Interest on land value	263241	246172	195287	233356
15	Cost „B“ (13+14)	341850	318491	283827	313178
16	Imputed value of household labour	25080	15198	7093	15243
17	Cost „C“ (15+16)	366930	333689	290920	328421

Percentage Distribution of “COST A” per hectare of arecanut during 2016-17



The following table illustrates the work participation of arecanut cultivation. It shows that out of 67.95 per cent of the total labour hours 15.15% has been shared by females and 52.80 % has been shared by males.

Table 26: Percentage of hired human labour hours to total human Labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	45.63	53.26	60.61	52.80
Female	12.20	12.61	21.35	15.15
Total	57.83	65.87	81.97	67.95

Table 27: Cost of Cultivation of Arecanut per hectare (in Rs) during 2014-15, 2015-16 and 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	54441	52534	54132	53665
	2015-16	55561	71114	120981	80142
	2016-17	65278	66065	83813	72041
Cost 'B'	2014-15	662058	458842	420574	498585
	2015-16	276540	230451	290078	263185
	2016-17	341850	318491	283827	313178
Cost 'C'	2014-15	674279	467912	424558	506531
	2015-16	298509	243120	302278	278874
	2016-17	366930	333689	290920	328421

Value of Out put

Table 28: Value of Output per hectare (in Rs) of Arecanut

The estimated value of output per hectare is Rs.210160/- against the per hectare cost A of cultivation is Rs 720141/-.

Holding Size Class			
Small	Medium	Large	All Sizes
178470	206338	240491	210160

2.4 Tapioca during 2016-17

Area under the crop in this study was 154.40 hectare from 882 holdings.

Table 29: Area and Number of Holdings under Tapioca cultivation

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	595	44.00	28.50	0.07
Medium	256	79.90	51.75	0.31
Large	31	30.50	19.75	0.98
Total	882	154.40	100.00	0.18

The average size of a selected holding is 0.18 hectare

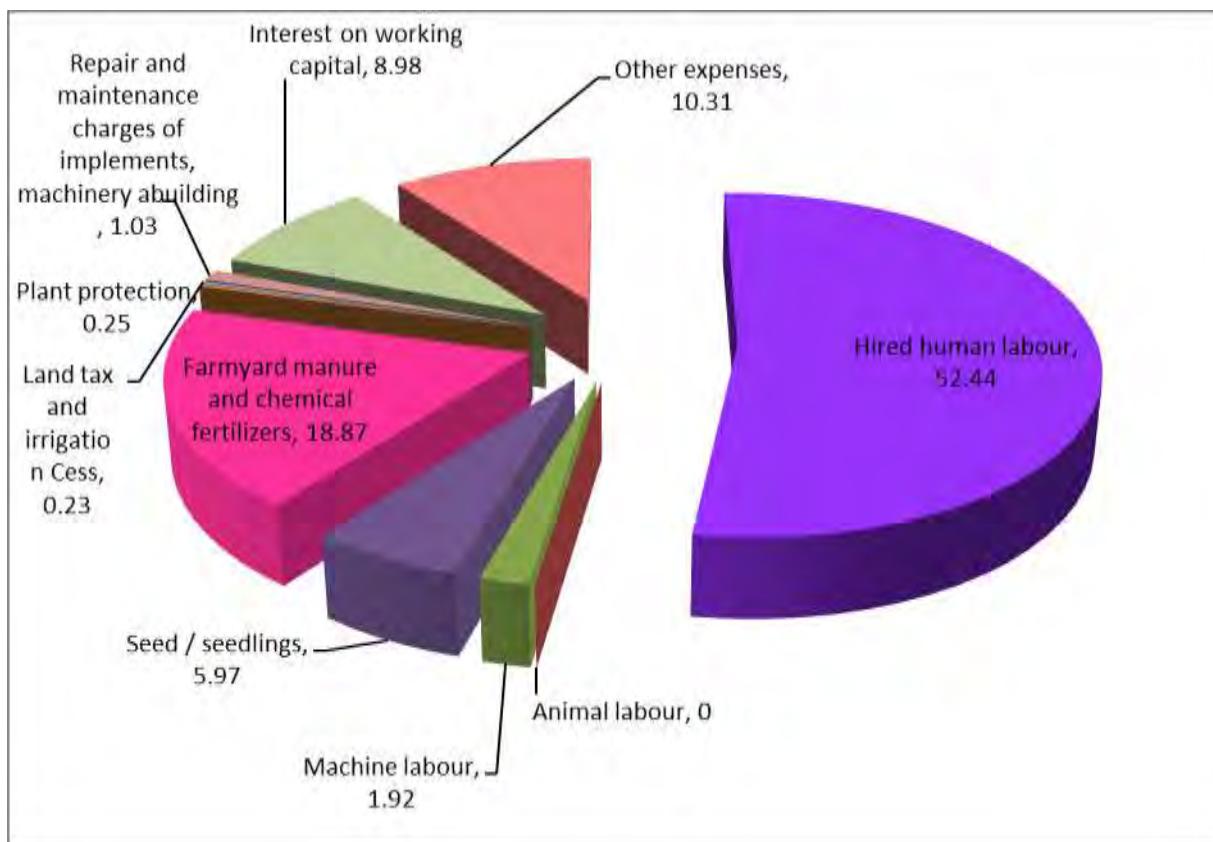
Cost of Cultivation

When Cost A is considered, per hectare cost of cultivation of tapioca is worked out as Rs. 95899/- . In this cost A, hired human labour cost constituted 52.44 % where as farmyard manure and chemical fertilizers shares 18.87%. Interest on working capital and other expenses contribute almost equal share. The cost of cultivation of Tapioca under different concepts is given below.

Table 30: Cost of cultivation per hectare (in Rs) of Tapioca

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	50684	52964	42704	50285
2	Animal labour	0	0	0	0
3	Machine labour	622	1808	3700	1841
4	Seed / seedlings	5847	6189	4326	5723
5	Farmyard manure and chemical fertilizers	17722	18053	18771	18099
6	Plant protection	114	204	516	240
7	Land tax and irrigation Cess	316	215	100	221
8	Repair and maintenance charges of implements, machinery abuilding	2437	497	183	992
9	Interest on working capital	8265	8933	8259	8608
10	Other expenses	7661	10107	12569	9890
11	Total Cost ,A"(1-10)	93668	98970	91128	95899
12	Interest on fixed capital	7921	2142	610	3500
13	Cost ,B1"(11+12)	101589	101112	91738	99399
14	Interest on land value	247870	217656	154080	213793
15	Cost ,B"(13+14)	349459	318768	245818	313192
16	Imputed value of household labour	50294	29344	15495	32630
17	Cost ,C"(15+16)	399753	348112	261313	345822

Percentage Distribution of “COST A” per hectare of Tapioca during 2016-17



The following table shows the percentage distribution of hired human labour hours engaged in tapioca cultivation.

Table 31: Percentage of hired human labour hours to total human labour hours

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	40.97	49.02	51.16	46.66
Female	7.23	13.68	20.29	12.50
Total	48.20	62.70	71.45	59.16

In tapioca cultivation 59.15% of the total human labour hours have been shared by hired human labour.

Table 32: Cost of cultivation of Tapioca per hectare (In Rs.) during 2014-15, 2015-16 and 2016-17

A comparative statement for 2014-15, 2015-16 and 2016-17 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	77514	65479	70322	69925
	2015-16	91029	89828	103125	93086
	2016-17	93668	98970	91128	95899
Cost 'B'	2014-15	691551	453045	284333	473573
	2015-16	363006	323306	266699	322735
	2016-17	349459	318768	245818	313192
Cost 'C'	2014-15	710483	467612	290009	487033
	2015-16	397696	348177	281915	348413
	2016-17	399753	348112	261313	345822

Value of Out put

Table 33: Value of Output per hectare (In Rs.) of Tapioca

Holding Size Class			
Small	Medium	Large	All Sizes
308686	315754	295677	309762

The value of output for medium holding size class have slight variation. The value of out put per hectre of Tapioca is estimated as Rs.309762/- where as the cost of cultivation per hectre, the paid out cost actually increased by the cultivators is only Rs95899/-.

2.5 Banana during 2016-17

To study the cost of cultivation on banana 861 sample holdings were selected by covering an area of 222.30 hectares under three different holding size classes with an average area per holding of 0.26 hectare.

Table 34: Area and Number of holdings selected under Banana cultivation

Size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to Total area	Area per holding (ha)
Small	497	43.70	19.66	0.09
Medium	301	104.60	47.05	0.35
Large	63	74.00	33.29	1.17
Total	861	222.30	100.00	0.26

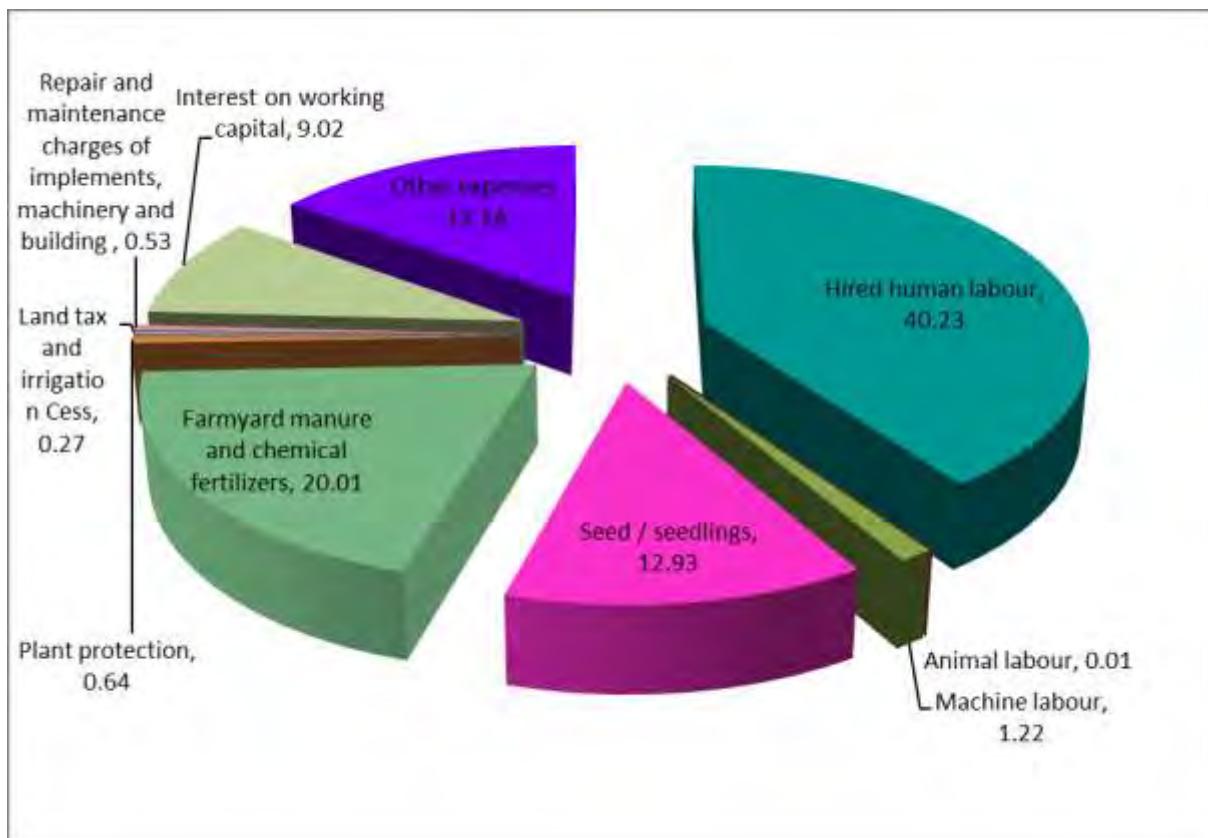
Cost of Cultivation

As in the case of other crops, cost of cultivation of banana is also calculated at different cost concepts such as cost ‘A’, Cost ‘B1’, ‘Cost ‘B’ and Cost ‘C’. When Cost A is considered, cost of cultivation per hectare is Rs.182921/- . Out of this 40.23% cost involved in hired human labour component, 20.01% cost for farmyard manure and chemical fertilizers and Seed/Seedlings constitute 12.93 % and other expenses shares 15.14%.

Table 35: The Cost of cultivation per hectare (in Rs.) of Banana

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	82553	71723	70883	73597
2	Animal labour	67	0	0	13
3	Machine labour	656	2249	3167	2237
4	Seed / seedlings	24533	22165	25201	23645
5	Farmyard manure and chemical	44237	36864	31677	36606
6	Plant protection	1097	1349	964	1171
7	Land tax and irrigation Cess	457	270	818	489
8	Repair and maintenance charges of implements, machinery and building	2819	735	178	964
9	Interest on working capital	17596	16150	16330	16497
10	Other expenses	22818	27148	31405	27702
11	Total Cost „A“ (110)	196833	178653	180623	182921
12	Interest on fixed capital	13968	4034	1669	5223
13	Cost „B1“ (11+12)	210801	182687	182292	188144
14	Interest on land value	238510	189144	270836	226105
15	Cost „B“ (13+14)	449311	371831	453128	414249
16	Imputed value of household labour	61419	39535	31331	41159
17	Cost „C“ (15+16)	510730	411366	484459	455408

Percentage Distribution of “COST A” per hectare of Banana during 2016-17



In Banana cultivation male participation rate (47.28) is higher than that of female (20.79). The percentage distributions are as follows.

Table 36: Percentage of hired human labour hours to the total human labour hours

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	47.60	54.23	40.07	47.28
Female	8.07	8.79	39.54	20.79
Total	55.67	63.02	79.60	68.07

Table 37: Cost of Cultivation per hectare of Banana (In Rs.) during 2014-15, 2015-16 & 2016-17

A comparative statement for 2014-15, 2015-16 and 2016-17 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	157116	120137	133384	131933
	2015-16	182234	180215	203804	188491
	2016-17	196833	178653	180623	182921
Cost 'B'	2014-15	932294	579448	381082	583240
	2015-16	423660	353431	382906	378604
	2016-17	449311	371831	453128	414249
Cost 'C'	2014-15	975586	603814	395962	608196
	2015-16	479060	387968	408027	414584
	2016-17	510730	411366	484459	455408

Value of out put

Table 38: Value of Output per hectare (In Rs.) of Banana

Holding Size Class			
Small	Medium	Large	All Sizes
496927	466827	549606	500319

During 2016-17 per hectare value of output from banana cultivation is estimated out as **Rs. 500319/-** whereas the cost A per hectre is Rs 182921/-.

2.6 Pepper during 2016-17

The monopoly of the state still continues in area and production of pepper in the country. Details of the holdings selected for the study is given below:

Table 39: Area and number of holdings under Pepper cultivation

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	743	43.50	38.36	0.06
Medium	157	52.90	46.65	0.34
Large	15	17.00	14.99	1.13
Total	915	113.40	100.00	0.12

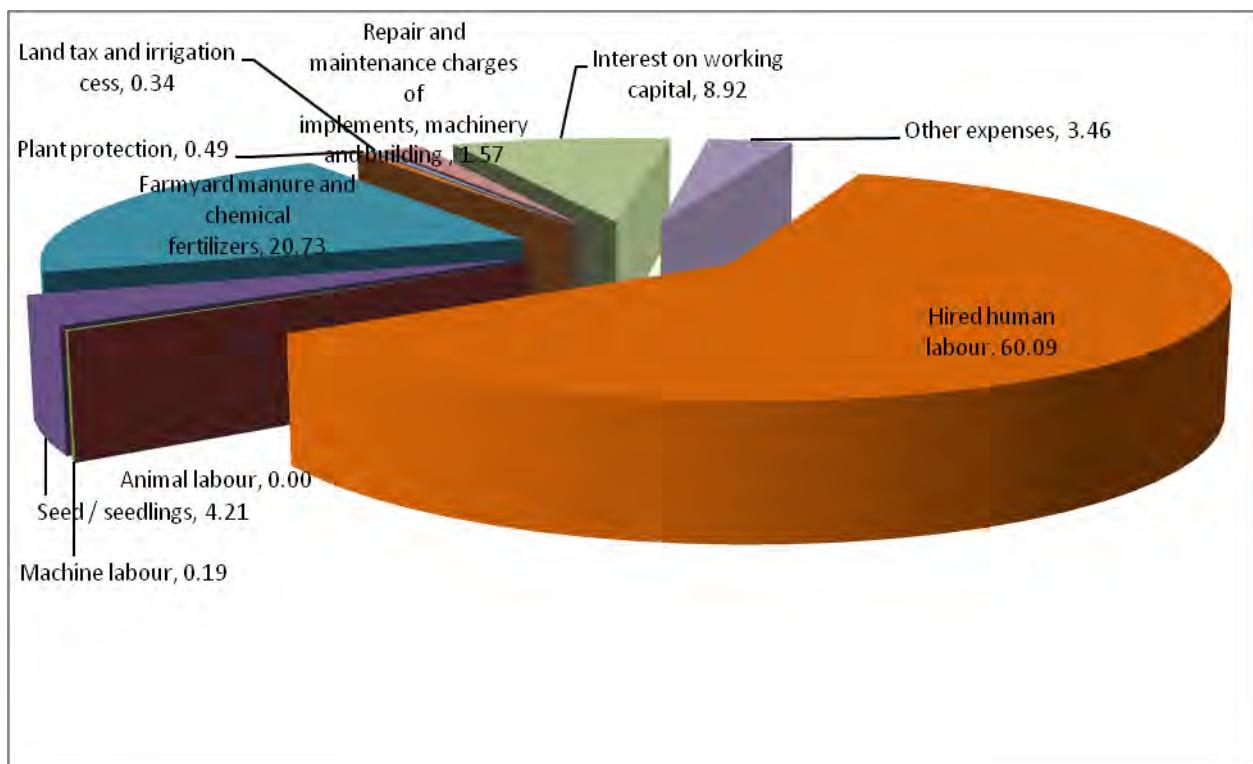
Cost of cultivation

The cultivation cost incurred for Pepper is entirely different when compared to the cost of Paddy and other seasonal crops. Hired human labour cost (60.09%) and the farmyard manure and chemical fertilizer cost (20.73%) are the two major items of expenses for pepper cultivation. Item wise expenses incurred under pepper cultivation are as follows:

Table 40: Cost of cultivation per hectare (in Rs.) of Pepper

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	50699	45911	36084	46279
2	Animal labour	0	0	0	0
3	Machine labour	70	116	452	149
4	Seed / seedlings	766	3229	9657	3245
5	Farmyard manure and chemical fertilizers	16595	14654	18435	15967
6	Plant protection	326	317	700	377
7	Land tax and irrigation Cess	244	169	600	262
8	Repair and maintenance charges of implements, machinery and building	2542	392	331	1209
9	Interest on working capital	7144	6636	6882	6868
10	Other expenses	2982	2134	3491	2663
11	Total Cost „A“ (1 to 10)	81368	73558	76632	77019
12	Interest on fixed capital	14742	4773	2822	8313
13	Cost „B1“ (11+12)	96110	78331	79454	85332
14	Interest on land value	258950	190607	176892	214825
15	Cost „B“ (13+14)	355060	268938	256353	300157
16	Imputed value of household labour	40984	15992	8057	24410
17	Cost „C“ (15+16)	396044	284930	264410	324567

Percentage Distribution of “COST A” per hectare of Pepper during 2016-17



The survey results reveal that out of the total cost involved in pepper cultivation, 60.09% is for hired human labour component and cost for farmyard manure and chemical fertilizer and interest on working capital are 20.73 and 8.92 percentage respectively.

Table 41: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	42.79	59.92	66.32	52.43
Female	9.54	10.84	14.40	10.62
Total	52.33	70.76	80.72	63.06

Table 42: Cost of cultivation of Pepper per hectare (In Rs.) during 2014-15, 2015-16 & 2016-17.

A comparative statement for 2014-15, 2015-16 & 2016-17 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	62882	59389	46496	57300
	2015-16	62824	54626	71719	60648
	2016-17	81368	73558	76632	77019
Cost 'B'	2014-15	795464	522466	162110	529326
	2015-16	282538	198610	178394	230833
	2016-17	355060	268938	256353	300157
Cost 'C'	2014-15	814237	536718	170084	543610
	2015-16	308479	217378	192079	251849
	2016-17	396044	284930	264410	324567

Value of out put

Table 43: Value of Output per Hectare (In Rs.) of Pepper

Holding Size Class			
Small	Medium	Large	All Sizes
314660	319247	322608	317987

During 2016-17 it is estimated that Rs 317987/- has been received as value of output from per hectare pepper cultivation whereas cost A for Cultivation is Rs.77019/-.

2.7 Ginger during 2016-17

For the cost of cultivation study during 2016-17, 727 sample holdings were selected for the crop ginger and total area covered for study is 69.90 hectare.

Table 44: Area and number of holdings under Ginger cultivation

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to total Area	Average area per holding (ha)
Small	626	28.20	40.34	0.05
Medium	87	24.80	35.48	0.29
Large	14	16.90	24.18	1.21
Total	727	69.90	100.00	0.10

Cost of cultivation

Among the various components of cost of ginger cultivation, hired human labour, Seed/seedling, fertilizer etc. are the top three components. Hired human labour alone accorded 37.01% of the total cost. Seed/seedling and farmyard manure and fertilizer share is 28.66 % and 14.84% of total cost of cultivation per hectare.

