



GOVERNMENT OF KERALA

REPORT ON COST OF CULTIVATION OF IMPORTANT CROPS IN KERALA-2018-19



**DEPARTMENT OF ECONOMICS AND
STATISTICS, KERALA**

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Government of Kerala

**Report On
Cost of Cultivation of
Important Crops in Kerala
2018-19**

**Department of Economics & Statistics
KERALA
2021**

PREFACE

The growth in the agricultural sector is not consistent in the State as the operational land availability, high production cost, asymmetrical seasonality and marketing conditions. The contribution of agriculture sector to state domestic product is also on decline. Formulating proper support price policies, creating marketing facilities and assessing loss out of natural calamities needs reliable data on crop husbandry right from sowing to harvesting stages. The major components of the costs involved are seed/seedlings, fertilisers, labour, rent, equipments, irrigation charges etc. In connection with this, department conducts annual survey on Cost of Cultivation of Important Crops in Kerala.

This report is based on the sample survey on Cost of Cultivation of Important Crops conducted during the year 2018-19 agriculture year. The crops covered under this study are Paddy (autumn, winter and summer), Coconut, Arecanut, Pepper, Banana, Tapioca, Ginger, Turmeric, Bitter Gourd (autumn, winter and summer), Cowpea (autumn, winter and summer), Pineapple and Cardamom.

The field work of the survey was carried out through the Statistical Investigators posted in the Taluk Statistical Offices where the scheme is in operation. The report was prepared in the Cost of Cultivation Division of the Directorate of Economics and Statistics. The dedicated efforts made by all officers who associated in this survey at the bottom level to collect data from the cultivators in regular intervals, supervisory officers to ensure the data quality and data tabulation and processing team in the Directorate 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.

Thiruvananthapuram.
21/05/2021

Sd/-
P.V.Babu
Director

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Chapter I

GENERAL

Introduction

Annual Survey of Cost of Cultivation of important crops in the State commencing from 1980-81 onwards vide G.O.(Rt) 466/79/plg dated 27/10/1979 .The present report relates to the 39th round of survey conducted during the agricultural year 2018-19

The crops covered under this 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 the survey is to produce reliable estimates on production cost involved in major agricultural crops in the State. Major perennial, annual and seasonal crops are covered in the survey with a breakup of cost incurring during various stages from sowing to harvest.

1.3. Period of the Survey

The period of the survey was the Agricultural Year (July to June) 2018-19

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, Arecanut	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 used for crop area enumeration under EARAS survey. From this diary, 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 season possess suitable number of plots and engaged in the cultivation of other crops included in the survey with considerable area/numbers will also be selected for the study like Coconut, Pepper, Arecanut, 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

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, Bittergaurd	Fortnight
2	Paddy	Three weeks
3	Cardamom	One month
4	Coconut, Arecanut, 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 data entry and tabulation sheet preparation were done at Thaluk level in DESCAS software. The compilation and preparation of District tabulation sheet were done at the district office and the report preparation, writing and analysis were done at the Directorate.

1.8 Method of Estimation

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:

Hired human labour

Animal labour

Machine labour

Seed/ seedlings

Farm yard Manure and Chemical fertilizers

Plant protection

Land tax and Irrigation Cess

Repair and maintenance charges of implements, machinery and buildings

Interest on working capital

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.

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 values 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.

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

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 agriculture year. The costs 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 2018-19

For this study details of holding selected and area coverage are given below. The data collected from 670 holdings according to the size class by covering 435.92 hectares of land. It is observed that the average area per holding is 0.65 hectares in all classes while area per holding in large size class, ie more than two hectares is 3.68 hectares per holdings. But in small size class, ie, less than 0.40 hectare which comprises 371 holdings, the average area per holding is only 0.22 hectare.

Table 1: Area and number of holdings under Autumn Paddy

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	371	80.01	18.35	0.22
Medium	253	186.56	42.8	0.74
Large	46	169.35	38.85	3.68
Total	670	435.92	100	0.65

Cost of cultivation

Under the Cost A ie; paid out cost actually incurred by the cultivators 46.37 percent of cost incurred against hired human labour is the highest. Machine labour cost shares 13.98% and farmyard manure and chemical fertilizers accounts to 12.42% respectively. In holdings size class less than 0.40 hectare, cost under hired human labour is more, ie, 51.19% against total cost under Cost A while in size class above two hectares, the cost percentage under hired human labour is coming down to 47.06%. Similarly per hectare cost difference between large and small size class is Rs 20574/-.

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

Sl No		Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	36356	28491	21311	27145
2	Animal labour	75	41	11	36
3	Machine labour	7645	8362	8247	8186
4	Seed / seedlings	2813	2867	2947	2888
5	Farmyard manure and chemical fertilizers	9300	7931	5580	7269
6	Plant protection	792	699	737	731
7	Land tax and irrigation cess	192	216	156	188
8	Repair and maintenance charges of implements, machinery and building	672	479	184	400
9	Interest on working capital	5698	4839	3883	4625
10	Other expenses	7483	6614	7395	7077
11	Total cost 'A' (1-10)	71026	60539	50452	58545
12	Interest on fixed capital	2021	2104	1112	1703
13	Cost 'B1' (11+12)	73047	62643	51564	60248
14	Interest on land value	226969	206464	213324	212893
15	Cost 'B' (13+14)	300016	269106	264888	273141
16	Imputed value of household labour	16937	8833	2645	7916
17	Cost 'C' (15+16)	316953	277939	267534	281057

Percentage Distribution of “COST A” per hectare of Autumn Paddy during 2018-19

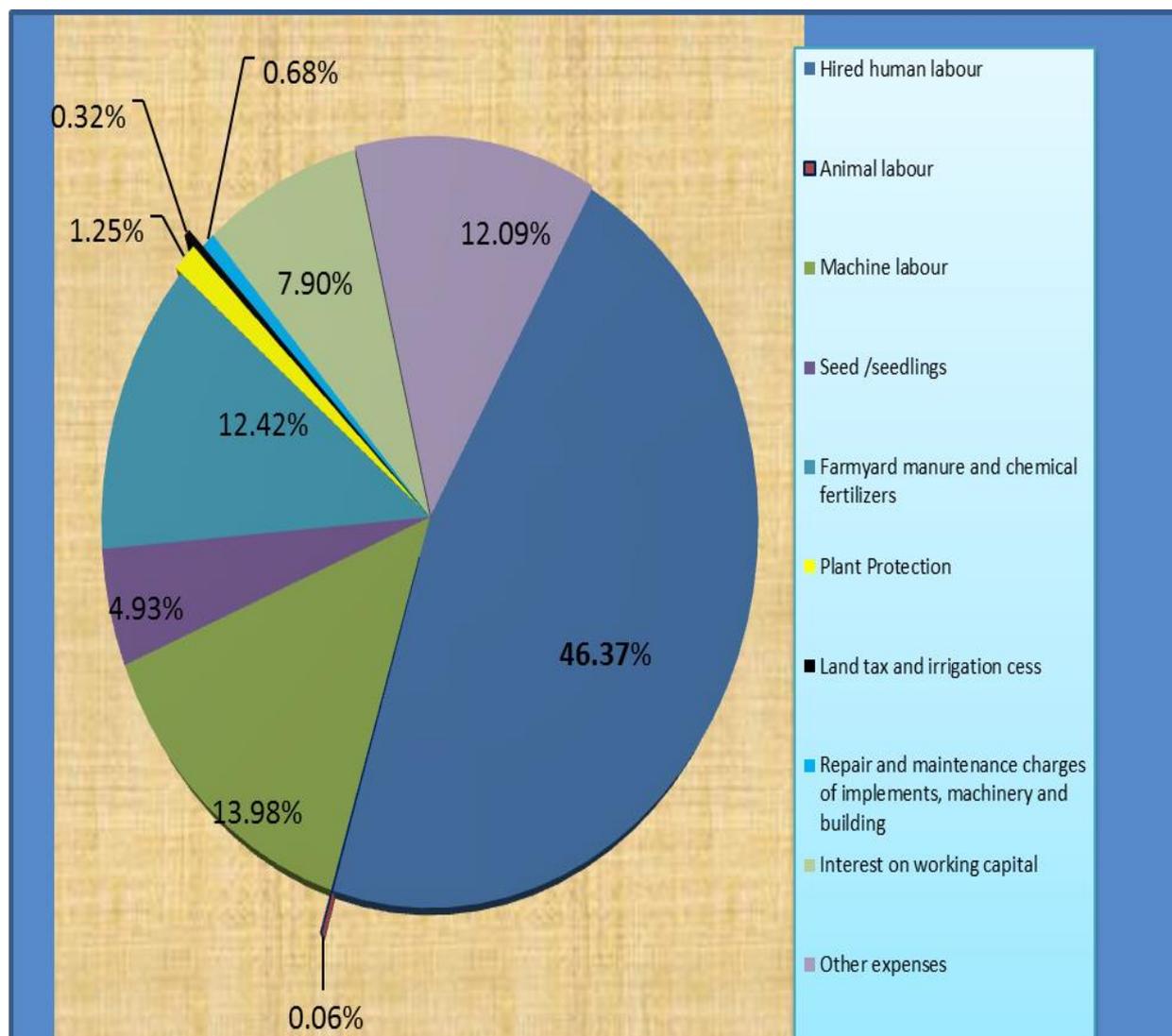


Table 3: Percentage of hired human labour hours to total human labour hours

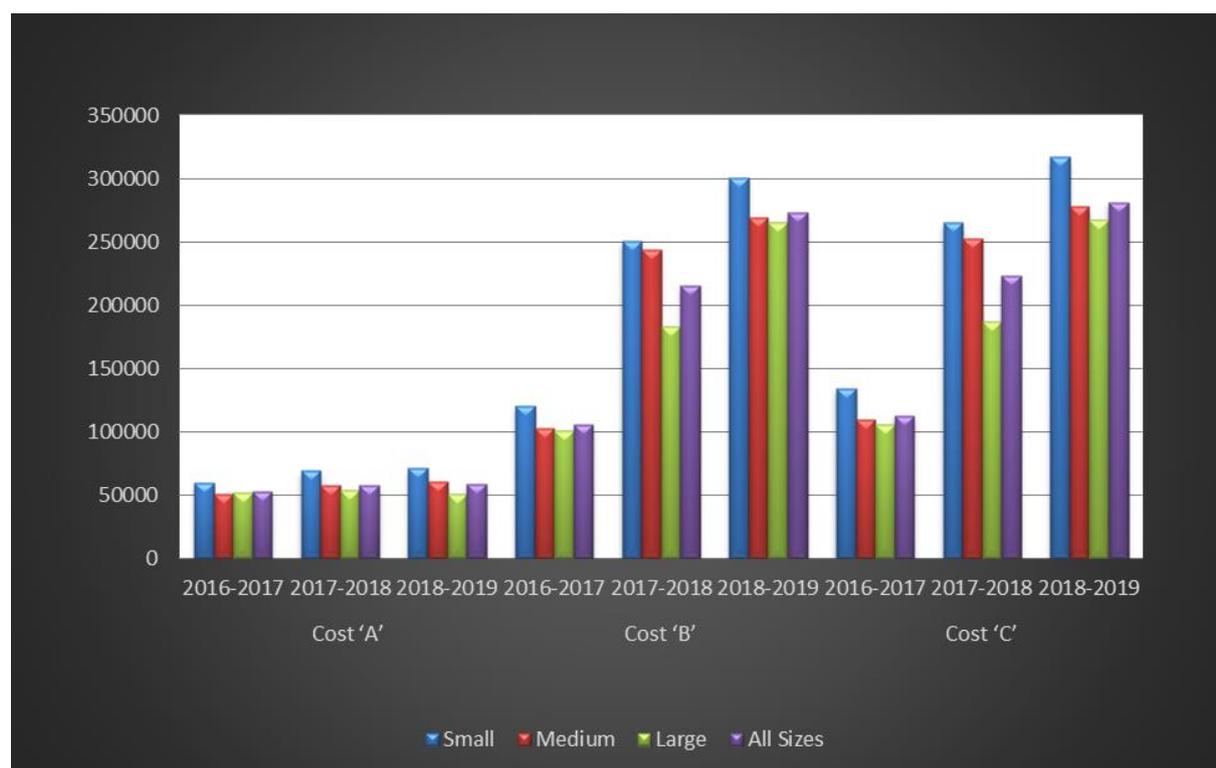
Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	24.92	28.04	33.43	28.7
Female	35.7	40.37	46.08	49.1
Total	60.62	68.41	79.51	77.8

If we consider total labour hours, 77.80% labour hours shares by the hired labour and 22.20% labour hours shares the family labour. Out of the hired labour hours, 49.10% of labour hours shares to female participation and 28.70% labour hours shares to male participation.

Table 4: Cost of cultivation of Autumn Paddy per hectare (in Rs.) during 2016-17, 2017-18 and 2018-2019

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2016-2017	59978	50844	51421	52818
	2017-2018	69260	57327	53886	57369
	2018-2019	71026	60539	50452	58545
Cost 'B'	2016-2017	119879	102645	100518	105157
	2017-2018	250470	243772	182836	215638
	2018-2019	300016	269106	264888	273141
Cost 'C'	2016-2017	134435	109878	105271	112862
	2017-2018	264872	252470	186811	222887
	2018-2019	316953	277939	267534	281057

Cost of cultivation of Autumn Paddy per hectare (in Rs.) - during 2016-2017, 2017-18 and 2018-19



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 2018-19 is increased by Rs 1176 as compared to cost in 2017-18.

Cost of Production of Paddy per quintal

The survey results show that during 2018-19 for producing one quintal of paddy Rs.1588/- 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 2016-17, 2017-18 and 2018-19

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2016-2017	1795	1438	1356	1470
	2017-2018	2244	1866	1762	1866
	2018-2019	1084	1559	2384	1588
Cost 'B'	2016-2017	3580	2903	2651	2926
	2017-2018	7898	7544	5498	6586
	2018-2019	4580	6931	12517	7410
Cost 'C'	2016-2017	4016	3108	2776	3140
	2017-2018	8347	7808	5613	6802
	2018-2019	4838	7158	12642	7624

Value of out put

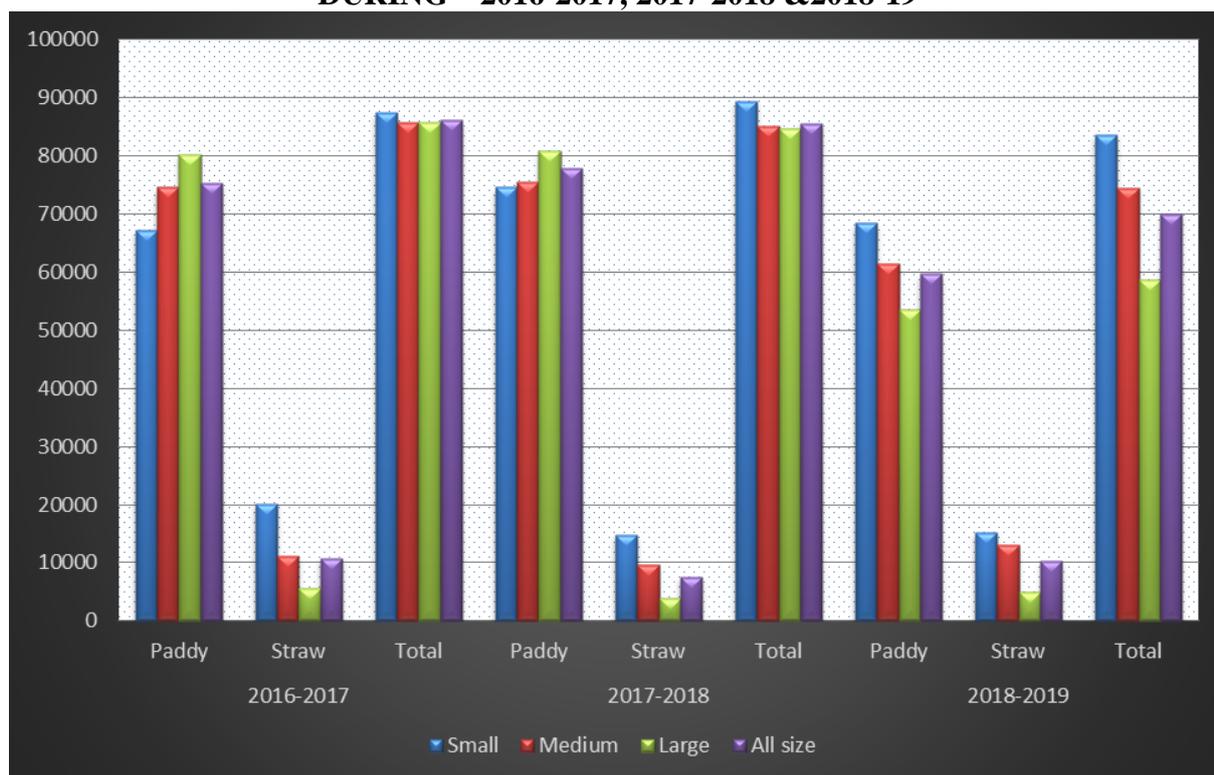
Details of product and by-product per hectare in Autumn Paddy during the last three years are given below.

Table 6: Value of product and by-product per hectare (in Rs.) of Autumn Paddy during 2016-17, 2017-18 and 2018-19

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2016-2017	Paddy	67315	74690	80311	75392
	Straw	20139	11162	5573	10780
	Total	87454	85852	85883	86172
2017-2018	Paddy	74676	75591	80860	77976
	Straw	14800	9607	3896	7614
	Total	89476	85198	84756	85591
2018-2019	Paddy	68468	61478	53682	59732
	Straw	15259	13023	5006	10319
	Total	83727	74501	58688	70051

Per hectare value of product and by product in Autumn season shows a decreasing trend during 2018-19 when compared to last year. The value of product is decreased from Rs 77976 to Rs 59732 whereas the value of straw is increased.

**VALUE PRODUCT AND BY PRODUCT PER HECTARE OF AUTUMN PADDY
DURING 2016-2017, 2017-2018 &2018-19**



2.1.2 Paddy-Winter (Mundakan) during 2018-19

During 2018-19 cost of cultivation study on winter paddy was conducted in 535 holdings according to the size class by covering 516.85 hectare of land. The average area per holding during the season under study is 0.97 hectare. In winter season area per holding in large size class is 4.06 hectare and in small size class it is only 0.23 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	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	254	57.3	11.09	0.23
Medium	209	167.49	32.41	0.80
Large	72	292.06	56.51	4.06
Total	535	516.85	100	0.97

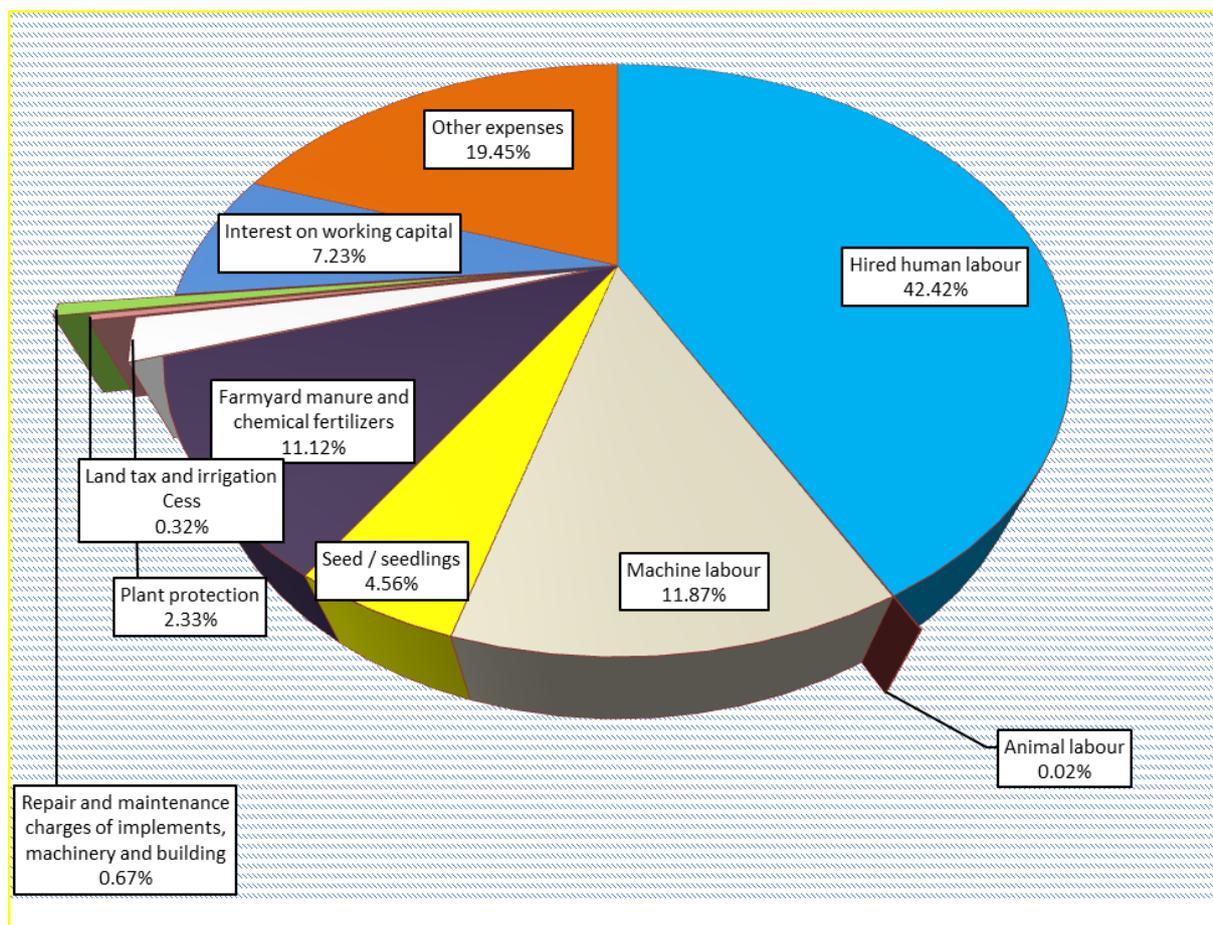
Cost of Cultivation

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 42.42% per cent. Another two major contributing factor in cost are machine labour and other expences which constitutes 11.87% and 19.45 % respectively. Farmyard manure and chemical fertilizers accounts were 11.12 %. 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.70626/-. Considerable variation in hired human labour component is reported in winter season during 2018-19 when small and large size classes are compared. Cost difference in human hired labour between small and large size class is Rs 15868/.

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	42069	32370	26201	29959
2	Animal labour	43	32		15
3	Machine labour	6673	8153	8855	8386
4	Seed / seedlings	2985	3373	3178	3220
5	Farmyard manure and chemical fertilizers	10326	8287	7117	7852
6	Plant protection	833	1440	1929	1649
7	Land tax and irrigation Cess	222	235	223	227
8	Repair and maintenance charges of implements, machinery and building	702	311	527	476
9	Interest on working capital	6293	5366	4728	5108
10	Other expenses	8448	12001	15765	13734
11	Total Cost 'A' (1-10)	78595	71568	68523	70626
12	Interest on fixed capital	3343	2012	1325	1771
13	Cost 'B1' (11+12)	81938	73580	69848	72398
14	Interest on land value	148012	176750	174296	172178
15	Cost 'B' (13+14)	229950	250330	244144	244575
16	Imputed value of household labour	17710	9388	4329	7452
17	Cost 'C' (15+16)	247661	259718	248473	252027

Percentage Distribution of “COST A” per hectare of Winter Paddy during 2018-2019



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

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

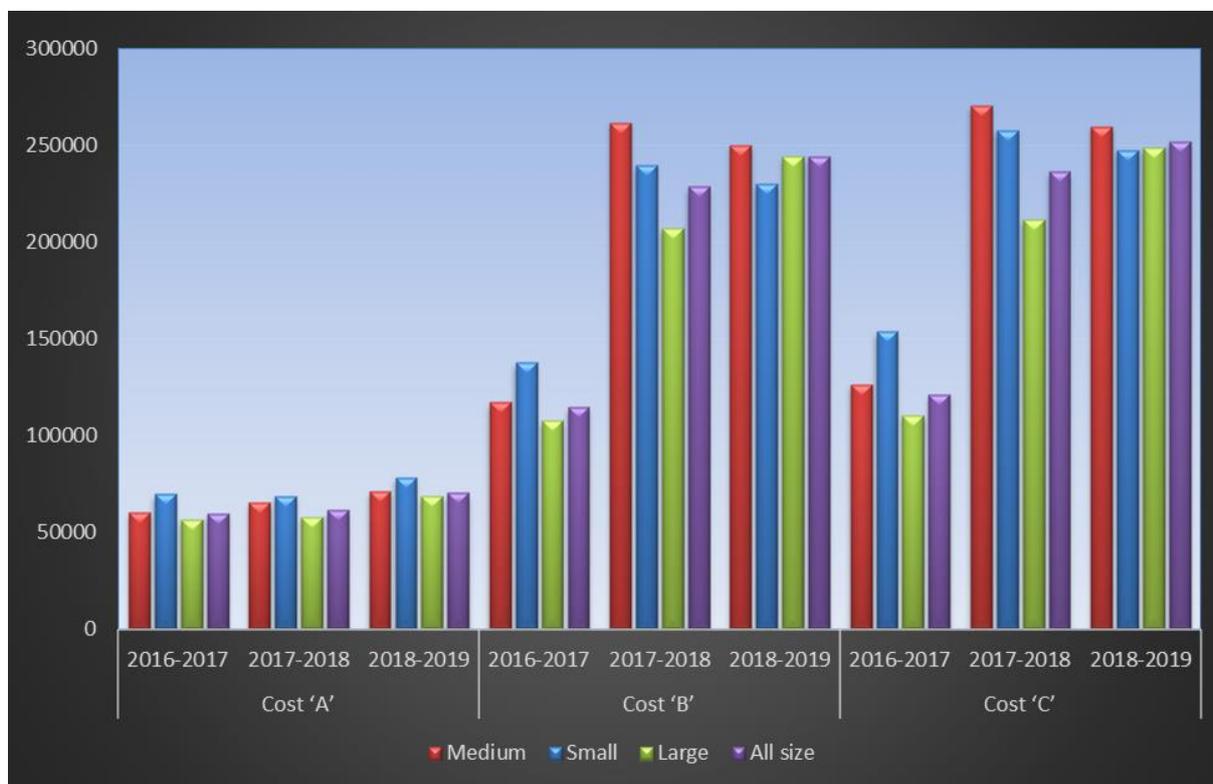
Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	26.67	32.04	45.43	37.06
Female	37.29	40.64	42.16	42.97
Total	63.96	72.68	87.59	80.03

Table 10: Cost of cultivation of Winter Paddy per hectare (in Rs) during, 2016-2017, 2017-2018 and 2018-2019

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	69983	60341	56716	59600
	2017-2018	68931	65436	58108	61663
	2018-2019	78595	71568	68523	70626
Cost 'B'	2016-2017	137601	117285	107672	114661
	2017-2018	239922	261675	207200	228859
	2018-2019	229950	250330	244144	244575
Cost 'C'	2016-2017	153877	126672	110447	121354
	2017-2018	257979	270704	211905	236449
	2018-2019	247661	259718	248473	252027

The result of the survey shows an increase of 14.53 percentage of cost during 2018-19 from the year 2017-18. Also the bottom size class (small) the cost increased by 14.02 percentage during the same period.

