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COST OF CULTIVATION
OF AGRICULTURAL CROPS

2019 Yala

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This is the 77th volume of the series "Cost of Cultivation of Agricultural Crops"seasonally published by the Socio Economics and Planning Centre of the Department of Agriculture, Peradeniya. This publication contains comprehensive information on costs and returns of major food crops cultivated in 2019 yala season which would be of paramount importance for those who involved in research and development of the food crop sector.

This publication is based on the data collected from cost of cultivation surveys conducted for 33 crops cultivated during 2019 Yala season, and the districts/area for the survey are selected considering the cultivated extent under each crop. The first chapter entails a brief introduction and the methodology adopted, the second and the third chapters respectively comprise of a summary analysis and detailed statistics of paddy. The fourth and fifth chapters include a summery followed by detailed statistics of subsidiary food crops.

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TABLE OF CONTENT

ABBREVIATIONS

AEZ	-	Agro-Ecological Zone
ASC	-	Agrarian Service Centre
BPH	-	Brown Plant Hopper
IR	-	Irrigated
LCDZ	-	Low Country Dry Zone
LCWZ	-	Low Country Wet Zone
LCIZ	-	Low Country Intermediate Zone
LL	-	Lorry Load
md	-	man days
MOP	-	Muriate of Potash
Nr	-	Not Reported
RF	-	Rain-fed
SFCs	-	Subsidiary Food Crops
TDM	-	Top Dressing Mixture
TSP	-	Triple Super Phosphate
UCIZ	-	Up Country Intermediate Zone
UCWZ	-	Up Country Wet Zone
2WT	-	Two Wheel Tractor
4WT	-	Four Wheel Tractor

CONVERSION TABLE

01 Bushel of :

Cowpea	=	28.63	kg
Green gram	=	29.50	kg
Kurakkan	=	25.00	kg
Maize	=	28.20	kg
(07 cobs)	=	01.00	kg
(01 cob)	=	150	grams
Paddy	=	20.87	kg

CHAPTER 1

METHODOLOGY

1.0 Introduction

Socio Economics and Planning Centre has initiated Cost of Cultivation studies since 1978/79 Maha, which demarcated a renowned identity for the institute. A series of studies has been undertaking for more than four decades incorporating major food crops (paddy) and subsidiary food crops (condiments, coarse grains and pulses, oil crops, root and tuber crops, and vegetables). Two publications are being published annually; for Yala and Maha seasons respectively after processing field data collected during the surveys. The data furnished in these publications include input usage, average yield, total costs of cultivation, unit costs of production, farm gate prices, and gross and net returns for each crop.

Cost of Cultivation for 2019 Yala (volume 77) is presented with a comprehensive analysis of field data collected during 2019 Yala season representing major cultivating districts/areas in Sri Lanka. Most strikingly the unit costs and total cost of cultivation of major food crops are computed based on the collected data which are frequently used in cost estimations. The data/information furnished in the publications are highly sought by policy makers, planners, researchers, academics, students as well as by the farmers that are essentially aided in guiding policy decisions, planning national food production programmes, forecasting market demand and farm budgeting.

1.1 Methodology

The methodology adopted in this study is structured as follows. A stratified random sampling method was used in three stages. In the first stage, representative districts were selected, secondly Agrarian Service Centers (ASC) within the districts were demarcated and the farmers within the ASC were selected in the third stage

1.1.1 Paddy

In estimating cost and returns for paddy, nine districts and three Mahaweli systems were selected considering the distribution of cultivated extents under different water management regimes (irrigation and rain-fed) during 2019 Yala season. The operative water management regime and respective Agro Ecological Zones of the selected districts are given in Table 1.1.

1.1.2 Subsidiary Food Crops (SFC)

As Subsidiary Food Crops (SFCs), seven Other Field Crops (OFCs), three root and tuber crops and six vegetable crops were selected for this study (Table1.2). The district having the highest reported extent of each SFC was selected.

1.2 Selection of survey sites in the districts

Survey sites were identified in the ASC covering at least 50% of the total cultivated extent.

1.3 Selection of farmers

A sample of 30 farmers were randomly selected for each crop, from the above selected Agrarian Service Centers (ASC). The number of farmers that should be included in each ASC was allocated proportionate to the cultivated extent of respective ASC.