Table 45: Cost of Cultivation per hectare (in Rs.) of Ginger

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	70966	86984	114490	87076
2	Animal labour	0	0	0	0
3	Machine labour	796	5398	12831	5312
4	Seed / seedlings	55876	76396	73759	67447
5	Farmyard manure and chemical fertilizers	29173	39386	38035	34923
6	Plant protection	1205	2103	2296	1786
7	Land tax and irrigation cess	202	270	106	203
8	Repair and maintenance charges of implements, machinery and building	3030	787	338	1589
9	Interest on working capital	16630	22573	27015	21228
10	Other expenses	8282	15465	28743	15732
11	Total Cost „A“ (10)	186160	249362	297613	235296
12	Interest on fixed capital	12644	2629	2485	6654
13	Cost „B1“ (11+12)	198804	251991	300098	241950
14	Interest on land value	245275	141506	93905	172171
15	Cost „B“ (13+14)	444079	393497	394003	414121
16	Imputed value of household labour	64402	38132	14252	43063
17	Cost „C“ (15+16)	508481	431629	408255	457184

Percentage Distribution of “COST A” per hectare of Ginger during 2016-17

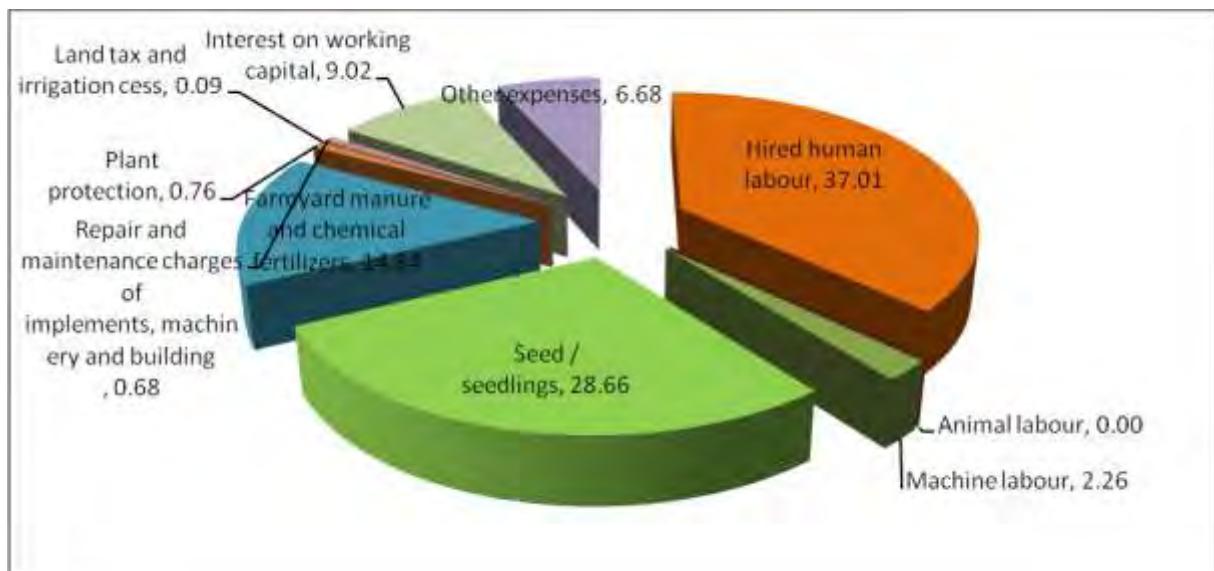


Table 46: Percentage distribution of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	34.83	38.98	18.79	28.34
Female	20.51	32.96	77.42	50.45
Total	55.34	71.94	96.21	78.79

Table 47: Cost of cultivation of Ginger per hectare (In Rs.) during 2014-15, 2015-16 and 2016-17

A comparative statement for 2014-15, 2015-16 & 2016-17 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost ‘A’	2014-15	133624	148987	78910	109816
	2015-16	147728	166761	324740	199526
	2016-17	186160	249362	297613	235296
Cost ‘B’	2014-15	788743	419437	318652	480983
	2015-16	334122	256751	452737	335817
	2016-17	444079	393497	394003	414121
Cost ‘C’	2014-15	806087	441585	325415	494101
	2015-16	380267	274368	465015	362935
	2016-17	508481	431629	408255	457184

Value of Out put

Table 48: Value of Out put per hectare (In Rs.) of Ginger

Holding Size Class			
Small	Medium	Large	All Sizes
331377	297169	331064	319149

The per hectare value of output estimated from Ginger cultivation is Rs.319149/- and the cost of cultivation per hectare is Rs 235296/- excluding interest on fixed capital, land value and household labour.

2.8 Turmeric during 2016-17

Sample holdings selected for the cost of cultivation study of turmeric is 726 which distributed among the three holding size classes and total area within the sample holding was 45.50 hectares.

Table 49: Area and Number of holdings under Turmeric cultivation

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to total area	Average area per holding (ha)
Small	665	23.80	52.31	0.04
Medium	53	14.30	31.43	0.27
Large	8	7.40	16.26	0.93
Total	726	45.50	100.00	0.06

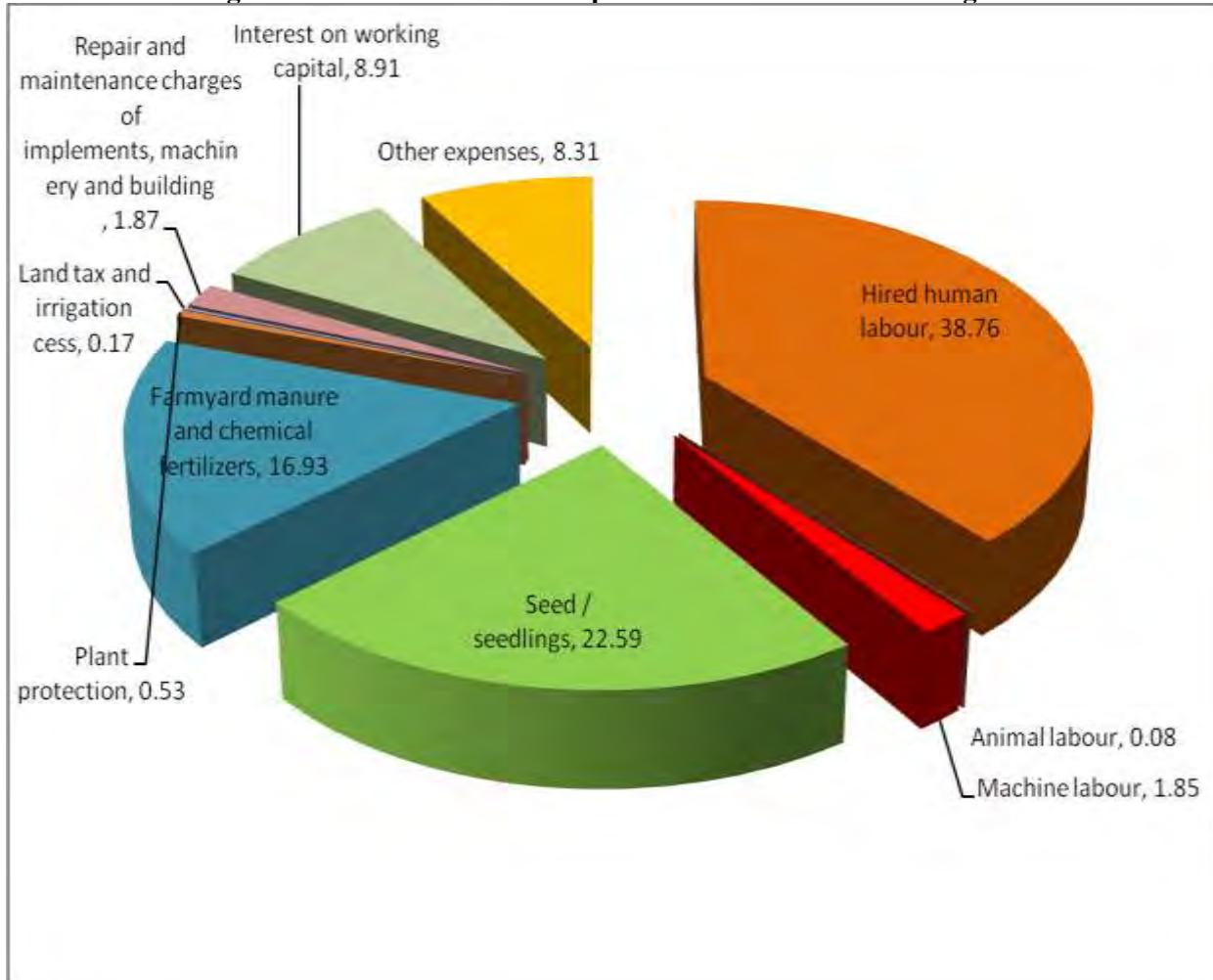
Cost of cultivation

The cash and other kind expenses incurred under Turmeric cultivation is estimated as Rs.120755/-per hectare. Out of this, 38.76% is for hired human labour, 22.59% for seed/seedlings and 16.93% for farmyard manure and fertilizer cost respectively.

Table 50: Cost of Cultivation per hectare (in Rs.) of Turmeric

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	36547	46666	80743	46802
2	Animal labour	0	0	641	102
3	Machine labour	425	1447	9737	2235
4	Seed / seedlings	23125	30445	34661	27280
5	Farmyard manure and chemical fertilizers	20805	16869	26348	20446
6	Plant protection	177	526	2351	635
7	Land tax and irrigation Cess	292	165	25	209
8	Repair and maintenance charges of implements, machinery and building	3712	958	32	2254
9	Interest on working capital	8806	10876	16905	10754
10	Other expenses	6985	12811	14572	10038
11	Total Cost „A“ (1+10)	100874	120763	186015	120755
12	Interest on fixed capital	16151	7376	6890	11899
13	Cost „B1“ (11+12)	117025	128139	192905	132654
14	Interest on land value	238052	158955	250312	215011
15	Cost „B“ (13+14)	355077	287094	443217	347665
16	Imputed value of household labour	69951	29856	7659	47334
17	Cost „C“ (15+16)	425028	316950	450876	394999

Percentage Distribution of “COST A” per hectare of Turmeric during 2016-17



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

Table 51: Percentage of Hired human labour hours to the total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	26.74	34.99	42.62	31.85
Female	13.58	35.78	48.44	26.07
Total	40.32	70.77	91.06	57.92

Table 52: Cost of cultivation of Turmeric per hectare (In Rs.) during 2014-15, 2015-16 & 2016-17

A comparative statement for 2014-15, 2015-2016 & 2016-17 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	85725	95509	125577	91467
	2015-16	50103	133095	148027	75031
	2016-17	100874	120763	186015	120755
Cost 'B'	2014-15	579838	336282	221536	471004
	2015-16	151591	278907	390089	197035
	2016-17	355077	287094	443217	347665
Cost 'C'	2014-15	598516	354480	225243	488701
	2015-16	179671	302453	416640	224065
	2016-17	425028	316950	450876	394999

In 2016-17 cost of cultivation of turmeric per hectare is increased when compared to previous years. The component wise analysis reveals that hired human labour cost is increased.

Output

The per hectare value of output received from turmeric cultivation is estimated as Rs 250017/- during the year 2016-17 and cost of cultivation is estimated as Rs 120755/- excluding Cost B and C

Table 53: Value of Out put per hectare (In Rs.) of Turmeric

Holding Size Class			
Small	Medium	Large	All Sizes
262961	249878	207785	250017

2.9 Pineapple during 2016-17

In the cost of cultivation study on pineapple 340 sample holdings were selected by covering area 390.70 hectares. Details of these holdings are given below

Table 54: Area and Number of holdings selected under Pineapple cultivation

Size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage to Total area	Area per holding (ha)
Small	120	6.20	1.59	0.05
Medium	93	35.90	9.19	0.39
Large	127	348.60	89.22	2.74
Total	340	390.70	100.00	1.15

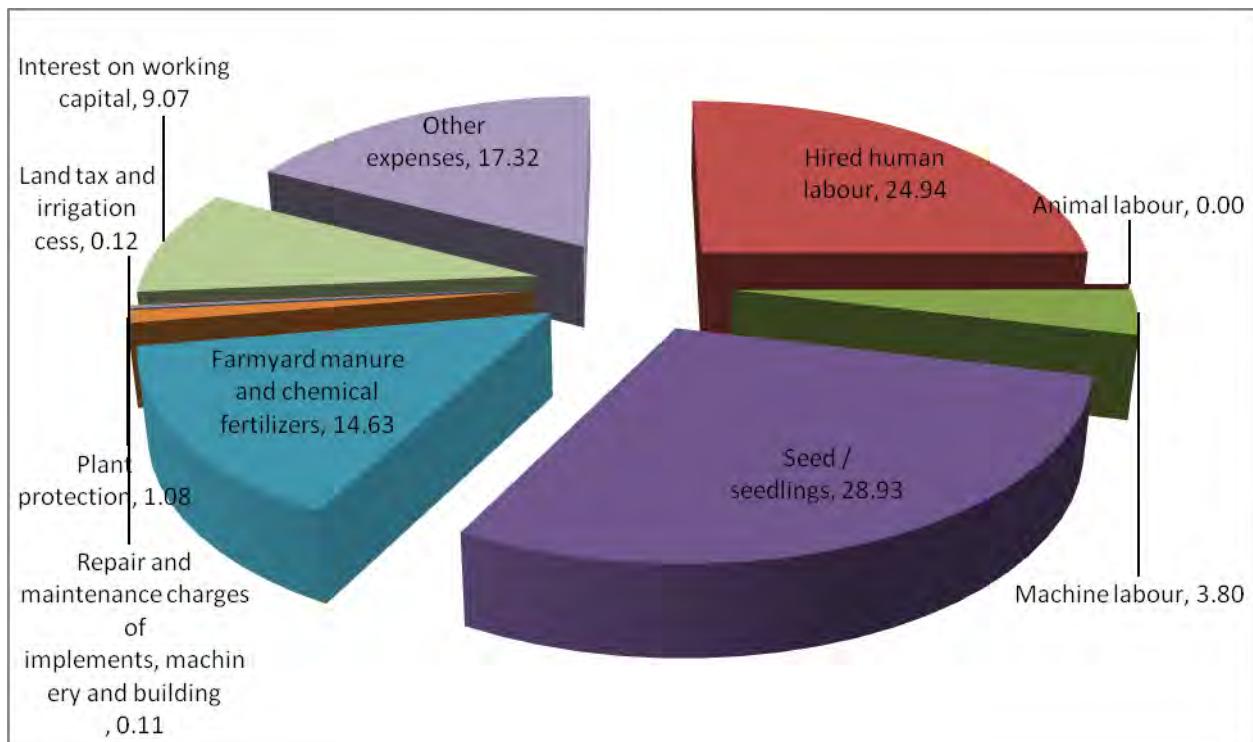
Cost of Cultivation

As in the case of other crops, cost of cultivation of pineapple is also calculated at different cost concepts such as cost ‘A’, Cost ‘B1’, ‘Cost ‘B’ and Cost ‘C’. When Cost A is considered, cost of cultivation per hectare of pineapple is Rs 212010/-

Table 55: The Cost of cultivation per hectare (in Rs.) of Pineapple

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	45806	67214	51526	52878
2	Animal labour	0	0	0	0
3	Machine labour	2425	6246	8358	8059
4	Seed / seedlings	56646	66295	60920	61343
5	Farmyard manure and chemical fertilizers	27953	41454	29999	31024
6	Plant protection	1738	6293	1895	2299
7	Land tax and irrigation Cess	310	2028	57	244
8	Repair and maintenance charges of implements, machinery and building	2277	526	167	236
9	Interest on working capital	14296	22661	18970	19230
10	Other expenses	8390	39106	37001	36697
11	Total Cost „A”(1-10)	159841	251823	208893	212010
12	Interest on fixed capital	11274	1281	530	787
13	Cost „B1”(11+12)	170005	253104	209423	212797
14	Interest on land value	158524	192999	201398	199872
15	Cost „B”(13+14)	329639	446103	410821	412669
16	Imputed value of household labour	38789	16648	6253	7783
17	Cost „C”(15+16)	369428	462751	417074	420452

Percentage Distribution of “COST A” per hectare of Pineapple during 2016-17



The hired human labour cost accounted as 24.94percent where as farmyard manure and chemical fertilizers cost as 14.63 percent of the total Cost ‘A’. Seed/seedling cost constitutes to 28.93% of the total cost ‘A’.

In Pineapple cultivation, female participation rate is higher than that of male.The percentage distributions of these facts are as follows

Table: 56 Percentage of hired human labour hours to the total human labour hours

Sex	Holding Size Class			
	Small	Medium	Large	All Sizes
Male	42.51	48.77	13.51	15.00
Female	12.17	30.41	83.01	80.61
Total	54.68	79.18	96.52	95.61

Table: 57 Cost of cultivation of Pineapple per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	507575	185169	91469	108638
	2015-16	141033	177168	253769	249952
	2016-17	159841	251843	208893	212010
Cost 'B'	2014-15	1991322	825754	394520	468379
	2015-16	346588	431720	480899	472621
	2016-17	329639	446103	410821	412669
Cost 'C'	2014-15	2084679	851393	401564	478923
	2015-16	373165	445581	487472	480423
	2016-17	368428	462751	417074	420452

Value of output

Table 58: Value of Output per hectare (In Rs.) of Pineapple

Holding Size Class			
Small	Medium	Large	All Sizes
315450	446914	407052	409141

During 2016-17 per hectare value of output from pineapple cultivation is estimated as Rs.409141/- and the cost of cultivating per hectare of pineapple is Rs.212010/-

2.10.1 Bitter Gourd- Autumn during 2016-17

For this study details of holding selected and area coverage are given below. The data collected from 373 sample holdings by covering 50.70 hectares and the average area per holding is 0.14 hectare.

Table 59 - Area and number of holdings under Bitter gourd Autumn

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	302	21.40	42.21	0.07
Medium	67	24.90	49.11	0.37
Large	4	4.40	8.68	1.10
Total	373	50.70	100.00	0.14

Cost of cultivation

When Cost A is considered about 51.82 percent of cost constitutes to hired human labour, Interest on working capital shares 8.30% and farmyard manure and chemical fertilizers accounts to 12.92%. Total cost for cultivating one hectare of Bittergourd in Autumn season is Rs.84721/-.

Table 60- Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Autumn)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	54209	36144	37506	43905
2	Animal labour	0	0	0	0
3	Machine labour	433	1294	4589	1219
4	Seed / seedlings	4327	5254	8428	5141
5	Farmyard manure and chemical fertilizers	13227	8835	11693	10943
6	Plant protection	1896	7028	14021	5471
7	Land tax and irrigation cess	4505	6631	7475	5820
8	Repair and maintenance charges of implements, machinery and building	2779	313	2259	1527
9	Interest on working capital	7741	6201	8271	7034
10	Other expenses	3313	3458	6470	3661
11	Total cost „A“ (110)	92430	75188	100712	84721
12	Interest on fixed capital	12087	3967	3166	7332
13	Cost „B1“ (11+12)	104517	79155	103878	92053
14	Interest on land value	157878	119833	117760	135744
15	Cost „B“ (13+14)	262395	198988	221638	227797
16	Imputed value of household labour	74941	39098	25895	53100
17	Cost „C“ (15+16)	337336	238086	247533	280897

Percentage Distribution of “COST A” per hectare of Bitter gourd (Autumn) during 2016-17

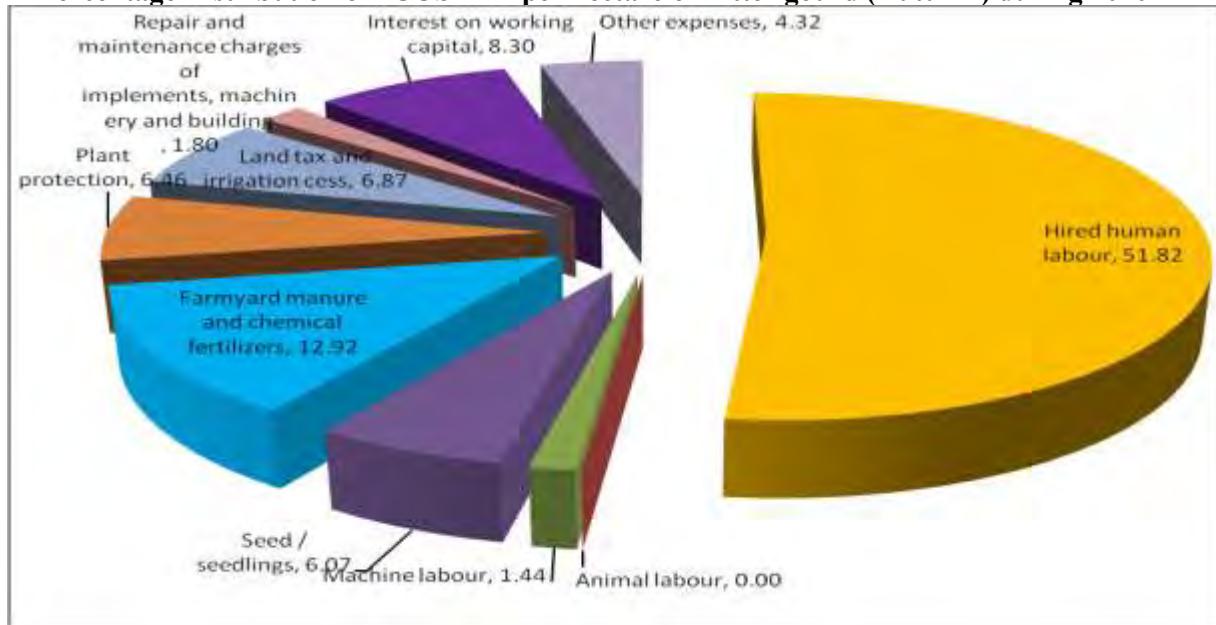


Table 61: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	35.36	32.07	45.47	34.57
Female	7.83	17.00	9.76	11.69
Total	43.19	49.07	55.24	46.27

In Bitter Gourd (Autumn) cultivation 11.69% of total labour hours shares to female participation of hired human labour hours.