COST OF CULTIVATION PER HECTARE OF WINTER PADDY DURING 2016-17, 2017-18 & 2018-19



Cost of production of Winter Paddy

Table 11: Per Quintal Cost (in Rs.) of production of Winter Paddy during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2016-2017	2118	1874	1463	1664
	2017-2018	1214	1250	1527	1382
	2018-2019	2031	1745	1436	1585
Cost 'B'	2016-2017	4154	3643	2779	3201
	2017-2018	4100	4779	4898	4751
	2018-2019	5942	6105	5115	5490
Cost 'C'	2016-2017	4647	3935	2851	3388
	2017-2018	4404	4941	5004	4904
	2018-2019	6400	6334	5205	5657

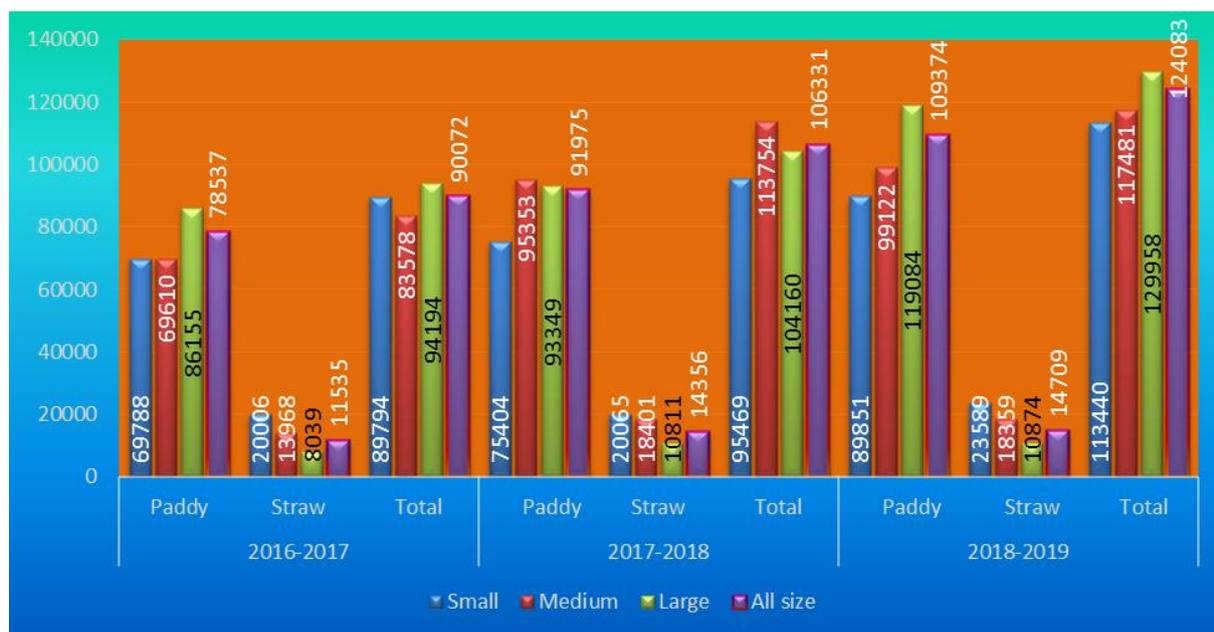
Value of Output

Table 12: Value of Product and Byproduct per hectare (in Rs) of Winter Paddy during 2016-17, 2017-18 and 2018-19

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2016-2017	Paddy	69788	69610	86155	78537
	Straw	20006	13968	8039	11535
	Total	89794	83578	94194	90072
2017-2018	Paddy	75404	95353	93349	91975
	Straw	20065	18401	10811	14356
	Total	95469	113754	104160	106331
2018-2019	Paddy	89851	99122	119084	109374
	Straw	23589	18359	10874	14709
	Total	113440	117481	129958	124083

Compared to autumn 2018-19 value of product and by product per hectre increased marginally during winter season. Similarly per hectare value of product and by product increased by 16.69 percentage in 2018-19 winter season against the value of 2017-18 in the same season.

Value of Product and By product per hectare (in Rs) of Winter Paddy during 2016-17, 2017-18 and 2018-19



Paddy - Summer (Puncha) during 2018-19

For the cost of cultivation study on summer paddy during 2018-19 the total number of holdings selected was 469. Number of holdings selected in large holding size is 84. The details of these holdings are presented below:

Table 13: Area and number of holdings under Summer Paddy

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage	Average Area per holding (ha)
Small	222	48.69	8.06	0.22
Medium	162	148.65	24.61	0.92
Large	84	406.55	67.3	4.84
All Size	469	604.13	100	1.29

The above table reveals that the total area under cultivation in the selected sample holdings covers to 604.13 hectares and the average size of a holding is 1.29 hectare. In the large size class the average area per holding is 4.84 hectare where as in small size class area per holding is 0.22 hectare only.

Cost of Cultivation

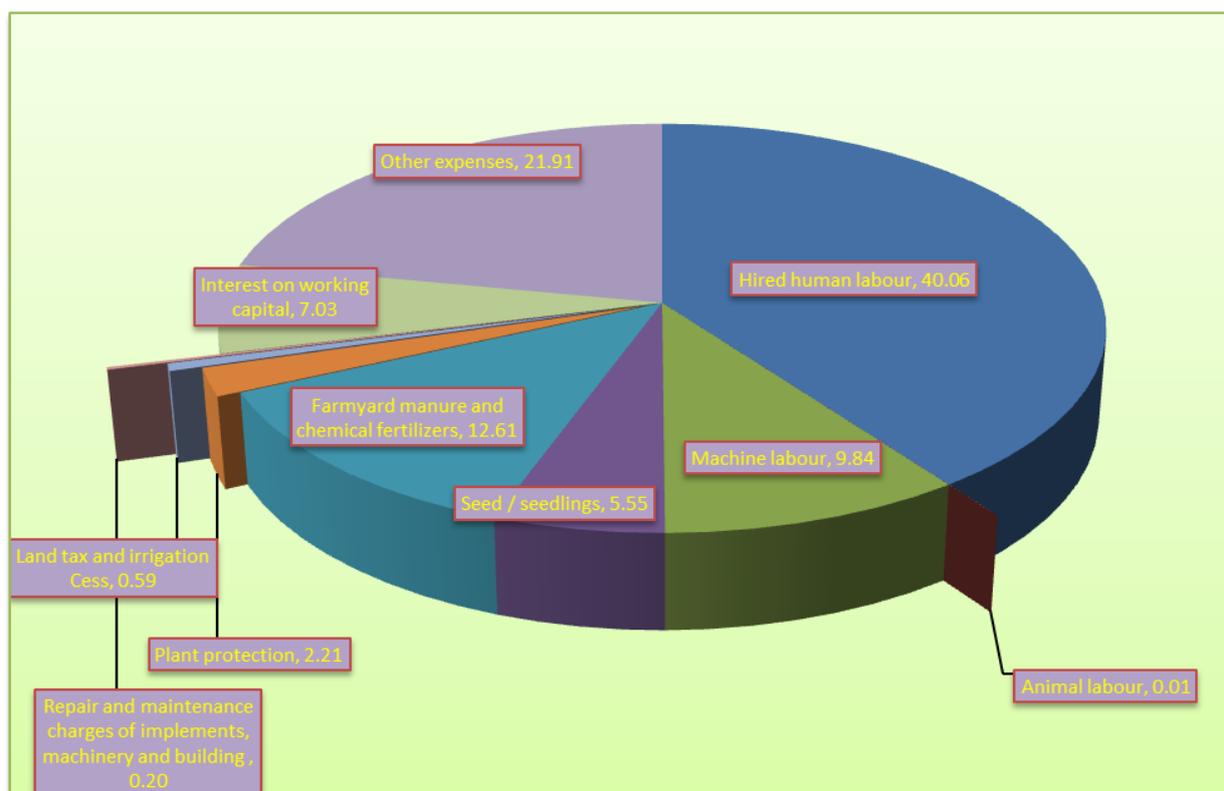
Cost of cultivation of summer paddy per hectare is estimated as Rs.69235/- when cost 'A' is considered. Component wise holding size class details are presented below:

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	39534	33589	24166	27734
2	Animal labour		27		7
3	Machine labour	9765	6836	6437	6813
4	Seed / seedlings	3047	3422	4095	3844
5	Farmyard manure and chemical fertilizers	10345	8640	8566	8728
6	Plant protection	1022	1662	1541	1529
7	Land tax and irrigation Cess	263	333	456	410
8	Repair and maintenance charges of implements, machinery and building	691	184	50	136
9	Interest on working capital	6371	5418	4480	4865
10	Other expenses	10033	14109	16180	15169
11	Total Cost 'A' (1-10)	81071	74220	65971	69235
12	Interest on fixed capital	3904	2078	531	1184
13	Cost 'B1' (11+12)	84975	76297	66503	70418
14	Interest on land value	173602	151987	128417	137849
15	Cost 'B' (13+14)	258577	228284	194920	208267
16	Imputed value of household labour	20607	9946	3633	6560
17	Cost 'C' (15+16)	279185	238230	198552	214828

Out of the total cost incurred for crop husbandry more than 40.06 percent cost goes to human labour component. Similarly compare to winter season a slight decrease in total cost A during the summer season is reported.

Percentage Distribution of “COST A” per hectare of Summer Paddy during 2018-19



In summer paddy cultivation hired female labour participation accounted as 42.94 % and that of male labour participation is 38.56% to the total labour hours. Details are given below:

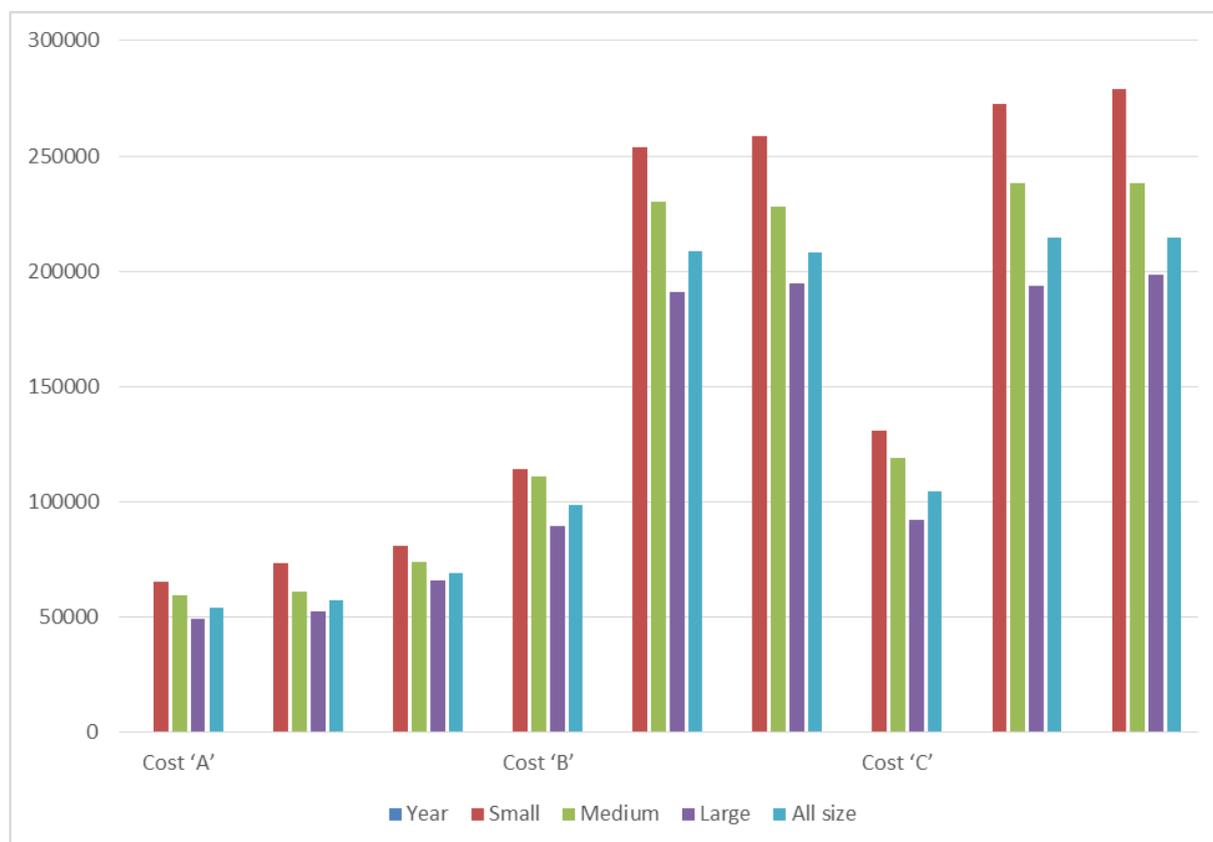
Table 15: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	25.21	33.21	45.25	38.56
Female	35.02	40.24	43.68	42.94
Total	60.23	73.45	88.93	81.50

Table 16: Cost of Cultivation of Summer Paddy per hectare (in Rs) during,2016-17 ,2017-2018 and 2018-2019

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	65432	59477	49251	54109
	2017-2018	73240	61344	52722	57200
	2018-2019	81071	74220	65971	69235
Cost 'B'	2016-2017	114236	111215	89434	98745
	2017-2018	253692	230215	191054	208687
	2018-2019	258577	228284	194920	208267
Cost 'C'	2016-2017	131088	119163	92090	104539
	2017-2018	272568	238358	193652	214438
	2018-2019	279185	238230	198552	214828

**COST OF CULTIVATION PER HECTARE OF SUMMER PADDY DURING
2016-17, 2017-18 & 2018-19**



Value of Output

Table 17: Per Quintal Cost (in Rs.) of production of Summer Paddy during, 2016-17, 2017-18 and 2018-2019

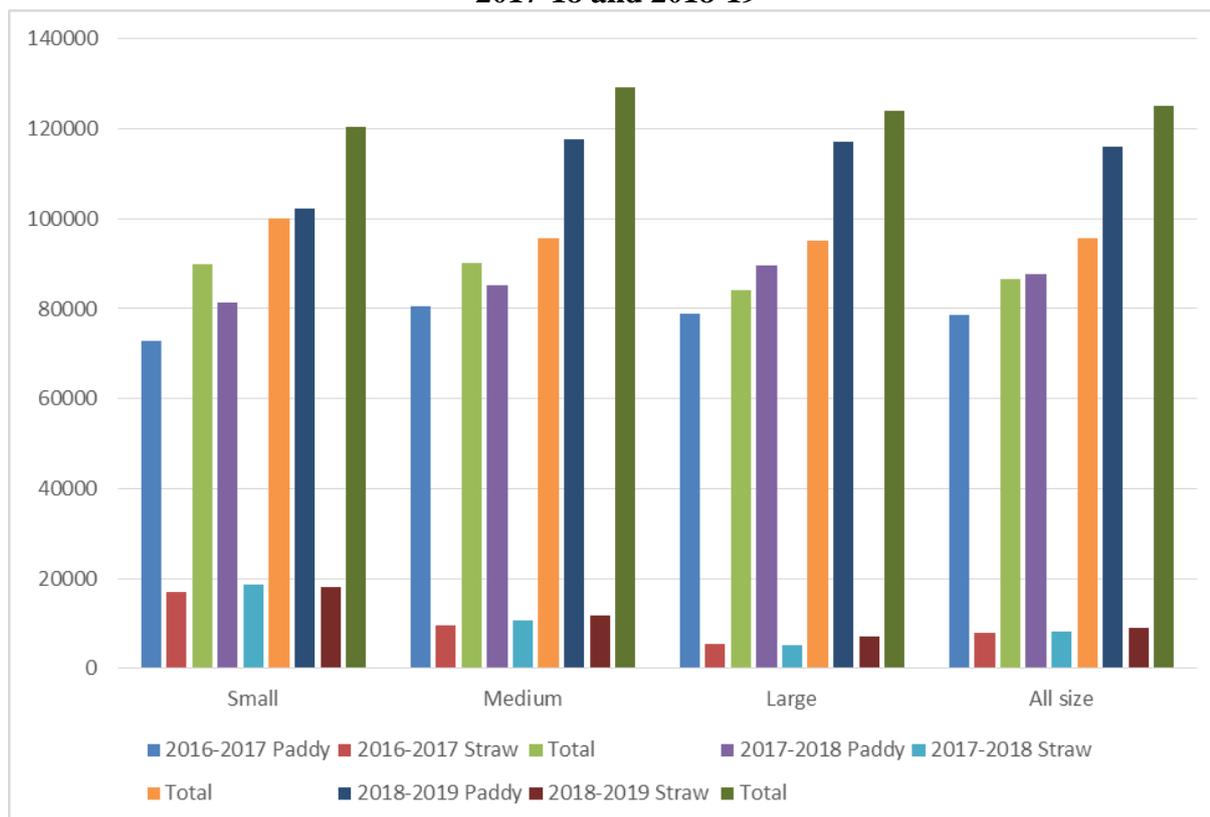
Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	2016-2017	1899	1591	1337	1474
	2017-2018	988	1681	1091	1216
	2018-2019	1869	1558	1406	1479
Cost 'B'	2016-2017	3316	2976	2429	2690
	2017-2018	3319	6006	3656	4162
	2018-2019	5960	4793	4153	4449
Cost 'C'	2016-2017	3805	3189	2501	2848
	2017-2018	3563	6215	3704	4274
	2018-2019	6435	5002	4231	4265

Above table reveals that for producing one quintal of paddy in summer season an amount of Rs 1479/- is required when cost 'A' is considered. Per hectare value of paddy produced during the season is calculated as **Rs.115989/-** and the value of by-product viz. straw is estimated as **Rs.9079/-**

Table 18: Value of Product and by product per hectare (in Rs) of Summer Paddy during 2016-17, 2017-18 and 2018-19

Year	Product/ By product	Holding size class			
		Small	Medium	Large	All size
2016-2017	Paddy	72826	80544	78769	78674
	Straw	17119	9693	5350	7938
	Total	89945	90237	84120	86612
2017-2018	Paddy	81508	85151	89743	87596
	Straw	18582	10537	5278	8079
	Total	100090	95688	95021	95675
2018-2019	Paddy	102291	117584	117075	115989
	Straw	18150	11795	6982	9079
	Total	120441	129379	124057	125068

Value of Product and Byproduct per hectare (in Rs) of Summer Paddy during 2016-17, 2017-18 and 2018-19



Coconut during 2018-19

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 760 sample holdings selected in the state from the different holding size classes, the average area per holding was 0.43 hectare. Details of the study conducted during 2018-19 are presented below.

Table 19: Area and number of holdings under Coconut cultivation

Holding size class	Sample Size	Area under coconut in the sample (ha)	Percentage	Average Area per holding (ha)
Small	250	36.52	11.11	0.15
Medium	402	144	43.79	0.36
Large	108	148.33	45.11	1.37
Total	760	328.85	100	0.43

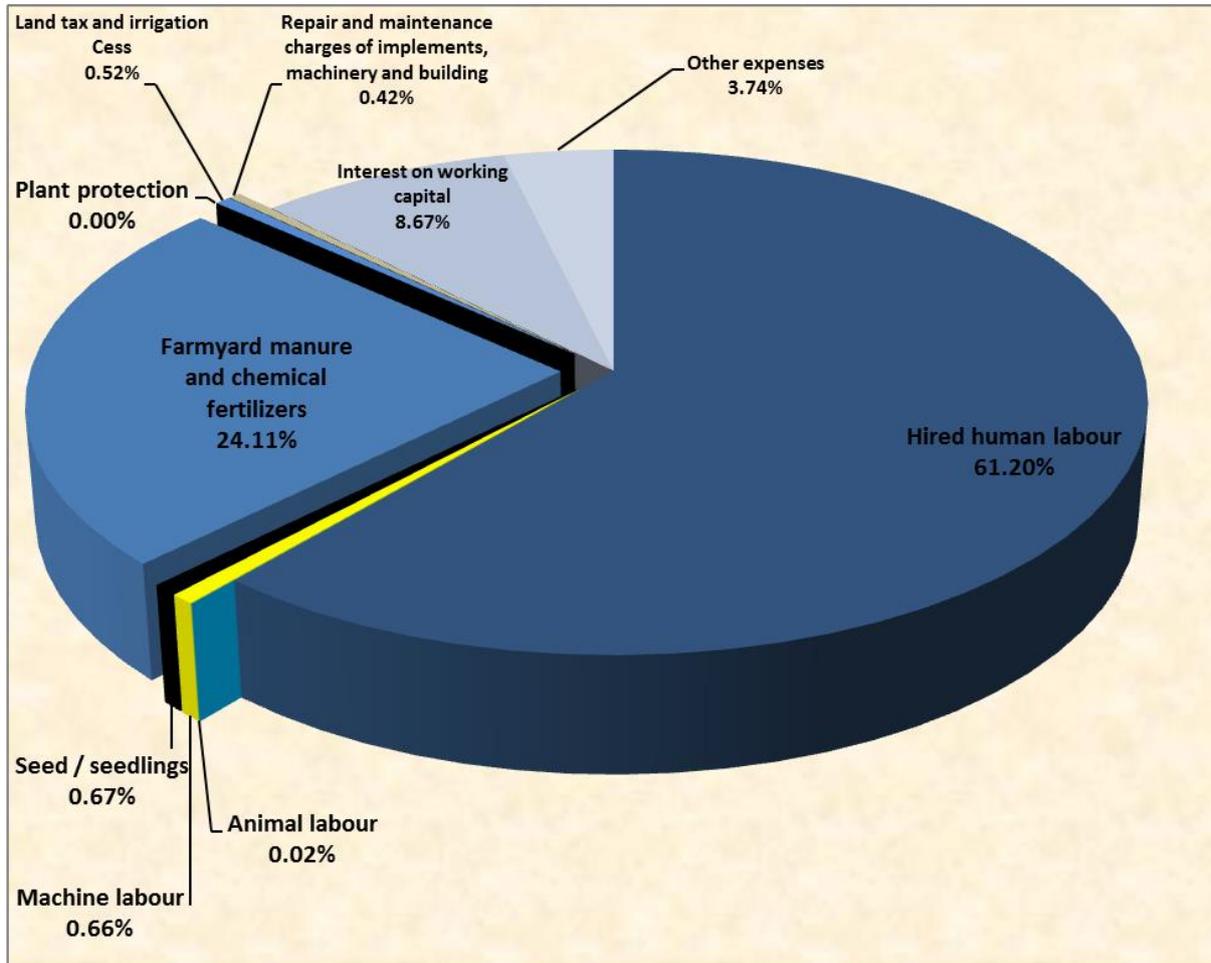
Cost of Cultivation

Cost per hectare for cultivating coconut during 2018-19 was Rs 74536/- excluding interest on fixed capital, land value and value of household labour. Out of this 61.20% of total cost is for the component of hired human labour and 24.11 % 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	47274	46349	44501	45618
2	Animal labour		14	12	12
3	Machine labour	173	176	873	490
4	Seed / seedlings	780	454	468	496
5	Farmyard manure and chemical fertilizers	14652	17364	19373	17969
6	Plant protection		3		1
7	Land tax and irrigation Cess	341	302	484	388
8	Repair and maintenance charges of implements, machinery and building	575	273	290	314
9	Interest on working capital	6288	6436	6523	6459
10	Other expenses	3266	2919	2543	2788
11	Total Cost 'A' (1-10)	73347	74291	75067	74536
12	Interest on fixed capital	6408	2882	3617	3605
13	Cost 'B1' (11+12)	79755	77174	78684	78142
14	Interest on land value	504101	563382	393502	480172
15	Cost 'B' (13+14)	583856	640556	472187	558313
16	Imputed value of household labour	16293	11775	5918	9635
17	Cost 'C' (15+16)	600149	652331	478105	567948

Percentage Distribution of “COST A” per hectare of Coconut during 2018-19



The following table reveals the percentage distribution of hired human labour hours to the total human labour hours. The percentage shares of female participation in total human labour hours are 9.12 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	64.4	68.42	67.26	67.42
Female	10.92	16.28	30.18	9.12
Total	75.32	84.7	97.44	76.54

Table 22: Cost of cultivation of Coconut per hectare (in Rs.) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	75192	67717	64392	67062
	2017-2018	68898	68744	68054	68434
	2018-2019	73347	74291	75067	74536
Cost 'B'	2016-2017	433827	431828	333139	386171
	2017-2018	616350	680508	547301	608168
	2018-2019	583856	640556	472187	558313
Cost 'C'	2016-2017	451339	443588	339292	396009
	2017-2018	633636	691776	553435	617780
	2018-2019	600149	652331	478105	567948

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	149936	140355	126231	135048
By-Product	2202	2113	2775	2422
Total	152138	142468	129006	137470

The study reveals that the value of output is Rs 137470/- per hectare were as the cost of cultivation per hectare is Rs 74536/-.

Areca nut during 2018-19

Areca nut 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 756 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 122.06 hectare.

Table 24: Area and Number of holdings under Arecanut cultivation

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage	Average Area per holding (ha)
Small	616	38.91	31.88	0.06
Medium	98	36.43	29.85	0.37
Large	42	46.72	38.28	1.11
All size	756	122.06	100	0.16

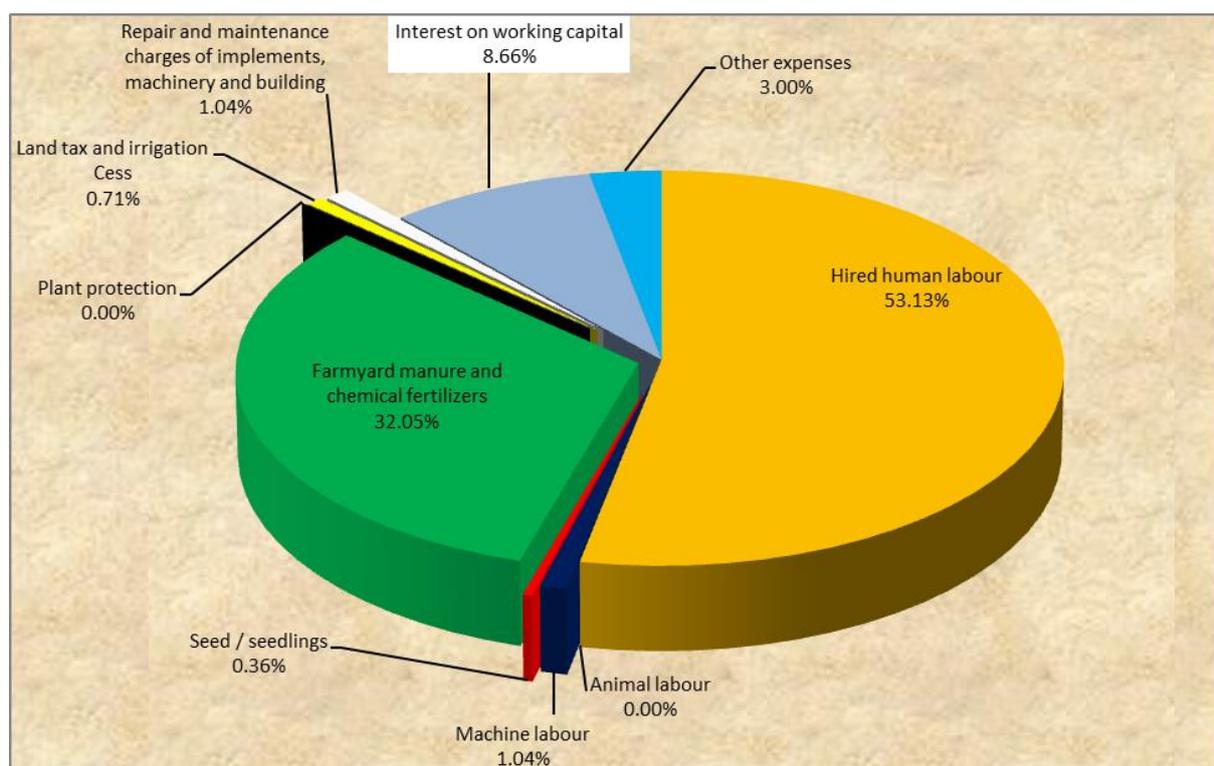
Cost of Cultivation

The different cost components of Arecanut cultivation is given below: Per hectare cost expenses is worked out as Rs.100395/- excluding interest on fixed capital, interest on land value and household labour components. Out of this 53.13 % cost is for hired human labour and 32.05% 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	51689	55845	52755	53338
2	Animal labour				
3	Machine labour	283	726	1934	1047
4	Seed / seedlings	540	258	284	358
5	Farmyard manure and chemical fertilizers	17148	31241	45432	32181
6	Plant protection	5	5		3
7	Land tax and irrigation Cess	392	624	1055	715
8	Repair and maintenance charges of implements, machinery and building	997	1392	816	1045
9	Interest on working capital	6967	8807	10041	8693
10	Other expenses	3283	3322	2553	3015
11	Total Cost 'A' (1-10)	81305	102220	114869	100395
12	Interest on fixed capital	9577	8145	8186	8617
13	Cost 'B1' (11+12)	90882	110365	123055	109012
14	Interest on land value	453079	387167	247188	354597
15	Cost 'B' (13+14)	543961	497532	370244	463610
16	Imputed value of household labour	26182	20626	9966	18317
17	Cost 'C' (15+16)	570143	518158	380209	481926

Percentage Distribution of “COST A” per hectare of arecanut during 2018-19



The following table illustrates the work participation of arecanut cultivation. It shows that out of 70.09 per cent of the total labour hours 16.01% has been shared by females and 54.08 % 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	53.15	55.45	53.75	54.08
Female	15.9	22.58	35.92	16.01
Total	69.05	78.03	89.67	70.09

Table 27: Cost of Cultivation of Arecanut per hectare (in Rs) during 2016-17, 2017-2018 and 2018-2019

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	65278	66065	83813	72041
	2017-2018	76569	83608	96486	84897
	2018-2019	81305	102220	114869	100395
Cost 'B'	2016-2017	341850	318491	283827	313178
	2017-2018	620065	469220	462917	525237
	2018-2019	543961	497532	370244	463610
Cost 'C'	2016-2017	366930	333689	290920	328421
	2017-2018	643946	484580	471862	541882
	2018-2019	570143	518158	380209	481926

Value of Out put

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

The estimated value of output per hectare is Rs.245169/- against the per hectare cost A of cultivation is Rs 100395/-.

Holding Size Class			
Small	Medium	Large	All Sizes
181797	268514	279736	245169

2.4 Tapioca during 2018-19

Area under the crop in this study was 114.02 hectare from 550 holdings.