1.4 Data collection

The survey was conducted in 14 areas by trained enumerators using a pre-tested structured questionnaire. The collected data include farmer details, cultivation cost for each management practice, the input costs and yield as well as price received of at the farm-gate

Table 1.1: Districts/ Mahaweli area selected for the survey of paddy (sample size - 30 per region)

Number	District/System	AEZ	Irrigation
1	Ampara-East	LCDZ	IR
2	Ampara-West	LCDZ	IR
3	Anuradhapura	LCDZ	IR
4	Hambantota	LCDZ	IR
5	Kurunegala	LCIZ	IR
6	Polonnaruwa	LCDZ	IR
7	Mahaweli B	LCDZ	IR
8	Mahaweli C	LCDZ	IR
9	Mahaweli H	LCDZ	IR
10	Trincomalee	LCDZ	IR
11	Gampaha	LCWZ	RF
12	Kalutara	LCWZ	RF
13	Kandy	UCWZ	RF
14	Kurunegala	LCIZ	RF

Table 1.2: Districts selected for cost of cultivation survey of SFCs, root and tuber crops and vegetables (sample size - 30 per district)

Number	Crop	District	AEZ	Irrigation
1.1.1 Coarse grains				
	Maize	Badulla	LCDZ	IR
1.1.2 Pulses				
	Cowpea	Ampara	LCDZ	RF
1.1.3 Condiments				
	Big onion	Matale	LCDZ	IR
	Green chilli	Anuradhapura	LCDZ	IR
	Red onion	Puttlam	LCDZ	IR
	Red onion	Trincomalee	LCDZ	IR
1.1.4 Oil crops				
	Gingelly	Anuradhapura	LCDZ	RF
	Soya bean	System H	LCDZ	IR
1.1.5 Root & tubers				
	Manioc	Gampaha	LCWZ	RF
	Potato	Badulla	UCIZ	IR
	Potato	N'Eliya	LCWZ	IR
	Sweet Potato	Matale	LCDZ	IR
1.1.6 Low country vegetables				
	Bitter gourd	Hambantota	LCDZ	IR
	Brinjal	Hambantota	LCDZ	IR
1.1.7 Up country vegetables				
	Cabbage	N'Eliya	UCWZ	IR
	Carrot	N'Eliya	UCWZ	IR
	Pole bean	Badulla	UCIZ	IR
	Tomato	Badulla	UCIZ	IR
	Tomato	Kandy	UCWZ	IR

1.5 Data Analysis

After tabulating primary data and preparing final tables, all costs and returns for each crop were computed for an acre of the cultivated extent. The average costs were calculated for main cultural/ agronomic practices and the production process was summerized by including the most prominent cultural practices. Cost items were divided into three main components; labour, power,and materials. The labour cost consist of family labour and hired labour and further divided in to male and female labour components. The power cost includes cost of draught power for land preparation, irrigation, while the material cost includes seed, fertilizer, pesticide and other materials. Costs and returns were calculated in two scenarios;

i. Including cost of farmer own inputs

ii. Excluding cost of farmer own inputs

Guidelines given below were followed in the data analysis.

- All costs, returns and yields were reported on per acre basis.
- Fixed costs within individual farms were not accounted; however, services of fixed capital were accounted
- Exchange labour was treated as equivalent to family labour.Therefore, family labour included the exchange labour as well.
- The imputed wage rate for family labour was the same as of hired wage rate for respective operations. The imputed value of farmer owned inputs was priced at prevailing market rates.
- 01 woman day = 0.7 man day
  but for specific operations (planting , thinning, harvesting and weeding),
  01 women day = 01 man day
- A child working day has been converted to a man day using a conversion factor of 0.5.
- Figures were rounded to two decimal points.

In addition to the details of cost, the following analytical indicators were also computed.