Table: 62 Cost of cultivation of Bitter Gourd -Autumn per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost ‘A’	2014-15	122235	72125	79575	90258
	2015-16	36571	102237	72468	63607
	2016-17	92430	75188	100712	84721
Cost ‘B’	2014-15	692734	499731	448740	552003
	2015-16	107599	288156	167623	168694
	2016-17	262395	198988	221638	227797
Cost ‘C’	2014-15	717454	516555	465587	571431
	2015-16	136245	331392	177549	194206
	2016-17	337336	238086	247533	280897

Table: 63 Value of product and by-product per hectare (in Rs.) of Bitter Gourd - Autumn 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
267601	158272	312002	218006

Value of product per hectare of Bitter gourd in Autumn season is estimated as Rs.218006/- where as the cost of cultivation per hectre is Rs.84721/-.

2.10.2 Bitter Gourd -Winter during 2016-17

During 2016-17 Cost of cultivation study on Bitter gourd(Winter) season, 456 sample holdings by covering 47.40 hectare selected and the average area per holding covers to 0.10 hectare

Table 64 – Area and number of holdings under Bitter Gourd (Winter)

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Area per holding (ha)
Small	369	18.60	39.24	0.05
Medium	83	24.40	51.48	0.29
Large	4	4.40	9.28	1.10
Total	456	47.40	100.00	0.10

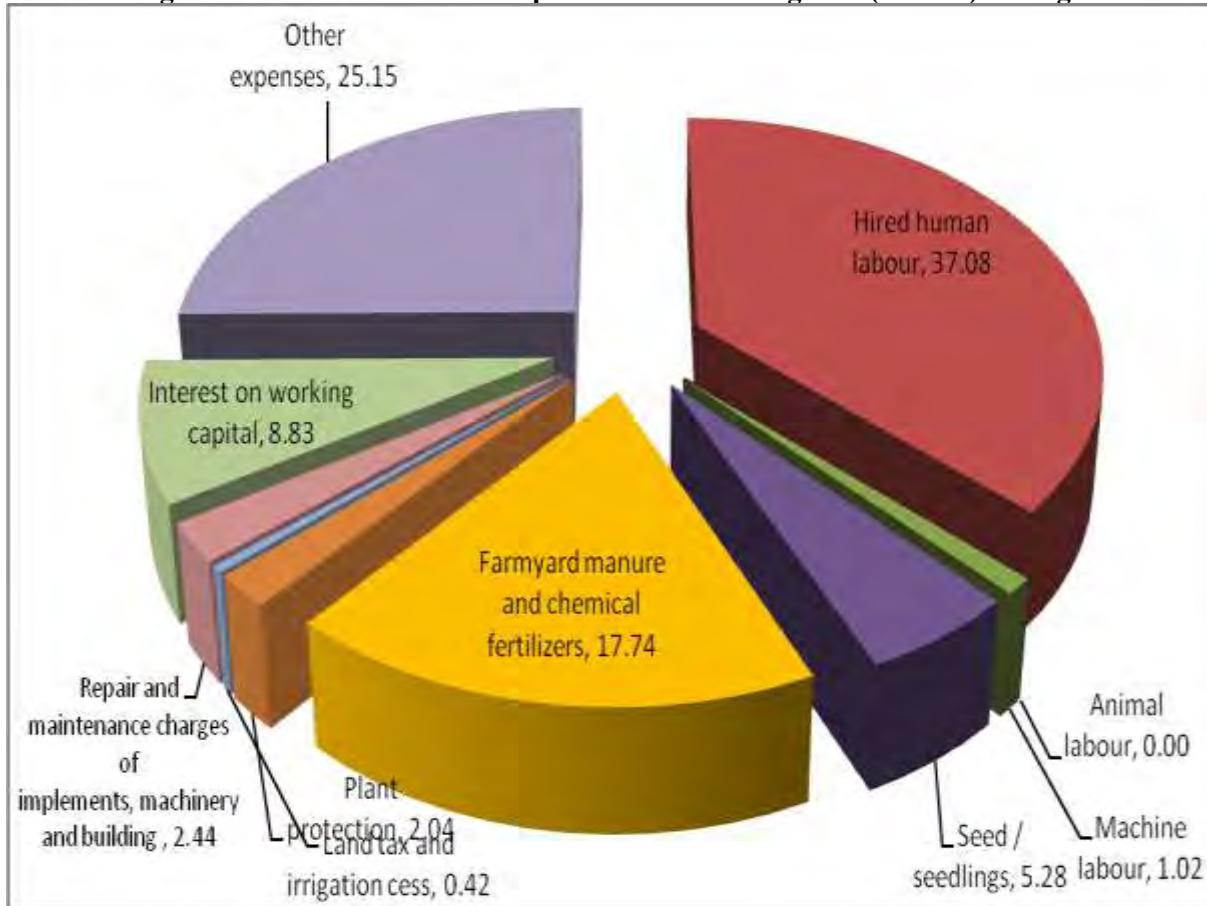
Cost of Cultivation

In CostA, the major share of the cost component was hired human labour. It constitutes 37.08%. Also farmyard manure and chemical fertilizers account 13.74%. Other expense account was 25.15%. By considering the various cost component of Bitter gourd (Winter) cultivation, per hectare cost calculated as Rs.130756/-

Table 65 – Cost of cultivation per hectare (in Rs.) of Bitter Gourd (Winter)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	57431	46232	22653	48485
2	Animal labour	0	0	0	0
3	Machine labour	598	1992	764	1330
4	Seed / seedlings	6607	7302	5975	6907
5	Farmyard manure and chemical fertilizers	28707	21426	9399	23194
6	Plant protection	2816	2314	3957	2662
7	Land tax and irrigation Cess	243	840	190	545
8	Repair and maintenance charges of implements, machinery and building	4991	2281	579	3193
9	Interest on working capital	13435	11013	6424	11547
10	Other expenses	38195	30861	21493	32893
11	Total Cost „A“(1-10)	153023	124261	71434	130756
12	Interest on fixed capital	19924	6394	3933	11499
13	Cost ‘B1’ (11+12)	172947	130655	75367	142255
14	Interest on land value	184531	143245	48199	150810
15	Cost „B“(13+14)	357478	273900	123566	293065
16	Imputed value of household labour	99373	45750	19153	64441
17	Cost „C“(15+16)	456851	319650	142719	357506

Percentage Distribution of “COST A” per hectare of Bittergourd (Winter) during 2016-17



Sex wise work participation percentage of hired human labours for Bitter gourd (Winter) cultivation shown below reveals that 10.31% of work shared by Female whereas percentage share to male workers is 33.19%.

Table 66 – Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	29.10	36.34	51.43	33.19
Female	6.60	15.43	2.36	10.31
Total	35.70	51.78	53.79	43.50

Table: 67 Cost of cultivation of Bitter Gourd -Winter per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	111080	87269	108917	98392
	2015-16	122771	120587	130773	122039
	2016-17	153023	124261	71434	130756
Cost 'B'	2014-15	569186	346072	437162	443154
	2015-16	346464	238920	378957	289102
	2016-17	357478	273900	123566	293065
Cost 'C'	2014-15	592507	357943	452992	459962
	2015-16	427606	279036	395247	343807
	2016-17	456851	319650	142719	357506

Output

Table: 68 - Value of Product and Byproduct per hectare (in Rs) of Bitter Gourd (Winter) 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
296698	209552	129956	236599

2.10.3 Bitter Gourd - Summer during 2016-17

For the cost of cultivation study on Bitter gourd (summer) during 2016-17 the total number of sample holdings selected was 290. The details of these holdings are presented below:

Table 69: Area and number of holdings under Bitter Gourd-(Summer)

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	250	13.60	52.51	0.05
Medium	38	10.70	41.31	0.28
Large	2	1.60	6.18	0.80
All Size	290	25.90	100.00	0.09

The total area under cultivation in the selected sample holdings covers 25.90 hectares and the average size of a holding is 0.09 hectare

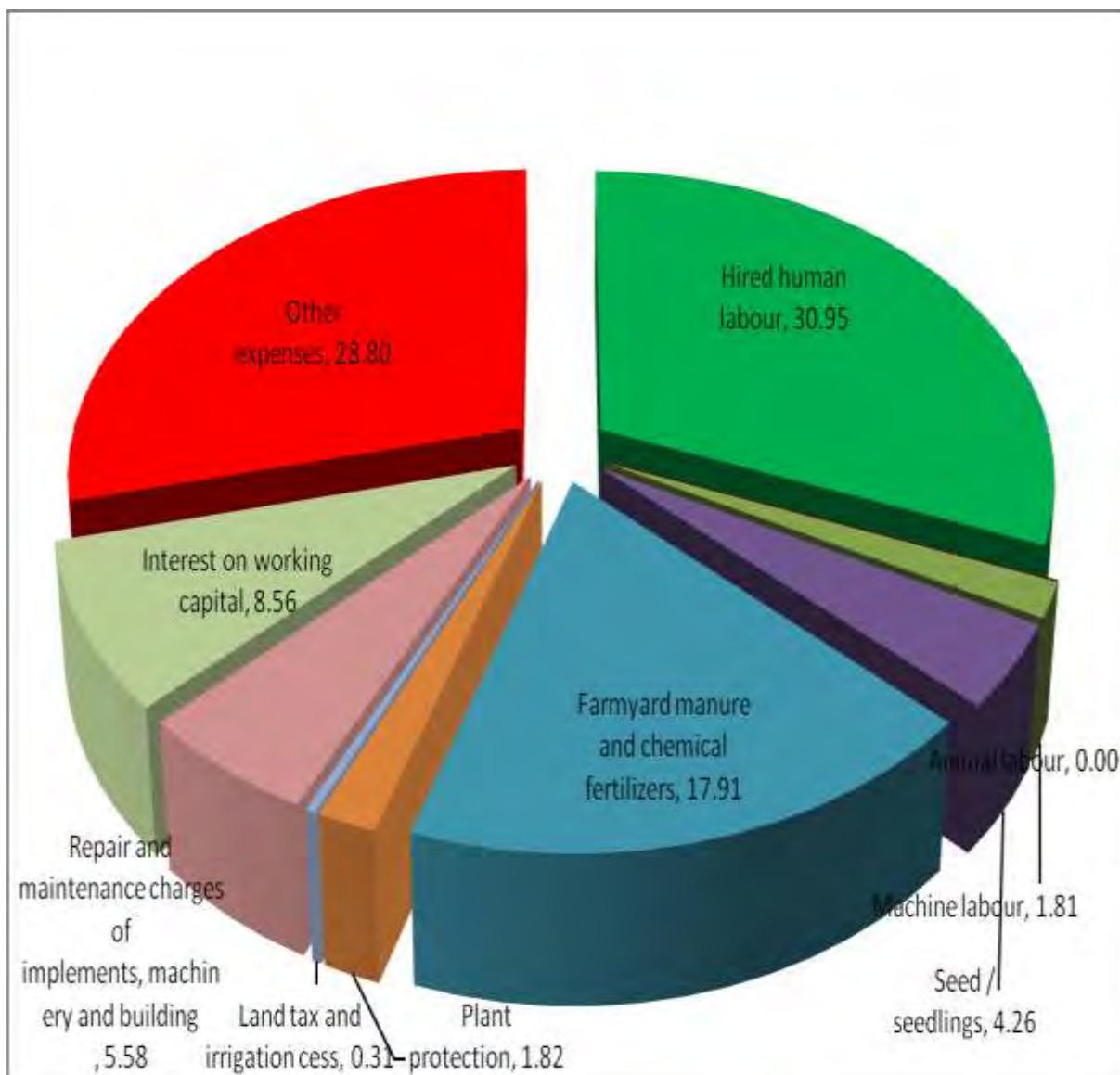
Cost of Cultivation

Cost of cultivation of Bitter gourd (Summer) per hectare is estimated as Rs.154825/- when cost ‘A’ is considered. Hired human labour gives a share of 30.95% and other expense gives 25.88%. Component wise holding size class details are presented below:

Table 70: Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Summer)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	54485	41718	32880	47922
2	Animal labour	0	0	0	0
3	Machine labour	1146	3578	12108	2808
4	Seed / seedlings	7081	6103	5745	6598
5	Farmyard manure and chemical fertilizers	29288	24570	35736	27731
6	Plant protection	2360	2853	6474	2811
7	Land tax and irrigation Cess	555	429	105	476
8	Repair and maintenance charges of implements, machinery and building	14745	1689	2742	8641
9	Interest on working capital	13564	12614	14788	13246
10	Other expenses	41279	47322	54939	44592
11	Total Cost „A“ (110)	164503	140876	165517	154825
12	Interest on fixed capital	17776	2662	4760	10762
13	Cost „B1“ (11+12)	182279	143538	170277	165587
14	Interest on land value	178130	122232	354343	165683
15	Cost „B“ (13+14)	360409	265770	524620	331270
16	Imputed value of household labour	97384	44443	25837	71255
17	Cost „C“ (15+16)	457793	310213	550457	402525

Percentage Distribution of “COST A” per hectare of Bitter gourd (Summer) during 2016-17



In Bitter gourd (Summer) cultivation male labour participation accounted as 25.88 % of the total labour hours. Details are given below:

Table 71: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	22.28	32.85	46.98	25.88
Female	4.75	14.53	10.92	7.62
Total	27.03	47.38	57.90	33.50

Table: 72 Cost of cultivation of Bitter Gourd -Summer per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	104141	101488	82013	100382
	2015-16	111674	153456	193324	136245
	2016-17	164503	140876	165517	154825
Cost 'B'	2014-15	584051	392025	274647	454471
	2015-16	271605	297088	390532	291955
	2016-17	360409	265770	524620	331270
Cost 'C'	2014-15	608523	409092	305551	475971
	2015-16	345753	347581	416332	352028
	2016-17	457793	310213	550457	402525

Table 73: Value of Product and by product per hectare (in Rs) of Bitter Gourd (Summer) during 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
286524	267920	251088	276723

2.11.1 Cowpea- Autumn during 2016-17

Sample of holding selected and area coverage for the study was 401 holdings by covering 44.20 hectares and the average area per holding was 0.11 hectare.

Table 74 - Area and number of holdings under Cowpea Autumn

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	341	25.80	58.37	0.08
Medium	57	17.60	39.82	0.31
Large	3	0.80	1.81	0.27
Total	401	44.20	100.00	0.11

Cost of cultivation

When Cost A is considered about 43.43 percent of cost constitutes to hired human labour, Machine labour cost shares 0.56% and farmyard manure and chemical fertilizers accounts to 18.48%. But the other expenses account a share of 22.06%.

Table 75- Cost of Cultivation per hectare (in Rs.) of Cowpea (Autumn)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	43871	53944	5313	47231
2	Animal labour	0	0	0	0
3	Machine labour	507	790	0	612
4	Seed / seedlings	2990	3817	1853	3302
5	Farmyard manure and chemical fertilizers	21202	19398	0	20097
6	Plant protection	2078	2146	2471	2112
7	Land tax and irrigation cess	135	634	0	333
8	Repair and maintenance charges of implements, machinery and building	1926	532	618	1341
9	Interest on working capital	9459	10505	1396	9735
10	Other expenses	23942	24956	4324	23998
11	Total cost „A“ (10)	106110	116722	15975	108761
12	Interest on fixed capital	9575	1651	301	6222
13	Cost „B1“ (11+12)	115685	118373	16276	114983
14	Interest on land value	148101	123342	74130	136817
15	Cost „B“ (13+14)	263786	241715	90406	251800
16	Imputed value of household labour	80191	50295	25364	67185
17	Cost „C“ (15+16)	343977	292010	115770	318985

Percentage Distribution of “COST A” per hectare of cowpea (Autumn) during 2016-17

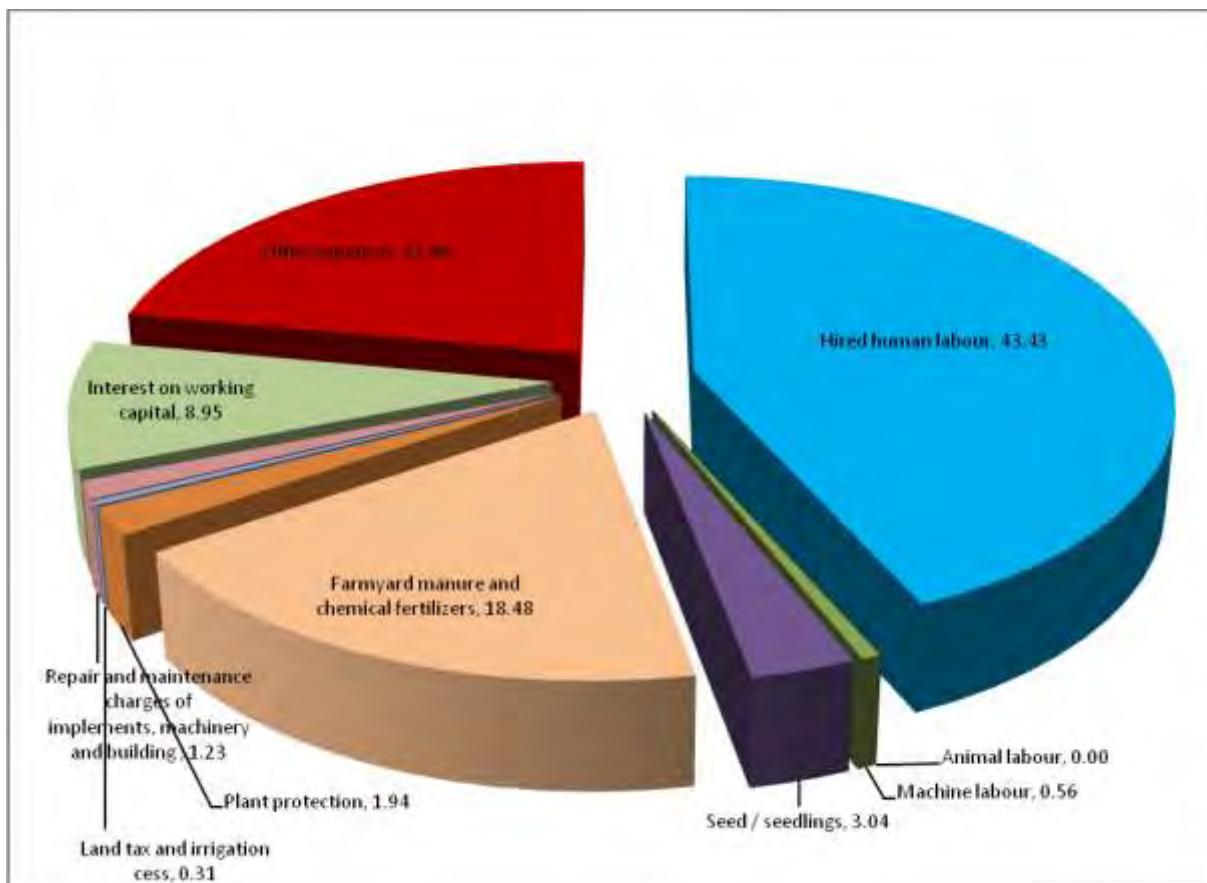


Table 76: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	31.17	35.61	5.22	32.78
Female	5.54	18.86	13.06	11.07
Total	36.71	54.47	18.28	43.85

In Cowpea (Autumn) cultivation 32.78% of total labour hours goes to males.

Table: 77 Cost of cultivation of Cowpea -Autumn per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	129609	140576	61845	115700
	2015-16	47980	125092	267435	77017
	2016-17	106110	116222	15975	108761

Cost 'B'	2014-15	920617	467017	224033	572241
	2015-16	133639	295855	497380	190921
	2016-17	263786	241715	90406	251800
Cost 'C'	2014-15	951216	408092	237974	598616
	2015-16	167192	349112	549568	230440
	2016-17	343977	292010	115770	318985

Table: 78 Value of product and by-product per hectare (in Rs.) of Cowpea-Autumn 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
254435	408407	91873	313444

2.11.2 Cowpea -Winter during 2016-17

During 2016-17 Cost of cultivation study on Cowpea (winter) was conducted in 491 holdings by covering 53.70 hectare of land. Details of these holdings are given below:

Table 79 – Area and number of holdings under Cowpea Winter

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Area per holding (ha)
Small	394	24.10	44.88	0.06
Medium	93	25.30	47.11	0.27
Large	4	4.30	8.01	1.08
Total	491	53.70	100.00	0.11

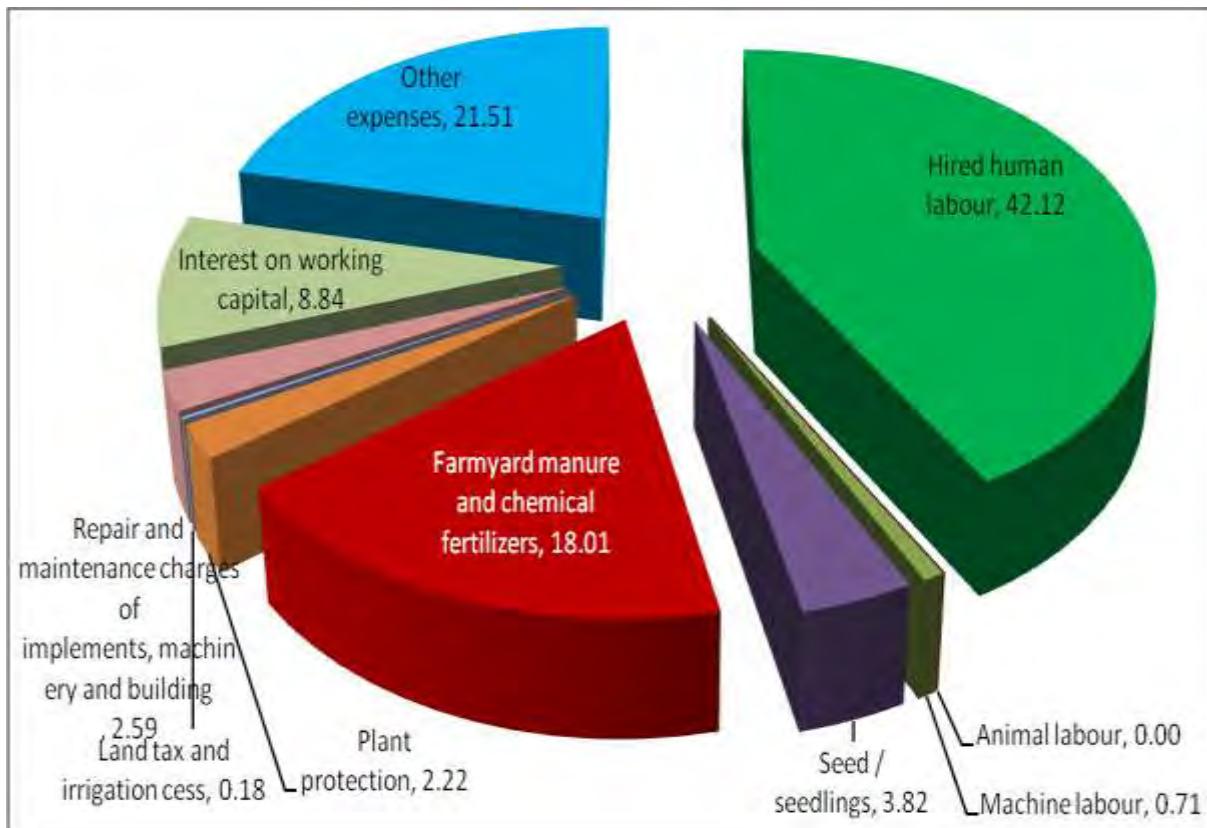
Cost of Cultivation

In Cost A, the major share of the cost component was hired human labour. It constitutes 42.12%. Another two major items were seed/seedlings and farmyard manure and chemical fertilizers which accounted 3.82% and 18.01% respectively. Interest on working capital was 8.84%. The share of other expenses contributes 21.51%. By considering the various cost component of Cowpea (Winter) cultivation per hectare cost calculated as Rs.119638/-.