Table 29: Area and Number of Holdings under Tapioca cultivation

Size class	Sample Size	Area under the crop in the sample (ha)	Percentage to total area of Selected holdings	Average Area per holding (ha)
Small	368	31.04	27.22	0.08
Medium	155	49.42	43.34	0.32
Large	27	33.56	29.43	1.24
Total	550	114.02	100	0.21

The average size of a selected holding is 0.21 hectare

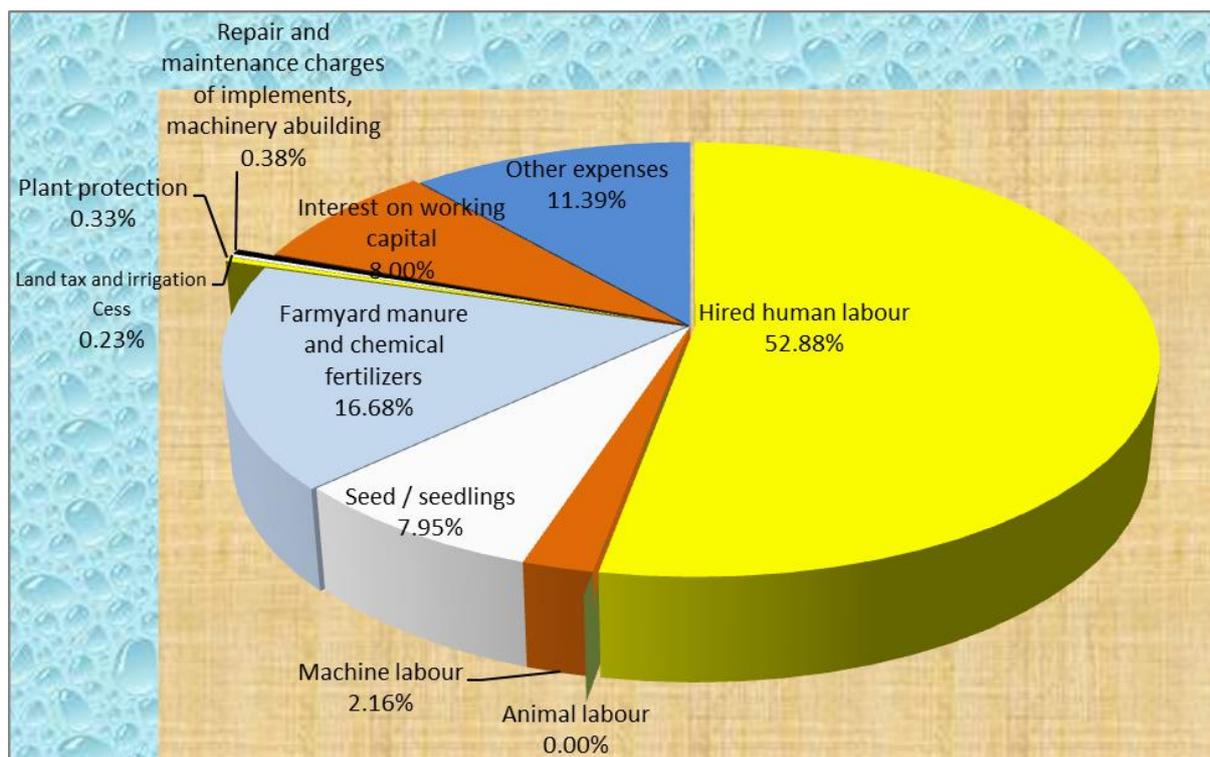
Cost of Cultivation

When Cost A is considered, per hectare cost of cultivation of tapioca is worked out as Rs. 111688/- . In this cost A, hired human labour cost constituted 52.88 % where as farmyard manure and chemical fertilizers shares 16.68%. Interest on working capital 8% and other expenses contribute 11.39%. 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	62565	65048	46994	59058
2	Animal labour				
3	Machine labour	1642	2302	3303	2417
4	Seed / seedlings	9403	7659	10174	8874
5	Farmyard manure and chemical fertilizers	19375	19237	17053	18632
6	Plant protection	296	308	540	373
7	Land tax and irrigation Cess	212	253	307	258
8	Repair and maintenance charges of implements, machinery abuilding	907	358	57	419
9	Interest on working capital	9328	9455	7806	8935
10	Other expenses	10350	12514	15219	12721
11	Total Cost 'A' (1-10)	114078	117134	101455	111688
12	Interest on fixed capital	3478	2121	3497	2895
13	Cost 'B1' (11+12)	117556	119256	104951	114583
14	Interest on land value	431078	372560	210759	340873
15	Cost 'B' (13+14)	548634	491816	315711	455456
16	Imputed value of household labour	51986	22664	13201	27862
17	Cost 'C' (15+16)	600620	514480	328912	483318

Percentage Distribution of “COST A” per hectare of Tapioca during 2018-19



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	47.69	65.7	65.68	59.31
Female	8.33	16.52	27.6	7.41
Total	56.02	82.22	93.28	66.72

In tapioca cultivation 59.31% of the total human labour hours have been shared by hired male human labour.

Table 32: Cost of cultivation of Tapioca per hectare (In Rs.) during 2016-17, 2017-18 and 2018-19

A comparative statement for 2016-17, 2017-18 and 2018-19 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost "A"	2016-2017	93668	98970	91128	95899
	2017-2018	103582	108440	94744	103061
	2018-2019	114078	117134	101455	111688
Cost 'B'	2016-2017	349459	318768	245818	313192
	2017-2018	610873	796094	457370	644765
	2018-2019	548634	491816	315711	455456
Cost 'C'	2016-2017	399753	348112	261313	345822
	2017-2018	666071	823147	475605	677149
	2018-2019	600620	514480	328912	483318

Value of Out put

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

Holding Size Class			
Small	Medium	Large	All Sizes
347048	321286	327552	330144

The value of output for medium holding size class has slight variation. The value of out put per hectre of Tapioca is estimated as Rs.330144/- where as the cost of cultivation per hectre, the paid out cost actually increased by the cultivators is only Rs.111688/-.

2.5 Banana during 2018-19

To study the cost of cultivation on banana 530 sample holdings were selected by covering an area of 145.41 hectares under three different holding size classes with an average area per holding of 0.27 hectare.

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

Size class	Sample Size	Area under the crop in the sample (ha)	Percentage to Total area	Average Area per holding (ha)
Small	305	27.83	19.14	0.09
Medium	183	64.21	44.16	0.35
Large	42	53.37	36.7	1.27
Total	530	145.41	100	0.27

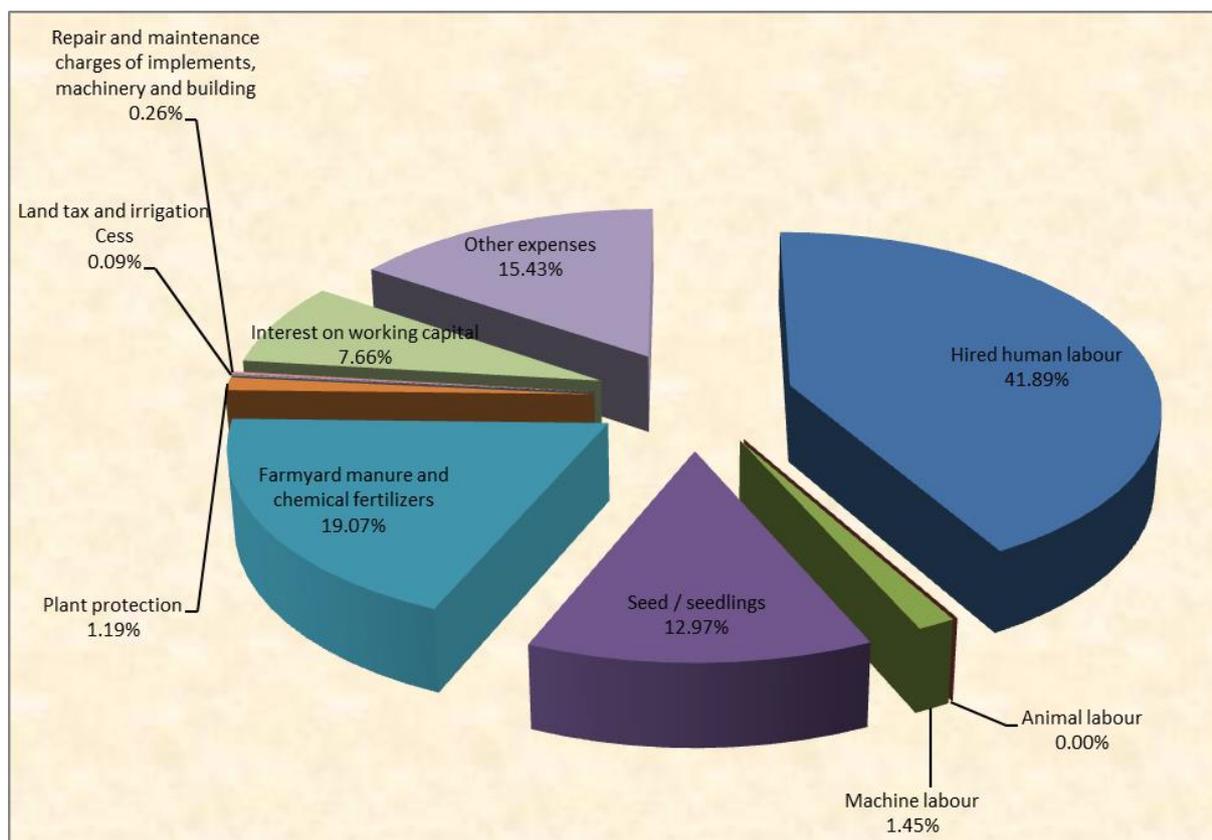
Cost of Cultivation

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	81894	103853	79777	90815
2	Animal labour				
3	Machine labour	1936	2830	4137	3139
4	Seed / seedlings	27533	28225	28321	28128
5	Farmyard manure and chemical	47716	41717	37570	41343
6	Plant protection	2326	2332	3025	2585
7	Land tax and irrigation Cess	291	218	96	187
8	Repair and maintenance charges of implements, machinery and building	1418	491	179	554
9	Interest on working capital	16141	17896	15283	16601
10	Other expenses	24410	31155	40909	33444
11	Total Cost 'A' (1-10)	203664	228718	209297	216796
12	Interest on fixed capital	10820	3245	1467	4042
13	Cost 'B1' (11+12)	214484	231963	210764	220838
14	Interest on land value	395141	315850	570535	424499
15	Cost 'B' (13+14)	609626	547813	781300	645337
16	Imputed value of household labour	72602	42275	20651	40142
17	Cost 'C' (15+16)	682228	590088	801951	685479

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 216796/- Out of this 41.89% cost involved in hired human labour component, 19.07% cost for farmyard manure and chemical fertilizers and Seed/Seedlings constitute 12.97 % and other expenses shares 15.43%.

Percentage Distribution of “COST A” per hectare of Banana during 2018-19



In Banana cultivation male participation (61.35%) is higher than that of female (7.10%). 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	47.13	62.37	70.57	61.35
Female	6.68	16.83	22.97	7.10
Total	53.81	79.2	93.54	68.45

Table 37: Cost of Cultivation per hectare of Banana (In Rs.) during 2016-17, 2017-18 & 2018-19

A comparative statement for 2016-17, 2017-18 and 2018-19 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	196833	178653	180623	182921
	2017-2018	191918	188039	181425	186081
	2018-2019	203664	228718	209297	216796
Cost 'B'	2016-2017	449311	371831	453128	414249
	2017-2018	688946	662418	977423	793095
	2018-2019	609626	547813	781300	645337
Cost 'C'	2016-2017	510730	411366	484459	455408
	2017-2018	764318	699195	1000811	831355
	2018-2019	682228	590088	801951	685479

Value of out put

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

Holding Size Class			
Small	Medium	Large	All Sizes
536491	541145	503453	526421

During 2017-18 per hectare value of output from banana cultivation is estimated out as **Rs. 526421** /- whereas the cost A per hectre is Rs.216796/-.

2.6 Pepper during 2018-19

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	Average Area per holding (ha)
Small	439	24.51	41.14	0.06
Medium	81	26.53	44.53	0.33
Large	10	8.54	14.33	0.85
Total	530	59.58	100	0.11

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 is 64.63 % and the farmyard manure and chemical fertilizer cost is 18.96% 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	52536	52905	40760	51012
2	Animal labour				
3	Machine labour	8	700	1030	463
4	Seed / seedlings	777	1386	2985	1365
5	Farmyard manure and chemical fertilizers	14823	15928	12360	14962
6	Plant protection	436	848	2042	850
7	Land tax and irrigation Cess	323	337	1716	529
8	Repair and maintenance charges of implements, machinery and building	1331	729	226	904
9	Interest on working capital	6858	7177	5918	6865
10	Other expenses	2373	1469	2413	1976
11	Total Cost 'A' (1 to 10)	79465	81478	69450	78925
12	Interest on fixed capital	12173	7489	2466	8697
13	Cost 'B1' (11+12)	91638	88967	71915	87622
14	Interest on land value	501286	437193	182350	427026
15	Cost 'B' (13+14)	592925	526160	254266	514647
16	Imputed value of household labour	41019	18240	15995	27290
17	Cost 'C' (15+16)	633943	544400	270261	541938

Percentage Distribution of “COST A” per hectare of Pepper during 2018--19

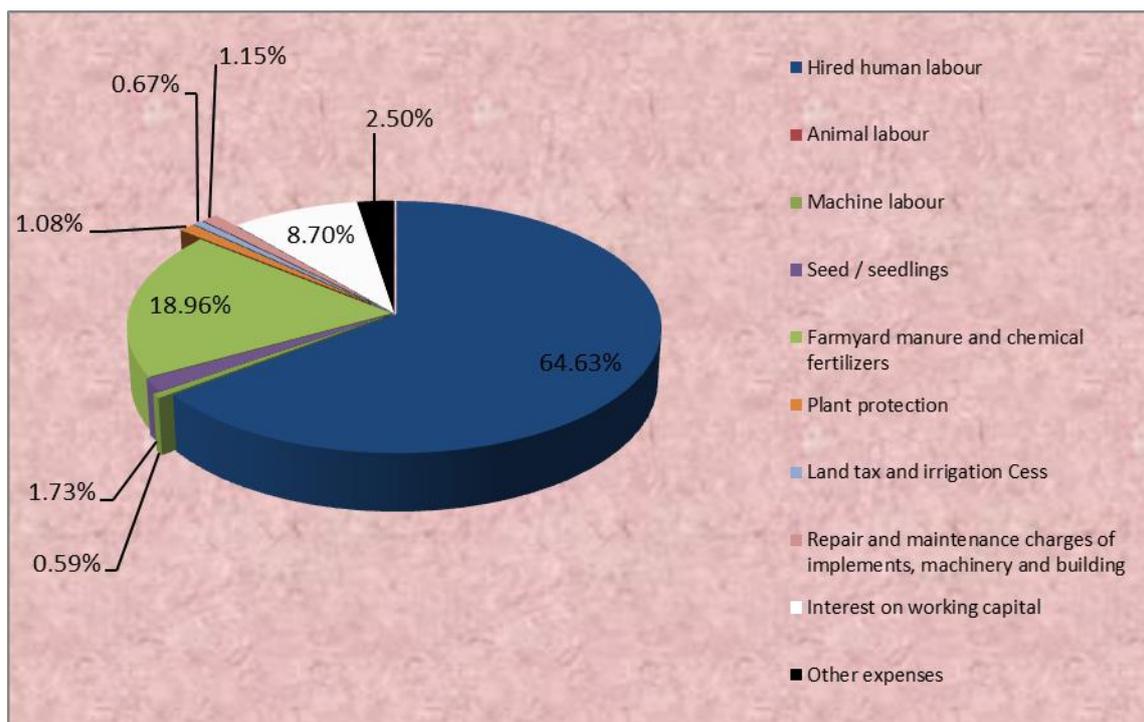


Table 41: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	46.19	62.3	49.46	52.75
Female	7.57	23.94	31.28	9.74
Total	53.76	86.24	80.74	62.49

Table 42: Cost of cultivation of Pepper per hectare (In Rs.) during 2016-17, 2017-18 & 2018-19.

A comparative statement for 2016-17, 2017-18 & 2018-19 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	81368	73558	76632	77019
	2017-2018	79031	76297	70138	76510
	2018-2019	79465	81478	69450	78925
Cost 'B'	2016-2017	355060	268938	256353	300157
	2017-2018	694206	462091	438581	563205
	2018-2019	592925	526160	254266	514647
Cost 'C'	2016-2017	396044	284930	264410	324567
	2017-2018	737753	480849	451844	592265
	2018-2019	633943	544400	270261	541938

Value of out put

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

Holding Size Class			
Small	Medium	Large	All Sizes
249064	188551	128193	204794

During 2018-19 it is estimated that Rs .204794/- has been received as value of output from per hectare pepper cultivation whereas cost A for Cultivation is Rs.78925/-.

2.7 Ginger during 2018-19

For the cost of cultivation study during 2018-19, 449 sample holdings were selected for the crop ginger and total area covered for study is 37.57 hectare.

Table 44: Area and number of holdings under Ginger cultivation

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage to total Area	Average area per holding (ha)
Small	402	17.97	47.83	0.04
Medium	42	12.11	32.23	0.29
Large	5	7.49	19.94	1.50
Total	449	37.57	100	0.08

Cost of cultivation

Among various components of cost of ginger cultivation, hired human labour, Seed/seedling, fertilizer etc. are the top three components. Hired human labour alone accorded 38.54% of the total cost. Seed/seedling and farmyard manure and fertilizer share is 24.96% and 13.58% 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	65535	84489	109784	80464
2	Animal labour				
3	Machine labour	661	4093	7904	3211
4	Seed / seedlings	55839	55403	37851	52112
5	Farmyard manure and chemical fertilizers	27275	32937	23518	28351
6	Plant protection	990	5345	27414	7662
7	Land tax and irrigation cess	260	224	55	207
8	Repair and maintenance charges of implements, machinery and building	1258	334		710
9	Interest on working capital	15030	18227	20647	17180
10	Other expenses	7754	14394	52745	18864
11	Total Cost 'A' (1-10)	174603	215447	279917	208761
12	Interest on fixed capital	89235	3602	1161	44078
13	Cost 'B1' (11+12)	263838	219049	281078	252839
14	Interest on land value	389624	229838	66486	273710
15	Cost 'B' (13+14)	653462	448887	347564	526549
16	Imputed value of household labour	62066	27445	9092	40349
17	Cost 'C' (15+16)	715528	476332	356656	566898

Percentage Distribution of “COST A” per hectare of Ginger during 2018-19

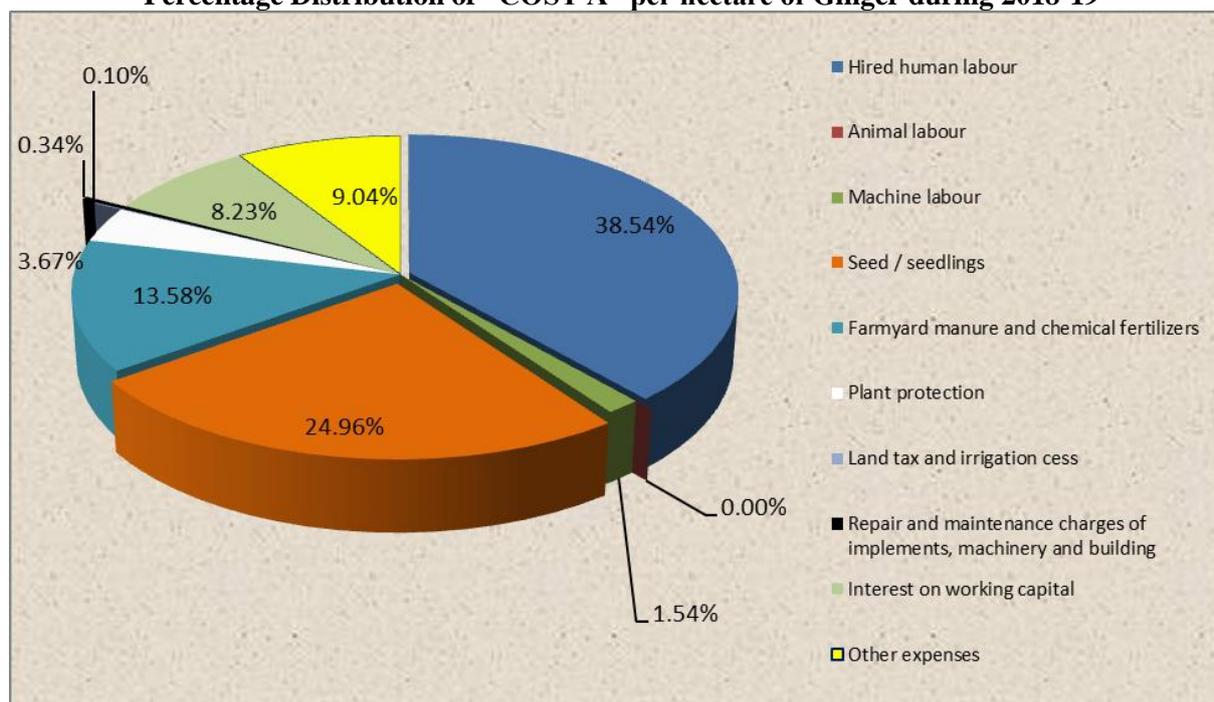


Table 46: Percentage distribution of hired human labour hours to total human labour hours

ex	Holding size class			
	Small	Medium	Large	All Sizes
Male	37.53	43.47	32.76	37.88
Female	14.44	38.16	47.8	32.49
Total	51.97	81.63	80.56	70.37

Table 47: Cost of cultivation of Ginger per hectare (In Rs.) during 2016-17, 2017-18 and 2018-19

A comparative statement for 2016-17, 2017-18 & 2018-19 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	186160	249362	297613	235296
	2017-2018	180199	252135	313107	238820
	2018-2019	174603	215447	279917	208761
Cost 'B'	2016-2017	444079	393497	394003	414121
	2017-2018	586517	511956	543993	554207
	2018-2019	653462	448887	347564	526549
Cost 'C'	2016-2017	508481	431629	408255	457184
	2017-2018	652004	548143	560420	597334
	2018-2019	715528	476332	356656	566898

Value of Out put

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

Holding Size Class			
Small	Medium	Large	All Sizes
463298	582019	1107194	629930

The per hectare value of output estimated from Ginger cultivation is Rs. 629930 /- and the cost of cultivation per hectre is Rs 208761/- excluding interest on fixed capital, land value and household labour.

2.8 Turmeric during 2018-19

Sample holdings selected for the cost of cultivation study of turmeric is 485 which distributed among the three holding size classes and total area within the sample holding was 27.81 hectares.

Table 49: Area and Number of holdings under Turmeric cultivation

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage to total area	Average area per holding (ha)
Small	455	16.98	61.06	0.04
Medium	27	7.59	27.29	0.28
Large	3	3.24	11.65	1.08
Total	485	27.81	100	0.06

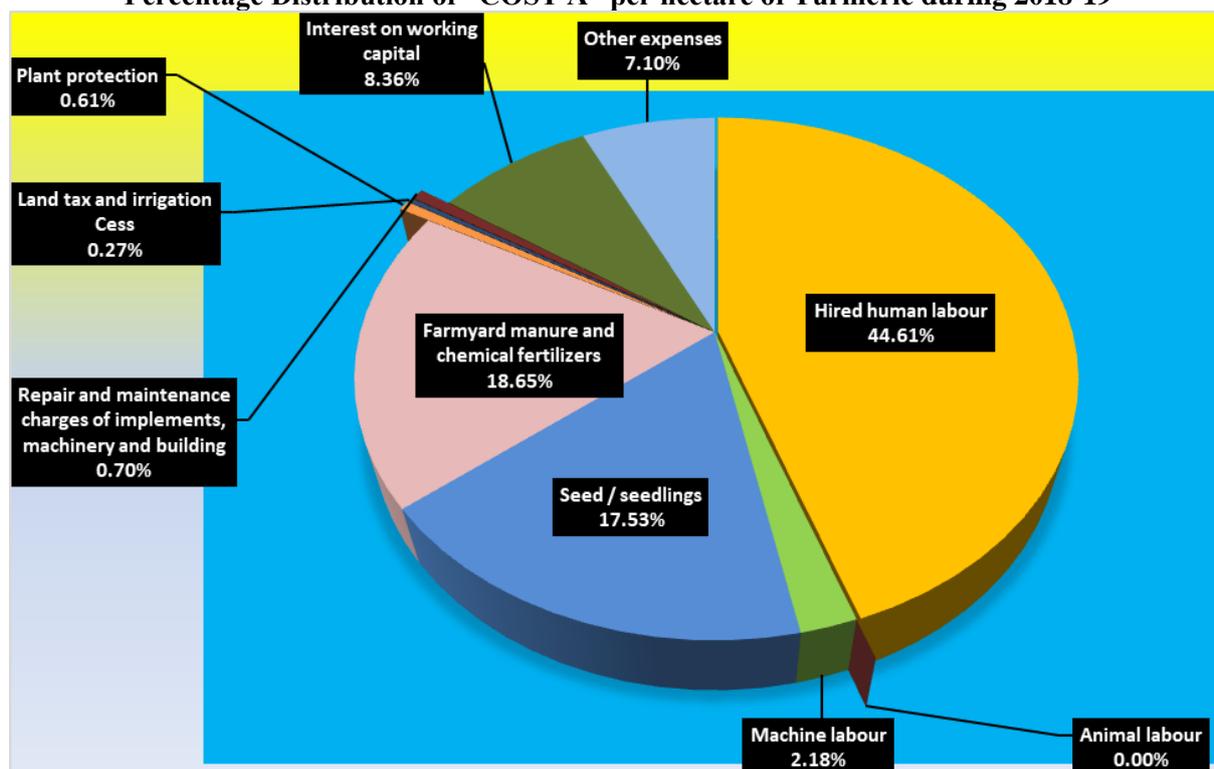
Cost of cultivation

The cash and other kind expenses incurred under Turmeric cultivation is estimated as Rs.140032/- per hectare. Out of this44.61% is for hired human labour, 17.53% for seed/seedlings and 18.65% 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	63161	59610	65501	62464
2	Animal labour				
3	Machine labour	964	5421	8460	3054
4	Seed / seedlings	23354	25565	28375	24543
5	Farmyard manure and chemical fertilizers	23006	20037	56662	26116
6	Plant protection	385	1300	2228	850
7	Land tax and irrigation Cess	292	591	320	377
8	Repair and maintenance charges of implements, machinery and building	1455	100	531	977
9	Interest on working capital	11087	11193	16123	11703
10	Other expenses	7313	18836	2933	9949
11	Total Cost 'A' (1-10)	131018	142655	181133	140032
12	Interest on fixed capital	9700	10713	4198	9334
13	Cost 'B1' (11+12)	140718	153368	185331	149366
14	Interest on land value	396710	315248	177145	348895
15	Cost 'B' (13+14)	537428	468616	362476	498262
16	Imputed value of household labour	71967	27989	13956	53204
17	Cost 'C' (15+16)	609395	496605	376431	551465

Percentage Distribution of “COST A” per hectare of Turmeric during 2018-19



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	35.05	27.49	46.48	33.74
Female	13.49	26.29	42.39	17.12
Total	48.54	53.78	88.87	50.86

Table 52: Cost of cultivation of Turmeric per hectare (In Rs.) during 2016-17, 2017-18 & 2018-19

A comparative statement for 2016-17, 2017-2018 & 2018-19 for cost of cultivation of different concept is given below.

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	100874	120763	186015	120755
	2017-2018	134744	128759	164779	137084
	2018-2019	131018	142655	181133	140032
Cost 'B'	2016-2017	355077	287094	443217	347665
	2017-2018	590874	555710	404291	551750
	2018-2019	537428	468616	362476	498262
Cost 'C'	2016-2017	425028	316950	450876	394999
	2017-2018	656246	586504	416084	597567
	2018-2019	609395	496605	376431	551465

In 2018-19 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 464590/- during the year 2018-19 and cost of cultivation is estimated as Rs 140032/- 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
323996	692528	667248	464590

2.9 Pineapple during 2018-19

In the cost of cultivation study on pineapple 211 sample holdings were selected by covering area 472.51 hectares. Details of these holdings are given below

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

Size class	Sample Size	Area under the crop in the sample (ha)	Percentage to Total area	Average Area per holding (ha)
Small	57	4.2	0.89	0.07
Medium	62	24.67	5.22	0.4
Large	92	443.64	93.89	4.82
Total	211	472.51	100	2.24

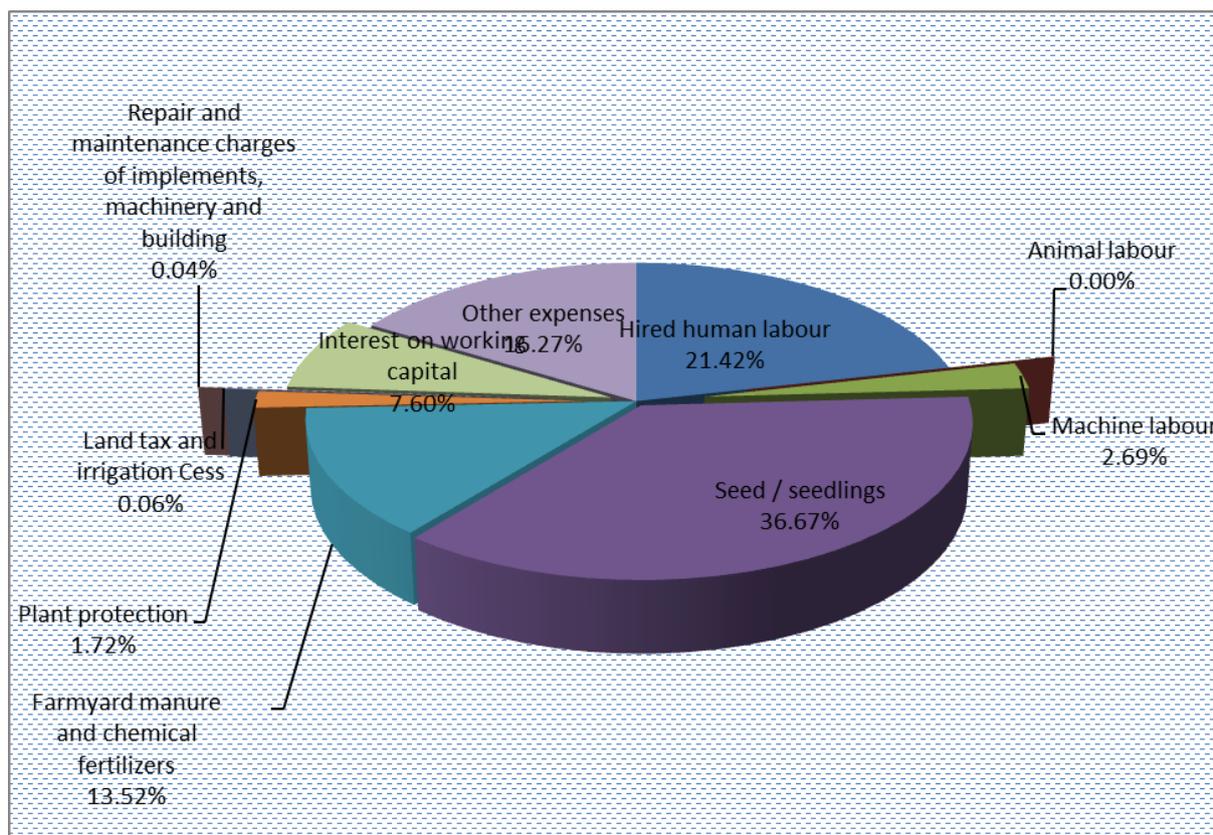
Cost of Cultivation

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 211075/-.