(a)	Profit including imputed costs	=	Gross return - Cost of cultivation including imputed cost
(b)	Profit excluding imputed costs	=	Gross return - Cost of cultivation excluding imputed cost
(c)	Return to labour	=	(Profit excluding imputed cost + Cost of hired labour) / man days
(d)	Return to capital	=	Gross return / Cost of cultivation excluding imputed cost
(e)	Per unit cost including imputed cost	=	Cost of cultivation including imputed cost /Average yield
(f)	Per unit cost excluding imputed cost	=	Cost of cultivation excluding imputed cost/ Average yield
(g)	Break even yield (including)	=	Cost of cultivation including imputed cost imputed cost / Farm-gate price
(h)	Break even yield excluding	=	Cost of cultivation excluding imputed cost imputed cost/Farm-gate price

1.6 Computation of cost of cultivation for whole island

1.6.1 Deciding sub-sample sizes within a district

In order of viewing the overall picture of paddy cultivation in 2019 yala season, a secondery analysis was conducted to represent the whole island scenario. For computation of cost of production of paddy for the whole island, a sample list of each district was taken as the sub-sample frame for the particular district. The following formula was used to derive sub-sample size to be drawn from each district.

$$\text{Sub - sample size in } j^{th} \text{ district} = N_m \times \frac{\text{Harvested extent of } j^{th} \text{ district}}{\text{Harvested extent of district with maximum harvested extent}}$$

where, N_m = Total sample size of j^{th} district

The aggregate sample of all the district was 300 sampling units, since 10 case studies were conducted under irrigated condition, of this sub sample size for each district was determined from the equation. Polonnaruwa reported the highest extent of paddy 61,429 ha under major irrigation. Therefore, the sub sample size for Polonnaruwa was decided as 30. The sub sample size drawn for each districtis given in Table 1.3.

The survey was conducted in four rain-fed areas. The reported maximum area harvested in rain-fed water regime was in Kurunegala (8,763 ha). Accordingly, the sub-sample size for that district was fixed as 30, and the sub-sample sizes for the other three districts (Kalutara, Gampaha and Kandy) were decided substituting harvested extents of each district.

After deciding the sub sample size in each district/system, the initial district sample of 30 was used as the sampling frame and the number of farmers selected for sub sample/system in each district was drawn by random sampling without replacement.

1.6.2 Sub-sample selection bias

The cost of cultivation survey was reckoned to represent modes of practices rather than average of the practices. In selection of districts for the survey, districts were arranged in descending order of the harvested extents, and the districts that represent at least the top 75% of the national harvested extent of irrigated paddy and the top 30% of the national harvested extent of rain-fed paddy were selected. In selection of ASCs within a district, the same procedure was followed to select the ASCs with maximum extents. The sample size for a district forpaddy farming was fixed as 30. Then the sub sample size within an ASC was decided based on the gross harvested extent within the ASC as a ratio of the gross harvested extent within all ASCs selected for the survey. Thereafter, the sample units within each ASC in a district are randomly selected.

The selection of areas with relatively greater harvested extents resulted an increased probability of getting selected for mode of practices over mean of practices.

Table 1.3: Sub sample size distribution of irrigated and rain-fed paddy

District/ region	Extent harvested		Sub sample size	
	for irrigated paddy during 2019 Yala (ha)	for rain-fed paddy during 2019 Yala (ha)	for irrigated whole island sample	for rain-fed whole island sample
Ampara-East	30415	Nr	15	-
Ampara-West	17148	Nr	8	-
(Ampara district)	(47563)	Nr	(23)	-
Polonnaruwa	61429	Nr	30	-
Anuradhapura	32073	Nr	16	-
Hambantota	31503	Nr	15	-
Mahaweli Systems				
System B	19547	Nr	10	-
System C	21848	Nr	11	-
System H	2587	Nr	1	-
Trincomalee	18099	Nr	9	-
Kurunegala	22001	8763	11	30
Kalutara	Nr	3882	-	13
Gampaha	Nr	1949	-	7
Kandy	Nr	705	-	2
Total	256,650	15,299	126	52

CHAPTER 2

PADDY ANALYSIS - SUMMERY

2.0 Comparison of the Cost of Cultivation of Paddy

The chapter two presents a detailed analysis of the cost and returns of paddy cultivated in respective districts/ Mahaweli systems during 2019 Yala season and the latter section of the chapter includes the cost structure of paddy at all island scenario. All the computations were reported for an acre of paddy land area unless otherwise specified. The breakdown of the cost and returns under different management practices and the related information are given in chapter three.