Table 80– Cost of cultivation per hectare (in Rs.) of Cowpea (Winter)

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	47324	54632	42987	50393
2	Animal labour	0	0	0	0
3	Machine labour	337	1059	2505	848
4	Seed / seedlings	4815	4517	3509	4571
5	Farmyard manure and chemical fertilizers	23819	20979	11992	21544
6	Plant protection	2158	3289	1702	2650
7	Land tax and irrigation Cess	164	250	243	211
8	Repair and maintenance charges of implements, machinery and building	4667	2064	292	3100
9	Interest on working capital	10558	10942	8533	10575
10	Other expenses	27127	24943	22632	25746
11	Total Cost „A“ (1+10)	120969	122675	94395	119638
12	Interest on fixed capital	12515	5138	5901	8536
13	Cost ‘B1’ (11+12)	133484	127813	100296	128174
14	Interest on land value	187740	112262	73504	143295
15	Cost „B“ (13+14)	321224	240075	173800	271469
16	Imputed value of household labour	84842	48397	20369	62635
17	Cost „C“ (15+16)	406066	288472	194169	334104

Percentage Distribution of “COST A” per hectare of Cowpea (Winter) during 2016-17



Sex wise work participation in hired human labours for Cowpea (Winter) cultivation reveals that 5.04% of work shared by Female whereas 10.02% shared by male workers.

The following table reveals the percentage of hired human labours hours to total human labour hours.

Table 81 – Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	9.93	9.42	28.71	10.02
Female	2.53	6.01	37.57	5.04
Total	12.46	15.43	66.28	15.06

Table: 82 Cost of cultivation of Cowpea -Winter per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	96234	90747	129808	95899
	2015-16	113061	94862	181882	106713
	2016-17	120969	122675	94395	119638
Cost 'B'	2014-15	478959	350634	381067	405139
	2015-16	280580	225644	321148	253671
	2016-17	321224	240075	173800	271469
Cost 'C'	2014-15	511638	365644	411741	428511
	2015-16	354355	272786	346428	311244
	2016-17	406066	288472	194169	334104

Output

Table: 83 - Value of Product and Byproduct per hectare (in Rs) of Cowpea -Winter 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
263629	243535	242558	252546

2.11.3 Cowpea - Summer (Puncha) during 2016-17

For the cost of cultivation study on Cowpea (Summer) during 2016-17 the total number of holdings selected was 414. The details of these holdings are presented below

Table 84: Area and number of holdings under Cowpea -Summer

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	341	20.10	46.96	0.06
Medium	71	20.70	48.36	0.29
Large	2	2.00	4.67	1.00
Total	414	42.80	100	0.10

The total area under cultivation in the selected sample holdings covers to 42.80 hectares and the average size of a holding is 0.10 hectare.

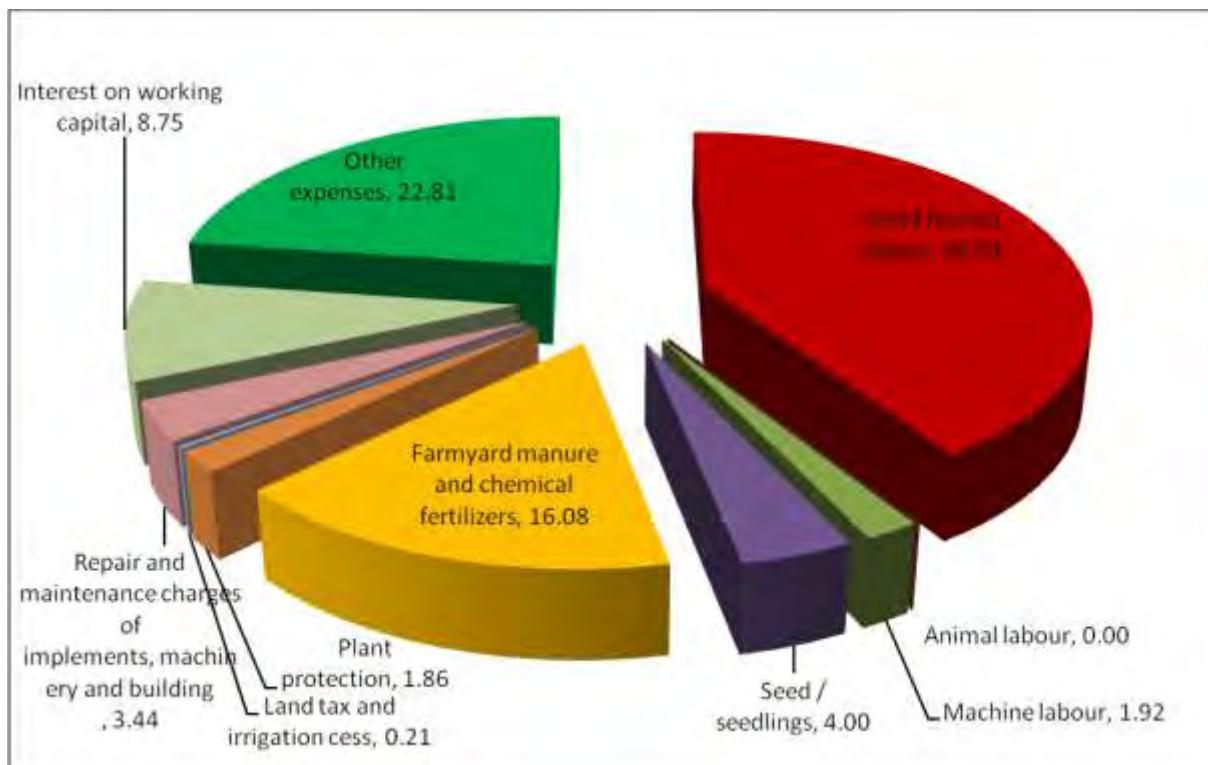
Cost of Cultivation

Cost of cultivation of Cowpea (summer) per hectare is estimated as Rs.131286/- when cost 'A' is considered. Cost incurred for hired human labour is 40.93% of the total cost and farmyard manure and chemical fertilizer is 16.08% of the total cost, but the other expenses share is 22.81%

Table 85: Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2016-2017

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	51780	56939	40178	53731
2	Animal labour	0	0	0	0
3	Machine labour	693	3662	9306	2519
4	Seed / seedlings	5330	5212	4942	5255
5	Farmyard manure and chemical fertilizers	22354	20144	18335	21105
6	Plant protection	2254	2550	3217	2441
7	Land tax and irrigation Cess	359	211	0	271
8	Repair and maintenance charges of implements, machinery and building	5788	3493	2313	4522
9	Interest on working capital	11477	11517	11547	11499
10	Other expenses	32362	26659	39492	29943
11	Total Cost „A“ (1+10)	132397	130387	129330	131286
12	Interest on fixed capital	12202	5313	2419	8433
13	Cost „B“ (11+12)	144599	135700	131749	139719
14	Interest on land value	172781	120251	31513	140978
15	Cost „B“ (13+14)	317380	255951	163262	280697
16	Imputed value of household labour	90753	52551	17038	68960
17	Cost „C“ (15+16)	408133	308502	180300	349657

Percentage Distribution of “COST A” per hectare of Cowpea (Summer) during 2016-17



In Cowpea summer cultivation hired female labour participation accounted as **35.66 %** of the total labour hours. Details are given below:

Table 86: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	17.19	32.76	39.02	22.94
Female	41.92	23.78	35.50	35.66
Total	59.11	56.54	74.52	58.60

Table 87: Cost of cultivation of Cowpea -Summer per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost ‘A’	2014-15	91299	89448	74452	89367
	2015-16	101427	127397	98685	111248
	2016-17	132397	130387	129330	131286
Cost ‘B’	2014-15	502602	413647	159498	436551
	2015-16	241091	287306	392100	272474
	2016-17	317380	255951	163262	280697

Cost 'C'	2014-15	526788	433940	184471	458752
	2015-16	321328	340537	432109	338656
	2016-17	408133	308502	180300	349657

Table 88: Value of Product and by product per hectare (in Rs) of Cowpea Summer during 2016-17

Holding Size Class			
Small	Medium	Large	All Sizes
279755	260705	242455	268868

2.12 Cardamom during 2016-17

Cardamom is cultivated widely in Idukki, Palakkad and Wayanad districts of the state.

Table 89: Area and Number of holdings under Cardamom cultivation

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	44	5.30	15.54	0.12
Medium	52	19.20	56.30	0.37
Large	9	9.60	28.15	1.07
Total	105	34.10	100.00	0.32

For the study 105 sample holdings were selected and the total area of crop in the selected area was 34.10 hectare. The average size per holding was 0.32 hectare.

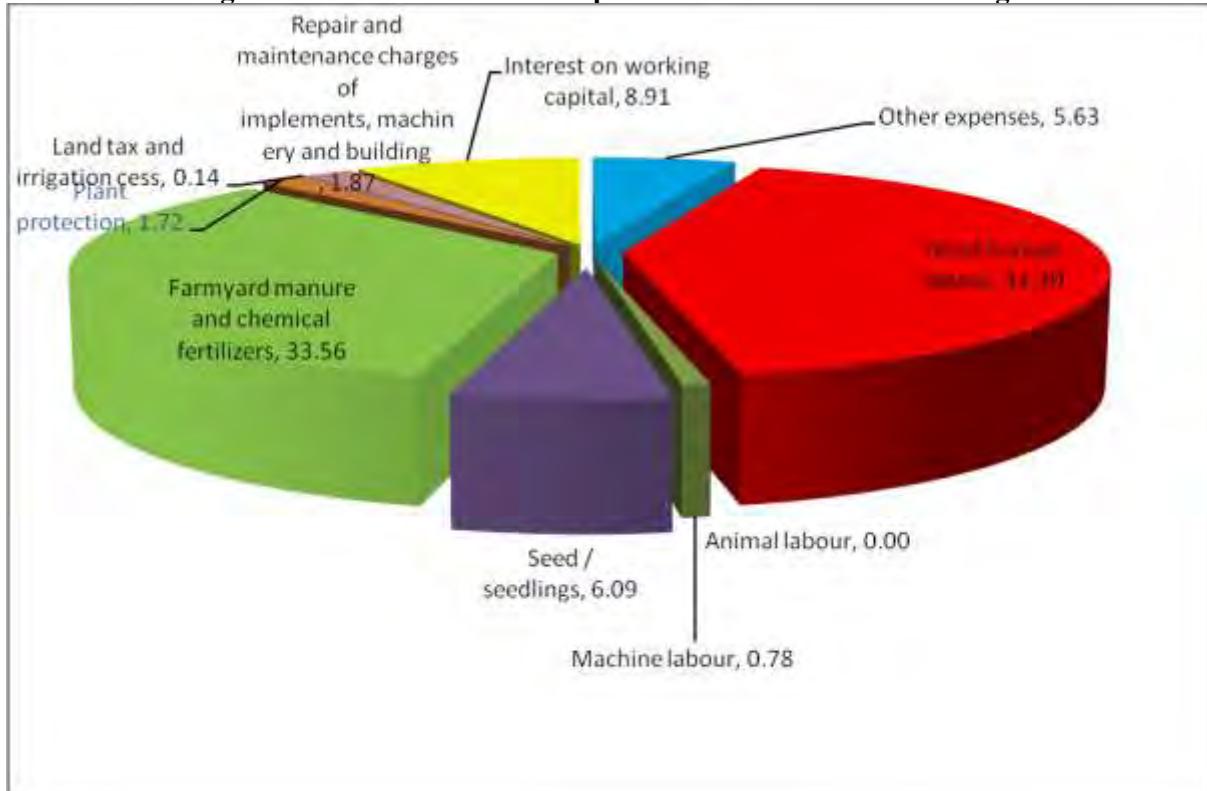
Cost of Cultivation

The different cost components of Cardamom cultivation is given below: Per hectare cost for cultivating cardamom is estimated as Rs 134526/- excluding interest on fixed capital, interest on land value and inputted value of household labour.

Table 90: Cost of Cultivation per hectare (in Rs.) of Cardamom

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	67430	50120	59722	55554
2	Animal labour	0	0	0	0
3	Machine labour	2089	1295	0	1055
4	Seed / seedlings	4784	1077	5146	8189
5	Farmyard manure and chemical fertilizers	47275	45398	43441	45142
6	Plant protection	2493	2524	1813	2319
7	Land tax and irrigation Cess	191	179	209	190
8	Repair and maintenance charges of implements, machinery and building	5566	1782	2268	2516
9	Interest on working capital	12774	11602	12301	11984
10	Other expenses	3669	6007	12888	7577
11	Total Cost „A“ (1+10)	146271	129584	137788	134526
12	Interest on fixed capital	10673	6569	2233	5994
13	Cost ‘B1’ (11+12)	156944	136153	140021	140520
14	Interest on land value	132415	96552	84414	98784
15	Cost „B“ (13+14)	289359	232705	224435	239304
16	Imputed value of household labour	36175	24348	10648	22351
17	Cost „C“ (15+16)	325534	257053	235083	261655

Percentage Distribution of “COST A” per hectare of Cardamom during 2016-17



When Cost A is considering, 41.30% comes under hired human labour and 33.56% in Farmyard manure and chemical fertilizers.

The following table illustrates the work participation of cardamom cultivation. It shows that percentage of hired human labour hours of females are very high and it is accounted as 59.05%.

Table 91: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	21.50	23.91	13.60	19.56
Female	46.01	47.07	79.03	59.05
Total	67.50	70.98	92.63	78.61

Table: 92 Cost of cultivation of Cardamom per hectare (in Rs) during 2014-15, 2015-16 & 2016-17

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2014-15	109423	114950	153244	130918
	2015-16	136993	98466	138363	115984
	2016-17	146271	129584	137788	134526
Cost 'B'	2014-15	616444	520430	372965	466350
	2015-16	253364	199407	210245	208470
	2016-17	289359	232705	224435	239304
Cost 'C'	2014-15	651008	535535	387889	483307
	2015-16	287471	222784	223946	229584
	2016-17	325534	257053	235083	261655

Value of Out put

Table 93: Value of Output per hectare (in Rs) of Cardamom

The estimated value of output per hectare is Rs.373933/-

Holding Size Class			
Small	Medium	Large	All Sizes
316221	385899	382413	373933

A1.1 District wise Area and number of holding under Autumn Paddy during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	21.70	4.83	.036
2	Kollam	55	26.70	5.94	.049
3	Pathanamthitta	27	10.90	2.43	.040
4	Alappuzha	71	64.80	14.42	.091
5	Kottayam	45	61.50	13.69	1.37
6	Idukki	30	8.20	1.83	0.27
7	Ernakulam	105	52.90	11.77	0.50
8	Thrissur	69	45.580	10.13	0.66
9	Palakkad	68	76.20	16.96	1.12
10	Malappuram	59	40.50	9.01	0.69
11	Kozhikode	43	7.70	1.71	0.18
12	Wayanad	0	0	0	0
13	Kannur	45	21.70	4.83	0.48
14	Kasaragod	30	11.00	2.45	0.37
	State	707	449.30	100	0.64

A1.2 District wise Area and number of holding under Winter Paddy during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	20.40	2.87	0.34
2	Kollam	71	29.70	4.19	0.42
3	Pathanamthitta	55	90.10	12.70	1.64
4	Alappuzha	90	96.90	13.66	1.08
5	Kottayam	45	36.10	5.09	0.80
6	Idulkki	45	12.50	1.76	0.28
7	Eranakulam	81	57.50	8.10	0.71
8	Thrissur	75	125.40	17.67	1.67
9	Palakkad	75	85.30	12.02	1.14
10	Malappuram	60	73.90	10.41	1.23
11	Kozhikkode	45	21.30	3.00	0.47
12	Wayanad	45	32.20	4.54	0.72
13	Kannur	45	15.20	2.14	0.34
14	Kasaragod	30	13.10	1.85	0.44
	State	822	709.60	100	0.86

A1.3 District wise Area and number of holding under Summer Paddy during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	26	8.50	1.37	0.33
2	Kollam	16	10.50	1.69	0.66
3	Pathanamthitta	60	39.80	6.40	0.66
4	Alappuzha	75	165.40	26.58	2.21
5	Kottayam	60	75.70	12.16	1.26
6	Idukki	35	5.00	0.80	0.14
7	Eranakulam	82	58.90	9.46	0.72
8	Thrissur	61	111.90	17.98	1.83
9	Palakkad	50	37.10	5.96	0.74
10	Malappuram	36	53.40	8.58	1.48
11	Kozhikkode	45	26.10	4.19	0.58
12	Wayanad	44	12.40	1.99	0.28
13	Kannur	16	4.10	0.66	0.26
14	Kasaragod	30	13.50	2.17	0.45
	State	636	622.30	100	0.98

A1.4 District wise Area and number of holding under Coconut during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	80	23.10	4.61	0.29
2	Kollam	100	21.10	4.21	0.21
3	Pathanamthitta	100	29.20	5.83	0.29
4	Alappuzha	120	45.80	9.14	0.38
5	Kottayam	100	34.30	6.85	0.34
6	Idulkki	80	27.60	5.51	0.35
7	Eranakulam	140	51.40	10.26	0.37
8	Thrissur	100	53.40	10.66	0.53
9	Palakkad	100	67.00	13.37	0.67
10	Malappuram	80	47.90	9.56	0.60
11	Kozhikkode	60	36.90	7.37	0.62
12	Wayanad	60	16.20	3.23	0.27
13	Kannur	60	22.30	4.45	0.37
14	Kasaragod	40	24.80	4.95	0.62
	State	1220	501.00	100	0.41

A1.5 District wise Area and number of holding under Arecanut during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	78	7.20	3.62	0.09
2	Kollam	100	5.30	2.66	0.05
3	Pathanamthitta	100	4.60	2.31	0.05
4	Alappuzha	120	4.40	2.21	0.04
5	Kottayam	100	4.00	2.01	0.04
6	Idukki	80	12.90	6.48	0.16
7	Eranakulam	140	18.00	9.04	0.13
8	Thrissur	100	13.10	6.58	0.13
9	Palakkad	100	28.9	14.52	0.29
10	Malappuram	80	36.90	18.53	0.46
11	Kozhikkode	60	6.00	3.01	0.10
12	Wayanad	60	26.60	13.36	0.44
13	Kannur	60	12.20	6.13	0.20
14	Kasaragod	40	19.00	9.54	0.48
	State	1218	199.10	100	0.16

A1.6 District wise Area and number of holding under Tapioca during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	9.40	6.09	0.16
2	Kollam	75	12.50	8.10	0.17
3	Pathanamthitta	75	10.40	6.74	0.14
4	Alappuzha	90	7.70	4.99	0.09
5	Kottayam	73	13.10	8.48	0.18
6	Idukki	60	11.10	7.19	0.19
7	Eranakulam	91	22.10	14.31	0.24
8	Thrissur	67	12.10	7.84	0.18
9	Palakkad	75	17.20	11.14	0.23
10	Malappuram	60	17.90	11.59	0.30
11	Kozhikkode	45	4.70	3.04	0.10
12	Wayanad	45	6.30	4.08	0.14
13	Kannur	36	5.30	3.43	0.15
14	Kasaragod	30	4.60	2.98	0.15
	State	882	154.40	100	0.18

A1.7 District wise Area and number of holding under Banana during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	13.90	6.25	0.23
2	Kollam	75	13.60	6.12	0.18
3	Pathanamthitta	75	29.10	13.10	0.39
4	Alappuzha	60	5.80	2.61	0.10
5	Kottayam	75	18.10	8.14	0.24
6	Idukki	60	14.60	6.57	0.24
7	Eranakulam	89	32.70	14.71	0.37
8	Thrissur	70	17.10	7.69	0.24
9	Palakkad	75	23.90	10.75	0.32
10	Malappuram	60	14.20	6.39	0.24
11	Kozhikkode	45	10.70	4.81	0.24
12	Wayanad	45	17.80	8.01	0.40
13	Kannur	42	5.40	2.43	0.13
14	Kasaragod	30	5.40	2.43	0.18
	State	861	222.30	100	0.26