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	54710	45766	45091	45212
2	Animal labour		81		4
3	Machine labour	6505	2853	5826	5676
4	Seed / seedlings	70516	86745	76948	77402
5	Farmyard manure and chemical fertilizers	20719	29771	28544	28539
6	Plant protection	2100	4838	3581	3634
7	Land tax and irrigation Cess	247	288	115	125
8	Repair and maintenance charges of implements, machinery and building	1154	337	61	85
9	Interest on working capital	15455	17005	15999	16047
10	Other expenses	6816	26553	35044	34350
11	Total Cost 'A' (1-10)	178221	214237	211210	211075
12	Interest on fixed capital	7680	1596	527	646
13	Cost 'B1' (11+12)	185901	215834	211737	211721
14	Interest on land value	309950	611378	654744	649417
15	Cost 'B' (13+14)	495851	827211	866481	861138
16	Imputed value of household labour	34500	18094	4345	5330
17	Cost 'C' (15+16)	530351	845306	870825	866468

Percentage Distribution of “COST A” per hectare of Pineapple during 2018-19



The hired human labour cost accounted as 21.42% where as farmyard manure and chemical fertilizers cost as 13.52 percent of the total Cost ‘A’. Seed/seedling cost constitutes to 36.67% of the total cost ‘A’.

In Pineapple cultivation, male participation is higher than that of female. .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	50.89	61.73	75.94	74.71
Female	18.21	19.57	39.29	15.12
Total	69.1	81.3	115.23	89.83

Table: 57 Cost of cultivation of Pineapple per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	159841	251843	208893	212010
	2017-2018	145222	197338	192819	192302
	2018-2019	178221	214237	211210	211075
Cost 'B'	2016-2017	329639	446103	410821	412669
	2017-2018	890928	752947	687418	695922
	2018-2019	495851	827211	866481	861138
Cost 'C'	2016-2017	368428	462751	417074	420452
	2017-2018	931611	766605	691404	701282
	2018-2019	530351	845306	870825	866468

Value of out put

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

Holding Size Class			
Small	Medium	Large	All Sizes
390952	386341	440493	437226

During 2018-19 per hectare value of output from pineapple cultivation is estimated as Rs. **437226** /- and the cost of cultivating per hectare of pineapple is Rs. 211075 /-

2.10.1 Bitter Gourd- Autumn during 2018-19

For this study details of holding selected and area coverage are given below. The data collected from 232 sample holdings by covering 35.40 hectares and the average area per holding is 0.15 hectare.

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

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	175	11.94	33.73	0.07
Medium	50	16.34	46.16	0.33
Large	7	7.13	20.14	1.02
Total	232	35.4	100	0.15

Cost of cultivation

When Cost A is considered about 37.42 percent of cost constitutes to hired human labour, Interest on working capital shares 6.62% and farmyard manure and chemical fertilizers accounts to 19.87%. Total cost for cultivating one hectare of Bittergourd in Autumn season is Rs 135154 /-.

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	59223	35572	70484	50575
2	Animal labour				
3	Machine labour	44	2709	4031	2077
4	Seed / seedlings	7380	6612	10852	7724
5	Farmyard manure and chemical fertilizers	29829	22109	32735	26851
6	Plant protection	1814	1662	4344	2253
7	Land tax and irrigation cess	236	107	113	152
8	Repair and maintenance charges of implements, machinery and building	2642	563	385	1228
9	Interest on working capital	9829	6866	12245	8948
10	Other expenses	39629	28747	43304	35347
11	Total cost 'A' (1-10)	150625	104947	178492	135154
12	Interest on fixed capital	7074	2477	596	3648
13	Cost 'B1' (11+12)	157699	107424	179088	138802
14	Interest on land value	314231	338747	366087	335984
15	Cost 'B' (13+14)	471930	446171	545175	474786
16	Imputed value of household labour	102576	43726	17276	58245
17	Cost 'C' (15+16)	574506	489897	562451	533031

Percentage Distribution of “COST A” per hectare of Bitter gourd (Autumn) during 2018-19

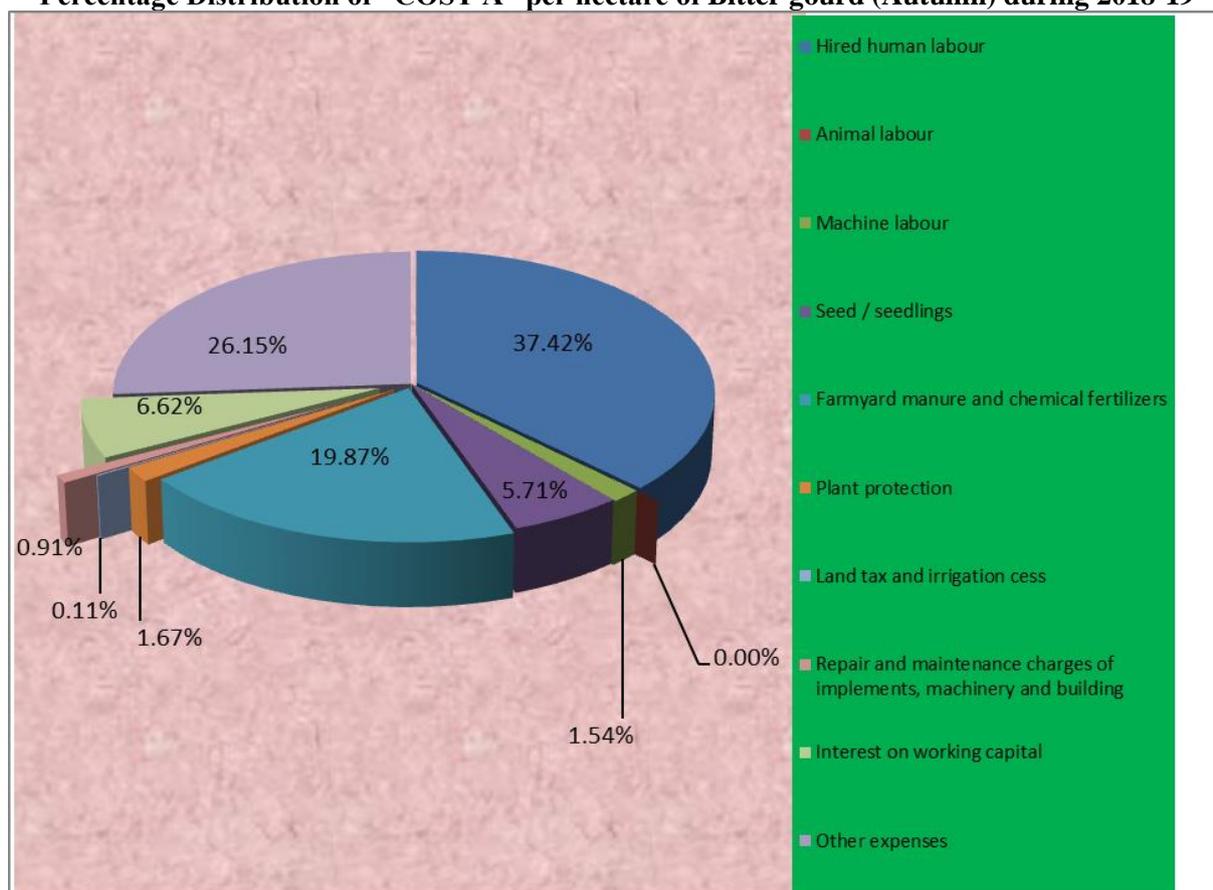


Table 61: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	28.8	31.23	58.87	34.7
Female	9.45	17.76	34.33	12.4
Total	38.25	48.99	93.2	47.1

In Bitter Gourd (Autumn) cultivation 12.40% 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 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	92430	75188	100712	84721
	2017-2018	143637	119679	100784	124719
	2018-2019	150625	104947	178492	135154
Cost 'B'	2016-2017	262395	198988	221638	227797
	2017-2018	577914	468225	259537	470956
	2018-2019	471930	446171	545175	474786
Cost 'C'	2016-2017	337336	238086	247533	280897
	2017-2018	674699	510872	275937	527732
	2018-2019	574506	489897	562451	533031

Table: 63 Value of product and by-product per hectare (in Rs.) of Bitter Gourd - Autumn 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
305396	235293	276427	267211

Value of product per hectare of Bitter gourd in Autumn season is estimated as Rs267211/- Where as the cost of cultivation per hectre is Rs. 135154 /-.

2.10.2 Bitter Gourd -Winter during 2018-19

During 2018-19 Cost of cultivation study on Bitter gourd(Winter) season, 266 sample holdings by covering 30.7 hectare selected and the average area per holding covers to 0.12 hectare

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

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	220	14.31	46.61	0.07
Medium	43	13.35	43.49	0.31
Large	3	3.04	9.9	1.01
Total	266	30.7	100	0.12

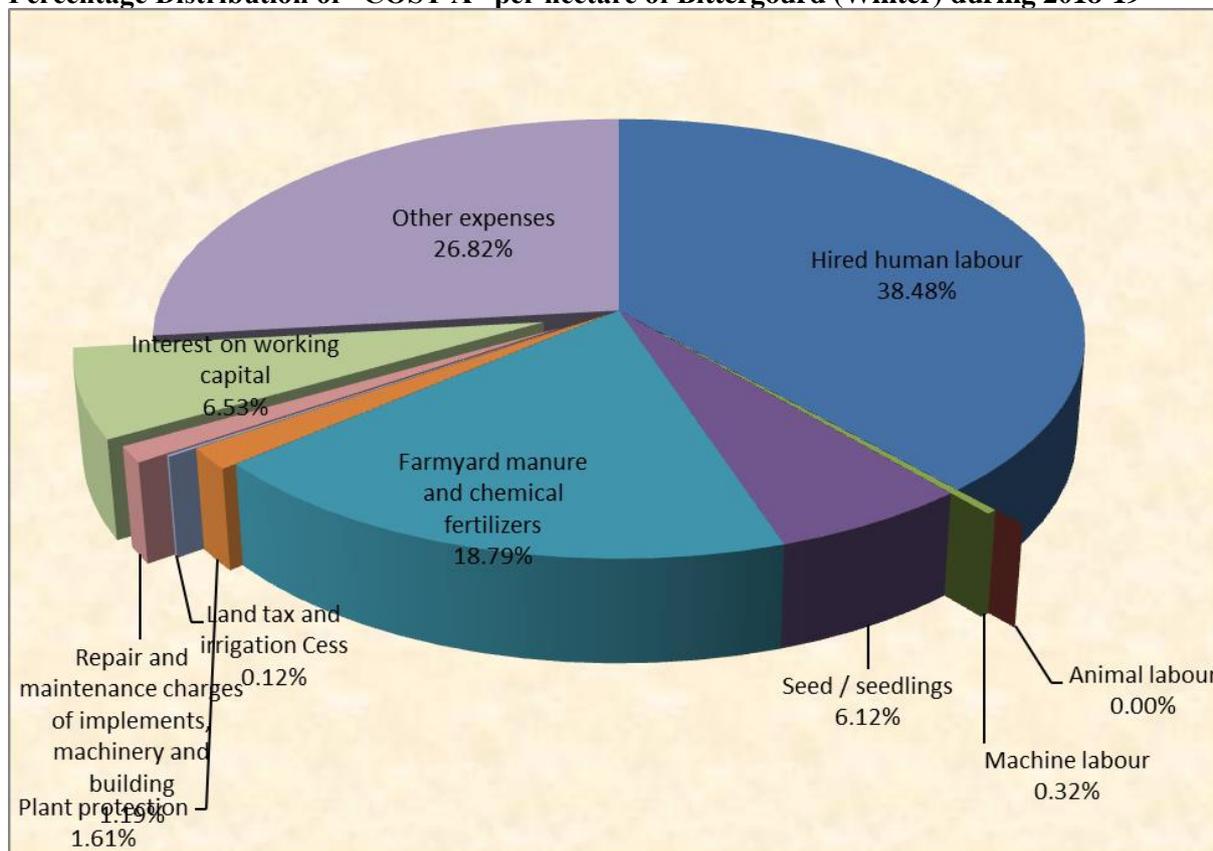
Cost of Cultivation

In Cost A, the major share of the cost component was hired human labour. It constitutes 38.48%. Also farmyard manure and chemical fertilizers account 18.79%. Other expense account

was 26.82%. By considering the various cost component of Bitter gourd (Winter) cultivation, per hectare cost calculated as Rs. 145423 /-

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	63731	51803	37626	55961
2	Animal labour				
3	Machine labour	737	195	395	467
4	Seed / seedlings	8206	8963	11912	8902
5	Farmyard manure and chemical fertilizers	32643	22293	24420	27328
6	Plant protection	2441	2624	667	2345
7	Land tax and irrigation Cess	252	129	66	180
8	Repair and maintenance charges of implements, machinery and building	2897	880	16	1735
9	Interest on working capital	10776	8588	7502	9500
10	Other expenses	44772	34833	30154	39004
11	Total Cost 'A' (1-10)	166455	130308	112758	145423
12	Interest on fixed capital	9113	6285	466	7028
13	Cost 'B1' (11+12)	175568	136594	113224	152451
14	Interest on land value	256974	203702	140692	222304
15	Cost 'B' (13+14)	432542	340296	253916	374755
16	Imputed value of household labour	102183	51136	22279	72079
17	Cost 'C' (15+16)	534725	391432	276196	446834

Percentage Distribution of “COST A” per hectare of Bittergourd (Winter) during 2018-19



Work participation percentage of hired human labours for Bitter gourd (Winter) cultivation shown below reveals that 12.57% of work shared by Female whereas percentage share to male workers is 32.78%.

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

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	32.06	34.68	27.7	32.78
Female	8.64	21.39	35.81	12.57
Total	40.7	56.07	63.51	45.35

Table: 67 Cost of cultivation of Bitter Guard -Winter per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	153023	124261	71434	130756
	2017-2018	317610	136971	115945	135319
	2018-2019	166455	130308	112758	145423
Cost 'B'	2016-2017	357478	273900	123566	293065
	2017-2018	497367	365177	273180	415690
	2018-2019	432542	340296	253916	374755
Cost 'C'	2016-2017	456851	319650	142719	357506
	2017-2018	595245	413848	318229	486458
	2018-2019	534725	391432	276196	446834

Output

Table: 68 - Value of Product and Byproduct per hectare (in Rs) of Bitter Gourd (Winter) 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
341003	263186	227029	295886

2.10.3 Bitter Gourd - Summer during 2018-19

For the cost of cultivation study on Bitter gourd (summer) during 2018-19 the total number of sample holdings selected was 201. The details of these holdings are presented below:

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

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage	Average Area per holding (ha)
Small	185	9.75	62.46	0.05
Medium	15	5.05	32.35	0.34
Large	1	0.81	5.19	0.81
Total	201	15.61	100	0.08

The total area under cultivation in the selected sample holdings covers 15.61 hectares and the average size of a holding is 0.08 hectare

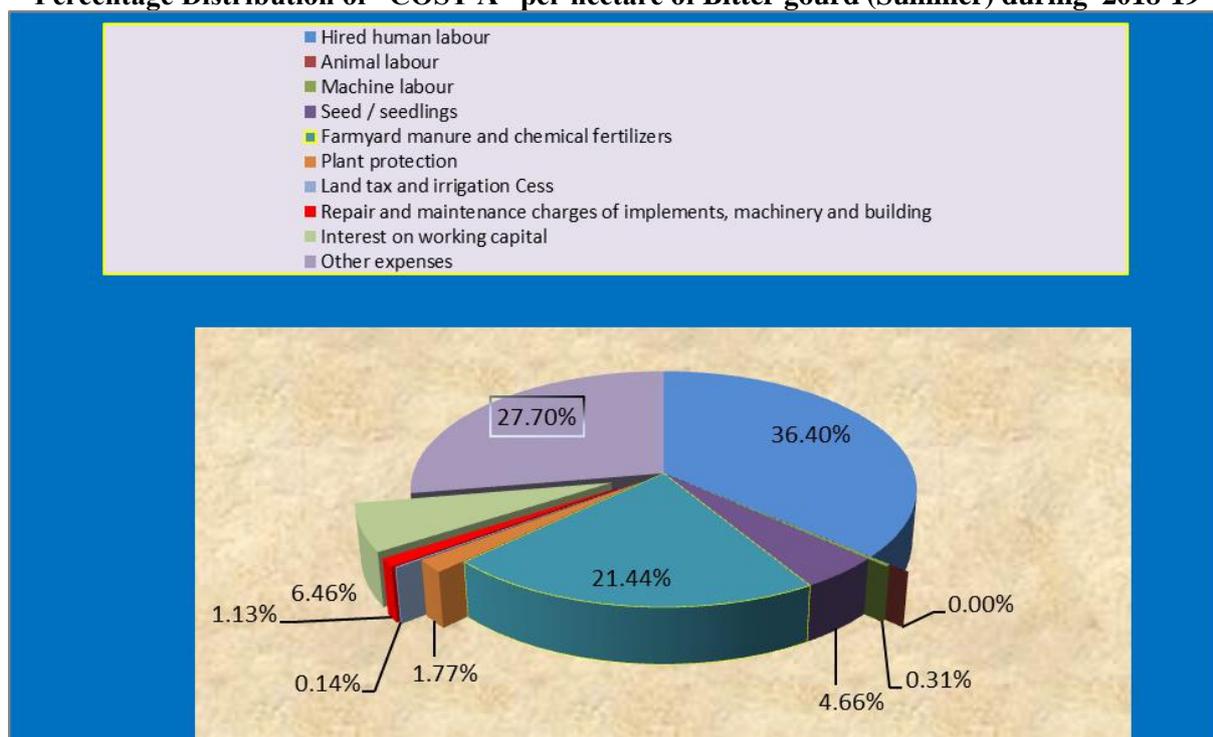
Cost of Cultivation

Cost of cultivation of Bitter gourd (Summer) per hectare is estimated as Rs. 164070 /- when cost 'A' is considered. Hired human labour gives a share of 36.40% and other expense gives 27.70%. 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	60680	48068	121030	59728
2	Animal labour				
3	Machine labour	569	475		509
4	Seed / seedlings	8546	6420	4446	7646
5	Farmyard manure and chemical fertilizers	38665	31478	16178	35172
6	Plant protection	2769	2860	4693	2898
7	Land tax and irrigation Cess	316	82		224
8	Repair and maintenance charges of implements, machinery and building	2819	291		1854
9	Interest on working capital	11123	8930	14635	10595
10	Other expenses	50308	40555	17352	45442
11	Total Cost 'A' (1-10)	175795	139160	178334	164070
12	Interest on fixed capital	9174	3768	648	6983
13	Cost 'B1' (11+12)	184969	142928	178982	171053
14	Interest on land value	215404	199706	742112	237642
15	Cost 'B' (13+14)	400373	342634	921094	408695
16	Imputed value of household labour	128033	95991	121154	117306
17	Cost 'C' (15+16)	528406	438626	1042247	526001

Percentage Distribution of “COST A” per hectare of Bitter gourd (Summer) during 2018-19



In Bitter gourd (Summer) cultivation male labour participation accounted as 28.88% 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	28.5	24.89	45.79	28.88
Female	4.14	10.48		4.29
Total	32.64	35.37	45.79	33.17

Table: 72 Cost of cultivation of Bitter Gourd -Summer per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	164503	140876	165517	154825
	2017-2018	145510	131148	158118	143294
	2018-2019	175795	139160	178334	164070
Cost 'B'	2016-2017	360409	265770	524620	331270
	2017-2018	458146	283425	407751	391662
	2018-2019	400373	342634	921094	408695
Cost 'C'	2016-2017	457793	310213	550457	402525
	2017-2018	559599	340014	422261	461689
	2018-2019	528406	438626	1042247	526001

Table 73: Value of Product and by product per hectare (in Rs) of Bitter Gourd (Summer) during 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
385135	298883	348887	355339

2.11.1 Cowpea- Autumn during 2018-19

Sample of holding selected and area coverage for the study was 268 holdings by covering 33.38 hectares and the average area per holding was 0.12 hectare.

Table 74 - Area and number of holdings under Cowpea Autumn

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	223	15.01	44.97	0.07
Medium	39	12.7	38.05	0.33
Large	6	5.67	16.99	0.95
Total	268	33.38	100	0.12

Cost of cultivation

When Cost A is considered about 41.87 percent of cost constitutes to hired human labour, and farmyard manure and chemical fertilizers accounts to 20.97%. But the other expenses account a share of 22.81%.

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	53235	48590	60792	52752
2	Animal labour		177		67
3	Machine labour	662	1743	1447	1206
4	Seed / seedlings	6428	3799	2746	4803
5	Farmyard manure and chemical fertilizers	33444	18836	24787	26417
6	Plant protection	2529	1204	1242	1806
7	Land tax and irrigation cess	196	126		136
8	Repair and maintenance charges of implements, machinery and building	2183	758	582	1369
9	Interest on working capital	9630	7435	9101	8705
10	Other expenses	34067	24574	23984	28744
11	Total cost 'A' (1-10)	142374	107244	124681	126006
12	Interest on fixed capital	7970	1749	679	4365
13	Cost 'B1' (11+12)	150344	108993	125360	130371
14	Interest on land value	408964	241191	541341	367624
15	Cost 'B' (13+14)	559308	350183	666701	497994
16	Imputed value of household labour	91917	44809	83208	72518
17	Cost 'C' (15+16)	651225	394992	749909	570513

Percentage Distribution of “COST A” per hectare of cowpea (Autumn) during 2018-19

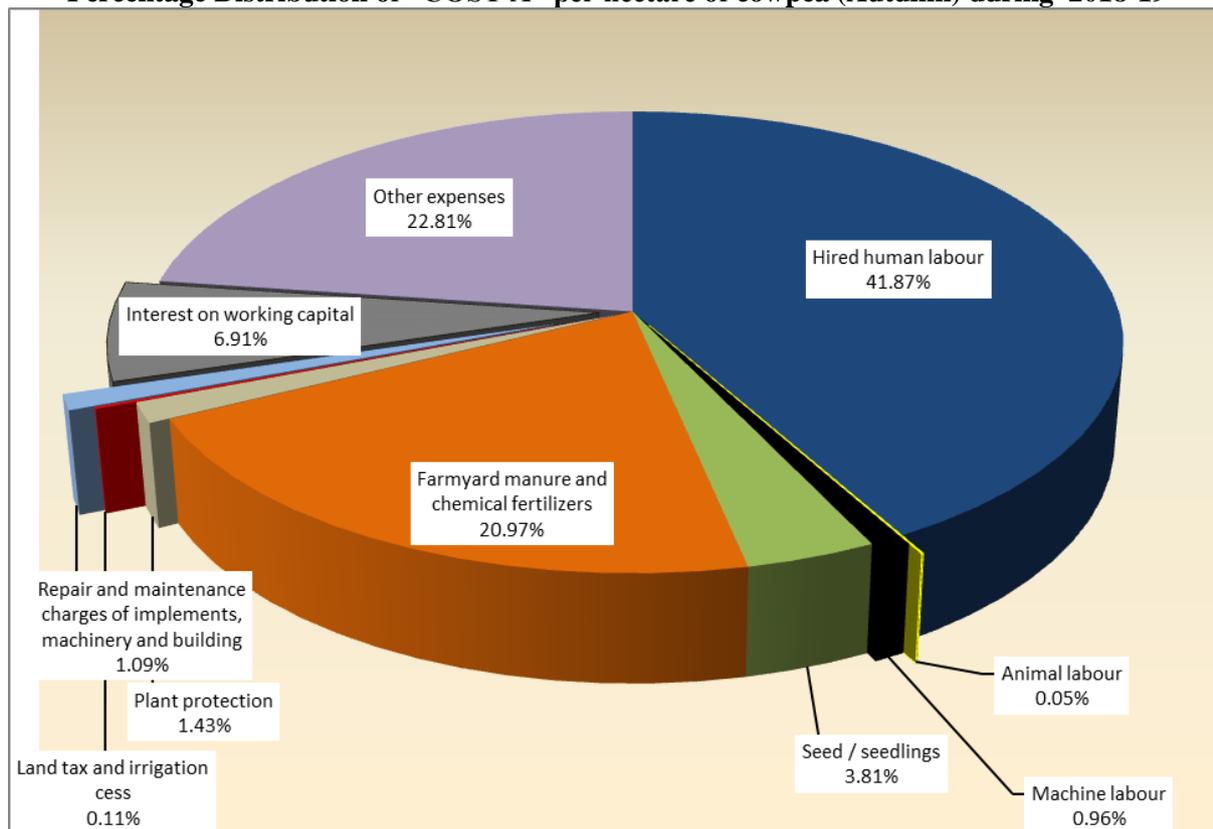


Table 76: Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	25.73	30.02	18.43	25.68
Female	8.42	26.6	31.42	17.34
Total	34.15	56.62	49.85	43.02

In Cowpea (Autumn) cultivation 25.68% of total labour hours goes to males.

Table: 77 Cost of cultivation of Cowpea -Autumn per hectare (in Rs) during 2016-17, 2017-18& 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	106110	116222	15975	108761
	2017-2018	126803	121063	126091	124490
	2018-2019	142374	107244	124681	126006
Cost 'B'	2016-2017	263786	241715	90406	251800
	2017-2018	452670	441125	799801	494099
	2018-2019	559308	350183	666701	497994
Cost 'C'	2016-2017	343977	292010	115770	318985
	2017-2018	526858	483400	811291	547661
	2018-2019	651225	394992	749909	570513

Table: 78 Value of product and by-product per hectare (in Rs.) of Cowpea-Autumn 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
283585	195702	319957	256331

2.11.2 Cowpea -Winter during 2018-19

During 2018-19 Cost of cultivation study on Cowpea (winter) was conducted in 318 holdings by covering 35.36 hectare of land. Details of these holdings are given below:

Table 79 – Area and number of holdings under Cowpea Winter

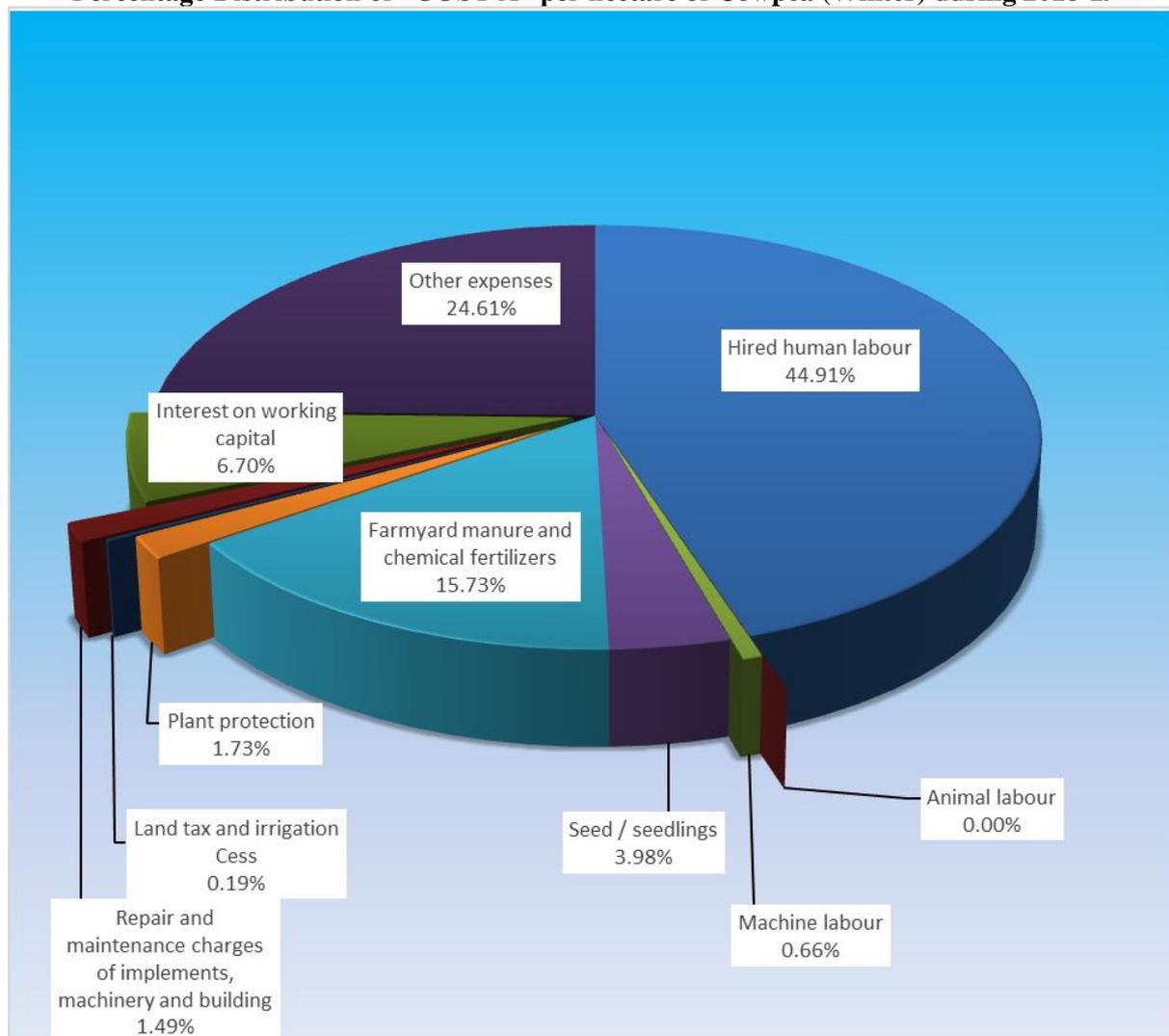
Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
Small	264	16.28	46.04	0.06
Medium	48	14.23	40.24	0.3
Large	6	4.86	13.74	0.81
Total	318	35.36	100	0.11

Cost of Cultivation

In Cost A, the major share of the cost component was hired human labour. It constitutes 44.91% and farmyard manure and chemical fertilizers which accounted 15.73% respectively. Interest on working capital was 6.70%. The share of other expenses contributes 24.61%. By considering the various cost component of Cowpea (Winter) cultivation per hectare cost calculated as Rs. 146339 /-.

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	60621	68842	73699	65726
2	Animal labour				
3	Machine labour	815	562	2676	969
4	Seed / seedlings	6630	5112	5175	5820
5	Farmyard manure and chemical fertilizers	25257	22158	18038	23018
6	Plant protection	2400	2393	3385	2533
7	Land tax and irrigation Cess	233	284	371	273
8	Repair and maintenance charges of implements, machinery and building	3226	1265	1371	2182
9	Interest on working capital	9572	9907	10297	9807
10	Other expenses	35288	38365	31542	36012
11	Total Cost 'A' (1-10)	144045	148889	146553	146339
12	Interest on fixed capital	11322	2044	2570	6387
13	Cost 'B1' (11+12)	155366	150933	149123	152725
14	Interest on land value	267010	227835	192526	241013
15	Cost 'B' (13+14)	422377	378768	341649	393739
16	Imputed value of household labour	101540	63297	44980	78380
17	Cost 'C' (15+16)	523916	442065	386628	472119

Percentage Distribution of “COST A” per hectare of Cowpea (Winter) during 2018-19



Work participation in hired human labours for Cowpea (winter) cultivation reveals that 11,45% of work shared by Female whereas 34.40% shared by male workers.

The following table reveals the percentage of hired human labour 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	30.13	41.06	32.71	34.4
Female	8.02	15.35	32.45	11.45
Total	38.15	56.41	65.16	45.85

Table: 82 Cost of cultivation of Cowpea -Winter per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	120969	122675	94395	119638
	2017-2018	126240	123683	129959	126257
	2018-2019	144045	148889	146553	146339
Cost 'B'	2016-2017	321224	240075	173800	271469
	2017-2018	435567	380532	274779	407907
	2018-2019	422377	378768	341649	393739
Cost 'C'	2016-2017	406066	288472	194169	334104
	2017-2018	533889	435125	311311	487444
	2018-2019	523916	442065	386628	472119

Output

Table: 83 - Value of Product and Byproduct per hectare (in Rs) of Cowpea -Winter 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
296513	296235	285656	294910

2.11.3 Cowpea - Summer (Puncha) during 2018-19

For the cost of cultivation study on Cowpea (Summer) during 2018-19 the total number of holdings selected was 288. The details of these holdings are presented below

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

Holding size class	Sample Size	Area under the crop in the sample (ha)	Percentage	Average Area per holding (ha)
Small	237	14.88	47.46	0.06
Medium	48	13.03	41.56	0.27
Large	3	3.44	10.97	1.15
Total	288	31.35	100	0.11

The total area under cultivation in the selected sample holdings covers to 31.35 hectares and the average size of a holding is 0.11 hectare.

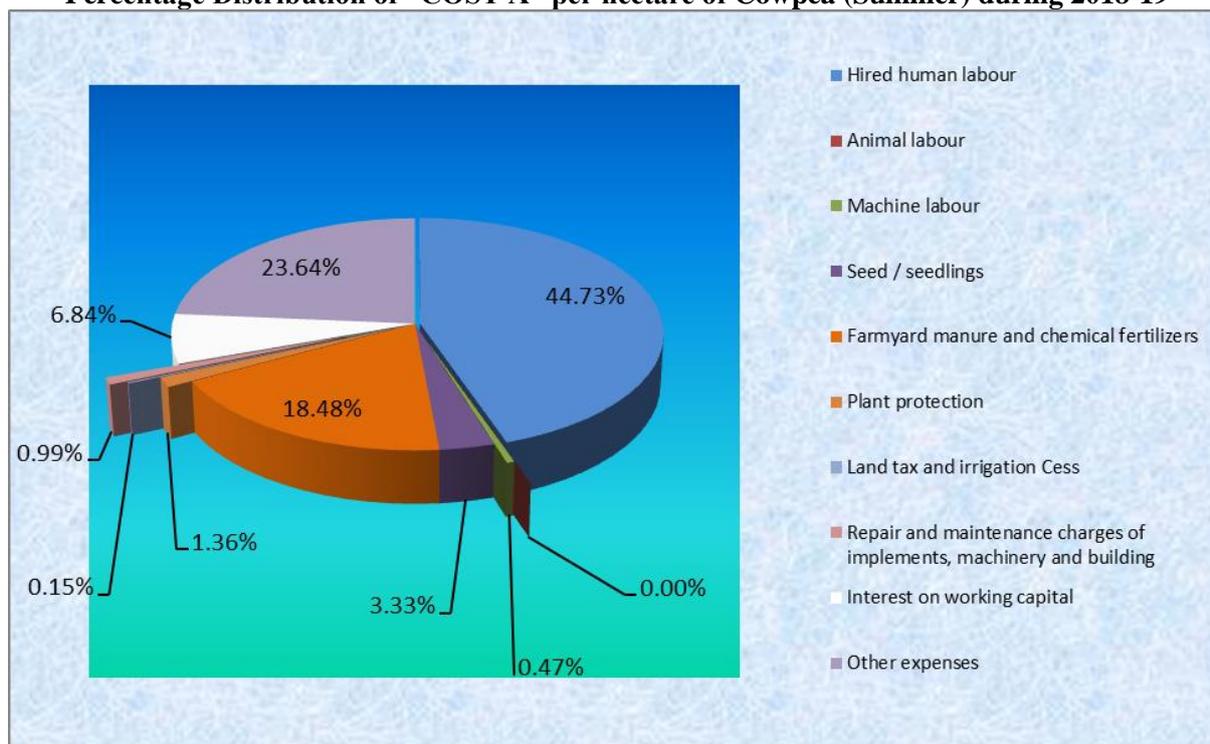
Cost of Cultivation

Cost of cultivation of Cowpea (summer) per hectare is estimated as Rs.149400/- when cost 'A' is considered. Cost incurred for hired human labour is 44.73% of the total cost and farmyard manure and chemical fertilizer is 18.48% of the total cost, but the other expenses share is 23.64%

Table 85: Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2018-2019

Sl No	Components	Holding size Class			
		Small	Medium	Large	All Size
1	Hired human labour	64697	67221	74565	66830
2	Animal labour				
3	Machine labour	479	910	930	707
4	Seed / seedlings	5202	5236	3073	4982
5	Farmyard manure and chemical fertilizers	27668	26689	30884	27614
6	Plant protection	1998	2215	1470	2030
7	Land tax and irrigation Cess	250	209	145	222
8	Repair and maintenance charges of implements, machinery and building	2065	1176	70	1477
9	Interest on working capital	10004	10227	11092	10216
10	Other expenses	34084	37029	34217	35322
11	Total Cost 'A' (1-10)	146448	150911	156446	149400
12	Interest on fixed capital	7300	4164	579	5259
13	Cost 'B1' (11+12)	153748	155075	157026	154659
14	Interest on land value	245728	330215	397785	297533
15	Cost 'B' (13+14)	399475	485290	554811	452192
16	Imputed value of household labour	103122	77463	93811	91436
17	Cost 'C' (15+16)	502598	562754	648621	543628

Percentage Distribution of “COST A” per hectare of Cowpea (Summer) during 2018-19



In Cowpea summer cultivation hired male labour participation accounted as 34.31% 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	33.18	37.32	28.6	34.31
Female	7.34	9.82	19.36	7.12
Total	40.52	47.14	47.96	41.43

Table 87: Cost of cultivation of Cowpea -Summer per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	132397	130387	129330	131286
	2017-2018	129069	123559	50901	122157
	2018-2019	146448	150911	156446	149400
Cost 'B'	2016-2017	317380	255951	163262	280697
	2017-2018	400140	431401	228966	401750
	2018-2019	399475	485290	554811	452192
Cost 'C'	2016-2017	408133	308502	180300	349657
	2017-2018	496355	499028	284955	484456
	2018-2019	502598	562754	648621	543628

Table 88: Value of Product and by product per hectare (in Rs) of Cowpea Summer during 2018-19

Holding Size Class			
Small	Medium	Large	All Sizes
334069	305372	364078	325437

2.12 Cardamom during 2018-19

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	Sample Size	Area under the crop in the sample (ha)	Percentage	Average Area per holding (ha)
Small	8	0.97	9.45	0.12
Medium	13	4.33	42.2	0.33
Large	6	4.96	48.34	0.83
Total	27	10.26	100	0.38

For the study 27 sample holdings were selected and the total area of crop in the selected area was 10.26 hectare. The average size per holding was 0.38 hectare.

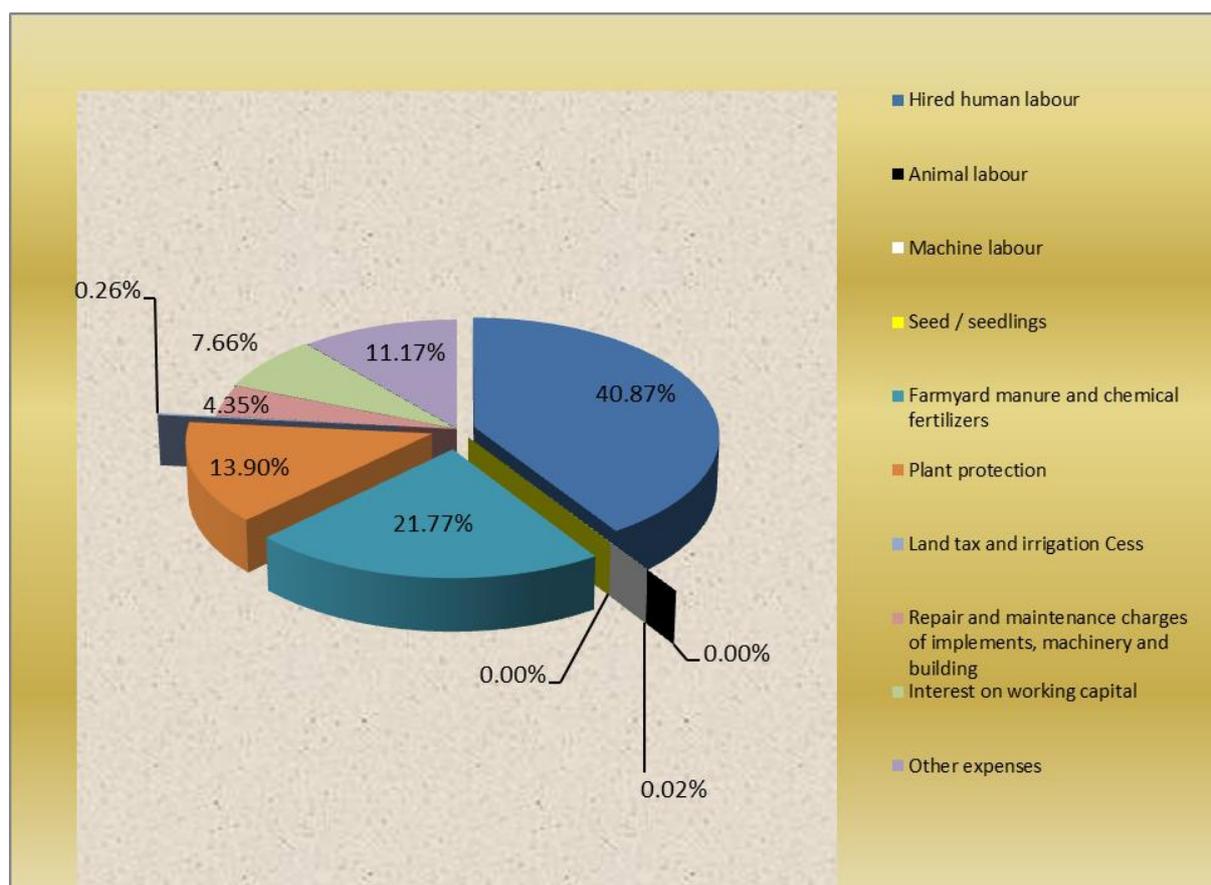
Cost of Cultivation

The different cost components of Cardamom cultivation is given below: Per hectare cost for cultivating cardamom is estimated as Rs 158512/- excluding interest on fixed capital, interest on land value and imputed 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	53560	75450	57672	64787
2	Animal labour				
3	Machine labour	309			29
4	Seed / seedlings				
5	Farmyard manure and chemical fertilizers	30250	37093	33088	34510
6	Plant protection	20017	34101	11876	22028
7	Land tax and irrigation Cess	245	480	400	419
8	Repair and maintenance charges of implements, machinery and building	7256	5072	8428	6900
9	Interest on working capital	10414	14664	10264	12135
10	Other expenses	24083	20983	13590	17704
11	Total Cost 'A' (1-10)	146133	187844	135318	158512
12	Interest on fixed capital	44110	11113	14073	15672
13	Cost 'B1' (11+12)	190243	198956	149391	174184
14	Interest on land value	95836	110823	92754	100672
15	Cost 'B' (13+14)	286079	309779	242145	274857
16	Imputed value of household labour	118334	102612	94808	100329
17	Cost 'C' (15+16)	404413	412392	336952	375186

Percentage Distribution of “COST A” per hectare of Cardamom during 2018-19



When Cost A is considering, 40.87% comes under hired human labour and 21.77% 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 is very high and it is accounted as 27.19%.

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

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	18.65	15.37	7.99	12.42
Female	13.77	20.68	27.87	27.19
Total	32.42	36.05	35.86	39.61

Table: 92 Cost of cultivation of Cardamom per hectare (in Rs) during 2016-17, 2017-18 & 2018-19

Concept of cost	Year	Holding Size class			
		Small	Medium	Large	All size
Cost 'A'	2016-2017	146271	129584	137788	134526
	2017-2018	143117	156127	124997	137342
	2018-2019	146133	187844	135318	158512
Cost 'B'	2016-2017	289359	232705	224435	239304
	2017-2018	156651	160221	126612	141055
	2018-2019	286079	309779	242145	274857
Cost 'C'	2016-2017	325534	257053	235083	261655
	2017-2018	369467	407578	209444	292774
	2018-2019	404413	412392	336952	375186

Value of Out put

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

The estimated value of output per hectare is Rs.395872/-

Holding Size Class			
Small	Medium	Large	All Sizes
395303	492107	311926	395872

Sample size, area under each crop and average size of each holding selected for cost of cultivation survey 2018-2019 is given below.

Table 94: Area, Sample size and Average Area per holding of some crops during the year 2018-2019

Sl. No.	Name of Crop	Sample Size	Area under the crop in the sample (ha)	Average Area per holding (ha)
1	Paddy Autumn	670	435.92	0.65
2	Paddy Winter	535	516.85	0.97
3	Paddy Summer	469	604.13	1.29
4	Coconut	760	328.85	0.43
5	Arecanut	756	122.06	0.16
6	Tapioca	550	114.02	0.21
7	Banana	530	145.41	0.27
8	Pepper	530	59.58	0.11
9	Ginger	449	37.57	0.08
10	Turmeric	485	27.81	0.06
11	Pineapple	211	472.51	2.24
12	Bitter gourd Autumn	232	35.4	0.15
13	Bitter gourd Winter	266	30.7	0.12
14	Bitter gourd Summer	201	15.61	0.08
15	Cowpea Autumn	268	33.38	0.12
16	Cowpea Winter	318	35.36	0.11
17	Cowpea Summer	288	31.35	0.11
18	Cardamom	27	10.26	0.38

The Cost of Cultivation of Crops are Calculated under three different cost concepts viz, Cost A, B and C respectively is shown in the table given below.

Table 95: COST A, B AND C OF SOME OF CROPS (PER HECTRE) DURING THE YEAR 2018-2019

Sl.no	Name of Crop	Cost A ₹	Cost B ₹	Cost C ₹
1	Paddy Autumn	58545	273141	281057
2	Paddy Winter	70626	244575	252027
3	Paddy Summer	69235	208267	214828
4	Coconut	74536	558313	567948
5	Arecanut	100395	463610	481926
6	Tapioca	111688	455456	483318
7	Banana	216796	645337	685479
8	Pepper	78925	514647	541938
9	Ginger	208761	526549	566898
10	Turmeric	140032	498262	551465
11	Pineapple	211075	861138	866468
12	Bitter gourd Autumn	135154	474786	533031
13	Bitter gourd Winter	145423	374755	446834
14	Bitter gourd Summer	164070	408695	526001
15	Cowpea Autumn	126006	497994	570513
16	Cowpea Winter	146339	393739	472119
17	Cowpea Summer	149400	452192	543628
18	Cardamom	158512	274857	375186

The Cost of Cultivation study 2018-2019 revealed the three categories of cost including the components thereon and also the value of Output received per hectare by the cultivators during the period of study table no given below shown the result.

Table 96: Cost of cultivation per hectare (in Rs) during the year 2018-2019

Sl.no	components	Paddy			Coconut	Arecanut	Tapioca	Banana	Pepper	Ginger
		Autumn	Winter	Summer						
1	2	3	4	5	6	7	8	9	10	11
1	Hired Human Labour	27145	29959	27734	45618	53338	59058	90815	51012	80464
2	Animal labour	36	15	7	12					
3	Machine labour	8186	8386	6813	490	1047	2417	3139	463	3211
4	Seed /seedlings	2888	3220	3844	496	358	8874	28128	1365	52112
5	Farmyard manure and chemical fertilizers	7269	7852	8728	17969	32181	18632	41343	14962	28351
6	Plant Protection	731	1649	1529	1	3	373	2585	850	7662
7	Land tax and irrigation cess	188	227	410	388	715	258	187	529	207
8	Repair and maintenance charges of implements, machinery and building	400	476	136	314	1045	419	554	904	710
9	Interest on working capital	4625	5108	4865	6459	8693	8935	16601	6865	17180
10	Other expenses	7077	13734	15169	2788	3015	12721	33444	1976	18864
11	Total cost 'A'(1-10)	58545	70626	69235	74536	100395	111688	216796	78925	208761
12	Interest on fixed capital	1703	1771	1184	3605	8617	2895	4042	8697	44078
13	Cost 'B'(11+12)	60248	72398	70418	78142	109012	114583	220838	87622	252839
14	Interest on land value	212893	172178	137849	480172	354597	340873	424499	427026	273710
15	Cost 'B'(13+14)	273141	244575	208267	558313	463610	455456	645337	514647	526549
16	Imputed value of household labour	7916	7452	6560	9635	18317	27862	40142	27290	40349
17	Cost 'C'(15+16)	281057	252027	214828	567948	481926	483318	685479	541938	566898
18	Value of Output received (Rs.Ha)	70051	124083	125068	137470	245169	330144	526421	204794	629930

Contd.. Table 96:

Table 96: Cost of cultivation per hectare (in Rs) of some crops during the year 2018-2019

Sl.no	components	Turmeric	Pineapple	Bitter gourd			Cowpea			Cardamom
				Autumn	Winter	Summer	Autumn	Winter	Summer	
12	13	14	15	16	17	18	19	20	21	22
1	Hired human labour	62464	45212	50575	55961	59728	52752	65726	66830	64787
2	Animal labour		4				67			
3	Machine labour	3054	5676	2077	467	509	1206	969	707	29
4	Seed /seedlings	24543	77402	7724	8902	7646	4803	5820	4982	
5	Farmyard manure and chemical fertilizers	26116	28539	26851	27328	35172	26417	23018	27614	34510
6	Plant Protection	850	3634	2253	2345	2898	1806	2533	2030	22028
7	Land tax and irrigation cess	377	125	152	180	224	136	273	222	419
8	Repair and maintenance charges of implements, machinery and building	977	85	1228	1735	1854	1369	2182	1477	6900
9	Interest on working capital	11703	16047	8948	9500	10595	8705	9807	10216	12135
10	Other expenses	9949	34350	35347	39004	45442	28744	36012	35322	17704
11	Total cost 'A'(1-10)	140032	211075	135154	145423	164070	126006	146339	149400	158512
12	Interest on fixed capital	9334	646	3648	7028	6983	4365	6387	5259	15672
13	Cost 'B1'(11+12)	149366	211721	138802	152451	171053	130371	152725	154659	174184
14	Interest on land value	348895	649417	335984	222304	237642	367624	241013	297533	100672
15	Cost 'B'(13+14)	498262	861138	474786	374755	408695	497994	393739	452192	274857
16	Inputed value of household labour	53204	5330	58245	72079	117306	72518	78380	91436	100329
17	Cost 'C'(15+16))	551465	866468	533031	446834	526001	570513	472119	543628	375186
18	Value of Output received (Rs.Ha)	464590	437226	267211	295886	355339	256331	294910	325437	395872

The value of output including both main product and byproduct of each crop included in the survey during 2018-2019 is shown below.

Table 97: Value of Output per hectare (In Rs.) of some crops during the year 2018-2019

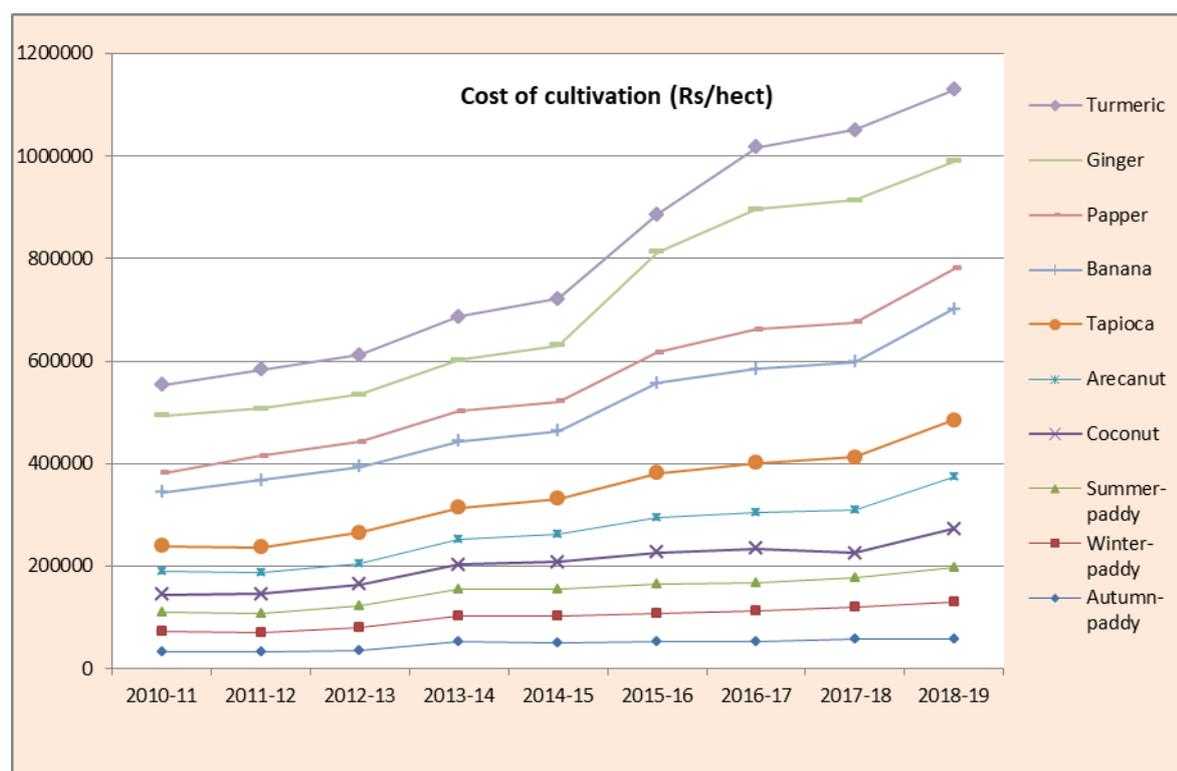
Sl.no	Name of Crop	Value of Output In Rupees
1	Paddy Autumn	70051
2	Paddy Winter	124083
3	Paddy Summer	125068
4	Coconut	137470
5	Arecanut	245169
6	Tapioca	330144
7	Banana	526421
8	Pepper	204794
9	Ginger	629930
10	Turmeric	464590
11	Pineapple	437226
12	Bitter gourd Autumn	267211
13	Bitter gourd Winter	295886
14	Bitter gourd Summer	355339
15	Cowpea Autumn	256331
16	Cowpea Winter	294910
17	Cowpea Summer	325437
18	Cardamom	395872

Comparison table for the cost of cultivation of crops such as paddy(3season), coconut,arecanut, tapioca, banana, pepper,ginger,turmeric from 2010-2011 to 2018-2019 is given in the table below. Cost of cultivation of crops during 2010-11has more or less doubled during 2018-19.

Table 98: Cost of Cultivation from 2010-11to 2018-19(in Rs / Hect.)