A1.8 District wise Area and number of holding under Pepper during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	7.50	6.61	0.13
2	Kollam	75	6.00	5.29	0.08
3	Pathanamthitta	75	7.30	6.44	0.10
4	Alappuzha	90	2.90	2.56	0.03
5	Kottayam	75	8.50	7.50	0.11
6	Idukki	60	22.80	20.11	0.38
7	Eranakulam	105	8.80	7.76	0.08
8	Thrissur	75	5.70	5.03	0.08
9	Palakkad	75	9.70	8.55	0.13
10	Malappuram	60	8.70	7.67	0.15
11	Kozhikkode	45	2.10	1.85	0.05
12	Wayanad	45	14.90	13.14	0.33
13	Kannur	45	5.70	5.03	0.13
14	Kasaragod	30	2.80	2.47	0.09
	State	915	113.40	100	0.12

A1.9 District wise Area and number of holding under Ginger during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	3.20	4.57	0.05
2	Kollam	72	2.50	3.58	0.03
3	Pathanamthitta	75	4.90	7.01	0.07
4	Alappuzha	28	1.00	1.43	0.04
5	Kottayam	75	4.70	6.72	0.06
6	Idukki	60	7.70	11.02	0.13
7	Eranakulam	66	7.30	10.44	0.11
8	Thrissur	64	3.20	4.58	0.05
9	Palakkad	64	15.80	22.60	0.25
10	Malappuram	33	2.00	2.86	0.06
11	Kozhikkode	32	3.80	5.44	0.12
12	Wayanad	45	10.70	15.31	0.24
13	Kannur	31	2.30	3.29	0.07
14	Kasaragod	22	0.80	1.14	0.04
	State	727	69.90	100	0.10

A1.10 District wise Area and number of holding under Turmeric during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	52	1.60	3.52	0.03
2	Kollam	72	2.50	5.49	0.03
3	Pathanamthitta	64	2.80	6.15	0.04
4	Alappuzha	25	1.00	2.20	0.04
5	Kottayam	75	2.00	4.40	0.03
6	Idukki	57	4.10	9.01	0.07
7	Eranakulam	74	9.90	21.76	0.13
8	Thrissur	72	3.00	6.59	0.04
9	Palakkad	60	10.20	22.42	0.17
10	Malappuram	44	2.10	4.62	0.05
11	Kozhikkode	33	1.70	3.74	0.05
12	Wayanad	45	2.20	4.84	0.05
13	Kannur	27	1.30	2.86	0.05
14	Kasaragod	26	1.10	2.42	0.04
	State	726	45.50	100	0.06

**A1.11 District wise Area and number of holding
under Pineapple during 2016-17**

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	12	9.70	2.48	0.81
2	Kollam	31	5.00	1.28	0.16
3	Pathanamthitta	8	5.30	1.36	0.66
4	Alappuzha	15	0.40	0.10	0.03
5	Kottayam	71	70.00	17.92	0.99
6	Idukki	34	29.70	7.60	0.87
7	Eranakulam	67	106.60	27.28	1.59
8	Thrissur	23	67.20	17.20	2.92
9	Palakkad	13	26.20	6.71	2.02
10	Malappuram	17	4.30	1.10	0.25
11	Kozhikkode	7	7.50	1.92	1.07
12	Wayanad	6	3.90	1.00	0.65
13	Kannur	22	49.40	12.64	2.25
14	Kasaragod	14	5.50	1.41	0.39
	State	340	390.70	100	1.15

A1.12 District wise Area and number of holding under Bitter Gourd (Autumn) during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	40	4.30	8.48	0.11
2	Kollam	50	2.50	4.93	0.05
3	Pathanamthitta	29	1.10	2.17	0.04
4	Alappuzha	26	1.00	1.97	0.04
5	Kottayam	50	4.80	9.47	0.10
6	Idukki	0	0	0	0
7	Eranakulam	51	8.60	16.96	0.17
8	Thrissur	31	2.70	5.33	0.09
9	Palakkad	44	18.70	36.88	0.43
10	Malappuram	28	5.50	10.85	0.20
11	Kozhikode	0	0	0	0
12	Wayanad	0	0	0	0
13	Kannur	20	1.40	2.76	0.07
14	Kasaragod	4	0.10	0.20	0.03
	State	373	50.7	100	0.14

A1.13 District wise Area and number of holding under Bitter Gourd (Winter) during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	40	3.30	6.96	0.08
2	Kollam	50	2.10	4.43	0.04
3	Pathanamthitta	43	1.90	4.01	0.04
4	Alappuzha	34	1.70	3.59	0.05
5	Kottayam	50	5.20	10.97	0.10
6	Idukki	34	8.30	17.51	0.24
7	Eranakulam	40	2.50	5.27	0.06
8	Thrissur	32	3.80	8.02	0.12
9	Palakkad	38	7.30	15.40	0.19
10	Malappuram	17	2.10	4.43	0.12
11	Kozhikode	6	0.30	0.63	0.05
12	Wayanad	27	5.90	12.45	0.22
13	Kannur	28	2.40	5.06	0.09
14	Kasaragod	17	0.60	1.27	0.04
	State	456	47.40	100	0.10

A1.14 District wise Area and number of holding under Bitter Gourd (Summer) during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	31	2.50	9.65	0.08
2	Kollam	39	2.30	8.88	0.06
3	Pathanamthitta	24	0.90	3.47	0.04
4	Alappuzha	13	0.60	2.32	0.05
5	Kottayam	27	2	7.72	0.07
6	Idukki	0	0	0	0
7	Eranakulam	33	4.60	17.76	0.14
8	Thrissur	19	2.60	10.04	0.14
9	Palakkad	4	0.10	0.39	0.03
10	Malappuram	18	1.50	5.79	0.08
11	Kozhikode	21	1.90	7.34	0.09
12	Wayanad	26	2.50	9.65	0.10
13	Kannur	19	3.90	15.06	0.21
14	Kasaragod	16	0.50	1.93	0.03
	State	290	25.90	100	0.09

A1.15 District wise Area and number of holding under Cowpea (Autumn) during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	40	3.20	7.24	0.08
2	Kollam	50	3.40	7.69	0.07
3	Pathanamthitta	35	1.80	4.07	0.05
4	Alappuzha	45	2.90	6.56	0.06
5	Kottayam	50	6.30	14.25	0.13
6	Idukki	0	0	0	0
7	Eranakulam	50	4.10	9.28	0.08
8	Thrissur	33	3.20	7.24	0.10
9	Palakkad	42	13.80	31.22	0.33
10	Malappuram	29	4.10	9.28	0.14
11	Kozhikkode	2	0.04	0.90	0.02
12	Wayanad	0	0	0	0
13	Kannur	20	1.30	2.94	0.07
14	Kasaragod	5	0.10	0.23	0.02
	State	401	44.20	100	0.11

**A1.16 District wise Area and number of holding under Cowpea (Winter) during
2016-17**

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	40	3.50	6.52	.09
2	Kollam	50	2.60	4.84	0.05
3	Pathanamthitta	49	3.70	6.89	0.08
4	Alappuzha	49	2.80	5.21	0.06
5	Kottayam	50	8.10	15.08	0.16
6	Idukki	37	5.60	10.43	0.15
7	Eranakulam	39	4.70	8.75	0.12
8	Thrissur	35	3.80	7.08	0.11
9	Palakkad	35	7.30	13.59	0.21
10	Malappuram	22	3.20	5.96	0.15
11	Kozhikode	8	0.30	0.56	0.04
12	Wayanad	30	5.10	9.50	0.17
13	Kannur	30	2.10	3.91	0.07
14	Kasaragod	17	0.90	1.68	0.05
	State	491	53.70	100	0.11

**A1.17 District wise Area and number of holding under Cowpea (Summer) during
2016-17**

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	40	3060	8.40	0.09
2	Kollam	49	3.30	7.71	0.07
3	Pathanamthitta	38	2.30	5.37	0.06
4	Alappuzha	41	1.70	3.97	0.04
5	Kottayam	50	5.30	12.38	0.11
6	Idukki	0	0	0	0
7	Eranakulam	38	2.80	6.54	0.07
8	Thrissur	25	2.90	6.78	0.12
9	Palakkad	13	2.30	5.37	0.18
10	Malappuram	28	3.30	7.71	0.12
11	Kozhikode	21	1.70	3.97	0.08
12	Wayanad	30	8.40	19.62	0.28
13	Kannur	21	2.60	6.08	0.12
14	Kasaragod	20	2.60	6.08	0.13
	State	414	42.80	100	0.10

A1.18 District wise Area and number of holding under Cardamom during 2016-17

Sl No	District	No of selected holdings	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Idukki	57	22.30	65.40	0.39
2	Palakkad	3	0.70	2.05	0.23
3	Wayanad	45	11.10	32.55	0.93
	State	105	34.10	100	0.32

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2016-7

Sl No	Components	Thiruvannthapuram	Kollam	Pathanmthitta	Alappuzha	Kottayam
1	Hired human labour	48273	57172	37441	23868	15966
2	Animal labour	0	0	0	0	0
3	Machine labour	10439	11988	16353	6907	6162
4	Seed / seedlings	2306	2786	4333	4296	1739
5	Farmyard manure and chemical fertilizers	7302	9943	5757	8741	4359
6	Plant protection	437	366	430	286	277
7	Land tax and irrigation cess	30	329	213	776	20
8	Repair and maintenance charges of implements, machinery and building	254	1322	212	18	46
9	Interest on working capital	4001	4339	3467	2733	1789
10	Other expenses	11253	4523	5026	10571	7285
11	Total cost „A“ (110)	84295	92678	73232	58196	37643
12	Interest on fixed capital	201	772	82	122	63
13	Cost „B1“ (11+12)	84496	93540	73314	58318	37706
14	Interest on land value	80153	21049	34968	26979	48293
15	Cost „B“ (13+14)	164649	114589	108282	85297	85999
16	Imputed value of household labour	15470	7374	6676	4220	10802
17	Cost „C“ (15+16)	180119	121963	114958	89517	96801

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	20269	28189	14534	16188	18827
2	Animal labour	0	0	0	2885	0
3	Machine labour	10367	7075	12521	5188	10790
4	Seed / seedlings	2636	4243	1887	1903	2682
5	Farmyard manure and chemical fertilizers	3885	3933	5907	7324	4979
6	Plant protection	53	398	984	1046	746
7	Land tax and irrigation cess	71	127	128	212	62
8	Repair and maintenance charges of implements, machinery and building	551	553	56	1413	56
9	Interest on working capital	1948	2412	1977	1865	2316
10	Other expenses	1758	4409	3713	2853	8287
11	Total cost „A“ (1-10)	41538	51339	41707	40787	48745
12	Interest on fixed capital	289	739	366	756	143
13	Cost „B1“ (11+12)	41827	52078	42073	41543	48888
14	Interest on land value	54627	118132	40115	44809	48710
15	Cost „B“ (13+14)	96454	170210	82188	86352	97598
16	Imputed value of household labour	19692	7614	4921	4749	6765
17	Cost „C“ (15+16)	116146	177824	87109	91101	104363

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	31687	0	46145	33322	25474
2	Animal labour	1290	0	585	0	539
3	Machine labour	10039	0	7010	5433	8241
4	Seed / seedlings	1784	0	2070	1780	2717
5	Farmyard manure and chemical fertilizers	5730	0	6486	9979	6405
6	Plant protection	25	0	20	0	526
7	Land tax and irrigation cess	59	0	529	61	240
8	Repair and maintenance charges of implements, machinery and building	1057	0	365	217	472
9	Interest on working capital	2631	0	3185	2456	2481
10	Other expenses	2058	0	1385	407	5723
11	Total cost „A“ (110)	56360	0	67780	53745	52818
12	Interest on fixed capital	1495	0	3036	140	531
13	Cost „B1“ (11+12)	57855	0	70816	53885	53349
14	Interest on land value	64669	0	50214	35068	51808
15	Cost „B“ (13+14)	122524	0	121030	88953	105157
16	Imputed value of household labour	9373	0	10031	18371	7705
17	Cost „C“ (15+16)	131897	0	131061	107324	112862

A2.2 District wise Cost of Cultivation per hectare (in Rs.) of Winter Paddy during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	47341	46102	29428	22671	21452
2	Animal labour	2690	0	0	0	0
3	Machine labour	11629	11728	15695	9539	7719
4	Seed / seedlings	2874	3625	3648	4063	2329
5	Farmyard manure and chemical fertilizers	7821	17637	7405	5965	5194
6	Plant protection	636	386	3132	1535	1203
7	Land tax and irrigation cess	77	165	66	220	90
8	Repair and maintenance charges of implements, machinery and building	951	2358	73	34	139
9	Interest on working capital	4301	4098	3501	2519	2132
10	Other expenses	13022	2480	10713	6598	4736
11	Total cost „A“(1-10)	91342	88579	73661	53144	44994
12	Interest on fixed capital	2874	1389	104	103	180
13	Cost „B1“(11+12)	94216	89968	73765	53247	45174
14	Interest on land value	51882	24445	14493	36373	59007
15	Cost „B“(13+14)	146098	114413	88258	89620	104181
16	Imputed value of household labour	16112	10369	1920	4124	17755
17	Cost „C“(15+16)	162210	124782	90178	93744	121936

A2.2 District wise Cost of Cultivation per hectare (in Rs) of Winter Paddy during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	24233	20441	15123	18840	24427
2	Animal labour	1677	0	0	56	306
3	Machine labour	7228	11402	13908	9365	13802
4	Seed / seedlings	3447	2875	2931	1530	1965
5	Farmyard manure and chemical fertilizers	8359	5055	6471	5363	4808
6	Plant protection	248	810	1617	370	677
7	Land tax and irrigation cess	53	95	137	212	2338
8	Repair and maintenance charges of implements, machinery and building	306	769	70	69	380
9	Interest on working capital	2383	2340	2601	1996	2742
10	Other expenses	2470	6221	11960	4404	8848
11	Total cost „A“ (110)	50404	50008	54818	42205	60293
12	Interest on fixed capital	563	692	144	823	517
13	Cost „B1“ (11+12)	50961	50700	54962	43028	60810
14	Interest on land value	48086	184971	51945	40206	62518
15	Cost „B“ (13+14)	99053	235671	106907	83234	123328
16	Imputed value of household labour	27854	6652	2242	4818	8880
17	Cost „C“ (15+16)	126907	242323	109149	88052	132208

A2.2 District wise Cost of Cultivation per hectare (in Rs) of Winter Paddy during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	25822	41688	56861	30272	25234
2	Animal labour	994	121	105	0	183
3	Machine labour	10399	13018	6657	6149	11743
4	Seed / seedlings	2751	3025	2263	2059	2877
5	Farmyard manure and chemical fertilizers	3327	14486	12706	11543	7073
6	Plant protection	42	347	29	0	1190
7	Land tax and irrigation cess	609	597	180	44	404
8	Repair and maintenance charges of implements, machinery and building	293	2488	4586	2249	538
9	Interest on working capital	2362	3979	3977	2569	2793
10	Other expenses	3911	6894	917	1349	7565
11	Total cost „A“ (1+10)	50510	86643	88281	56234	59600
12	Interest on fixed capital	816	3953	2581	4410	763
13	Cost „B1“ (11+12)	51326	90596	90862	60644	60363
14	Interest on land value	66665	37729	57592	35514	54298
15	Cost „B“ (13+14)	117991	128325	148454	96158	114661
16	Imputed value of household labour	7080	8690	11355	16275	6693
17	Cost „C“ (15+16)	125071	137015	159809	112433	121354

A2.3 District wise Cost of Cultivation per hectare (in Rs.) of Summer Paddy during 2016-17

Sl No	Components	Thiruvannthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	44770	43524	37795	14602	28492
2	Animal labour	0	0	0	0	0
3	Machine labour	8360	6201	16679	8043	6996
4	Seed / seedlings	2380	3738	4055	4187	1988
5	Farmyard manure and chemical fertilizers	7525	28938	6984	4557	4651
6	Plant protection	522	764	1682	1300	2013
7	Land tax and irrigation cess	61	519	713	185	174
8	Repair and maintenance charges of implements, machinery and building	214	1686	175	36	165
9	Interest on working capital	3941	4343	3622	1885	2494
10	Other expenses	15266	3703	5238	5011	5738
11	Total cost „A“(1-10)	83039	93416	76943	39806	52711
12	Interest on fixed capital	5230	689	104	53	64
13	Cost „B1“(11+12)	88269	94105	77047	39859	52775
14	Interest on land value	44233	16081	16191	18399	50804
15	Cost „B“(13+14)	132502	110186	93238	81223	103579
16	Imputed value of household labour	14697	7488	5075	5075	8854
17	Cost „C“(15+16)	147199	117674	98313	86298	112433

A2.3 District wise Cost of Cultivation per hectare (in Rs) of Summer Paddy during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	30185	19820	14391	14140	25638
2	Animal labour	0	0	0	0	0
3	Machine labour	4251	10402	13178	11419	16570
4	Seed / seedlings	5047	2748	2798	1864	2269
5	Farmyard manure and chemical fertilizers	10892	8297	7099	6589	6467
6	Plant protection	369	427	1612	662	981
7	Land tax and irrigation cess	126	964	213	174	1212
8	Repair and maintenance charges of implements, machinery and building	1723	556	23	406	160
9	Interest on working capital	2644	2505	2426	1891	3173
10	Other expenses	2145	8397	9447	3142	11528
11	Total cost „A“ (110)	57382	54116	51187	40287	67998
12	Interest on fixed capital	772	619	138	2275	643
13	Cost „B1“ (11+12)	58184	54735	51325	42562	68641
14	Interest on land value	47290	152103	25850	55615	46620
15	Cost „B“ (13+14)	105444	206838	77175	98177	115261
16	Imputed value of household labour	45876	6391	2393	7843	6325
17	Cost „C“ (15+16)	151320	213229	79568	106020	121586

A2.3 District wise Cost of Cultivation per hectare (in Rs) of Summer Paddy during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	21666	50421	58615	37964	22006
2	Animal labour	0	0	0	0	0
3	Machine labour	11469	16944	5281	6585	10762
4	Seed / seedlings	1966	3712	2309	2308	3040
5	Farmyard manure and chemical fertilizers	8412	24480	17059	8613	7061
6	Plant protection	271	1653	40	0	1218
7	Land tax and irrigation cess	39	469	137	94	385
8	Repair and maintenance charges of implements, machinery and building	176	4218	475	1451	308
9	Interest on working capital	2464	5333	4252	2848	2544
10	Other expenses	5499	9440	1737	1485	6785
11	Total cost „A“ (1+10)	51962	116670	89905	61348	54109
12	Interest on fixed capital	409	4100	538	3568	575
13	Cost „B1“ (11+12)	52371	120770	90443	64916	54684
14	Interest on land value	44657	66305	42204	38626	44061
15	Cost „B“ (13+14)	97028	187075	132647	103542	98745
16	Imputed value of household labour	6103	16616	9247	17878	5794
17	Cost „C“ (15+16)	103131	203691	141894	121420	104539

A2.4 District wise Cost of Cultivation per hectare (in Rs.) of Coconut during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	74278	61708	36760	41233	38585
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	380	0
4	Seed / seedlings	644	387	1429	467	2068
5	Farmyard manure and chemical fertilizers	7469	36023	7145	9771	16215
6	Plant protection	0	205	65	0	407
7	Land tax and irrigation cess	131	649	234	169	202
8	Repair and maintenance charges of implements, machinery and building	164	4968	785	289	201
9	Interest on working capital	8564	10233	4886	5336	6045
10	Other expenses	3250	4002	3459	1505	3171
11	Total cost „A“(1-10)	94500	118175	54763	59150	66894
12	Interest on fixed capital	3373	6820	257	458	331
13	Cost „B“(11+12)	97773	124995	55020	59608	67225
14	Interest on land value	317856	449663	464733	345449	276740
15	Cost „C“(13+14)	415729	574658	519763	405057	343965
16	Imputed value of household labour	21404	18037	4036	8127	11589
17	Cost „C“(15+16)	437133	592695	523789	413184	355554

A 2.4 District wise Cost of Cultivation per hectare (in Rs) of Coconut during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	31990	24441	41148	31036	67266
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	796	1784
4	Seed / seedlings	0	619	82	0	2438
5	Farmyard manure and chemical fertilizers	12799	7198	14029	11665	21188
6	Plant protection	179	85	129	0	0
7	Land tax and irrigation cess	72	229	231	298	424
8	Repair and maintenance charges of implements, machinery and building	291	436	137	226	557
9	Interest on working capital	4825	4036	5822	4455	9423
10	Other expenses	3285	8018	2829	1052	1552
11	Total cost „A“ (110)	53441	45062	64407	49528	104632
12	Interest on fixed capital	246	1386	1907	6883	4305
13	Cost „B1“ (11+12)	53687	46448	66314	56411	108937
14	Interest on land value	138544	662331	418410	183584	248718
15	Cost „B“ (13+14)	192231	708779	484724	239995	357655
16	Imputed value of household labour	13562	9307	4586	7135	12583
17	Cost „C“ (15+16)	205793	718086	489310	247130	370238

A 2.4 District wise Cost of Cultivation per hectare (in Rs) of coconut during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	27749	43447	38073	39404	40918
2	Animal labour	293	0	0	0	22
3	Machine labour	242	407	0	176	351
4	Seed / seedlings	362	742	0	0	669
5	Farmyard manure and chemical fertilizers	10969	40312	17442	30522	15212
6	Plant protection	19	114	0	0	78
7	Land tax and irrigation cess	75	378	180	510	260
8	Repair and maintenance charges of implements, machinery and building	107	1715	200	1194	594
9	Interest on working capital	4124	9148	5690	7175	6019
10	Other expenses	1609	6460	1387	1647	2939
11	Total cost „A“ (110)	45549	102723	62972	80628	67062
12	Interest on fixed capital	980	15748	10156	8707	3679
13	Cost „B1“ (11+12)	46529	118471	73128	89335	70741
14	Interest on land value	185344	187405	224807	124210	315430
15	Cost „B“ (13+14)	231873	305876	297935	213545	386171
16	Imputed value of household labour	4550	10832	8555	18173	9838
17	Cost „C“ (15+16)	236423	316708	306490	231718	396009