Year	Paddy			Coconut	Arecanut	Tapioca	Banana	Pepper	Ginger	Turmeric
	Autumn	Winter	Summer							
2010-11	32019	41133	37957	33343	45534	48474	104903	38052	112123	59707
2011-12	32713	36491	38878	37361	40560	50907	130342	48121	91914	75384
2012-13	35968	43955	41862	42390	41114	59770	128621	47981	92885	76825
2013-14	53142	50166	50674	49277	47912	62703	129956	57947	99827	85016
2014-15	50895	51851	52312	52588	53665	69925	131933	57300	109816	91467
2015-16	51823	55044	58555	61429	68723	85382	176400	59074	196316	73625
2016-17	52818	59600	54109	67062	72041	95899	182921	77019	235296	120755
2017-18	57369	61663	57200	48434	87897	103061	186081	76510	238820	137084
2018-19	58545	70626	69235	74536	100395	111688	216796	78925	208761	140032

NB-Excluding interest on fixed capital, interest on land value and imputed value of household labour



ANNEXURE

A1.1 District wise Area and number of holding under Autumn Paddy during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	23.48	5.39	0.39
2	Kollam	70	24.33	5.58	0.35
3	Pathanamthitta	23	10.86	2.49	0.47
4	Alappuzha	48	48.62	11.15	1.01
5	Kottayam	30	13.79	3.16	0.46
6	Idukki	30	6.83	1.57	0.23
7	Ernakulam	105	81.52	18.7	0.78
8	Thrissur	58	49.22	11.29	0.85
9	Palakkad	66	84.2	19.32	1.28
10	Malappuram	60	43.34	9.94	0.72
11	Kozhikkode	45	9.85	2.26	0.22
12	Wayanad				
13	Kannur	45	22.04	5.06	0.49
14	Kasaragod	30	17.85	4.09	0.6
	State	670	435.92	100	0.65

A1.2 District wise Area and number of holding under Winter Paddy during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	43	18.19	3.52	0.42
2	Kollam	60	32.37	6.26	0.54
3	Pathanamthitta	45	56.4	10.91	1.25
4	Alappuzha	75	80.01	15.48	1.07
5	Kottayam	31	53.02	10.26	1.71
6	Idulkki	15	4.77	0.92	0.32
7	Eranakulam	41	20.79	4.02	0.51
8	Thrissur	45	89.66	17.35	1.99
9	Palakkad	30	28.45	5.5	0.95
10	Malappuram	45	83.01	16.06	1.84
11	Kozhikkode	30	11.45	2.22	0.38
12	Wayanad	15	13.32	2.58	0.89
13	Kannur	30	11.99	2.32	0.4
14	Kasaragod	30	13.43	2.6	0.45
	State	535	516.85	100	0.97

A1.3 District wise Area and number of holding under Summer Paddy during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	45	12.45	2.06	0.28
2	Kollam	22	24.3	4.02	1.1
3	Pathanamthitta	60	123.64	20.47	2.06
4	Alappuzha	75	165.49	27.39	2.21
5	Kottayam	45	88.35	14.62	1.96
6	Idukki	1	1.35	0.22	1.35
7	Eranakulam	20	8.85	1.46	0.44
8	Thrissur	45	74.48	12.33	1.66
9	Palakkad	21	20.95	3.47	1
10	Malappuram	45	53.98	8.94	1.2
11	Kozhikkode	30	10.11	1.67	0.34
12	Wayanad	15	3	0.5	0.2
13	Kannur	15	4.9	0.81	0.33
14	Kasaragod	30	12.3	2.04	0.41
	State	469	604.13	100	1.29

A1.4 District wise Area and number of holding under Coconut during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	15.88	4.83	0.26
2	Kollam	80	23.35	7.1	0.29
3	Pathanamthitta	80	21.86	6.65	0.27
4	Alappuzha	100	30.09	9.15	0.3
5	Kottayam	60	21.48	6.53	0.36
6	Idulkki	20	6.71	2.04	0.34
7	Eranakulam	60	18.36	5.58	0.31
8	Thrissur	60	28.38	8.63	0.47
9	Palakkad	40	29.36	8.93	0.73
10	Malappuram	60	48.02	14.6	0.8
11	Kozhikkode	40	23.63	7.19	0.59
12	Wayanad	20	7.87	2.39	0.39
13	Kannur	40	24.23	7.37	0.61
14	Kasaragod	40	29.62	9.01	0.74
	State	760	328.85	100	0.43

A1.5 District wise Area and number of holding under Arecanut during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	60	8.05	6.6	0.13
2	Kollam	80	4.08	3.34	0.05
3	Pathanamthitta	80	2.79	2.29	0.03
4	Alappuzha	96	3.98	3.26	0.04
5	Kottayam	60	3.68	3.01	0.06
6	Idukki	20	1.36	1.11	0.07
7	Eranakulam	60	2.87	2.35	0.05
8	Thrissur	60	6.61	5.42	0.11
9	Palakkad	40	11.85	9.71	0.3
10	Malappuram	60	29.35	24.05	0.49
11	Kozhikkode	40	5.77	4.73	0.14
12	Wayanad	20	11.01	9.02	0.55
13	Kannur	40	6.72	5.51	0.17
14	Kasaragod	40	23.92	19.6	0.6
	State	756	122.06	100	0.16

A1.6 District wise Area and number of holding under Tapioca during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	45	8.27	7.25	0.18
2	Kollam	60	11.91	10.45	0.2
3	Pathanamthitta	60	10.42	9.14	0.17
4	Alappuzha	60	6.23	5.46	0.1
5	Kottayam	45	14.35	12.59	0.32
6	Idukki	15	2.17	1.9	0.14
7	Eranakulam	40	7.66	6.72	0.19
8	Thrissur	45	7.81	6.85	0.17
9	Palakkad	30	10.45	9.17	0.35
10	Malappuram	45	20.12	17.65	0.45
11	Kozhikkode	30	2.81	2.46	0.09
12	Wayanad	15	2.02	1.77	0.13
13	Kannur	30	6.3	5.53	0.21
14	Kasaragod	30	3.51	3.08	0.12
	State	550	114.02	100	0.21

A1.7 District wise Area and number of holding under Banana during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	45	13.63	9.37	0.3
2	Kollam	60	11.3	7.77	0.19
3	Pathanamthitta	60	11.7	8.05	0.2
4	Alappuzha	38	4.54	3.12	0.12
5	Kottayam	45	20	13.75	0.44
6	Idukki	15	7.15	4.92	0.48
7	Ernakulam	42	7.49	5.15	0.18
8	Thrissur	45	15.63	10.75	0.35
9	Palakkad	30	11.28	7.76	0.38
10	Malappuram	45	18.98	13.05	0.42
11	Kozhikkode	30	6.12	4.21	0.2
12	Wayanad	15	5.43	3.73	0.36
13	Kannur	30	9.1	6.26	0.3
14	Kasaragod	30	3.08	2.12	0.1
	State	530	145.41	100	0.27

A1.8 District wise Area and number of holding under Pepper during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	45	8.23	13.81	0.18
2	Kollam	60	4.37	7.33	0.07
3	Pathanamthitta	60	2.85	4.78	0.05
4	Alappuzha	38	1.29	2.17	0.03
5	Kottayam	45	6.66	11.18	0.15
6	Idukki	15	1.38	2.32	0.09
7	Eranakulam	42	1.76	2.95	0.04
8	Thrissur	45	2.88	4.83	0.06
9	Palakkad	30	7.28	12.22	0.24
10	Malappuram	45	6.32	10.61	0.14
11	Kozhikkode	30	1.91	3.21	0.06
12	Wayanad	15	6.42	10.78	0.43
13	Kannur	30	2.7	4.53	0.09
14	Kasaragod	30	5.54	9.3	0.18
	State	530	59.58	100	0.11

A1.9 District wise Area and number of holding under Ginger during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	33	1.88	5	0.06
2	Kollam	60	2.61	6.95	0.04
3	Pathanamthitta	60	3.18	8.46	0.05
4	Alappuzha	21	0.54	1.44	0.03
5	Kottayam	40	1.67	4.45	0.04
6	Idukki	15	1.64	4.37	0.11
7	Eranakulam	32	1.09	2.9	0.03
8	Thrissur	45	1.9	5.06	0.04
9	Palakkad	25	11.1	29.54	0.44
10	Malappuram	25	2.18	5.8	0.09
11	Kozhikkode	29	2.06	5.48	0.07
12	Wayanad	15	1.72	4.58	0.11
13	Kannur	28	3.77	10.03	0.13
14	Kasaragod	21	2.24	5.96	0.11
	State	449	37.57	100	0.08

A1.10 District wise Area and number of holding under Turmeric during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	38	2.26	8.13	0.06
2	Kollam	60	2.07	7.44	0.03
3	Pathanamthitta	57	1.64	5.9	0.03
4	Alappuzha	26	0.71	2.55	0.03
5	Kottayam	45	1.77	6.36	0.04
6	Idukki	15	0.66	2.37	0.04
7	Eranakulam	32	1.08	3.88	0.03
8	Thrissur	45	3.56	12.8	0.08
9	Palakkad	30	3.97	14.28	0.13
10	Malappuram	36	4.74	17.04	0.13
11	Kozhikkode	30	0.96	3.45	0.03
12	Wayanad	15	0.4	1.44	0.03
13	Kannur	30	2.3	8.27	0.08
14	Kasaragod	26	1.69	6.08	0.07
	State	485	27.81	100	0.06

A1.11 District wise Area and number of holding under Pineapple during 2018-19					
Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	3	1.94	0.41	0.65
2	Kollam	30	5.11	1.08	0.17
3	Pathanamthitta	5	0.57	0.12	0.11
4	Alappuzha	1	0.08	0.02	0.08
5	Kottayam	45	140.07	29.64	3.11
6	Idukki	15	15	3.17	1
7	Eranakulam	32	33.18	7.02	1.04
8	Thrissur	27	142.39	30.13	5.27
9	Palakkad	5	16.03	3.39	3.21
10	Malappuram	8	45.02	9.53	5.63
11	Kozhikkode	8	2.36	0.5	0.3
12	Wayanad				
13	Kannur	18	66.09	13.99	3.67
14	Kasaragod	14	4.66	0.99	0.33
	State	211	472.51	100	2.24

**A1.12 District wise Area and number of holding under Bitter Gourd (Autumn)
during 2018-19**

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	27	3.04	8.59	0.11
2	Kollam	34	2.6	7.34	0.08
3	Pathanamthitta	19	1.41	3.98	0.07
4	Alappuzha	1	0.06	0.17	0.06
5	Kottayam	33	3.74	10.56	0.11
6	Idukki				
7	Eranakulam	37	5.69	16.07	0.15
8	Thrissur	20	6.36	17.97	0.32
9	Palakkad	25	6.44	18.19	0.26
10	Malappuram	12	2.19	6.19	0.18
11	Kozhikode				
12	Wayanad				
13	Kannur	24	3.86	10.9	0.16
14	Kasaragod				
	State	232	35.4	100	0.15

A1.13 District wise Area and number of holding under Bitter Gourd (Winter) during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	28	2.45	7.98	0.09
2	Kollam	37	2.84	9.25	0.08
3	Pathanamthitta	27	2.12	6.91	0.08
4	Alappuzha	18	0.89	2.9	0.05
5	Kottayam	22	3.02	9.84	0.14
6	Idukki	10	2.41	7.85	0.24
7	Eranakulam	9	0.64	2.08	0.07
8	Thrissur	30	3.63	11.82	0.12
9	Palakkad	15	4.85	15.8	0.32
10	Malappuram	20	2.89	9.41	0.14
11	Kozhikode	12	0.92	3	0.08
12	Wayanad	2	0.2	0.65	0.1
13	Kannur	20	2.93	9.54	0.15
14	Kasaragod	16	0.91	2.96	0.06
	State	266	30.7	100	0.12

A1.14 District wise Area and number of holding under Bitter Gourd (Summer) during 2018-19					
Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	30	2.66	17.04	0.09
2	Kollam	25	1.7	10.89	0.07
3	Pathanamthitta	31	1.11	7.11	0.04
4	Alappuzha	20	0.96	6.15	0.05
5	Kottayam	6	1.34	8.58	0.22
6	Idukki				
7	Eranakulam	12	1.78	11.4	0.15
8	Thrissur	22	2.29	14.67	0.1
9	Palakkad	2	0.16	1.02	0.08
10	Malappuram	7	0.47	3.01	0.07
11	Kozhikkode	20	0.78	5	0.04
12	Wayanad	5	0.3	1.92	0.06
13	Kannur	6	1.66	10.63	0.28
14	Kasaragod	15	0.4	2.56	0.03
	State	201	15.61	100	0.08

A1.15 District wise Area and number of holding under Cowpea (Autumn) during 2018-19

Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	30	3.68	11.02	0.12
2	Kollam	36	2.78	8.33	0.08
3	Pathanamthitta	20	1.72	5.15	0.09
4	Alappuzha	4	0.22	0.66	0.06
5	Kottayam	40	7.05	21.12	0.18
6	Idukki				
7	Eranakulam	42	4.59	13.75	0.11
8	Thrissur	20	2.54	7.61	0.13
9	Palakkad	33	3.84	11.5	0.12
10	Malappuram	24	3.41	10.22	0.14
11	Kozhikkode				
12	Wayanad				
13	Kannur	19	3.53	10.58	0.19
14	Kasaragod				
	State	268	33.38	100	0.12

A1.16 District wise Area and number of holding under Cowpea (Winter) during 2018-19					
SI No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	30	3.45	9.76	0.12
2	Kollam	40	3.03	8.57	0.08
3	Pathanamthitta	34	2.7	7.64	0.08
4	Alappuzha	29	1.45	4.1	0.05
5	Kottayam	30	5.3	14.99	0.18
6	Idukki	10	1.32	3.73	0.13
7	Eranakulam	13	0.53	1.5	0.04
8	Thrissur	30	2.38	6.73	0.08
9	Palakkad	19	3.62	10.24	0.19
10	Malappuram	20	4.43	12.53	0.22
11	Kozhikkode	13	0.46	1.3	0.04
12	Wayanad	10	3.14	8.88	0.31
13	Kannur	20	2.62	7.41	0.13
14	Kasaragod	20	0.94	2.66	0.05
	State	318	35.36	100	0.11

<u>A1.17 District wise Area and number of holding under Cowpea (Summer) during 2018-19</u>					
SI No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Thiruvananthapuram	30	4.85	15.47	0.16
2	Kollam	33	2.21	7.05	0.07
3	Pathanamthitta	40	3.14	10.02	0.08
4	Alappuzha	37	3.4	10.85	0.09
5	Kottayam	30	4.91	15.66	0.16
6	Idukki	4	0.49	1.56	0.12
7	Eranakulam	6	0.57	1.82	0.1
8	Thrissur	30	2.43	7.75	0.08
9	Palakkad				
10	Malappuram	16	2.44	7.78	0.15
11	Kozhikkode	20	0.59	1.88	0.03
12	Wayanad	10	1.76	5.61	0.18
13	Kannur	12	3.22	10.27	0.27
14	Kasaragod	20	1.35	4.31	0.07
	State	288	31.35	100	0.11

A1.18 District wise Area and number of holding under Cardamom during 2018-19					
Sl No	District	Sample Size	Area under the crop in the sample (ha)	Percentage Area	Average Area per holding (ha)
1	Idukki	7	1.92	18.71	0.27
2	Palakkad	5	2.13	20.76	0.43
3	Wayanad	15	6.21	60.53	0.41
	State	27	10.26	100	0.38

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2018-19						
Sl No	Components	Thiruvannthapuram	Kollam	Pathanmthitta	Alappuzha	Kottayam
1	Hired human labour	59854	55107	36735	24479	21740
2	Animal labour					
3	Machine labour	11920			5547	6479
4	Seed / seedlings	2544	3138	4131	4526	2194
5	Farmyard manure and chemical fertilizers	8375	11629	9802	3049	8392
6	Plant protection	777	372	875	1264	1034
7	Land tax and irrigation cess	10	457	48	238	356
8	Repair and maintenance charges of implements, machinery and building	187	1896	419		138
9	Interest on working capital	8347	7025	5154	3887	3984
10	Other expenses	6292	13938	22006	2206	13278
11	Total cost 'A' (1-10)	98307	93561	79171	45196	57594
12	Interest on fixed capital	495	2203	486	62	482
13	Cost 'B1' (11+12)	98802	95764	79657	45258	58077
14	Interest on land value	297937	79385	74804	68462	269001
15	Cost 'B' (13+14)	396739	175149	154461	113720	327078
16	Imputed value of household labour	15087	12984	6944	4796	17060
17	Cost 'C' (15+16)	411827	188133	161405	118517	344138

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	27500	17061	14518	23840	25072
2	Animal labour				37	286
3	Machine labour	9802	5158	12633	13452	9618
4	Seed / seedlings	1618	2324	3467	2728	2293
5	Farmyard manure and chemical fertilizers	4109	3970	7771	9739	6183
6	Plant protection	144	600	1068	750	854
7	Land tax and irrigation cess	47	67	180	287	110
8	Repair and maintenance charges of implements, machinery and building	780	1050	13	133	79
9	Interest on working capital	4317	2911	3946	5055	4431
10	Other expenses	2765	7494	8644	3827	9522
11	Total cost 'A' (1-10)	51084	40637	52239	59848	58449
12	Interest on fixed capital	382	1612	95	2182	1761
13	Cost 'B1' (11+12)	51466	42249	52335	62030	60210
14	Interest on land value	258893	381905	317652	123305	181555
15	Cost 'B' (13+14)	310359	424154	369987	185334	241764
16	Imputed value of household labour	20235	5039	5278	5774	3892
17	Cost 'C' (15+16)	330594	429194	375264	191109	245657

A2.1 District wise Cost of Cultivation per hectare (in Rs) of Autumn Paddy during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	30201		37807	38112	27145
2	Animal labour					36
3	Machine labour	5764		4310	6667	8186
4	Seed / seedlings	2941		2923	1913	2888
5	Farmyard manure and chemical fertilizers	8759		9280	11521	7269
6	Plant protection			133	34	731
7	Land tax and irrigation cess	58		112	393	188
8	Repair and maintenance charges of implements, machinery and building	30		374	146	400
9	Interest on working capital	4766		5445	5825	4625
10	Other expenses	10945		7122	769	7077
11	Total cost 'A' (1-10)	63465		67506	65380	58545
12	Interest on fixed capital	696		9730	2364	1703
13	Cost 'B1' (11+12)	64161		77236	67744	60248
14	Interest on land value	197767		188954	175318	212893
15	Cost 'B' (13+14)	261928		266190	243063	273141
16	Imputed value of household labour	11064		20860	11464	7916
17	Cost 'C' (15+16)	272992		287050	254527	281057

A2.2 District wise Cost of Cultivation per hectare (in Rs.) of Winter Paddy during 2018-19

Sl No	Components	Thiruvannthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	56108	53941	36443	21144	27913
2	Animal labour				67	
3	Machine labour	6579			10274	
4	Seed / seedlings	2899	2963	6394	4098	1993
5	Farmyard manure and chemical fertilizers	10152	12789	7821	8307	6504
6	Plant protection	910	132	354	3391	3232
7	Land tax and irrigation cess	10	570	73	334	213
8	Repair and maintenance charges of implements, machinery and building	73	1269	124	7	2811
9	Interest on working capital	7665	6983	5101	4728	3964
10	Other expenses	6296	17838	26577	6551	19864
11	Total cost 'A' (1-10)	90692	96485	82888	58902	66494
12	Interest on fixed capital	391	1899	76	69	307
13	Cost 'B1' (11+12)	91083	98384	82963	58970	66801
14	Interest on land value	272940	72051	68082	66667	188702
15	Cost 'B' (13+14)	364023	170436	151046	125637	255503
16	Imputed value of household labour	18812	9990	7265	4460	10095
17	Cost 'C' (15+16)	382835	180426	158311	130097	265598

A2.2 District wise Cost of Cultivation per hectare (in Rs) of Winter Paddy during 2018-19

SI No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	22394	35759	16647	27549	26995
2	Animal labour		24			
3	Machine labour	10046	10108	13345	11998	16495
4	Seed / seedlings	2440	2400	3060	2308	2234
5	Farmyard manure and chemical fertilizers	4302	8186	7118	8156	5698
6	Plant protection	34	960	2152	2872	836
7	Land tax and irrigation cess	8	110	339	95	92
8	Repair and maintenance charges of implements, machinery and building	1263	141	10	11	81
9	Interest on working capital	3922	5744	4232	5288	5226
10	Other expenses	7412	5851	16159	6966	10812
11	Total cost 'A' (1-10)	51821	69283	63062	65243	68470
12	Interest on fixed capital	858	3172	228	10716	3023
13	Cost 'B1' (11+12)	52678	72455	63290	75959	71492
14	Interest on land value	390833	298074	337983	207629	142165
15	Cost 'B' (13+14)	443511	370529	401273	283588	213657
16	Imputed value of household labour	18420	7603	4247	4758	5051
17	Cost 'C' (15+16)	461932	378132	405520	288347	218709

A2.2 District wise Cost of Cultivation per hectare (in Rs) of Winter Paddy during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	25501	62824	48669	30609	29959
2	Animal labour	175				15
3	Machine labour	2695		4069	11000	8386
4	Seed / seedlings	2710	3777	1859	2289	3220
5	Farmyard manure and chemical fertilizers	6965	7045	13031	10819	7852
6	Plant protection		128	251		1649
7	Land tax and irrigation cess	50	464	87	421	227
8	Repair and maintenance charges of implements, machinery and building	81	1288	4	904	476
9	Interest on working capital	3805	7377	6788	5472	5108
10	Other expenses	13859	28700	6085	1107	13734
11	Total cost 'A' (1-10)	55842	111602	80843	62621	70626
12	Interest on fixed capital	3184	1427	1627	7420	1771
13	Cost 'B1' (11+12)	59026	113029	82470	70040	72398
14	Interest on land value	199527	76755	124634	122151	172178
15	Cost 'B' (13+14)	258552	189784	207103	192192	244575
16	Imputed value of household labour	8894	11213	11396	23443	7452
17	Cost 'C' (15+16)	267447	200996	218500	215635	252027

A2.3 District wise Cost of Cultivation per hectare (in Rs.) of Summer Paddy during 2018-19

Sl No	Components	Thiruvannthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	65439	67962	36276	10963	34153
2	Animal labour				24	
3	Machine labour	13997			9262	
4	Seed / seedlings	2350	2754	6727	4551	1058
5	Farmyard manure and chemical fertilizers	8655	10640	9270	8606	7784
6	Plant protection	758	168	668	1965	3251
7	Land tax and irrigation cess	27	258	24	145	848
8	Repair and maintenance charges of implements, machinery and building	366	731	69	6	179
9	Interest on working capital	9120	8152	5294	3537	4625
10	Other expenses	12370	13760	25112	8128	22665
11	Total cost 'A' (1-10)	113083	104426	83440	47187	74561
12	Interest on fixed capital	685	510	64	31	145
13	Cost 'B1' (11+12)	113768	104936	83504	47219	74706
14	Interest on land value	356886	91780	95996	38706	131377
15	Cost 'B' (13+14)	470654	196716	179500	85924	206083
16	Imputed value of household labour	21279	7011	5256	2330	9068
17	Cost 'C' (15+16)	491934	203727	184756	88255	215151

A2.3 District wise Cost of Cultivation per hectare (in Rs) of Summer Paddy during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	45111	19613	18461	21883	30231
2	Animal labour					
3	Machine labour	5325	9180	14019	12035	15253
4	Seed / seedlings	1198	2475	3081	2233	2008
5	Farmyard manure and chemical fertilizers		8643	8950	9251	7047
6	Plant protection		1186	1559	2102	789
7	Land tax and irrigation cess		67	1711	99	67
8	Repair and maintenance charges of implements, machinery and building	629	295	8	24	226
9	Interest on working capital	5163	4110	4607	4750	5533
10	Other expenses		12295	11028	3949	14085
11	Total cost 'A' (1-10)	57425	57864	63425	56327	75238
12	Interest on fixed capital	267	3041	861	9932	4680
13	Cost 'B1' (11+12)	57693	60905	64287	66259	79918
14	Interest on land value	427285	296694	334700	139680	201940
15	Cost 'B' (13+14)	484978	357598	398987	205939	281858
16	Imputed value of household labour	2108	11165	6395	7281	7404
17	Cost 'C' (15+16)	487086	368763	405382	213221	289262

A2.3 District wise Cost of Cultivation per hectare (in Rs) of Summer Paddy during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	35493	80642	54059	33137	27734
2	Animal labour					7
3	Machine labour	2987		5552	11677	6813
4	Seed / seedlings	2524	4513	15557	1982	3844
5	Farmyard manure and chemical fertilizers	9140	17924	14029	9465	8728
6	Plant protection	8	344	145		1529
7	Land tax and irrigation cess	34	494	101	269	410
8	Repair and maintenance charges of implements, machinery and building	150	2437		699	136
9	Interest on working capital	5015	10342	8934	5626	4865
10	Other expenses	12312	24400	49768	720	15169
11	Total cost 'A' (1-10)	67664	141095	148147	63575	69235
12	Interest on fixed capital	166	1390	390	8820	1184
13	Cost 'B1' (11+12)	67830	142485	148537	72395	70418
14	Interest on land value	172297	76857	90283	191315	137849
15	Cost 'B' (13+14)	240126	219343	238819	263711	208267
16	Imputed value of household labour	11750	44093	11892	20498	6560
17	Cost 'C' (15+16)	251876	263435	250711	284209	214828

A2.4 District wise Cost of Cultivation per hectare (in Rs.) of Coconut during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	70660	40705	24127	46453	50647
2	Animal labour					
3	Machine labour					
4	Seed / seedlings			2358		3627
5	Farmyard manure and chemical fertilizers	13302	16962	8691	11919	23451
6	Plant protection				15	
7	Land tax and irrigation cess	64	225	285	338	524
8	Repair and maintenance charges of implements, machinery and building	300	647	334	123	105
9	Interest on working capital	8396	5767	3518	5839	7772
10	Other expenses	6598	2050	1507	1575	2983
11	Total cost 'A' (1-10)	99319	66356	40820	66261	89109
12	Interest on fixed capital	684	808	228	340	360
13	Cost 'B1' (11+12)	100004	67164	41049	66600	89469
14	Interest on land value	427190	248164	337986	379752	522190
15	Cost 'B' (13+14)	527194	315328	379035	446353	611659
16	Imputed value of household labour	27886	9367	4835	4707	9863
17	Cost 'C' (15+16)	555080	324696	383870	451059	621522

A 2.4 District wise Cost of Cultivation per hectare (in Rs) of Coconut during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	33853	45952	47710	28927	64700
2	Animal labour					
3	Machine labour				1499	1710
4	Seed / seedlings		175	503		246
5	Farmyard manure and chemical fertilizers	8575	18145	13148	9955	22479
6	Plant protection					
7	Land tax and irrigation cess	25	157	242	712	376
8	Repair and maintenance charges of implements, machinery and building	92	117	124		625
9	Interest on working capital	4243	6427	6136	4038	8913
10	Other expenses	1994	2617	2556	1811	4495
11	Total cost 'A' (1-10)	48782	73590	70418	46941	103544
12	Interest on fixed capital	1105	1939	3500	4888	9473
13	Cost 'B1' (11+12)	49887	75529	73918	51828	113016
14	Interest on land value	370206	2327361	734700	205599	552670
15	Cost 'B' (13+14)	420093	2402889	808618	257428	665687
16	Imputed value of household labour	12130	9430	12964	6924	7220
17	Cost 'C' (15+16)	432224	2412319	821582	264352	672906

A 2.4 District wise Cost of Cultivation per hectare (in Rs) of coconut during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	30583	38352	44461	48372	45618
2	Animal labour	85	229			12
3	Machine labour				1185	490
4	Seed / seedlings	191				496
5	Farmyard manure and chemical fertilizers	9806	11275	40128	27722	17969
6	Plant protection					1
7	Land tax and irrigation cess	205	490	269	1002	388
8	Repair and maintenance charges of implements, machinery and building	103	970		806	314
9	Interest on working capital	4067	4986	8459	7728	6459
10	Other expenses	1674		4662	2174	2788
11	Total cost 'A' (1-10)	46713	56301	97980	88989	74536
12	Interest on fixed capital	1008	852	1485	10994	3605
13	Cost 'B1' (11+12)	47721	57154	99465	99983	78142
14	Interest on land value	199128	177725	212540	182195	480172
15	Cost 'B' (13+14)	246849	234879	312005	282178	558313
16	Imputed value of household labour	6740	11036	8580	14221	9635
17	Cost 'C' (15+16)	253589	245914	320585	296400	567948

A 2.5 District wise Cost of Cultivation per hectare (in Rs.) of Arecanut during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	84890	46300	34826	15666	30801
2	Animal labour					
3	Machine labour					
4	Seed / seedlings			247		5097
5	Farmyard manure and chemical fertilizers	12082	7072	7324	4513	13855
6	Plant protection					
7	Land tax and irrigation cess	62	332	230	330	629
8	Repair and maintenance charges of implements, machinery and building	294	3333	2076		555
9	Interest on working capital	9697	5337	4240	2018	4975
10	Other expenses	4509	1250	716	580	1175
11	Total cost 'A' (1-10)	111535	63624	49659	23107	57088
12	Interest on fixed capital	766	4562	1946	1486	1477
13	Cost 'B1' (11+12)	112301	68186	51605	24593	58565
14	Interest on land value	314225	191414	288438	397836	582745
15	Cost 'B' (13+14)	426526	259599	340043	422429	641310
16	Imputed value of household labour	31384	9912	10741	25625	29931
17	Cost 'C' (15+16)	457910	269511	350783	448054	671241

A 2.5 District wise Cost of Cultivation per hectare (in Rs) of Arecanut during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	20977	124342	77200	28317	56467
2	Animal labour					
3	Machine labour				4217	1261
4	Seed / seedlings			908		565
5	Farmyard manure and chemical fertilizers	6654	20598	28275	21296	24630
6	Plant protection			54		
7	Land tax and irrigation cess	30	273	269	1321	392
8	Repair and maintenance charges of implements, machinery and building	494	89	195	4	1317
9	Interest on working capital	2763	14494	10644	5383	8292
10	Other expenses	2175	11821	2729	4069	4017
11	Total cost 'A' (1-10)	33093	171617	120274	64605	96942
12	Interest on fixed capital	1279	511	9748	5170	16010
13	Cost 'B1' (11+12)	34373	172128	130022	69775	112952
14	Interest on land value	369732	1869025	723050	170359	459443
15	Cost 'B' (13+14)	404105	2041153	853072	240134	572395
16	Imputed value of household labour	20571	28266	33597	7716	9674
17	Cost 'C' (15+16)	424676	2069419	886669	247850	582069

A 2.5 District wise Cost of Cultivation per hectare (in Rs) of Arecanut during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	31172	53273	50080	57374	53338
2	Animal labour					
3	Machine labour				1709	1047
4	Seed / seedlings	281				358
5	Farmyard manure and chemical fertilizers	9469	9944	14014	92952	32181
6	Plant protection					3
7	Land tax and irrigation cess	302	689	261	1686	715
8	Repair and maintenance charges of implements, machinery and building	64	808		2241	1045
9	Interest on working capital	4092	6322	6409	15204	8693
10	Other expenses	951	80	5922	2118	3015
11	Total cost 'A' (1-10)	46331	71116	76686	173284	100395
12	Interest on fixed capital	1654	673	5216	15028	8617
13	Cost 'B1' (11+12)	47986	71789	81901	188312	109012
14	Interest on land value	182860	187551	198957	201514	354597
15	Cost 'B' (13+14)	230845	259339	280858	389826	463610
16	Imputed value of household labour	11257	9154	34222	24992	18317
17	Cost 'C' (15+16)	242102	268493	315080	414818	481926