A 2.5 District wise Cost of Cultivation per hectare (in Rs.) of Arecanut during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	42149	33530	34625	10167	49082
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	34	123	305	185	15733
5	Farmyard manure and chemical fertilizers	8695	11017	6050	4635	21036
6	Plant protection	0	0	0	0	0
7	Land tax and irrigation cess	57	437	271	226	395
8	Repair and maintenance charges of implements, machinery and building	316	7268	3298	998	1142
9	Interest on working capital	5319	4555	4188	1620	8868
10	Other expenses	2310	882	895	1214	2831
11	Total cost „A“(1-10)	58880	57812	49632	19045	99087
12	Interest on fixed capital	1223	10665	1177	1618	1314
13	Cost „B1“(11+12)	60103	68477	50809	20663	100401
14	Interest on land value	223108	178282	314853	255885	441559
15	Cost „B“(13+14)	283211	246759	365662	276548	542360
16	Imputed value of household labour	17589	14039	10656	26230	38998
17	Cost „C“(15+16)	300800	260798	376318	302778	581358

A 2.5 District wise Cost of Cultivation per hectare (in Rs) of Arecanut during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	19220	13379	60995	29459	44174
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	1424	792
4	Seed / seedlings	58	0	207	0	198
5	Farmyard manure and chemical fertilizers	6941	4848	17709	18906	21228
6	Plant protection	0	0	0	1418	764
7	Land tax and irrigation cess	12	230	225	214	1224
8	Repair and maintenance charges of implements, machinery and building	173	507	443	440	308
9	Interest on working capital	2726	2425	8111	5575	6880
10	Other expenses	1045	6025	2199	4541	1646
11	Total cost „A“ (1+10)	30175	27414	89889	61977	77214
12	Interest on fixed capital	439	1414	9294	12193	7011
13	Cost „B1“ (11+12)	30614	28828	99183	74170	84225
14	Interest on land value	99236	531227	295727	93297	326026
15	Cost „B“ (13+14)	129850	560655	394910	167467	410251
16	Imputed value of household labour	18793	15557	16761	10716	15603
17	Cost „C“ (15+16)	148643	575612	411671	178183	425854

A 2.5 District wise Cost of Cultivation per hectare (in Rs) of Arecanut during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	37418	44548	33989	43735	36698
2	Animal labour	0	0	0	0	0
3	Machine labour	147	299	0	609	454
4	Seed / seedlings	835	112	0	0	433
5	Farmyard manure and chemical fertilizers	12058	23039	17157	89991	23072
6	Plant protection	57	685	0	946	529
7	Land tax and irrigation cess	155	346	199	1433	526
8	Repair and maintenance charges of implements, machinery and building	335	1182	414	1705	892
9	Interest on working capital	5173	7439	5292	13719	6420
10	Other expenses	1218	5709	1777	1904	3017
11	Total cost „A“ (110)	57396	83359	58828	154042	72041
12	Interest on fixed capital	402	8507	18371	13423	7781
13	Cost „B1“ (11+12)	57798	91866	77199	167285	79822
14	Interest on land value	182539	144590	218785	130255	233356
15	Cost „B“ (13+14)	240337	236456	295984	297540	313178
16	Imputed value of household labour	13313	7500	11540	24307	15243
17	Cost „C“ (15+16)	253650	243956	307524	321847	328421

A 2.6 District wise Cost of Cultivation per hectare (in Rs.) of Tapioca during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	107084	66076	56058	62559	49475
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	176	404
4	Seed / seedlings	3045	1916	2147	8410	4731
5	Farmyard manure and chemical fertilizers	12723	21236	10268	28180	29984
6	Plant protection	24	68	0	90	0
7	Land tax and irrigation cess	47	314	162	192	176
8	Repair and maintenance charges of implements, machinery and building	198	4804	1393	853	341
9	Interest on working capital	13904	9213	7932	10847	9439
10	Other expenses	16163	2836	10847	9059	9794
11	Total cost „A“(1-10)	153188	106463	88807	120366	104344
12	Interest on fixed capital	682	6944	474	1456	534
13	Cost „B1“(11+12)	153870	113407	89281	121822	104878
14	Interest on land value	211038	210717	261823	248358	343763
15	Cost „B“(13+14)	364908	324124	351104	370180	448641
16	Imputed value of household labour	58038	22058	25151	59298	41718
17	Cost „C“(15+16)	422946	346182	376255	429478	490359

A 2.6 District wise Cost of Cultivation per hectare (in Rs) of Tapioca during 2016-17

S1 No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	22320	31304	71175	47292	40755
2	Animal labour	0	0	0	0	0
3	Machine labour	0	3051	1535	6905	2651
4	Seed / seedlings	2381	11227	7537	4049	2506
5	Farmyard manure and chemical fertilizers	17118	19334	13474	15396	21190
6	Plant protection	65	134	659	726	483
7	Land tax and irrigation cess	50	438	129	195	261
8	Repair and maintenance charges of implements, machinery and building	1048	240	267	351	712
9	Interest on working capital	4392	8308	10828	8445	7727
10	Other expenses	2037	18026	13902	10080	9689
11	Total cost „A“ (10)	49411	92062	119506	93439	85974
12	Interest on fixed capital	596	352	6441	6585	7069
13	Cost „B1“ (11+12)	50007	92414	125947	100024	93043
14	Interest on land value	107039	316093	251709	93810	214205
15	Cost „B“ (13+14)	157046	408507	377656	193834	307248
16	Imputed value of household labour	43732	28111	12581	29738	31013
17	Cost „C“ (15+16)	200778	436618	390237	223572	338261

A 2.6 District wise Cost of Cultivation per hectare (in Rs) of Tapioca during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	46199	50053	44220	23905	50285
2	Animal labour	0	0	0	0	0
3	Machine labour	685	2398	0	1571	1841
4	Seed / seedlings	3942	5316	24606	4136	5723
5	Farmyard manure and chemical fertilizers	10483	3858	22476	16872	18099
6	Plant protection	222	231	0	0	240
7	Land tax and irrigation cess	132	380	218	87	221
8	Repair and maintenance charges of implements, machinery and building	494	2611	0	1798	992
9	Interest on working capital	6814	6813	9271	4982	8608
10	Other expenses	6609	6277	1411	3338	9890
11	Total cost „A“ (11)	75580	77937	102202	56689	95899
12	Interest on fixed capital	252	4881	210	12766	3500
13	Cost „B1“ (11+12)	75832	82818	102412	69455	99399
14	Interest on land value	157433	96865	144817	105933	213793
15	Cost „B“ (13+14)	233265	179683	247229	175388	313192
16	Imputed value of household labour	25318	26557	26658	43209	32630
17	Cost „C“ (15+16)	258583	206240	273887	218597	345822

A2.7 District wise Cost of Cultivation per hectare (in Rs.) of Banana during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	111652	135766	73280	84997	51337
2	Animal labour	0	0	0	505	0
3	Machine labour	0	0	0	505	2332
4	Seed / seedlings	20511	26228	24266	28179	19119
5	Farmyard manure and chemical fertilizers	41744	49939	20656	59660	36577
6	Plant protection	46	318	437	611	916
7	Land tax and irrigation cess	45	264	111	225	167
8	Repair and maintenance charges of implements, machinery and building	156	5619	435	845	335
9	Interest on working capital	19621	21677	12872	21721	12230
10	Other expenses	22255	4515	10077	42749	12020
11	Total cost „A”(1-10)	216030	244326	142134	239997	135033
12	Interest on fixed capital	1942	6674	157	1535	332
13	Cost „B1”(11+12)	217972	251000	142291	241532	135365
14	Interest on land value	193940	183798	332193	201362	204873
15	Cost „B”(13+14)	411912	434798	474484	442894	340238
16	Imputed value of household labour	56030	34923	20223	74210	30988
17	Cost „C”(15+16)	467942	469721	494707	517104	371226

A 2.7 District wise Cost of Cultivation per hectare (in Rs) of Banana during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	32936	43944	99679	66263	85631
2	Animal labour	0	0	0	0	0
3	Machine labour	0	3938	3161	3921	5607
4	Seed / seedlings	17009	20454	30173	17204	47575
5	Farmyard manure and chemical fertilizers	23523	26911	48830	40420	62856
6	Plant protection	864	647	3590	2265	1335
7	Land tax and irrigation cess	65	81	172	207	1593
8	Repair and maintenance charges of implements, machinery and building	859	235	594	383	1272
9	Interest on working capital	8253	12947	27663	14513	26802
10	Other expenses	8197	33577	91192	15054	65012
11	Total cost „A“ (10)	91706	142734	305034	160230	297683
12	Interest on fixed capital	1612	1255	6466	9709	14388
13	Cost „B1“ (11+12)	93318	143989	311520	169939	312071
14	Interest on land value	124979	349574	303094	103940	350009
15	Cost „B“ (13+14)	218297	493563	614614	273879	662080
16	Imputed value of household labour	61735	44345	25951	38267	73226
17	Cost „C“ (15+16)	280032	537908	640565	312146	735306

A 2.7 District wise Cost of Cultivation per hectare (in Rs) of Banana during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	62986	86512	93512	47137	73597
2	Animal labour	0	0	0	0	13
3	Machine labour	5951	1081	0	2423	2237
4	Seed / seedlings	26574	19693	23606	21323	23645
5	Farmyard manure and chemical fertilizers	35209	22084	35303	71464	36606
6	Plant protection	1005	2446	0	0	1171
7	Land tax and irrigation cess	5310	209	218	97	489
8	Repair and maintenance charges of implements, machinery and building	705	1475	733	3058	964
9	Interest on working capital	16412	15456	17912	15536	16497
10	Other expenses	32395	22740	26697	13010	27702
11	Total cost „A“ (10)	186547	171696	197981	174048	182921
12	Interest on fixed capital	944	3448	44142	17806	5223
13	Cost „B1“ (11+12)	187491	175144	242123	191854	188144
14	Interest on land value	121937	99041	183637	115107	226105
15	Cost „B“ (13+14)	309428	274185	425760	306961	414249
16	Imputed value of household labour	43698	27448	26344	86402	41159
17	Cost „C“ (15+16)	353126	301633	452104	393363	455408

A 2.8 District wise Cost of Cultivation per hectare (in Rs.) of Pepper during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	82324	49780	51946	31155	40787
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	194	132	450	293	1484
5	Farmyard manure and chemical fertilizers	6271	23411	6234	18398	21218
6	Plant protection	0	0	0	0	199
7	Land tax and irrigation cess	161	310	207	291	238
8	Repair and maintenance charges of implements, machinery and building	158	8149	1762	1482	487
9	Interest on working capital	9219	7531	6362	5460	6640
10	Other expenses	3403	1983	4988	4756	2712
11	Total cost ,A"(1-10)	101730	91296	71949	61835	73765
12	Interest on fixed capital	5883	11274	640	2259	534
13	Cost ,B1"(11+12)	107613	102570	72589	64094	74299
14	Interest on land value	340545	138434	241455	213765	249458
15	Cost ,B"(13+14)	448158	241003	314044	277859	323757
16	Imputed value of household labour	30708	16941	13994	95227	41566
17	Cost ,C"(15+16)	478866	257944	328038	373086	365323

A2.8 District wise Cost of Cultivation per hectare (in Rs) of pepper during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	27002	72514	60864	39656	35180
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	500	0
4	Seed / seedlings	11072	100	568	0	831
5	Farmyard manure and chemical fertilizers	12214	13739	14379	7787	12386
6	Plant protection	0	636	703	338	816
7	Land tax and irrigation cess	342	119	282	160	187
8	Repair and maintenance charges of implements, machinery and building	369	581	244	553	243
9	Interest on working capital	5218	9033	7948	4915	5067
10	Other expenses	1896	3340	2967	866	1452
11	Total cost „A“ (1+10)	58113	10062	87955	54775	56162
12	Interest on fixed capital	590	3106	10512	21732	4685
13	Cost „B1“ (11+12)	58703	103168	98467	76507	60847
14	Interest on land value	112290	504032	346474	115952	192747
15	Cost „B“ (13+14)	170993	607200	444941	192459	253594
16	Imputed value of household labour	16964	40197	24937	19502	26349
17	Cost „C“ (15+16)	187957	647397	469878	211961	279943

A2.8 District wise Cost of Cultivation per hectare (in Rs) of Pepper during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	47905	46813	57367	33266	46279
2	Animal labour	0	0	0	0	0
3	Machine labour	0	738	0	376	149
4	Seed / seedlings	590	5772	0	0	3245
5	Farmyard manure and chemical fertilizers	14067	22961	33931	39237	15967
6	Plant protection	68	1402	0	0	377
7	Land tax and irrigation cess	125	402	216	429	262
8	Repair and maintenance charges of implements, machinery and building	738	1372	517	6519	1209
9	Interest on working capital	6485	8210	9231	7453	6868
10	Other expenses	2221	4413	1014	1649	2663
11	Total cost „A“ (110)	72199	92083	102276	88929	77019
12	Interest on fixed capital	383	7026	41027	42747	8313
13	Cost „B1“ (11+12)	72582	99109	143303	131676	85332
14	Interest on land value	102023	206351	166642	97388	214825
15	Cost „B“ (13+14)	244605	305460	309945	229064	300157
16	Imputed value of household labour	32375	12091	15086	23726	24410
17	Cost „C“ (15+16)	276980	317551	325031	252790	324567

A 2.9 District wise Cost of Cultivation per hectare (in Rs.) of Ginger during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	151260	76901	56369	74314	47232
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	72412	57802	60995	34828	39455
5	Farmyard manure and chemical fertilizers	22082	45406	12036	34568	21601
6	Plant protection	37	278	270	0	52
7	Land tax and irrigation cess	65	332	194	162	244
8	Repair and maintenance charges of implements, machinery and building	420	18492	1516	3153	1076
9	Interest on working capital	26369	18800	13881	14625	12150
10	Other expenses	17895	7608	9136	2540	13160
11	Total cost ,A"(1-10)	290540	225619	154397	164190	134970
12	Interest on fixed capital	1080	23328	883	1876	1378
13	Cost ,B1"(11+12)	291620	248947	155280	166066	136348
14	Interest on land value	218186	215526	285770	283566	246421
15	Cost ,B"(13+14)	509806	464473	441050	449632	382769
16	Imputed value of household labour	102866	62574	29622	100131	60852
17	Cost ,C"(15+16)	612672	527047	470672	549763	443621

A2.9 District wise Cost of Cultivation per hectare (in Rs) of Ginger during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	17651	45395	67768	134213	49064
2	Animal labour	0	0	0	0	0
3	Machine labour	0	4480	5567	13121	440
4	Seed / seedlings	66684	53833	28391	58637	13307
5	Farmyard manure and chemical fertilizers	27652	19119	18496	33994	22074
6	Plant protection	1353	915	941	4336	168
7	Land tax and irrigation cess	236	54	152	177	839
8	Repair and maintenance charges of implements, machinery and building	973	816	416	375	2071
9	Interest on working capital	11639	14507	13168	27283	8670
10	Other expenses	3046	21326	10516	28526	1646
11	Total cost „A“ (10)	129234	160445	145415	300662	98279
12	Interest on fixed capital	3688	4756	2547	4939	5902
13	Cost „B1“ (11+12)	132922	165201	147962	305601	104181
14	Interest on land value	138265	253837	298499	87499	214220
15	Cost „B“ (13+14)	271187	419038	446461	393100	318401
16	Imputed value of household labour	66005	32909	29216	26334	53444
17	Cost „C“ (15+16)	337192	451947	475677	419434	371845

A2.9 District wise Cost of Cultivation per hectare (in Rs) of Ginger during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	81394	135178	76162	21230	87076
2	Animal labour	0	0	0	0	0
3	Machine labour	9905	5678	5485	3361	5312
4	Seed / seedlings	49066	145955	41340	49439	67447
5	Farmyard manure and chemical fertilizers	19762	85315	25349	37137	34923
6	Plant protection	300	3084	0	0	1786
7	Land tax and irrigation cess	51	260	279	136	203
8	Repair and maintenance charges of implements, machinery and building	459	1832	426	1050	1589
9	Interest on working capital	16571	39592	15136	11499	21228
10	Other expenses	5279	20712	3025	3821	15732
11	Total cost „A“ (110)	182787	437606	167202	127673	235296
12	Interest on fixed capital	145	4623	77117	2658	6654
13	Cost „B1“ (11+12)	182932	442229	244319	130331	241950
14	Interest on land value	149166	108499	180388	122501	172171
15	Cost „B“ (13+14)	332098	550728	424707	252832	414121
16	Imputed value of household labour	52046	26601	32059	83253	43063
17	Cost „C“ (15+16)	384144	577329	456766	336085	457184

A 2.10 District wise Cost of Cultivation per hectare (in Rs.) of Turmeric during 2016-17

Sl No	Components	Thiruvanan thapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	22140	58605	51804	95820	43599
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	18484	19842	11407	11627	34560
5	Farmyard manure and chemical fertilizers	21102	14178	11686	27646	17154
6	Plant protection	0	380	414	0	0
7	Land tax and irrigation cess	164	288	184	130	328
8	Repair and maintenance charges of implements, machinery and building	1562	9622	3411	1300	1349
9	Interest on working capital	8570	9559	8863	14578	10672
10	Other expenses	23972	2581	13321	10689	11410
11	Total cost „A“(1-10)	95994	115055	101090	161790	119072
12	Interest on fixed capital	2004	14036	1251	1922	2517
13	Cost „B1“(11+12)	97998	129091	102341	163712	121589
14	Interest on land value	285061	179436	192879	190633	314917
15	Cost „B“(13+14)	383059	308527	295220	354345	436506
16	Imputed value of household labour	134102	55565	40311	67606	115950
17	Cost „C“(15+16)	517161	364092	335531	421951	552456

A2.10 District wise Cost of Cultivation per hectare (in Rs) of Turmeric during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	37489	33173	62253	94891	68654
2	Animal labour	0	0	0	461	0
3	Machine labour	0	0	0	8208	3265
4	Seed / seedlings	34916	32261	18686	30720	16562
5	Farmyard manure and chemical fertilizers	16533	19141	10586	21185	37568
6	Plant protection	58	0	496	2408	0
7	Land tax and irrigation cess	47	100	143	170	1082
8	Repair and maintenance charges of implements, machinery and building	1430	559	507	1781	3054
9	Interest on working capital	9398	10085	9699	16895	12937
10	Other expenses	4983	16275	4971	11074	3320
11	Total cost „A“ (110)	104854	111594	107341	187793	146442
12	Interest on fixed capital	793	3033	2472	11120	30208
13	Cost „B1“ (11+12)	105647	114627	109813	198913	176650
14	Interest on land value	131625	382817	292177	67877	313503
15	Cost „B“ (13+14)	237272	497444	401990	266790	490153
16	Imputed value of household labour	74554	21915	30704	27218	65221
17	Cost „C“ (15+16)	311826	519359	432694	294008	555374

A2.10 District wise Cost of Cultivation per hectare (in Rs) of Turmeric during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	38500	63226	76107	11084	46802
2	Animal labour	0	0	0	0	102
3	Machine labour	0	445	6365	2118	2235
4	Seed / seedlings	28747	30745	20584	38945	27280
5	Farmyard manure and chemical fertilizers	26834	30009	32837	24361	20446
6	Plant protection	0	0	0	602	635
7	Land tax and irrigation cess	74	446	156	184	209
8	Repair and maintenance charges of implements, machinery and building	552	7435	1572	4563	2254
9	Interest on working capital	9713	12898	13634	8743	10754
10	Other expenses	3046	4559	449	10323	10038
11	Total cost „A“ (110)	107466	149763	151704	100923	120755
12	Interest on fixed capital	377	31132	110675	55250	11899
13	Cost „B1“ (11+12)	107843	180895	262379	156173	132654
14	Interest on land value	174060	145252	166165	126874	215011
15	Cost „B“ (13+14)	281903	326147	428544	283047	347665
16	Imputed value of household labour	32035	60707	40547	98412	47334
17	Cost „C“ (15+16)	313938	386854	469091	381459	394999

A 2.11 District wise Cost of Cultivation per hectare (in Rs.) of Pineapple during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	119537	83982	27138	11651	46607
2	Animal labour	0	0	0	0	0
3	Machine labour	15112	0	0	0	0
4	Seed / seedlings	74242	59640	21737	39980	31018
5	Farmyard manure and chemical fertilizers	36616	39630	6960	254	38446
6	Plant protection	653	79	0	0	4644
7	Land tax and irrigation cess	10	274	53	397	44
8	Repair and maintenance charges of implements, machinery and building	306	4559	69	0	96
9	Interest on working capital	26158	18621	7140	5568	14865
10	Other expenses	15418	2880	15566	3793	27931
11	Total cost ,A"(1-10)	288052	209665	78663	61643	163651
12	Interest on fixed capital	1019	4546	102	1328	249
13	Cost ,B1"(11+12)	289071	214211	78765	62971	163900
14	Interest on land value	160227	91563	125611	152901	159886
15	Cost ,B"(13+14)	449298	305774	204376	215872	323786
16	Imputed value of household labour	30071	9023	5290	35494	9895
17	Cost ,C"(15+16)	479369	314797	209666	251366	333681

A2.11 District wise Cost of Cultivation per hectare (in Rs) of Pine apple during 2016-17