A 2.6 District wise Cost of Cultivation per hectare (in Rs.) of Tapioca during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	110684	74255	44431	44299	59572
2	Animal labour					
3	Machine labour				6143	
4	Seed / seedlings	3465	2418	6646	9360	3933
5	Farmyard manure and chemical fertilizers	17764	19722	12608	24563	23998
6	Plant protection				19	
7	Land tax and irrigation cess	17	316	132	121	762
8	Repair and maintenance charges of implements, machinery and building	126	1225	576	136	224
9	Interest on working capital	13191	9640	6369	8438	8750
10	Other expenses	15068	3859	17330	8936	14793
11	Total cost 'A' (1-10)	160315	111434	88091	102017	112032
12	Interest on fixed capital	561	1089	419	595	348
13	Cost 'B1' (11+12)	160876	112523	88511	102611	112380
14	Interest on land value	344349	115578	251110	289689	600006
15	Cost 'B' (13+14)	505226	228101	339621	392301	712386
16	Imputed value of household labour	44074	21452	24040	59499	26192
17	Cost 'C' (15+16)	549300	249553	363661	451800	738579

A 2.6 District wise Cost of Cultivation per hectare (in Rs) of Tapioca during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	42318	70428	68841	21000	58607
2	Animal labour					
3	Machine labour		882	6943	7661	4043
4	Seed / seedlings	2983	13057	10231	21656	4879
5	Farmyard manure and chemical fertilizers	6498	26393	12226	12888	17965
6	Plant protection		39	900	1187	619
7	Land tax and irrigation cess	28	190	175	433	46
8	Repair and maintenance charges of implements, machinery and building	309	240	33	31	469
9	Interest on working capital	5180	11080	9914	6439	8611
10	Other expenses	14266	11486	9849	7960	21149
11	Total cost 'A' (1-10)	71582	133795	119113	79255	116388
12	Interest on fixed capital	1246	258	357	10444	7733
13	Cost 'B1' (11+12)	72828	134053	119470	89699	124120
14	Interest on land value	418238	1000866	577751	170640	215442
15	Cost 'B' (13+14)	491066	1134919	697220	260338	339562
16	Imputed value of household labour	40480	22222	23358	11983	21437
17	Cost 'C' (15+16)	531546	1157141	720578	272321	360999

A 2.6 District wise Cost of Cultivation per hectare (in Rs) of Tapioca during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	61338	82004	40440	51382	59058
2	Animal labour					
3	Machine labour			71	4126	2417
4	Seed / seedlings	6017	2660	35284	4334	8874
5	Farmyard manure and chemical fertilizers	6772	5734	31148	22627	18632
6	Plant protection			812	1450	373
7	Land tax and irrigation cess	100	494	208	432	258
8	Repair and maintenance charges of implements, machinery and building	1104	2403		448	419
9	Interest on working capital	7413	9040	10776	8392	8935
10	Other expenses	18569	15166	5909	1949	12721
11	Total cost 'A' (1-10)	101312	117500	124648	95140	111688
12	Interest on fixed capital	582	1554	338	5806	2895
13	Cost 'B1' (11+12)	101894	119055	124987	100946	114583
14	Interest on land value	228210	155140	145408	154277	340873
15	Cost 'B' (13+14)	330104	274195	270394	255223	455456
16	Imputed value of household labour	36661	72470	32356	31229	27862
17	Cost 'C' (15+16)	366765	346665	302751	286452	483318

A2.7 District wise Cost of Cultivation per hectare (in Rs.) of Banana during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	146853	122518	60753	83453	71693
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	21498	27349	26117	23887	14822
5	Farmyard manure and chemical fertilizers	38401	46074	22264	39493	66497
6	Plant protection	114	53	969	242	970
7	Land tax and irrigation cess	15	301	111	116	419
8	Repair and maintenance charges of implements, machinery and building	144	1584	547	132	131
9	Interest on working capital	20687	19599	11010	14708	15398
10	Other expenses	28116	6564	22180	18037	29271
11	Total cost 'A' (1-10)	255828	224042	143952	180068	199200
12	Interest on fixed capital	526	1543	374	443	236
13	Cost 'B1' (11+12)	256354	225585	144326	180511	199437
14	Interest on land value	356199	114156	225976	269706	1101164
15	Cost 'B' (13+14)	612553	339741	370302	450217	1300601
16	Imputed value of household labour	67356	35366	27462	75903	35303
17	Cost 'C' (15+16)	679909	375107	397763	526120	1335904

A 2.7 District wise Cost of Cultivation per hectare (in Rs) of Banana during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	29018	134682	75697	56864	90082
2	Animal labour					
3	Machine labour	10795	631	8277	10190	5617
4	Seed / seedlings	36310	25134	50995	20513	29711
5	Farmyard manure and chemical fertilizers	29695	52681	37782	35230	29258
6	Plant protection	22385	1124	2456	3304	1428
7	Land tax and irrigation cess	28	104	102	96	70
8	Repair and maintenance charges of implements, machinery and building	479	260	99	14	781
9	Interest on working capital	12820	21425	17521	12610	15610
10	Other expenses	45557	22168	61206	47122	44196
11	Total cost 'A' (1-10)	187088	258209	254136	185944	216752
12	Interest on fixed capital	301	3268	2615	7877	11606
13	Cost 'B1' (11+12)	187389	261477	256751	193821	228358
14	Interest on land value	404316	653068	786186	121821	197706
15	Cost 'B' (13+14)	591705	914545	1042937	315641	426064
16	Imputed value of household labour	19832	29326	42545	15816	29829
17	Cost 'C' (15+16)	611538	943871	1085481	331457	455893

A 2.7 District wise Cost of Cultivation per hectare (in Rs) of Banana during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	71566	109270	148339	53751	90815
2	Animal labour					
3	Machine labour				7683	3139
4	Seed / seedlings	34569	30580	30609	26498	28128
5	Farmyard manure and chemical fertilizers	39496	49972	38525	60031	41343
6	Plant protection	1119	5200	1253	7904	2585
7	Land tax and irrigation cess	54	494	171	1243	187
8	Repair and maintenance charges of implements, machinery and building	759	1346		5579	554
9	Interest on working capital	14675	19502	21873	15587	16601
10	Other expenses	57454	11050	25349	5988	33444
11	Total cost 'A' (1-10)	219692	227414	266118	184264	216796
12	Interest on fixed capital	377	3667	2266	43043	4042
13	Cost 'B1' (11+12)	220069	231081	268383	227307	220838
14	Interest on land value	279199	82210	197336	178293	424499
15	Cost 'B' (13+14)	499268	313292	465720	405600	645337
16	Imputed value of household labour	44522	74948	32834	129522	40142
17	Cost 'C' (15+16)	543790	388239	498553	535122	685479

A 2.8 District wise Cost of Cultivation per hectare (in Rs.) of Pepper during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	49103	66507	53800	51640	59968
2	Animal labour					
3	Machine labour					
4	Seed / seedlings			557		2717
5	Farmyard manure and chemical fertilizers	3740	16515	8844	11857	16723
6	Plant protection				1188	
7	Land tax and irrigation cess	61	349	280	377	505
8	Repair and maintenance charges of implements, machinery and building	18	2532	1739		282
9	Interest on working capital	5284	8302	6320	6468	7941
10	Other expenses	1443	229	3496	1320	1570
11	Total cost 'A' (1-10)	59649	94433	75035	72851	89706
12	Interest on fixed capital	416	2664	1231	4178	614
13	Cost 'B1' (11+12)	60066	97097	76266	77029	90320
14	Interest on land value	380525	190092	306146	511787	900593
15	Cost 'B' (13+14)	440590	287189	382412	588816	990913
16	Imputed value of household labour	24392	26637	18374	65759	30914
17	Cost 'C' (15+16)	464983	313825	400785	654576	1021826

A2.8 District wise Cost of Cultivation per hectare (in Rs) of pepper during 2018-19						
Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	27642	76422	86453	43168	45867
2	Animal labour					
3	Machine labour				1635	506
4	Seed / seedlings	4068	85	4188		840
5	Farmyard manure and chemical fertilizers	3194	28707	17052	15618	14047
6	Plant protection			4318	2114	1608
7	Land tax and irrigation cess	51	321	279	1867	293
8	Repair and maintenance charges of implements, machinery and building	886	122	122	22	2323
9	Interest on working capital	3490	10521	11201	6253	6287
10	Other expenses	2477	9436	5268	3877	1731
11	Total cost 'A' (1-10)	41809	125615	128882	74553	73501
12	Interest on fixed capital	5962	772	1265	5569	36018
13	Cost 'B1' (11+12)	47771	126386	130147	80122	109520
14	Interest on land value	416902	1780506	800656	79408	550746
15	Cost 'B' (13+14)	464673	1906892	930802	159530	660266
16	Imputed value of household labour	31990	27779	48608	19040	20706
17	Cost 'C' (15+16)	496663	1934671	979410	178570	680972

A2.8 District wise Cost of Cultivation per hectare (in Rs) of Pepper during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	34470	40919	68493	33636	51012
2	Animal labour					
3	Machine labour				2250	463
4	Seed / seedlings	209	5937			1365
5	Farmyard manure and chemical fertilizers	15021	9225	20381	33793	14962
6	Plant protection		1336		460	850
7	Land tax and irrigation cess	279	494	287	629	529
8	Repair and maintenance charges of implements, machinery and building	183	842		2429	904
9	Interest on working capital	4970	5742	8887	7014	6865
10	Other expenses	654		1442	593	1976
11	Total cost 'A' (1-10)	55787	64494	99490	80804	78925
12	Interest on fixed capital	654	1057	948	35755	8697
13	Cost 'B1' (11+12)	56442	65551	100438	116560	87622
14	Interest on land value	177793	271426	246066	204951	427026
15	Cost 'B' (13+14)	234235	336977	346504	321511	514647
16	Imputed value of household labour	46726	20383	36318	26235	27290
17	Cost 'C' (15+16)	280960	357361	382822	347745	541938

A 2.9 District wise Cost of Cultivation per hectare (in Rs.) of Ginger during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	99825	63255	62906	186658	45629
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	50989	65570	58124	30313	71769
5	Farmyard manure and chemical fertilizers	24173	22640	11607	42071	25408
6	Plant protection	212		299	479	
7	Land tax and irrigation cess	46	293	277	221	465
8	Repair and maintenance charges of implements, machinery and building	226	4334	1430		827
9	Interest on working capital	17520	15147	13294	25952	14281
10	Other expenses	28492	4967	4953	800	3053
11	Total cost 'A' (1-10)	221483	176205	152888	286495	161431
12	Interest on fixed capital	1657	3622	1130	3083	2208
13	Cost 'B1' (11+12)	223140	179827	154018	289578	163639
14	Interest on land value	292123	222276	275181	564966	588664
15	Cost 'B' (13+14)	515263	402104	429199	854545	752304
16	Imputed value of household labour	109493	64460	24808	47188	70401
17	Cost 'C' (15+16)	624756	466563	454007	901733	822705

A2.9 District wise Cost of Cultivation per hectare (in Rs) of Ginger during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	43020	25179	98477	106598	67851
2	Animal labour					
3	Machine labour	3363		3153	8139	1779
4	Seed / seedlings	41516	34530	28373	38194	31435
5	Farmyard manure and chemical fertilizers	11559	84901	28198	25341	20026
6	Plant protection	752	516	744	24987	735
7	Land tax and irrigation cess	38	168	251	91	276
8	Repair and maintenance charges of implements, machinery and building	376	562	120		386
9	Interest on working capital	10021	14513	15895	20326	12183
10	Other expenses	8890	2622	7174	42716	8520
11	Total cost 'A' (1-10)	119534	162991	182384	266392	143191
12	Interest on fixed capital	3652	5173	929	141571	10418
13	Cost 'B1' (11+12)	123187	168164	183313	407963	153609
14	Interest on land value	546058	1071314	552675	106970	433153
15	Cost 'B' (13+14)	669244	1239478	735988	514932	586762
16	Imputed value of household labour	48853	95289	54251	12866	21272
17	Cost 'C' (15+16)	718097	1334766	790238	527798	608034

A2.9 District wise Cost of Cultivation per hectare (in Rs) of Ginger during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	44654	131695	68252	44994	80464
2	Animal labour					
3	Machine labour			531	5766	3211
4	Seed / seedlings	106212	93337	59091	51927	52112
5	Farmyard manure and chemical fertilizers	32636	41029	28842	54687	28351
6	Plant protection	827	1232	54		7662
7	Land tax and irrigation cess	63	494	220	455	207
8	Repair and maintenance charges of implements, machinery and building	503	2615	68	413	710
9	Interest on working capital	18433	26729	15677	15737	17180
10	Other expenses	19794	3545	11611	2888	18864
11	Total cost 'A' (1-10)	223123	300676	184345	176868	208761
12	Interest on fixed capital	852	2003	4944	1383	44078
13	Cost 'B1' (11+12)	223975	302679	189289	178251	252839
14	Interest on land value	155846	200873	203244	142617	273710
15	Cost 'B' (13+14)	379821	503552	392533	320867	526549
16	Imputed value of household labour	35300	79999	38628	39406	40349
17	Cost 'C' (15+16)	415120	583551	431160	360273	566898

A 2.10 District wise Cost of Cultivation per hectare (in Rs.) of Turmeric during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	111465	44083	60955	153484	67023
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	11783	19289	12209	21979	31592
5	Farmyard manure and chemical fertilizers	61387	14696	13363	35754	16932
6	Plant protection				1559	881
7	Land tax and irrigation cess	39	338	267	311	544
8	Repair and maintenance charges of implements, machinery and building	482	4423	2507		711
9	Interest on working capital	18464	7807	8653	21278	11643
10	Other expenses	11450	2695	8437	4720	4531
11	Total cost 'A' (1-10)	215069	93331	106391	239085	133857
12	Interest on fixed capital	1825	4941	2037	3339	2182
13	Cost 'B1' (11+12)	216894	98271	108428	242424	136038
14	Interest on land value	263240	136317	265651	572264	654864
15	Cost 'B' (13+14)	480134	234588	374079	814688	790902
16	Imputed value of household labour	93656	67328	31306	48737	93601
17	Cost 'C' (15+16)	573790	301916	405385	863424	884503

A2.10 District wise Cost of Cultivation per hectare (in Rs) of Turmeric during 2018-19

SI No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	23824	32556	68789	63487	56240
2	Animal labour					
3	Machine labour	758	2043	1852	6616	7330
4	Seed / seedlings	34550	18146	17846	34985	19723
5	Farmyard manure and chemical fertilizers	9540	49224	13576	9273	31814
6	Plant protection	273		689	4614	
7	Land tax and irrigation cess	12	187	197	893	387
8	Repair and maintenance charges of implements, machinery and building	492	395	88		692
9	Interest on working capital	6894	10197	10275	11898	11511
10	Other expenses	22912	3162	9017	22741	5988
11	Total cost 'A' (1-10)	99255	115908	122330	154507	133685
12	Interest on fixed capital	4017	1191	7047	31262	11767
13	Cost 'B1' (11+12)	103273	117099	129377	185769	145452
14	Interest on land value	525327	817756	631309	125757	376101
15	Cost 'B' (13+14)	628599	934855	760686	311527	521553
16	Imputed value of household labour	59719	82550	48049	18525	34487
17	Cost 'C' (15+16)	688319	1017405	808735	330052	556040

A2.10 District wise Cost of Cultivation per hectare (in Rs) of Turmeric during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	28646	37050	63207	38202	62464
2	Animal labour					
3	Machine labour			2174	5673	3054
4	Seed / seedlings	43000	37297	21995	46824	24543
5	Farmyard manure and chemical fertilizers	38843	40046	31892	34347	26116
6	Plant protection					850
7	Land tax and irrigation cess	470	494	206	387	377
8	Repair and maintenance charges of implements, machinery and building	157	11239	435	907	977
9	Interest on working capital	11049	11439	11927	12505	11703
10	Other expenses	3085		19457	1773	9949
11	Total cost 'A' (1-10)	125250	137565	151293	140618	140032
12	Interest on fixed capital	964	7800	8240	2219	9334
13	Cost 'B1' (11+12)	126213	145365	159533	142837	149366
14	Interest on land value	240391	206839	214077	153430	348895
15	Cost 'B' (13+14)	366604	352204	373610	296267	498262
16	Imputed value of household labour	57375	168825	50611	59700	53204
17	Cost 'C' (15+16)	423979	521028	424221	355966	551465

A 2.11 District wise Cost of Cultivation per hectare (in Rs.) of Pineapple during 2018-19

SI No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	117448	87429	27329	39518	35175
2	Animal labour					14
3	Machine labour					
4	Seed / seedlings	151444	49488	32004	43225	65740
5	Farmyard manure and chemical fertilizers	34791	22731	9509	9263	47702
6	Plant protection			4367		8965
7	Land tax and irrigation cess		276	150	618	156
8	Repair and maintenance charges of implements, machinery and building	41	1135	1279		47
9	Interest on working capital	30368	15965	7321	9201	15760
10	Other expenses	20841	5255	12174		49083
11	Total cost 'A' (1-10)	354934	182279	94133	101824	222640
12	Interest on fixed capital	224	2407	758	1219	95
13	Cost 'B1' (11+12)	355158	184685	94890	103042	222734
14	Interest on land value	204783	127502	272300	988000	857874
15	Cost 'B' (13+14)	559941	312187	367190	1091042	1080609
16	Imputed value of household labour	31482	10226	19169		8356
17	Cost 'C' (15+16)	591424	322414	386359	1091042	1088964

A2.11 District wise Cost of Cultivation per hectare (in Rs) of Pine apple during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	42121	37627	60746	46079	58235
2	Animal labour					
3	Machine labour	9088	2166	12350	9942	11144
4	Seed / seedlings	33738	139342	98591	117999	44523
5	Farmyard manure and chemical fertilizers	33855	29860	24546	17205	9743
6	Plant protection	2284	8817	624	1270	
7	Land tax and irrigation cess	12	92	141	437	9
8	Repair and maintenance charges of implements, machinery and building	416	79	38		273
9	Interest on working capital	12109	21781	19686	19250	12364
10	Other expenses	13116	55539	25944	19695	13674
11	Total cost 'A' (1-10)	146738	295303	242664	231877	149966
12	Interest on fixed capital	427	247	1175	1576	678
13	Cost 'B1' (11+12)	147165	295550	243839	233453	150644
14	Interest on land value	448030	1888085	357773	1180898	6303
15	Cost 'B' (13+14)	595196	2183636	601612	1414351	156947
16	Imputed value of household labour	16550	6650	2908	2152	1362
17	Cost 'C' (15+16)	611745	2190286	604520	1416503	158309

A2.11 District wise Cost of Cultivation per hectare (in Rs) of pineapple during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	38531		23052	50992	45212
2	Animal labour					4
3	Machine labour			336	6910	5676
4	Seed / seedlings	52583		46575	113707	77402
5	Farmyard manure and chemical fertilizers	17429		10407	37775	28539
6	Plant protection	2370		227	457	3634
7	Land tax and irrigation cess	348		44	258	125
8	Repair and maintenance charges of implements, machinery and building	21			86	85
9	Interest on working capital	11091		8060	20984	16047
10	Other expenses	12477		38873	3825	34350
11	Total cost 'A' (1-10)	134851		127573	234994	211075
12	Interest on fixed capital	196		88	7484	646
13	Cost 'B1' (11+12)	135047		127662	242477	211721
14	Interest on land value	151659		677224	164119	649417
15	Cost 'B' (13+14)	286706		804885	406597	861138
16	Imputed value of household labour	17782		2112	13644	5330
17	Cost 'C' (15+16)	304488		806998	420241	866468

**A 2.12 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Autumn) during
2018-19**

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	144140	106878	27708	86450	78029
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	2833	12737	8847	3952	3440
5	Farmyard manure and chemical fertilizers	45086	59880	9262	37873	24405
6	Plant protection	1982	1729	568		2930
7	Land tax and irrigation cess	11	426	174	593	153
8	Repair and maintenance charges of implements, machinery and building	893	6694	5394		2282
9	Interest on working capital	19404	18122	4638	12828	10880
10	Other expenses	95796	23723	25481	55163	33378
11	Total cost 'A' (1-10)	310147	230190	82072	196859	155496
12	Interest on fixed capital	1958	6227	7823	1833	1993
13	Cost 'B1' (11+12)	312105	236417	89895	198692	157489
14	Interest on land value	275682	55702	99774	741000	682675
15	Cost 'B' (13+14)	587787	292119	189669	939692	840164
16	Imputed value of household labour	187782	74769	60423		100623
17	Cost 'C' (15+16)	775570	366888	250091	939692	940788

A2.12 District wise Cost of Cultivation per hectare (in Rs) of bitter gourd(Autumn) during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour		36254	23154	33659	55013
2	Animal labour					
3	Machine labour			4381	5877	182
4	Seed / seedlings		3649	6822	16130	9247
5	Farmyard manure and chemical fertilizers		20217	19363	34704	16163
6	Plant protection		1095	3809	3421	2269
7	Land tax and irrigation cess		98	234	104	240
8	Repair and maintenance charges of implements, machinery and building		449	16	357	711
9	Interest on working capital		6122	5753	9379	8287
10	Other expenses		34132	51208	19141	28063
11	Total cost 'A' (1-10)		102016	114740	122772	120175
12	Interest on fixed capital		1455	284	5277	813
13	Cost 'B1' (11+12)		103472	115024	128049	120988
14	Interest on land value		321036	625420	126800	174405
15	Cost 'B' (13+14)		424507	740444	254849	295393
16	Imputed value of household labour		24711	32334	28454	46126
17	Cost 'C' (15+16)		449218	772778	283303	341518

**A2.12 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Autumn)during
2018-19**

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour			11998		50575
2	Animal labour					
3	Machine labour			1918		2077
4	Seed / seedlings			4612		7724
5	Farmyard manure and chemical fertilizers			13923		26851
6	Plant protection					2253
7	Land tax and irrigation cess			33		152
8	Repair and maintenance charges of implements, machinery and building			181		1228
9	Interest on working capital			3245		8948
10	Other expenses			7534		35347
11	Total cost 'A' (1-10)			43444		135154
12	Interest on fixed capital			11023		3648
13	Cost 'B1' (11+12)			54467		138802
14	Interest on land value			302473		335984
15	Cost 'B' (13+14)			356940		474786
16	Imputed value of household labour			52719		58245
17	Cost 'C' (15+16)			409659		533031

A 2.13 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Winter) during 2018-19

SI No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	127336	110049	51133	52768	58239
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	2802	12022	11271	3739	4017
5	Farmyard manure and chemical fertilizers	46312	37637	9022	83920	28295
6	Plant protection	2021	2116	1098	3425	4391
7	Land tax and irrigation cess	13	451	94	200	403
8	Repair and maintenance charges of implements, machinery and building	667	6709	4805		1255
9	Interest on working capital	17847	16182	7253	14385	9494
10	Other expenses	107333	27871	42536	64232	19360
11	Total cost 'A' (1-10)	304330	213037	127213	222670	125455
12	Interest on fixed capital	2476	3866	6394	2299	2322
13	Cost 'B1' (11+12)	306806	216903	133607	224969	127777
14	Interest on land value	367585	50119	99177	152471	292368
15	Cost 'B' (13+14)	674391	267021	232785	377440	420145
16	Imputed value of household labour	146875	79224	64897	111296	156857
17	Cost 'C' (15+16)	821266	346245	297681	488736	577002

A2.13 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Winter) during 2018-19

SI No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	35353	58928	31656	33583	42429
2	Animal labour					
3	Machine labour				578	242
4	Seed / seedlings	9251	3236	10802	18226	7531
5	Farmyard manure and chemical fertilizers	12421	50995	23139	16699	18344
6	Plant protection	2470	4612	2576	2420	2443
7	Land tax and irrigation cess	35	352	224	79	23
8	Repair and maintenance charges of implements, machinery and building	1658	234	295	10	493
9	Interest on working capital	5949	11777	6817	7151	7099
10	Other expenses	29608	39708	37527	33565	48802
11	Total cost 'A' (1-10)	96746	169841	113037	112310	127407
12	Interest on fixed capital	4123	14823	9279	9365	10212
13	Cost 'B1' (11+12)	100869	184665	122316	121675	137619
14	Interest on land value	295403	973930	338530	67601	186258
15	Cost 'B' (13+14)	396272	1158595	460846	189276	323877
16	Imputed value of household labour	43898	62704	73834	16869	38111
17	Cost 'C' (15+16)	440170	1221299	534680	206145	361988

**A2.13 District wise Cost of Cultivation per hectare (in Rs) of Bitter gourd(Winter)during
2018-19**

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	24315	73112	49067	64099	55961
2	Animal labour					
3	Machine labour			1706	6451	467
4	Seed / seedlings	5818	20995	1720	5092	8902
5	Farmyard manure and chemical fertilizers	25851	16865	30959	44944	27328
6	Plant protection	2600	6916	527		2345
7	Land tax and irrigation cess	60	494	81	726	180
8	Repair and maintenance charges of implements, machinery and building	217	27368		6820	1735
9	Interest on working capital	5858	11789	8398	12059	9500
10	Other expenses	15893	76570	24398	12324	39004
11	Total cost 'A' (1-10)	80611	234109	116857	152513	145423
12	Interest on fixed capital	715	29400	2248	38404	7028
13	Cost 'B1' (11+12)	81325	263509	119104	190918	152451
14	Interest on land value	165967	54217	276592	162417	222304
15	Cost 'B' (13+14)	247292	317725	395697	353335	374755
16	Imputed value of household labour	38231	234650	39858	123279	72079
17	Cost 'C' (15+16)	285523	552375	435554	476614	446834

A 2.14 District wise Cost of Cultivation per hectare (in Rs.) of Bitter Gourd (Summer) during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	91529	94948	41046	89875	93935
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	3132	14662	12753	5564	4517
5	Farmyard manure and chemical fertilizers	48946	38658	9752	68963	16942
6	Plant protection	2209	1338	545	4482	4637
7	Land tax and irrigation cess		299	109	252	52
8	Repair and maintenance charges of implements, machinery and building	882	5405	4688		247
9	Interest on working capital	14582	14961	6410	16888	12003
10	Other expenses	74687	49665	41859	49719	20632
11	Total cost 'A' (1-10)	235966	219935	117161	235743	152965
12	Interest on fixed capital	2434	3492	3329	4033	1853
13	Cost 'B1' (11+12)	238400	223427	120490	239776	154818
14	Interest on land value	373439	55183	107843	123630	561486
15	Cost 'B' (13+14)	611839	278610	228333	363406	716305
16	Imputed value of household labour	254121	92316	75066	71460	142387
17	Cost 'C' (15+16)	865959	370926	303399	434865	858691

A2.14 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(Summer)during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour		16907	33035	39366	29412
2	Animal labour					
3	Machine labour				6793	
4	Seed / seedlings		3637	11298	8151	8964
5	Farmyard manure and chemical fertilizers		49601	20238	13289	12192
6	Plant protection		7759	2405	1729	2295
7	Land tax and irrigation cess		87	172	111	85
8	Repair and maintenance charges of implements, machinery and building		754	26		1672
9	Interest on working capital		7791	6698	6933	5286
10	Other expenses		83327	33980	24206	23422
11	Total cost 'A' (1-10)		169864	107851	100577	83330
12	Interest on fixed capital		3969	8760	3781	5034
13	Cost 'B1' (11+12)		173833	116611	104358	88364
14	Interest on land value		252013	200021	142890	202227
15	Cost 'B' (13+14)		425846	316632	247247	290591
16	Imputed value of household labour		55707	102549	45232	81459
17	Cost 'C' (15+16)		481553	419181	292479	372050

A2.14 District wise Cost of Cultivation per hectare (in Rs) of Bitter Gourd(summer)during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour	5676	59280	66039	30005	59728
2	Animal labour					
3	Machine labour			1446	11216	509
4	Seed / seedlings	7493	23547	4485	5598	7646
5	Farmyard manure and chemical fertilizers	42387	28866	31379	42534	35172
6	Plant protection	4223	6653			2898
7	Land tax and irrigation cess	154	494	132	3665	224
8	Repair and maintenance charges of implements, machinery and building	64	17455	108	10510	1854
9	Interest on working capital	5978	11835	10335	8935	10595
10	Other expenses	10712	25688	23555	20758	45442
11	Total cost 'A' (1-10)	76687	173817	137479	133222	164070
12	Interest on fixed capital	1500	15617	9678	86318	6983
13	Cost 'B1' (11+12)	78187	189434	147158	219539	171053
14	Interest on land value	180015	51351	185334	366925	237642
15	Cost 'B' (13+14)	258202	240785	332492	586464	408695
16	Imputed value of household labour	90942	182121	43068	198091	117306
17	Cost 'C' (15+16)	349144	422906	375560	784556	526001