S1 No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	27756	58501	72096	35716	53258
2	Animal labour	0	0	0	0	0
3	Machine labour	0	13777	8465	9143	0
4	Seed / seedlings	83004	90719	80324	41462	9249
5	Farmyard manure and chemical fertilizers	34092	42945	28630	15346	7834
6	Plant protection	0	3336	1822	2355	549
7	Land tax and irrigation cess	69	689	76	234	4
8	Repair and maintenance charges of implements, machinery and building	177	46	11	1268	1079
9	Interest on working capital	15488	29865	21194	12630	9143
10	Other expenses	10029	89372	20600	22281	20538
11	Total cost „A“ (1+10)	170615	329250	233218	140435	101654
12	Interest on fixed capital	153	498	845	3736	2138
13	Cost „B1“ (11+12)	170768	329748	234063	144171	103792
14	Interest on land value	119354	370187	150547	117648	105015
15	Cost „B“ (13+14)	290122	699935	384610	261819	208807
16	Imputed value of household labour	9590	10147	2043	8950	7698
17	Cost „C“ (15+16)	299712	710082	386653	270769	216505

A2.11 District wise Cost of Cultivation per hectare (in Rs) of pineapple during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	41385	32592	38760	46626	52878
2	Animal labour	0	0	0	0	0
3	Machine labour	1866	19118	12493	4121	8059
4	Seed / seedlings	51568	76996	13158	36370	61343
5	Farmyard manure and chemical fertilizers	23027	17319	11594	16167	31024
6	Plant protection	635	2959	113	633	2299
7	Land tax and irrigation cess	0	73	54	106	244
8	Repair and maintenance charges of implements, machinery and building	62	2347	0	117	236
9	Interest on working capital	13633	17231	7887	10545	19230
10	Other expenses	17853	23324	2750	1528	36697
11	Total cost „A“ (1+10)	150029	191959	86809	116213	212010
12	Interest on fixed capital	62	1212	12	5126	787
13	Cost „B1“ (11+12)	150091	193171	86821	121339	212797
14	Interest on land value	134758	62706	120516	72576	199872
15	Cost „B“ (13+14)	284849	255877	207337	193915	412669
16	Imputed value of household labour	4334	8466	1343	11375	7783
17	Cost „C“ (15+16)	289183	264343	208680	205290	420452

**A 2.12 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Autumn) during
2016-17**

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	82835	144247	27913	57853	55473
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	2989	3917	10621	6825	9895
5	Farmyard manure and chemical fertilizers	22241	27892	7930	32350	12901
6	Plant protection	1949	857	3112	0	756
7	Land tax and irrigation cess	9437	5253	2319	6005	4044
8	Repair and maintenance charges of implements, machinery and building	652	12505	1941	3854	1553
9	Interest on working capital	11451	18162	6098	10164	8069
10	Other expenses	4494	4709	11407	4614	1665
11	Total cost „A“(1-10)	136048	217542	71341	121665	94356
12	Interest on fixed capital	3403	15179	776	2042	16803
13	Cost „B1“(11+12)	139451	232721	72117	123707	111159
14	Interest on land value	176844	95133	140033	284734	136012
15	Cost „B“(13+14)	316295	327854	212150	408441	247171
16	Imputed value of household labour	168007	78944	72364	157572	95802
17	Cost „C“(15+16)	484302	406798	284514	566013	342973

**A2.12 District wise Cost of Cultivation per hectare (in Rs) of bitter gourd(Autumn) during
2016-17**

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappura m
1	Hired human labour	0	51957	44328	18143	28576
2	Animal labour	0	0	0	0	0
3	Machine labour	0	637	0	2713	1031
4	Seed / seedlings	0	3545	4851	5433	3554
5	Farmyard manure and chemical fertilizers	0	5206	12672	7018	8951
6	Plant protection	0	22543	2085	3309	0
7	Land tax and irrigation cess	0	3413	5665	5616	10181
8	Repair and maintenance charges of implements, machinery and building	0	450	1132	846	247
9	Interest on working capital	0	8858	6580	3996	4547
10	Other expenses	0	4692	1867	3341	3358
11	Total cost „A“ (1+10)	0	101301	79180	50415	60445
12	Interest on fixed capital	0	2039	15600	5183	1633
13	Cost „B1“ (11+12)	0	103340	94780	55598	62078
14	Interest on land value	0	287533	170733	44060	144955
15	Cost „B“ (13+14)	0	390873	265513	99658	207033
16	Imputed value of household labour	0	27689	35824	17015	64265
17	Cost „C“ (15+16)	0	418562	301337	116673	271298

**A2.12 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Autumn)during
2016-17**

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	0	0	52212	33937	43905
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	4236	1219
4	Seed / seedlings	0	0	5169	4448	5141
5	Farmyard manure and chemical fertilizers	0	0	15629	16040	10943
6	Plant protection	0	0	0	0	5471
7	Land tax and irrigation cess	0	0	4967	2245	5820
8	Repair and maintenance charges of implements, machinery and building	0	0	3490	1130	1527
9	Interest on working capital	0	0	7527	5870	7034
10	Other expenses	0	0	2262	35	3661
11	Total cost „A“ (1+10)	0	0	91256	67941	84721
12	Interest on fixed capital	0	0	48897	3142	7332
13	Cost „B1“ (11+12)	0	0	140153	71083	92053
14	Interest on land value	0	0	147358	110943	135744
15	Cost „B“ (13+14)	0	0	287511	182027	227797
16	Imputed value of household labour	0	0	26036	97484	53100
17	Cost „C“ (15+16)	0	0	313547	279511	280897

A 2.13 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Winter) during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamtitta	Alappuzha	Kottayam
1	Hired human labour	101314	114489	32186	57499	68374
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	438	0
4	Seed / seedlings	3995	4729	9655	11027	4273
5	Farmyard manure and chemical fertilizers	52346	45637	10531	45133	13582
6	Plant protection	5930	2115	1760	3577	1653
7	Land tax and irrigation cess	117	305	123	226	147
8	Repair and maintenance charges of implements, machinery and building	446	11533	2501	734	1362
9	Interest on working capital	25212	19875	9843	17023	11029
10	Other expenses	88538	31776	44302	52559	22407
11	Total cost „A“(1-10)	277898	230459	110901	188216	122827
12	Interest on fixed capital	7032	20825	1198	2971	2031
13	Cost „B“(11+12)	284930	251284	112099	191187	124858
14	Interest on land value	220952	109338	193626	111170	266908
15	Cost „C“(13+14)	505882	360622	305725	302357	391766
16	Imputed value of household labour	207389	80456	66443	128992	85083
17	Cost „C“(15+16)	713271	441078	372168	431349	476849

**A2.13 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Winter) during
2016-17**

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	24403	60106	48851	23759	26624
2	Animal labour	0	0	0	0	0
3	Machine labour	0	567	0	1985	1858
4	Seed / seedlings	2496	3247	10400	9553	7101
5	Farmyard manure and chemical fertilizers	13088	35496	28784	17231	11226
6	Plant protection	927	4711	2188	2946	2413
7	Land tax and irrigation cess	45	147	186	1911	3135
8	Repair and maintenance charges of implements, machinery and building	1558	5185	127	642	288
9	Interest on working capital	5938	14464	13547	7441	9000
10	Other expenses	18467	40511	45246	18938	40781
11	Total cost „A“ (1+10)	66922	164434	149329	84406	102426
12	Interest on fixed capital	3097	26061	15353	9726	5027
13	Cost „B1“ (11+12)	70019	190495	164682	94132	107453
14	Interest on land value	99627	303207	269031	67091	142490
15	Cost „B“ (13+14)	169646	493702	433713	161223	249943
16	Imputed value of household labour	34248	39362	37515	35192	53763
17	Cost „C“ (15+16)	203894	533064	471228	196365	303706

**A2.13 District wise Cost of Cultivation per hectare (in Rs) of Bitter gourd(Winter)during
2016-17**

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	50776	62646	16108	15287	48485
2	Animal labour	0	0	0	0	0
3	Machine labour	0	4770	4546	5930	1330
4	Seed / seedlings	4297	10775	9552	6201	6907
5	Farmyard manure and chemical fertilizers	19828	18930	24097	43112	23194
6	Plant protection	994	4839	324	0	2662
7	Land tax and irrigation cess	136	205	118	0	545
8	Repair and maintenance charges of implements, machinery and building	497	10591	3604	14925	3193
9	Interest on working capital	8683	13631	7086	8641	11547
10	Other expenses	10939	34345	16233	15882	32893
11	Total cost „A“ (110)	96150	160732	81668	109978	130756
12	Interest on fixed capital	10968	14419	30692	111048	11499
13	Cost „B1“ (11+12)	107118	175151	112360	221026	142255
14	Interest on land value	154137	63915	156719	91495	150810
15	Cost „B“ (13+14)	261255	239066	269079	312521	293065
16	Imputed value of household labour	59244	43204	51771	179747	64441
17	Cost „C“ (15+16)	320499	282270	320850	492268	357506

A 2.14 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Summer) during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	78127	92621	46381	141938	30851
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	3126	0
4	Seed / seedlings	2921	5792	9643	3654	4700
5	Farmyard manure and chemical fertilizers	37491	29753	9443	61861	19937
6	Plant protection	1403	2094	1748	2434	562
7	Land tax and irrigation cess	18	302	128	177	84
8	Repair and maintenance charges of implements, machinery and building	420	20479	3014	0	1182
9	Interest on working capital	18122	21120	10907	24177	11686
10	Other expenses	61279	80936	41856	28759	60810
11	Total cost „A“(1-10)	199781	253097	123120	266126	129812
12	Interest on fixed capital	15408	23870	1813	1098	2903
13	Cost „B1“(11+12)	215189	276967	124933	267224	132715
14	Interest on land value	167559	119994	171621	225069	186184
15	Cost „B“(13+14)	382748	396961	296554	492293	318899
16	Imputed value of household labour	163639	90893	56979	103306	75638
17	Cost „C“(15+16)	546387	487854	353533	595599	394537

A2.14 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Summer)during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	0	40321	54039	16944	36981
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	4942	0
4	Seed / seedlings	0	3223	7389	17827	8946
5	Farmyard manure and chemical fertilizers	0	28575	27409	32462	21502
6	Plant protection	0	4847	2866	2259	6614
7	Land tax and irrigation cess	0	1184	202	282	1979
8	Repair and maintenance charges of implements, machinery and building	0	24505	835	6531	682
9	Interest on working capital	0	13812	14215	11845	10033
10	Other expenses	0	61157	50442	44019	26288
11	Total cost „A“ (110)	0	177624	157397	137111	113025
12	Interest on fixed capital	0	2772	10930	50281	13982
13	Cost „B1“ (11+12)	0	180396	168327	187392	127007
14	Interest on land value	0	266683	263944	82143	113805
15	Cost „B“ (13+14)	0	447079	432271	269535	240812
16	Imputed value of household labour	0	30963	44910	191467	80392
17	Cost „C“ (15+16)	0	478042	477181	461002	321204

A2.14 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(summer)during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	38430	61062	5205	19408	47922
2	Animal labour	0	0	0	0	0
3	Machine labour	2705	15378	5742	8666	2808
4	Seed / seedlings	3992	17665	6706	5249	6598
5	Farmyard manure and chemical fertilizers	24345	37205	19721	30215	27731
6	Plant protection	1121	7165	250	0	2811
7	Land tax and irrigation cess	41	202	274	1356	476
8	Repair and maintenance charges of implements, machinery and building	1097	15470	2400	13034	8641
9	Interest on working capital	8090	18813	4708	7657	13246
10	Other expenses	10303	49657	9460	13029	44592
11	Total cost „A“ (110)	90124	222617	54466	98614	154825
12	Interest on fixed capital	2470	12855	7521	77445	10762
13	Cost „B1“ (11+12)	92594	235472	61987	176059	165587
14	Interest on land value	159421	81110	71767	123526	165683
15	Cost „B“ (13+14)	252015	316582	133754	299585	331270
16	Imputed value of household labour	53914	81714	41096	159592	71255
17	Cost „C“ (15+16)	305929	398296	174850	459177	402525

A 2.15 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Autumn) during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	75356	122735	34732	60004	66401
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	440	0
4	Seed / seedlings	2764	3814	5732	6820	4367
5	Farmyard manure and chemical fertilizers	40893	46535	10935	41729	21230
6	Plant protection	1877	2147	1209	935	1918
7	Land tax and irrigation cess	2782	237	116	206	131
8	Repair and maintenance charges of implements, machinery and building	628	9221	2234	1029	1074
9	Interest on working capital	16957	19343	9721	15191	13093
10	Other expenses	48677	18197	44602	41982	37018
11	Total cost „A“(1-10)	189934	222229	109281	168336	145232
12	Interest on fixed capital	4231	11554	542	14106	1397
13	Cost „B1“(11+12)	194165	233783	109823	182442	146629
14	Interest on land value	204552	122825	160039	173044	138535
15	Cost „B“(13+14)	398717	356608	269862	355986	285164
16	Imputed value of household labour	185419	67891	67699	122065	82106
17	Cost „C“(15+16)	584136	424499	337561	477551	367270

A2.15 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Autumn)during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	0	43805	43268	22469	17354
2	Animal labour	0	0	0	0	0
3	Machine labour	0	2107	0	1224	0
4	Seed / seedlings	0	3554	3708	1839	2570
5	Farmyard manure and chemical fertilizers	0	18494	19738	8921	7059
6	Plant protection	0	5275	2182	1836	1959
7	Land tax and irrigation cess	0	67	150	127	56
8	Repair and maintenance charges of implements, machinery and building	0	690	873	359	270
9	Interest on working capital	0	10754	8796	4578	4302
10	Other expenses	0	34301	19067	9490	14075
11	Total cost „A“ (1+10)	0	119047	97782	50843	47645
12	Interest on fixed capital	0	3773	9000	5331	1877
13	Cost „B“ (11+12)	0	122820	106782	56174	49522
14	Interest on land value	0	268371	235759	35369	175007
15	Cost „C“ (13+14)	0	391191	342541	91543	224529
16	Imputed value of household labour	0	52164	39901	20551	67396
17	Cost „C“ (15+16)	0	443355	382442	112094	291925

A2.15 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Autumn) during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	0	0	54325	10082	47231
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	330	0	612
4	Seed / seedlings	2696	0	2427	8945	3302
5	Farmyard manure and chemical fertilizers	10468	0	22378	22980	20097
6	Plant protection	359	0	887	0	2112
7	Land tax and irrigation cess	45	0	408	30	333
8	Repair and maintenance charges of implements, machinery and building	0	0	0	2570	1341
9	Interest on working capital	2026	0	9080	6706	9735
10	Other expenses	6739	0	10449	25056	23998
11	Total cost „A“ (10)	22333	0	100284	76369	108761
12	Interest on fixed capital	719	0	34329	4566	6222
13	Cost „B1“ (11+12)	23052	0	134613	80935	114983
14	Interest on land value	186448	0	138162	448150	136817
15	Cost „B“ (13+14)	209500	0	272775	529085	251800
16	Imputed value of household labour	58405	0	172883	114150	67185
17	Cost „C“ (15+16)	267905	0	445658	643235	318985

A 2.16 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Winter) during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	72422	99470	38556	46985	72949
2	Animal labour	0	0	0	0	0
3	Machine labour	0	0	0	0	0
4	Seed / seedlings	3231	4957	7070	6487	4172
5	Farmyard manure and chemical fertilizers	35586	53256	11390	32249	15760
6	Plant protection	1354	1504	1892	2604	1553
7	Land tax and irrigation cess	105	301	103	196	202
8	Repair and maintenance charges of implements, machinery and building	325	14891	1800	785	812
9	Interest on working capital	16649	18700	9226	12227	11325
10	Other expenses	53899	27812	33355	33945	18811
11	Total cost „A“(1-10)	183571	220891	103392	135478	125584
12	Interest on fixed capital	4986	12416	892	2613	1143
13	Cost „B1“(11+12)	188557	233307	104284	138091	126727
14	Interest on land value	191734	130548	197941	268662	126431
15	Cost „B“(13+14)	380291	363855	302225	406753	253158
16	Imputed value of household labour	169510	66264	62755	126128	64003
17	Cost „C“(15+16)	549801	430119	364980	532881	317161

A2.16 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Winter)during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	20519	59622	67788	28251	21370
2	Animal labour	0	0	0	0	0
3	Machine labour	0	833	0	2837	481
4	Seed / seedlings	2815	3485	4219	4319	3507
5	Farmyard manure and chemical fertilizers	14145	24481	38908	11175	7011
6	Plant protection	1945	9878	1785	3272	1927
7	Land tax and irrigation cess	68	117	138	263	361
8	Repair and maintenance charges of implements, machinery and building	1859	1715	527	799	1254
9	Interest on working capital	5784	13856	14137	6906	5782
10	Other expenses	18411	40256	28671	19205	23524
11	Total cost „A“ (110)	65546	154243	156173	77027	65217
12	Interest on fixed capital	9328	4175	16908	7753	5978
13	Cost „B1“ (11+12)	74874	158418	173081	84780	71195
14	Interest on land value	87870	245758	190084	65667	157536
15	Cost „B“ (13+14)	162744	404176	363165	150147	228731
16	Imputed value of household labour	41325	32713	0	42491	74458
17	Cost „C“ (15+16)	204069	436889	363165	192938	303189

A 2.16 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Winter) during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Hired human labour	38798	66624	9893	28899	50393
2	Animal labour	0	0	0	0	0
3	Machine labour	0	2923	1014	2774	848
4	Seed / seedlings	4715	6808	4608	6842	4571
5	Farmyard manure and chemical fertilizers	10199	18024	29226	30652	21544
6	Plant protection	170	2451	290	0	2650
7	Land tax and irrigation cess	43	528	149	54	211
8	Repair and maintenance charges of implements, machinery and building	2102	12082	3458	11023	3100
9	Interest on working capital	5945	11663	5579	7837	10575
10	Other expenses	5567	19795	10755	9289	25746
11	Total cost „A“(1-10)	67539	140898	64972	97280	119638
12	Interest on fixed capital	7978	10224	34566	51639	8536
13	Cost „B1“(11+12)	75517	151122	99538	148919	128174
14	Interest on land value	190789	72455	143702	90763	143295
15	Cost „B“(13+14)	266306	223577	243240	239682	271469
16	Imputed value of household labour	46551	44490	75393	159690	62635
17	Cost „C“(15+16)	312857	268067	318633	399372	334104

A 2.17 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2016-17

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	80423	101695	45676	64947	58123
2	Animal labour	0	0	0	0	0
3	Machine labour	1064	0	0	810	0
4	Seed / seedlings	3445	5155	8302	9033	4061
5	Farmyard manure and chemical fertilizers	36787	27921	12090	36660	17099
6	Plant protection	1620	1605	2588	0	1332
7	Land tax and irrigation cess	42	291	193	211	191
8	Repair and maintenance charges of implements, machinery and building	2347	10461	1799	1701	1160
9	Interest on working capital	18214	18701	10659	14813	10813
10	Other expenses	58799	50633	37931	36831	27518
11	Total cost ,A"(1-10)	202741	216462	119238	164856	120297
12	Interest on fixed capital	12189	8959	1294	1483	1240
13	Cost ,B1"(11+12)	214930	225421	120532	166339	121537
14	Interest on land value	169440	123328	157262	127364	152399
15	Cost ,B"(13+14)	384370	348749	277794	293703	273936
16	Imputed value of household labour	155661	75492	59546	128968	79919
17	Cost ,C"(15+16)	540031	424241	337340	422671	353855

A2.17 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Summer)during 2016-17

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	0	56615	54329	37378	22390
2	Animal labour	0	0	0	0	0
3	Machine labour	0	516	0	2327	665
4	Seed / seedlings	0	3612	4325	4195	3879
5	Farmyard manure and chemical fertilizers	0	19869	19086	11405	11210
6	Plant protection	0	5385	3874	680	3508
7	Land tax and irrigation cess	0	831	203	345	371
8	Repair and maintenance charges of implements, machinery and building	0	3657	164	772	7458
9	Interest on working capital	0	12397	12289	6899	6572
10	Other expenses	0	37974	41275	13002	24063
11	Total cost „A“ (1+10)	0	140856	135545	77003	80116
12	Interest on fixed capital	0	9633	12424	3609	12045
13	Cost „B1“ (11+12)	0	150489	147969	80612	92161
14	Interest on land value	0	299132	240958	86143	169811
15	Cost „B“ (13+14)	0	449621	388927	166755	261972
16	Imputed value of household labour	0	45061	44078	45784	72871
17	Cost „C“ (15+16)	0	494682	433005	212539	334843

A 2.17 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2016-17

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Hired human labour	23129	59175	19820	34652	53731
2	Animal labour	0	0	0	0	0
3	Machine labour	2421	6773	4118	8637	2519
4	Seed / seedlings	2399	6519	6507	7326	5255
5	Farmyard manure and chemical fertilizers	16730	21450	17299	26949	21105
6	Plant protection	1169	4499	539	0	2441
7	Land tax and irrigation cess	50	242	77	542	271
8	Repair and maintenance charges of implements, machinery and building	1753	8765	3369	6131	4522
9	Interest on working capital	5559	12272	6114	8403	11499
10	Other expenses	9739	24299	12860	6469	29943
11	Total cost „A“(1-10)	62949	143994	70703	99109	131286
12	Interest on fixed capital	2501	7246	16171	21771	8433
13	Cost „B1“(11+12)	65450	151240	86874	120880	139719
14	Interest on land value	162897	60355	109229	96205	140978
15	Cost „B“(13+14)	228347	211595	196103	217085	280697
16	Imputed value of household labour	37992	35482	53033	98584	68960
17	Cost „C“(15+16)	266339	247077	249136	315669	349657

**A 2.18 District wise Cost of Cultivation per hectare (in Rs.) of Cardamom during
2016-17**

Sl No	Components	Idukki	Palakkad	Wayanad	State
1	Hired human labour	35174	75966	95111	55554
2	Animal labour	0	0	0	0
3	Machine labour	0	0	3236	1055
4	Seed / seedlings	12306	0	455	8189
5	Farmyard manure and chemical fertilizers	45253	20333	46484	45142
6	Plant protection	2333	932	2378	2319
7	Land tax and irrigation cess	96	0	389	190
8	Repair and maintenance charges of implements, machinery and building	1659	141	4379	2516
9	Interest on working capital	10415	11714	15145	11984
10	Other expenses	9083	19909	3784	7577
11	Total cost ,A"(1-10)	116319	128995	171361	134526
12	Interest on fixed capital	5234	4158	7632	5994
13	Cost ,B1"(11+12)	121553	133153	178993	140520
14	Interest on land value	85194	87035	126759	98784
15	Cost ,B"(13+14)	206747	220188	305752	239304
16	Imputed value of household labour	24107	19274	19025	22351
17	Cost ,C"(15+16)	230854	239462	324777	261655

A 3.1 Percentage of Hired human labour hours to total human labour hours under Autumn Paddy

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	26.84	50.97	77.81
2	Kollam	36.17	52.89	89.05
3	Pathanamthitta	37.81	49.33	87.13
4	Alappuzha	28.43	57.07	85.49
5	Kottayam	13.56	72.27	85.83
6	Idukki	22.56	29.70	52.26
7	Eranakulam	22.81	57.15	79.96
8	Thrissur	35.26	36.91	72.17
9	Palakkad	19.36	61.14	80.50
10	Malappuram	27.72	46.61	74.33
11	Kozhikkode	20.92	52.97	73.89
12	Wayanad	0	0	0
13	Kannur	6.56	76.27	82.83
14	Kasaragod	11.48	57.78	69.25
	State	21.46	59.61	81.07

A 3.2 Percentage of Hired human labour hours to total human labour hours under Winter Paddy

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	31.42	44.86	76.27
2	Kollam	36.38	45.09	81.47
3	Pathanamthitta	48.51	46.38	94.88
4	Alappuzha	36.63	47.61	84.24
5	Kottayam	9.05	80.03	89.08
6	Idukki	28.06	19.45	47.51
7	Eranakulam	37.29	31.21	68.50
8	Thrissur	49.50	38.36	87.86
9	Palakkad	19.43	62.98	82.41
10	Malappuram	47.06	25.84	72.90
11	Kozhikkode	18.35	59.83	78.18
12	Wayanad	34.12	41.64	75.15
13	Kannur	23.34	60.03	83.37
14	Kasaragod	13.81	57.97	71.77
	State	30.20	51.65	81.85

A 3.3 Percentage of Hired human labour hours to total human labour hours under Summer Paddy

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	22.57	52.48	75.05
2	Kollam	47.36	37.93	85.29
3	Pathanamthitta	38.84	51.58	90.42
4	Alappuzha	46.99	39.59	86.58
5	Kottayam	46.60	30.34	76.94
6	Idukki	22.23	17.89	40.11
7	Eranakulam	32.94	39.58	72.51
8	Thrissur	52.79	33.42	86.21
9	Palakkad	11.24	55.40	66.64
10	Malappuram	63.58	11.54	75.11
11	Kozhikkode	27.50	46.01	73.51
12	Wayanad	33.18	44.14	77.31
13	Kannur	19.93	67.27	87.20
14	Kasaragod	13.20	61.56	74.76
	State	38.72	39.75	78.46

A3.4 Percentage of Hired human labour hours to total human labour hours under Coconut

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	71.09	5.34	76.43
2	Kollam	77.39	0.00	77.39
3	Pathanamthitta	83.78	2.19	85.97
4	Alappuzha	77.29	1.96	79.25
5	Kottayam	67.62	6.19	73.81
6	Idukki	52.86	7.87	60.73
7	Eranakulam	43.22	14.25	57.47
8	Thrissur	71.61	17.27	88.88
9	Palakkad	60.36	17.23	77.59
10	Malappuram	64.02	7.07	71.09
11	Kozhikkode	74.48	5.39	79.88
12	Wayanad	69.51	6.59	76.10
13	Kannur	48.74	27.07	75.81
14	Kasaragod	44.20	20.67	64.87
	State	65.07	10.26	75.33

A 3.5 Percentage of Hired human labour hours to total human labour hours under Areca nut

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	68.19	1.73	69.92
2	Kollam	70.29	0.00	70.29
3	Pathanamthitta	75.70	1.10	76.80
4	Alappuzha	24.97	1.44	26.41
5	Kottayam	55.32	0.00	55.32
6	Idukki	42.13	10.04	52.18
7	Eranakulam	29.71	12.89	42.60
8	Thrissur	57.73	20.84	78.57
9	Palakkad	50.77	18.30	69.07
10	Malappuram	55.62	9.32	64.94
11	Kozhikkode	54.01	11.45	65.46
12	Wayanad	70.10	14.65	84.75
13	Kannur	38.91	29.34	68.25
14	Kasaragod	35.82	28.40	64.22
	State	52.80	15.15	67.95

A 3.6 Percentage of Hired human labour hours to total human labour hours under Tapioca

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	63.69	0.50	64.19
2	Kollam	73.34	0.00	73.34
3	Pathanamthitta	63.85	5.51	69.35
4	Alappuzha	39.93	0.07	40.00
5	Kottayam	51.82	2.26	54.08
6	Idukki	25.98	7.73	33.71
7	Eranakulam	32.67	14.89	47.56
8	Thrissur	45.58	39.99	85.57
9	Palakkad	33.87	29.10	62.96
10	Malappuram	46.92	7.49	54.41
11	Kozhikkode	57.10	0.99	58.10
12	Wayanad	63.61	0.46	64.10
13	Kannur	47.16	24.88	72.04
14	Kasaragod	15.31	26.08	41.39
	State	46.66	12.50	59.15

A 3.7 Percentage of Hired human labour hours to total human labour hours under Banana

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	65.45	0.44	65.89
2	Kollam	79.53	0.00	79.53
3	Pathanamthitta	69.13	9.57	78.70
4	Alappuzha	50.33	0.00	50.33
5	Kottayam	14.39	76.13	90.51
6	Idukki	27.60	7.82	35.41
7	Eranakulam	33.69	14.21	47.89
8	Thrissur	58.76	21.14	79.90
9	Palakkad	45.75	18.73	64.47
10	Malappuram	49.78	2.74	52.52
11	Kozhikkode	49.20	2.46	51.65
12	Wayanad	74.42	1.22	75.64
13	Kannur	56.41	19.10	75.51
14	Kasaragod	22.81	16.27	39.09
	State	47.28	20.79	68.07

A 3.8 Percentage of Hired human labour hours to total human labour hours under Pepper

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	66.00	5.12	71.12
2	Kollam	64.48	12.12	76.61
3	Pathanamthitta	75.10	3.65	78.75
4	Alappuzha	19.57	0.83	20.41
5	Kottayam	42.17	1.36	43.53
6	Idukki	41.17	19.39	60.56
7	Eranakulam	56.26	3.12	59.38
8	Thrissur	44.62	27.69	72.31
9	Palakkad	51.08	9.33	60.41
10	Malappuram	36.99	10.90	47.88
11	Kozhikkode	48.09	1.22	49.30
12	Wayanad	70.40	8.57	78.98
13	Kannur	55.06	21.26	76.32
14	Kasaragod	29.90	13.53	43.43
	State	52.43	10.62	63.06

A 3.9 Percentage of Hired human labour hours to total human labour hours under Ginger

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	48.99	9.18	58.17
2	Kollam	55.17	0.00	55.17
3	Pathanamthitta	49.36	18.54	67.90
4	Alappuzha	43.53	0.00	43.53
5	Kottayam	3.56	90.13	93.68
6	Idukki	13.20	10.15	23.35
7	Eranakulam	37.17	18.99	56.16
8	Thrissur	40.17	31.10	71.28
9	Palakkad	32.99	53.63	86.62
10	Malappuram	41.14	2.75	43.89
11	Kozhikkode	34.25	26.74	60.99*
12	Wayanad	57.48	27.51	84.99
13	Kannur	19.60	48.89	68.50
14	Kasaragod	11.31	9.73	21.05
	State	28.35	50.44	78.79

A 3.10 Percentage of Hired human labour hours to total human labour hours under Turmeric

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	11.08	1.74	12.82
2	Kollam	51.03	0.00	51.03
3	Pathanamthitta	45.97	11.14	57.11
4	Alappuzha	54.05	2.56	56.61
5	Kottayam	24.34	1.57	25.91
6	Idukki	23.54	14.74	38.29
7	Eranakulam	31.10	25.47	56.57
8	Thrissur	40.69	27.38	68.06
9	Palakkad	33.67	45.40	79.07
10	Malappuram	31.57	17.08	48.65
11	Kozhikkode	37.39	9.82	47.21
12	Wayanad	30.97	20.97	51.94
13	Kannur	19.60	52.37	71.96
14	Kasaragod	1.14	12.14	13.28
	State	32.55	25.66	58.21

A 3.11 Percentage of Hired human labour hours to total human labour hours under Pineapple

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	75.32	4.71	80.03
2	Kollam	88.43	1.87	90.31
3	Pathanamthitta	54.87	30.77	85.64
4	Alappuzha	24.71	0.00	24.71
5	Kottayam	3.39	95.51	98.90
6	Idukki	34.63	22.30	56.93
7	Eranakulam	45.07	37.88	82.94
8	Thrissur	48.40	49.22	97.62
9	Palakkad	52.76	29.83	82.58
10	Malappuram	43.15	46.27	89.42
11	Kozhikkode	81.95	5.78	87.73
12	Wayanad	22.77	60.71	83.47
13	Kannur	64.32	29.68	94.00
14	Kasaragod	39.61	43.36	82.97
	State	14.91	80.73	95.64

A 3.12 Percentage of Hired human labour hours to total human labour hours under Bitter Gourd (Autumn)

Sl No	District	Male	Female	Total
1	Thiruvananthapuram	32.81	0.08	32.90
2	Kollam	64.61	0.00	64.61
3	Pathanamthitta	26.81	0.87	27.67
4	Alappuzha	22.55	0.00	22.55
5	Kottayam	24.48	11.45	35.93
6	Idukki	0.00	0.00	0.00
7	Eranakulam	44.06	16.39	60.45
8	Thrissur	36.60	19.08	55.68
9	Palakkad	25.07	28.97	54.04
10	Malappuram	30.77	0.00	30.77
11	Kozhikkode	0.00	0.00	0.00
12	Wayanad	0.00	0.00	0.00
13	Kannur	35.17	36.39	71.56
14	Kasaragod	19.01	14.46	33.47
	State	34.57	11.69	46.27

A 3.13 Percentage of Hired human labour hours to total human labour hours under Bitter Gourd (Winter)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	32.26	0.10	32.35
2	Kollam	57.86	1.32	59.18
3	Pathanamthitta	29.93	2.52	32.45
4	Alappuzha	23.90	0.63	24.53
5	Kottayam	27.43	18.07	45.50
6	Idukki	34.15	7.07	41.22
7	Eranakulam	35.94	21.11	57.05
8	Thrissur	38.89	20.15	59.04
9	Palakkad	19.70	24.57	44.27
10	Malappuram	31.77	0.00	31.77
11	Kozhikode	34.27	2.80	37.06
12	Wayanad	48.23	8.42	56.65
13	Kannur	9.00	6.10	15.10
14	Kasaragod	0.44	11.21	11.65
	State	33.19	10.31	43.50

A 3.14 Percentage of Hired human labour hours to total human labour hours under Bitter Gourd (Summer)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	14.06	0.26	14.31
2	Kollam	48.18	1.60	49.78
3	Pathanamthitta	41.69	1.25	42.95
4	Alappuzha	48.66	6.04	54.70
5	Kottayam	25.40	3.76	29.16
6	Idukki	0.00	0.00	0.00
7	Eranakulam	35.55	18.92	54.47
8	Thrissur	29.71	27.12	56.83
9	Palakkad	4.38	5.84	10.22
10	Malappuram	24.96	4.82	29.78
11	Kozhikode	33.05	0.00	33.05
12	Wayanad	28.33	16.65	44.98
13	Kannur	4.14	2.19	6.33
14	Kasaragod	2.40	12.34	14.74
	State	25.88	7.62	33.50

A 3.15 Percentage of Hired human labour hours to total human labour hours under Cowpea (Autumn)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	28.48	0.23	28.71
2	Kollam	64.12	0.00	64.12
3	Pathanamthitta	30.89	3.22	34.11
4	Alappuzha	26.75	3.40	30.15
5	Kottayam	31.19	11.99	43.18
6	Idukki	0.00	0.00	0.00
7	Eranakulam	26.78	14.53	41.31
8	Thrissur	35.21	15.81	51.02
9	Palakkad	27.85	27.85	55.70
10	Malappuram	19.09	0.67	19.76
11	Kozhikkode	0.00	0.00	0.00
12	Wayanad	0.00	0.00	0.00
13	Kannur	35.08	39.06	74.14
14	Kasaragod	6.29	0.00	6.29
	State	32.78	11.07	43.85

A3.16 Percentage of Hired human labour hours to total human labour hours under Cowpea (Winter)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	29.26	0.29	29.55
2	Kollam	58.20	2.05	60.25
3	Pathanamthitta	35.42	1.81	37.24
4	Alappuzha	22.37	0.44	22.81
5	Kottayam	33.39	20.14	53.53
6	Idukki	23.09	8.03	31.11
7	Eranakulam	30.91	30.44	61.35
8	Thrissur	1.42	0.79	2.21
9	Palakkad	17.21	28.00	45.21
10	Malappuram	20.16	1.78	21.94
11	Kozhikkode	36.12	0.00	36.12
12	Wayanad	37.14	22.54	59.68
13	Kannur	4.87	2.67	7.54
14	Kasaragod	1.49	21.40	22.89
	State	10.02	5.04	15.06

A 3.17 Percentage of Hired human labour hours to total human labour hours under Cowpea (Summer)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	32.23	0.23	32.46
2	Kollam	56.55	0.53	57.08
3	Pathanamthitta	41.94	1.05	42.99
4	Alappuzha	4.04	85.53	89.57
5	Kottayam	27.00	16.19	43.19
6	Idukki	0.00	0.00	0.00
7	Eranakulam	30.67	21.14	51.81
8	Thrissur	32.17	25.48	57.65
9	Palakkad	16.62	29.98	46.60
10	Malappuram	19.89	3.24	23.13
11	Kozhikkode	29.96	0.96	30.92
12	Wayanad	33.49	31.59	65.08
13	Kannur	9.53	6.16	15.69
14	Kasaragod	9.56	22.09	31.65
	State	22.94	35.66	58.60

A 3.18 Percentage of Hired human labour hours to total human labour hours under Cardamom				
Sl No	District	Male	Female	Total
1	Idukki	14.14	59.12	73.26
2	Palakkad	11.48	72.21	83.69
3	Wayanad	27.12	58.31	85.43
	State	19.56	59.05	78.61

A4.1 District wise Value of product and by-product per hectare (in Rs.) of Autumn Paddy

Sl No	District	Product	By Product	Total
1	Thiruvananthapuram	84732	25806	110538
2	Kollam	67143	30692	97834
3	Pathanamthitta	90609	8833	99442
4	Alappuzha	88929	2188	91117
5	Kottayam	101880	0	101880
6	Idukki	71502	2899	74401
7	Eranakulam	57729	10192	67921
8	Thrissur	65279	3637	68915
9	Palakkad	77754	917	78671
10	Malappuram	52561	8974	61534
11	Kozhikkode	44328	27322	71650
12	Wayanad	0	0	0
13	Kannur	65321	32731	98052
14	Kasaragod	73242	102868	176110
	State	75392	10780	86172

A4.2 District wise Value of product and by-product per hectare (in Rs.) of Winter Paddy

Sl No	District	Product	By Product	Total
1	Thiruvananthapuram	72403	31519	103922
2	Kollam	69113	24038	93151
3	Pathanamthitta	102399	2533	104932
4	Alappuzha	79039	1620	80659
5	Kottayam	83619	328	83948
6	Idukki	65974	32607	98581
7	Eranakulam	93276	13500	106776
8	Thrissur	103149	7163	110312
9	Palakkad	43379	7306	50684
10	Malappuram	63386	22196	85583
11	Kozhikkode	42274	28505	70779
12	Wayanad	54899	16906	71805
13	Kannur	72604	31238	103842
14	Kasaragod	78208	34465	112673
	State	78537	11535	90072

A4.3 District wise Value of product and by-product per hectare (in Rs.) of Summer Paddy

Sl No	District	Product	By Product	Total
1	Thiruvananthapuram	71040	30171	101211
2	Kollam	79016	24787	103803
3	Pathanamthitta	90896	4491	95387
4	Alappuzha	67381	984	68365
5	Kottayam	95271	0	95271
6	Idukki	64498	26208	90706
7	Eranakulam	73781	0	73781
8	Thrissur	92462	5653	98115
9	Palakkad	60201	11327	71528
10	Malappuram	81725	17243	98968
11	Kozhikkode	65757	9529	75286
12	Wayanad	69729	28537	98266
13	Kannur	89631	42696	132327
14	Kasaragod	73659	32325	105985
	State	78674	7938	86612

A4.4 District wise Value of product and by-product per hectare (in Rs.) of Coconut				
Sl No	District	Product	By Product	Total
1	Thiruvananthapuram	162871	8289	171160
2	Kollam	198878	2147	201025
3	Pathanamthitta	75906	1731	77637
4	Alappuzha	113696	395	114091
5	Kottayam	140980	252	141232
6	Idukki	109510	0	109510
7	Eranakulam	211145	757	211902
8	Thrissur	100683	5021	105704
9	Palakkad	86160	2561	88721
10	Malappuram	156530	5180	161709
11	Kozhikkode	60015	2115	62129
12	Wayanad	72108	1359	73468
13	Kannur	83896	89504	173401
14	Kasaragod	125545	4790	130335
	State	121952	6515	128467

**A4.5 District wise Value of product and by-product per hectare (in Rs.) of
Arecanut, Tapioca and Banana.**

Sl No	District	Arecanut	Tapioca	Banana
1	Thiruvananthapuram	152952	524535	581015
2	Kollam	93658	267841	401413
3	Pathanamthitta	110205	336868	358949
4	Alappuzha	86762	333104	498175
5	Kottayam	262836	353033	503977
6	Idukki	88770	362273	536636
7	Eranakulam	162847	386956	641124
8	Thrissur	311808	258391	589587
9	Palakkad	151512	177916	338511
10	Malappuram	254271	267285	463870
11	Kozhikkode	118872	207605	487065
12	Wayanad	167951	190802	585897
13	Kannur	274902	355109	560596
14	Kasaragod	413108	272486	557258
	State	210160	309762	500319

A4.6 District wise Value of product and by-product per hectare (in Rs.) of Pepper, Ginger and Turmeric.

Sl No	District	Pepper	Ginger	Turmeric
1	Thiruvananthapuram	476772	819983	518489
2	Kollam	278472	389379	219136
3	Pathanamthitta	297831	214883	149730
4	Alappuzha	200053	453715	450356
5	Kottayam	335278	307438	332061
6	Idukki	223530	187792	192124
7	Eranakulam	468339	266487	252946
8	Thrissur	337645	324895	158772
9	Palakkad	212110	375478	243907
10	Malappuram	151291	220959	325692
11	Kozhikkode	218141	201865	163747
12	Wayanad	508299	322875	129120
13	Kannur	269616	196135	285721
14	Kasaragod	385526	370888	525786
	State	317987	319149	250017

A4.7 District wise Value of product and by-product per hectare of Pineapple

Sl No	District	Pineapple
1	Thiruvananthapuram	579128
2	Kollam	257124
3	Pathanamthitta	156669
4	Alappuzha	146657
5	Kottayam	322293
6	Idukki	382615
7	Eranakulam	609449
8	Thrissur	465723
9	Palakkad	163217
10	Malappuram	196965
11	Kozhikkode	201486
12	Wayanad	206968
13	Kannur	215322
14	Kasaragod	715618
	State	409141

**A4.8 District wise Value of product and by-product per hectare Bitter gourd
(Autumn, Winter and Summer)**

Sl No	District	Bitter gourd (Autumn)	Bitter gourd (Winter)	Bitter gourd (Summer)
1	Thiruvananthapuram	475066	497852	421401
2	Kollam	358887	310055	472020
3	Pathanamthitta	324885	256252	240671
4	Alappuzha	481776	340231	504174
5	Kottayam	374848	231121	95769+
6	Idukki	0	127629	0
7	Eranakulam	142753	309871	310411
8	Thrissur	163459	229900	232466
9	Palakkad	135743	153035	420503
10	Malappuram	172667	197463	220683
11	Kozhikkode	0	211307	88801
12	Wayanad	0	291685	353751
13	Kannur	180545	179088	173792
14	Kasaragod	183423	275523	344765
	State	218006	236599	276723

**A4.9 District wise Value of product and by-product per hectare (in Rs.) of Cowpea
(Autumn, Winter and Summer)**

Sl No	District	Cowpea(Autumn)	Cowpea(Winter)	Cowpea(Summer)
1	Thiruvananthapuram	408303	386752	391619
2	Kollam	385337	329973	408567
3	Pathanamthitta	311152	289381	264286
4	Alappuzha	374918	298137	408231
5	Kottayam	383860	257517	231103
6	Idukki	0	153420	0
7	Eranakulam	273170	258603	298764
8	Thrissur	1018855	247228	206379
9	Palakkad	137439	201279	152117
10	Malappuram	155064	176217	212632
11	Kozhikkode	81442	169635	165622
12	Wayanad	0	312930	234867
13	Kannur	163513	197912	245505
14	Kasaragod	201769	259177	323014
	State	313444	252546	268868

A4.10 District wise Value of product and by-product per hectare of Cardamom

Sl No	District	Cardamom
1	Idukki	465684
2	Palakkad	150379
3	Wayanad	204152
	State	373933