A 2.15 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Autumn) during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	62620	96247	44392	63321	78010
2	Animal labour					
3	Machine labour				4491	
4	Seed / seedlings	2720	12933	5159	7859	3931
5	Farmyard manure and chemical fertilizers	42975	62933	9868	35478	23800
6	Plant protection	3035	1172	565	6835	1426
7	Land tax and irrigation cess	4	418	72	386	128
8	Repair and maintenance charges of implements, machinery and building	767	5952	5421		1367
9	Interest on working capital	11135	17329	5998	11798	10717
10	Other expenses	59042	27670	20525	49804	33024
11	Total cost 'A' (1-10)	182298	224654	92001	179974	152403
12	Interest on fixed capital	2072	3433	7625	1000	1691
13	Cost 'B1' (11+12)	184371	228087	99626	180974	154094
14	Interest on land value	314032	136196	112474	291909	674055
15	Cost 'B' (13+14)	498403	364283	212100	472883	828148
16	Imputed value of household labour	228738	74660	62251	94848	83329
17	Cost 'C' (15+16)	727141	438943	274351	567731	911478

A2.15 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Autumn)during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour		36044	27591	44200	27171
2	Animal labour				586	
3	Machine labour		741	1576	6783	117
4	Seed / seedlings		3928	4253	5381	4875
5	Farmyard manure and chemical fertilizers		17233	18990	18786	15096
6	Plant protection		1433	2184	2735	2860
7	Land tax and irrigation cess		49	195	213	170
8	Repair and maintenance charges of implements, machinery and building		513	39	596	422
9	Interest on working capital		5938	5459	7847	5012
10	Other expenses		27358	38560	17786	17693
11	Total cost 'A' (1-10)		93236	98847	104912	73416
12	Interest on fixed capital		1176	637	16484	1618
13	Cost 'B1' (11+12)		94412	99484	121396	75034
14	Interest on land value		307113	537944	106736	333273
15	Cost 'B' (13+14)		401525	637428	228132	408307
16	Imputed value of household labour		27657	52680	39937	37058
17	Cost 'C' (15+16)		429182	690107	268070	445364

A2.15 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Autumn) during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasargod	State
1	Hired human labour			34980		52752
2	Animal labour					67
3	Machine labour			1531		1206
4	Seed / seedlings			2777		4803
5	Farmyard manure and chemical fertilizers			29645		26417
6	Plant protection			255		1806
7	Land tax and irrigation cess			40		136
8	Repair and maintenance charges of implements, machinery and building			326		1369
9	Interest on working capital			6919		8705
10	Other expenses			9437		28744
11	Total cost 'A' (1-10)			85912		126006
12	Interest on fixed capital			7776		4365
13	Cost 'B1' (11+12)			93687		130371
14	Interest on land value			396535		367624
15	Cost 'B' (13+14)			490222		497994
16	Imputed value of household labour			32110		72518
17	Cost 'C' (15+16)			522332		570513

A 2.16 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Winter) during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	148057	100435	52585	44122	79743
2	Animal labour					
3	Machine labour					
4	Seed / seedlings	2753	11014	6361	5082	5093
5	Farmyard manure and chemical fertilizers	43423	38090	10301	31479	23193
6	Plant protection	2916	1334	941	5603	2248
7	Land tax and irrigation cess	8	445	63	305	796
8	Repair and maintenance charges of implements, machinery and building	387	7889	4092		1567
9	Interest on working capital	19715	15087	7019	8629	11028
10	Other expenses	70113	24766	42742	64185	29902
11	Total cost 'A' (1-10)	287372	199060	124103	159404	153571
12	Interest on fixed capital	1756	3126	5054	3899	978
13	Cost 'B1' (11+12)	289128	202186	129157	163303	154548
14	Interest on land value	365294	107838	110495	160850	333049
15	Cost 'B' (13+14)	654422	310025	239651	324153	487597
16	Imputed value of household labour	110433	85720	67885	162725	93579
17	Cost 'C' (15+16)	764855	395745	307537	486877	581176

A2.16 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Winter)during 2018-19

Sl No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	34177	38502	52538	17861	40028
2	Animal labour					
3	Machine labour				4250	1669
4	Seed / seedlings	5639	6320	5278	4682	5448
5	Farmyard manure and chemical fertilizers	7253	35602	13853	15956	10699
6	Plant protection	2966	4949	3844	1689	1925
7	Land tax and irrigation cess		183	197	38	76
8	Repair and maintenance charges of implements, machinery and building	2202	2017	63		320
9	Interest on working capital	5004	8537	7551	4444	5977
10	Other expenses	46878	27575	38342	33309	43816
11	Total cost 'A' (1-10)	104120	123686	121665	82227	109956
12	Interest on fixed capital	3796	11177	11940	10014	4441
13	Cost 'B1' (11+12)	107915	134864	133606	92241	114397
14	Interest on land value	250386	1490862	407525	69383	169690
15	Cost 'B' (13+14)	358302	1625726	541131	161624	284087
16	Imputed value of household labour	44289	77984	90136	17949	39140
17	Cost 'C' (15+16)	402591	1703710	631267	179574	323227

A 2.16 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Winter) during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Hired human labour		83789	60714	27817	65726
2	Animal labour					
3	Machine labour			1912	6859	969
4	Seed / seedlings	5486	10693	1861	6416	5820
5	Farmyard manure and chemical fertilizers	17408	17652	31190	43303	23018
6	Plant protection	4372	5947	730		2533
7	Land tax and irrigation cess	77	494	105	575	273
8	Repair and maintenance charges of implements, machinery and building	219	5415		10548	2182
9	Interest on working capital	2727	11808	9641	8439	9807
10	Other expenses	19826	19744	10255	9835	36012
11	Total cost 'A' (1-10)	50113	155542	116408	113792	146339
12	Interest on fixed capital	1516	6275	378	73575	6387
13	Cost 'B1' (11+12)	51630	161817	116786	187367	152725
14	Interest on land value	161468	123793	340046	206395	241013
15	Cost 'B' (13+14)	213098	285610	456831	393762	393739
16	Imputed value of household labour	55149	121556	42634	154004	78380
17	Cost 'C' (15+16)	268247	407166	499466	547766	472119

A 2.17 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2018-19

Sl No	Components	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam
1	Hired human labour	87070	114696	44990	68123	99219
2	Animal labour					
3	Machine labour				147	
4	Seed / seedlings	3534	6913	6324	2914	4403
5	Farmyard manure and chemical fertilizers	50051	40850	9937	35688	22811
6	Plant protection	2913	777	950	2342	2606
7	Land tax and irrigation cess	5	357	22	125	508
8	Repair and maintenance charges of implements, machinery and building	276	3077	1689		1055
9	Interest on working capital	14357	16324	6220	10922	12904
10	Other expenses	63656	37094	49425	28479	24876
11	Total cost 'A' (1-10)	221862	220088	119558	148740	168382
12	Interest on fixed capital	1091	1636	1322	1462	1525
13	Cost 'B1' (11+12)	222953	221724	120879	150202	169908
14	Interest on land value	407826	117687	117856	108746	676044
15	Cost 'B' (13+14)	630779	339412	238735	258948	845952
16	Imputed value of household labour	152324	83470	68910	65368	104531
17	Cost 'C' (15+16)	783103	422882	307646	324316	950483

A2.17 District wise Cost of Cultivation per hectare (in Rs) of Cowpea (Summer)during 2018-19

SI No	Components	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram
1	Hired human labour	32913	37650	36489		40008
2	Animal labour					
3	Machine labour		1764	3561		1231
4	Seed / seedlings	5774	9457	3452		5562
5	Farmyard manure and chemical fertilizers	12179	40166	14313		15312
6	Plant protection	1433	3440	3719		2105
7	Land tax and irrigation cess		71	228		49
8	Repair and maintenance charges of implements, machinery and building	2892	670	78		812
9	Interest on working capital	5230	9248	6153		6422
10	Other expenses	23064	23377	37521		24773
11	Total cost 'A' (1-10)	83484	125842	105515		96275
12	Interest on fixed capital	7382	1488	11097		8143
13	Cost 'B1' (11+12)	90865	127330	116611		104418
14	Interest on land value	269194	830449	358785		242371
15	Cost 'B' (13+14)	360059	957779	475397		346789
16	Imputed value of household labour	59373	35903	84694		66704
17	Cost 'C' (15+16)	419432	993683	560091		413493

A 2.17 District wise Cost of Cultivation per hectare (in Rs.) of Cowpea (Summer) during 2018-19

Sl No	Components	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Hired human labour	852	63823	49358	47266	66830
2	Animal labour					
3	Machine labour			1522	3047	707
4	Seed / seedlings	6243	11981	2811	6270	4982
5	Farmyard manure and chemical fertilizers	23514	21009	20352	37649	27614
6	Plant protection	3237	3026			2030
7	Land tax and irrigation cess	128	494	78	915	222
8	Repair and maintenance charges of implements, machinery and building		7745		7454	1477
9	Interest on working capital	3385	9984	7404	9423	10216
10	Other expenses	13730	18596	36008	7150	35322
11	Total cost 'A' (1-10)	51088	136658	117535	119174	149400
12	Interest on fixed capital	1508	7199	3783	46151	5259
13	Cost 'B1' (11+12)	52596	143857	121317	165326	154659
14	Interest on land value	182439	67661	155070	176753	297533
15	Cost 'B' (13+14)	235036	211518	276388	342079	452192
16	Imputed value of household labour	78802	151799	36278	105772	91436
17	Cost 'C' (15+16)	313837	363317	312666	447851	543628

**A 2.18 District wise Cost of Cultivation per hectare (in Rs.) of Cardamom during
2018-19**

Sl No	Components	Idukki	Palakkad	Wayanad	State
1	Hired human labour	77060	43625	68227	64787
02	Animal labour				
3	Machine labour		141		29
4	Seed / seedlings				
5	Farmyard manure and chemical fertilizers	41707	40772	30140	34510
6	Plant protection	54444	1353	19068	22028
7	Land tax and irrigation cess	24	599	480	419
8	Repair and maintenance charges of implements, machinery and building	322		11296	6900
9	Interest on working capital	17321	8589	11744	12135
10	Other expenses	17810	10045	20291	17704
11	Total cost 'A' (1-10)	208689	105124	161245	158512
12	Interest on fixed capital	2503	6526	22881	15672
13	Cost 'B1' (11+12)	211192	111650	184126	174184
14	Interest on land value	145080	20031	114512	100672
15	Cost 'B' (13+14)	356272	131680	298638	274857
16	Imputed value of household labour	44236	19866	145207	100329
17	Cost 'C' (15+16)	400508	151546	443845	375186

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	37.3	43.22	80.52
2	Kollam	35.91	46.11	82.02
3	Pathanamthitta	42.17	44.01	86.18
4	Alappuzha	36.08	47	83.08
5	Kottayam	29	27.33	56.33
6	Idukki	24.23	33.04	57.27
7	Eranakulam	40.35	30.09	70.44
8	Thrissur	48.47	26.08	74.55
9	Palakkad	17.32	67.15	84.47
10	Malappuram	33.14	43.66	76.8
11	Kozhikkode	23.74	50.89	74.63
12	Wayanad			0
13	Kannur	13.1	56.85	69.95
14	Kasaragod	18.02	61.69	79.71
	State	28.7	49.1	77.8

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	40.64	35.52	76.16
2	Kollam	33.99	51.3	85.29
3	Pathanamthitta	41.01	44.32	85.33
4	Alappuzha	32.27	45.99	78.26
5	Kottayam	37	36.33	73.33
6	Idukki	29.92	25.03	54.95
7	Eranakulam	43.37	35.94	79.31
8	Thrissur	57.03	23.34	80.37
9	Palakkad	16.21	70.5	86.71
10	Malappuram	53.6	24.3	77.9
11	Kozhikkode	22.99	51.94	74.93
12	Wayanad	34.9	51.01	85.91
13	Kannur	15.49	69.12	84.61
14	Kasaragod	13.42	46.85	60.27
	State	37.06	42.97	80.03

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	39.21	37.73	76.94
2	Kollam	27.3	64.06	91.36
3	Pathanamthitta	42.79	46.14	88.93
4	Alappuzha	35.35	43.08	78.43
5	Kottayam	45.21	34.55	79.76
6	Idukki	68.05	27.59	95.64
7	Eranakulam	31.31	27.37	58.68
8	Thrissur	54.66	20.33	74.99
9	Palakkad	11.04	67.63	78.67
10	Malappuram	54.01	24.97	78.98
11	Kozhikkode	20.11	54.2	74.31
12	Wayanad	26.96	38.11	65.07
13	Kannur	8.27	76.79	85.06
14	Kasaragod	10.94	57.86	68.8
	State	38.56	42.94	81.5

A3.4 Percentage of Hired human labour hours to total human labour hours under Coconut				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	71	0.92	71.92
2	Kollam	81.42	0	81.42
3	Pathanamthitta	82.28	1.2	83.48
4	Alappuzha	85.53	1.34	86.87
5	Kottayam	75.8	4.01	79.81
6	Idukki	46.3	0	46.3
7	Eranakulam	79.93	0	79.93
8	Thrissur	63.48	9.86	73.34
9	Palakkad	60.76	17.48	78.24
10	Malappuram	68.9	9.83	78.73
11	Kozhikkode	68.85	9.46	78.31
12	Wayanad	64.21	8.26	72.47
13	Kannur	58.96	23.59	82.55
14	Kasaragod	42.21	20.8	63.01
	State	67.42	9.12	76.54

A 3.5 Percentage of Hired human labour hours to total human labour hours under Arecanut				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	73.08	0.77	73.85
2	Kollam	82.41	0	82.41
3	Pathanamthitta	74.86	1.63	76.49
4	Alappuzha	33.59	1.66	35.25
5	Kottayam	47.6	0.23	47.83
6	Idukki	22.54	0	22.54
7	Eranakulam	75.24	1.83	77.07
8	Thrissur	51.83	17.07	68.9
9	Palakkad	56.28	22.28	78.56
10	Malappuram	56.54	17.42	73.96
11	Kozhikkode	54.96	14.82	69.78
12	Wayanad	43.63	38.41	82.04
13	Kannur	45.34	13.05	58.39
14	Kasaragod	43.87	19.89	63.76
	State	54.08	16.01	70.1

A 3.6 Percentage of Hired human labour hours to total human labour hours under Tapioca				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	72.53	0	72.53
2	Kollam	73.01	4.87	77.88
3	Pathanamthitta	62.81	2.02	64.83
4	Alappuzha	38.48	3.03	41.51
5	Kottayam	67.34	1.57	68.91
6	Idukki	40.2	10.43	50.63
7	Eranakulam	70.46	1.71	72.17
8	Thrissur	64.12	9.79	73.91
9	Palakkad	34.94	30.05	64.99
10	Malappuram	58.02	10.87	68.89
11	Kozhikkode	58.04	4.2	62.24
12	Wayanad	52.19	0	52.19
13	Kannur	37.6	18.58	56.18
14	Kasaragod	35.19	22.05	57.24
	State	59.31	7.41	66.72

A 3.7 Percentage of Hired human labour hours to total human labour hours under Banana				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	68.37	0	68.37
2	Kollam	78.42	0	78.42
3	Pathanamthitta	68.43	0.34	68.77
4	Alappuzha	50.59	0	50.59
5	Kottayam	63.81	1.53	65.34
6	Idukki	55.86	3.07	58.93
7	Eranakulam	76.95	0.92	77.87
8	Thrissur	55.36	10.76	66.12
9	Palakkad	43.31	36.77	80.08
10	Malappuram	72.32	0.72	73.04
11	Kozhikkode	57.57	0.91	58.48
12	Wayanad	59.34	0	59.34
13	Kannur	54.62	27.44	82.06
14	Kasaragod	15.02	11.12	26.14
	State	61.35	7.1	68.44
A 3.8 Percentage of Hired human labour hours to total human labour hours under Pepper				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	67.06	0.79	67.85
2	Kollam	71.15	0	71.15
3	Pathanamthitta	70.58	4	74.58
4	Alappuzha	43.46	0.65	44.11
5	Kottayam	65.02	0	65.02
6	Idukki	38.78	4.93	43.71
7	Eranakulam	66.36	0.88	67.24
8	Thrissur	44.47	20.3	64.77
9	Palakkad	41.77	25.18	66.95
10	Malappuram	54.24	10.86	65.1
11	Kozhikkode	36.08	9.4	45.48
12	Wayanad	58.64	9.04	67.68
13	Kannur	47.44	17.23	64.67
14	Kasaragod	25.11	11.91	37.02
	State	52.75	9.74	62.49

A 3.9 Percentage of Hired human labour hours to total human labour hours under Ginger				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	47.62	0	47.62
2	Kollam	50.51	0	50.51
3	Pathanamthitta	63.93	8.27	72.2
4	Alappuzha	54.07	15.76	69.83
5	Kottayam	21.43	0.63	22.06
6	Idukki	38.11	8.74	46.85
7	Eranakulam	16.93	0	16.93
8	Thrissur	46.48	19.63	66.11
9	Palakkad	34.49	56.46	90.95
10	Malappuram	51.7	17.66	69.36
11	Kozhikkode	34.22	19.06	53.28
12	Wayanad	38.87	24.79	63.66
13	Kannur	38.48	26.09	64.57
14	Kasaragod	15.14	46.55	61.69
	State	37.88	32.49	70.36

A 3.10 Percentage of Hired human labour hours to total human labour hours under Turmeric				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	54.29	0	54.29
2	Kollam	40.8	0	40.8
3	Pathanamthitta	56.91	9.81	66.72
4	Alappuzha	58.27	2.8	61.07
5	Kottayam	38.64	0.32	38.96
6	Idukki	26.37	2.04	28.41
7	Eranakulam	14.53	10.05	24.58
8	Thrissur	38.58	22.76	61.34
9	Palakkad	31.2	48.7	79.9
10	Malappuram	22.81	12.62	35.43
11	Kozhikkode	22.96	9.58	32.54
12	Wayanad	9.82	9.82	19.64
13	Kannur	35.7	20.18	55.88
14	Kasaragod	16.45	24.49	40.94
	State	33.74	17.12	50.86

A 3.11 Percentage of Hired human labour hours to total human labour hours under Pineapple				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	83.57	0	83.57
2	Kollam	89.47	0	89.47
3	Pathanamthitta	51.6	8.01	59.61
4	Alappuzha	100	0	100
5	Kottayam	75.27	4.86	80.13
6	Idukki	44.75	26.48	71.23
7	Eranakulam	71.92	10.73	82.65
8	Thrissur	81.22	14.23	95.45
9	Palakkad	74.85	20.69	95.54
10	Malappuram	73.47	25	98.47
11	Kozhikkode	51.93	16.27	68.2
12	Wayanad			0
13	Kannur	63.6	28.19	91.79
14	Kasaragod	34.47	47.09	81.56
	State	74.71	15.12	89.83

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	42.91	0	42.91
2	Kollam	50.04	9.21	59.25
3	Pathanamthitta	31.47	0	31.47
4	Alappuzha	53.85	0	53.85
5	Kottayam	28.93	14.32	43.25
6	Idukki			0
7	Eranakulam	42.3	10.47	52.77
8	Thrissur	22.34	23.48	45.82
9	Palakkad	27.6	29.55	57.15
10	Malappuram	54.76	0	54.76
11	Kozhikkode			0
12	Wayanad			0
13	Kannur	11.63	5.4	17.03
14	Kasaragod			0
	State	34.7	12.4	47.1

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	44.95	0	44.95
2	Kollam	52.57	5.98	58.55
3	Pathanamthitta	39.56	4.38	43.94
4	Alappuzha	25.29	6.17	31.46
5	Kottayam	23.42	2.19	25.61
6	Idukki	38.26	5.89	44.15
7	Eranakulam	36.08	6.42	42.5
8	Thrissur	22.72	9.87	32.59
9	Palakkad	22.82	46.04	68.86
10	Malappuram	36.23	17.9	54.13
11	Kozhikkode	21.75	17.96	39.71
12	Wayanad	14.04	11.4	25.44
13	Kannur	28.9	30.37	59.27
14	Kasaragod	19.69	14.85	34.54
	State	32.78	12.57	45.35

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	26.9	0	26.9
2	Kollam	49.01	1.96	50.97
3	Pathanamthitta	34.45	1.08	35.53
4	Alappuzha	41.6	2.51	44.11
5	Kottayam	36.3	0	36.3
6	Idukki			0
7	Eranakulam	16.54	4.67	21.21
8	Thrissur	18.6	7.29	25.89
9	Palakkad	22.31	24.79	47.1
10	Malappuram	25.05	0.93	25.98
11	Kozhikkode	4.86	0.35	5.21
12	Wayanad	17.78	4.44	22.22
13	Kannur	34.62	27.42	62.04
14	Kasaragod	3.4	13.86	17.26
	State	28.88	4.29	33.17

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	22.98	0	22.98
2	Kollam	53.08	4.8	57.88
3	Pathanamthitta	41.71	0	41.71
4	Alappuzha	25	2.94	27.94
5	Kottayam	25.99	20.61	46.6
6	Idukki			0
7	Eranakulam	29.01	16.98	45.99
8	Thrissur	22.08	14.49	36.57
9	Palakkad	18.36	39.54	57.9
10	Malappuram	17.84	7.04	24.88
11	Kozhikkode			0
12	Wayanad			0
13	Kannur	4.52	46.93	51.45
14	Kasaragod			0
	State	25.68	17.34	43.02

A3.16 Percentage of Hired human labour hours to total human labour hours under Cowpea (Winter)				
Sl No	District	Male	Female	Total
1	Thiruvananthapuram	58.81	0	58.81
2	Kollam	50.82	3.36	54.18
3	Pathanamthitta	38.73	5.38	44.11
4	Alappuzha	17.6	0	17.6
5	Kottayam	37.21	9.35	46.56
6	Idukki	30.07	13.4	43.47
7	Eranakulam	26.19	0	26.19
8	Thrissur	28.52	9.96	38.48
9	Palakkad	12.75	41.74	54.49
10	Malappuram	39.8	10.13	49.93
11	Kozhikkode	0	0	0
12	Wayanad	22.04	19.58	41.62
13	Kannur	28.85	33.08	61.93
14	Kasaragod	8.09	9.43	17.52
	State	34.4	11.45	45.85

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	37.05	0	37.05
2	Kollam	57.81	0.16	57.97
3	Pathanamthitta	38.28	0.76	39.04
4	Alappuzha	43.76	6.36	50.12
5	Kottayam	34.6	12.57	47.17
6	Idukki	25.82	9.18	35
7	Eranakulam	43.65	0	43.65
8	Thrissur	23	6.44	29.44
9	Palakkad			0
10	Malappuram	32.91	4.29	37.2
11	Kozhikkode	0.96	0	0.96
12	Wayanad	22.46	5.76	28.22
13	Kannur	22.74	38.7	61.44
14	Kasaragod	19.85	10.88	30.73
	State	34.31	7.12	41.43

A 3.18 Percentage of Hired human labour hours to total human labour hours under Cardamom				
Sl No	District	Male	Female	Total
1	Idukki	20.28	17.12	37.4
2	Palakkad	20.43	52.16	72.59
3	Wayanad	9.21	26.51	35.72
	State	12.42	27.19	39.61

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	91396	29251	120648
2	Kollam	75096	48877	123974
3	Pathanamthitta	54406	7764	62169
4	Alappuzha	35491	1532	37024
5	Kottayam	61849	1417	63267
6	Idukki	71440	9114	80555
7	Eranakulam	50133	5730	55863
8	Thrissur	52250	754	53003
9	Palakkad	71127	2434	73562
10	Malappuram	59665	9303	68968
11	Kozhikkode	52103	15905	68007
12	Wayanad			
13	Kannur	67917	24062	91979
14	Kasaragod	65261	32617	97878
	State	59732	10319	70051

A4.2 District wise Value of product and by-product per hectare (in Rs.) of Winter Paddy				
SI No	District	Product	By Product	Total
1	Thiruvananthapuram	89386	33552	122939
2	Kollam	86240	25812	112052
3	Pathanamthitta	116105	14063	130168
4	Alappuzha	133244	2903	136147
5	Kottayam	148209	1799	150007
6	Idukki	64502	33611	98113
7	Eranakulam	92316	20366	112682
8	Thrissur	119030	9893	128922
9	Palakkad	110808	14665	125473
10	Malappuram	90002	21104	111105
11	Kozhikkode	60731	19995	80727
12	Wayanad	80737	22159	102895
13	Kannur	70938	34794	105733
14	Kasaragod	67182	33861	101043
	State	109374	14709	124083

A4.3 District wise Value of product and by-product per hectare (in Rs.) of Summer Paddy				
SI No	District	Product	By Product	Total
1	Thiruvananthapuram	106467	33132	139600
2	Kollam	79191	37631	116822
3	Pathanamthitta	117114	10761	127875
4	Alappuzha	95907	1770	97677
5	Kottayam	147151	513	147664
6	Idukki	24537	12779	37316
7	Eranakulam	90345	10382	100727
8	Thrissur	152682	6537	159219
9	Palakkad	121844	16857	138700
10	Malappuram	112843	13293	126136
11	Kozhikkode	79237	16684	95921
12	Wayanad	73591	20795	94386
13	Kannur	130362	39006	169367
14	Kasaragod	78331	32586	110917
	State	115989	9079	125068

A4.4 District wise Value of product and by-product per hectare (in Rs.) of Coconut				
SI No	District	Product	By Product	Total
1	Thiruvananthapuram	227105	9710	236816
2	Kollam	112895	214	113109
3	Pathanamthitta	97695	834	98529
4	Alappuzha	124788	201	124989
5	Kottayam	140505	130	140635
6	Idukki	184890		184889
7	Eranakulam	186345	1441	187786
8	Thrissur	106447	1532	107979
9	Palakkad	147521	1433	148954
10	Malappuram	138223	5583	143806
11	Kozhikkode	84131	2147	86278
12	Wayanad	77097		77097
13	Kannur	178256	4475	182731
14	Kasaragod	124686	2391	127077
	State	135048	2422	137470

A4.5 District wise Value of product and by-product per hectare (in Rs.) of Arecanut, Tapioca and Banana.				
SI No	District	Arecanut	Tapioca	Banana
1	Thiruvananthapuram	143654	351197	687156
2	Kollam	86890	240169	471867
3	Pathanamthitta	95451	356515	417708
4	Alappuzha	87490	307032	440961
5	Kottayam	174649	381715	555521
6	Idukki	95778	329024	409387
7	Eranakulam	355006	412240	520002
8	Thrissur	260378	237192	557261
9	Palakkad	122144	347044	428905
10	Malappuram	154146	271078	417059
11	Kozhikkode	218131	656793	694075
12	Wayanad	127101	215167	300223
13	Kannur	237440	449332	874219
14	Kasaragod	587628	245344	564739
	State	245169	330144	526421

A4.6 District wise Value of product and by-product per hectare (in Rs.) of Pepper, Ginger and Turmeric.				
SI No	District	Pepper	Ginger	Turmeric
1	Thiruvananthapuram	152896	960678	510492
2	Kollam	290682	460709	186913
3	Pathanamthitta	498223	309991	191770
4	Alappuzha	230828	399366	367539
5	Kottayam	226023	438622	315848
6	Idukki	119572	240385	190470
7	Eranakulam	225222	468503	320975
8	Thrissur	251609	342431	224340
9	Palakkad	160463	1068818	1591607
10	Malappuram	97097	331860	200872
11	Kozhikkode	328803	490005	190455
12	Wayanad	123632	525006	255460
13	Kannur	273066	356802	303123
14	Kasaragod	221210	591505	425140
	State	204794	629930	464590

A4.7 District wise Value of product and by-product per hectare of Pineapple		
Sl No	District	Pineapple
1	Thiruvananthapuram	472259
2	Kollam	280574
3	Pathanamthitta	174663
4	Alappuzha	182163
5	Kottayam	460098
6	Idukki	343842
7	Eranakulam	448960
8	Thrissur	428444
9	Palakkad	315051
10	Malappuram	256963
11	Kozhikkode	277289
12	Wayanad	
13	Kannur	544737
14	Kasaragod	1557627
	State	441289

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	626137	592568	589677
2	Kollam	439441	421480	438990
3	Pathanamthitta	113318	289104	321817
4	Alappuzha	393224	343886	388257
5	Kottayam	333590	288378	342619
6	Idukki		224259	
7	Eranakulam	140690	264056	264293
8	Thrissur	205068	267567	301428
9	Palakkad	277148	241120	153387
10	Malappuram	173757	202649	179825
11	Kozhikkode		336025	250734
12	Wayanad		448107	403104
13	Kannur	183415	194628	192803
14	Kasaragod		263671	341283
	State	267211	295886	355339

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	281437	472455	464255
2	Kollam	390877	419755	411868
3	Pathanamthitta	286893	243506	167362
4	Alappuzha	401779	374111	322473
5	Kottayam	387764	229086	245224
6	Idukki	239983	215103	0
7	Eranakulam	299096	245320	243832
8	Thrissur	261815	255906	195898
9	Palakkad	285465	299004	275293
10	Malappuram	179431	138707	205106
11	Kozhikkode	150670	158004	146939
12	Wayanad	305169	232279	298792
13	Kannur	231130	204154	169849
14	Kasaragod	213507	343391	229006
	State	300144	267466	262241

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

Sl No	District	Cardamom
1	Idukki	695240
2	Palakkad	173088
3	Wayanad	379431
	State	395872



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