2.1 Cost of cultivation

Ten irrigated regions and four rain-fed districts were surveyed for analyzing the cost of cultivation of paddy in Sri Lanka in 2019 Yala season. The total cost of paddy cultivation including farmer owned input per acre basis and the percent share of cash cost which excludes farmer owned input are given in Figure 2.1 and Table 2.5 respectively. The lowest total cost per acre under irrigated condition was reported as Rs. 43,811 in Ampara-East while the highest cost Rs. 61,208 was reported in Hambantota. The per acre total cost under rain-fed condition ranged from Rs. 47,323 in Gampaha to Rs.63,185 in Kandy. The percentage share of cash cost in total cost was greater than 60% in all the surveyed districts except in Gampaha and Kandy.

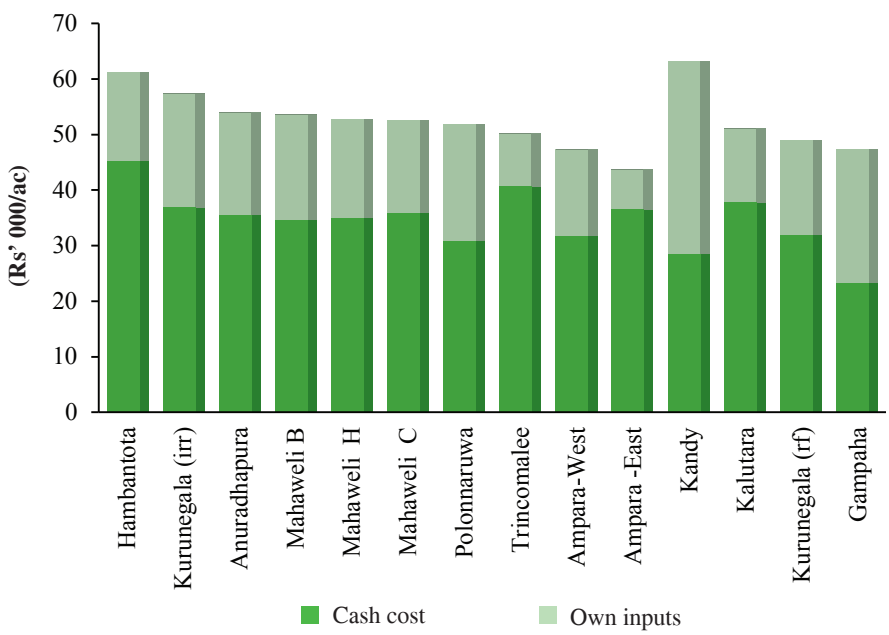


Figure 2.1 Cost of cultivation of paddy

2.2 Cost structure

The total cost of paddy is divided into three main cost components as Labour, Material and Power (Table 2.6 and Figure 2.2).The labour cost occupies 50% of the total cost on par with the escalating daily wage rates and the labour shift from paddy cultivation. The percent share of labour cost in total cost ranged from 41% (Rs. 20,703) in Trincomalee to 53% (Rs. 30,498) in Kurunagala under irrigated water regime. In rain-fed paddies the labour cost share varied from 45% (Rs. 21,307) in Gampaha to 72% (Rs.45,483) for Kandy. However, reduced percentage of labour cost (41% in Trincomalee and 44% in Ampara-East) in irrigated condition is due to the use of farm machinery like combine harvesters. The decline in labour cost has been put back by power cost, keeping the overall cost at a comparable level.

In case of power cost, the percent share of power cost in total cost at irrigated water regime was ranged from 30%(Rs.13,168) in Ampara-East to 39% (Rs.20, 494) in Polonnaruwa and Mahaweli H. In rain-fed areas, the power cost share varied from 20%(Rs.12, 819) in Kandy to 40% (Rs. 20,591) in Kalutara. On the contrary, the share of material cost varied from 13% (Rs. 7,385) in Kurunagala to 26% (Rs. 11,232) in Ampara-East at irrigated condition. However, in rain-fed condition the cost percentage share was lower and it ranged from 8 %-17% (Rs 4,883-Rs 8,164) for Kandy and Gampaha respectively.

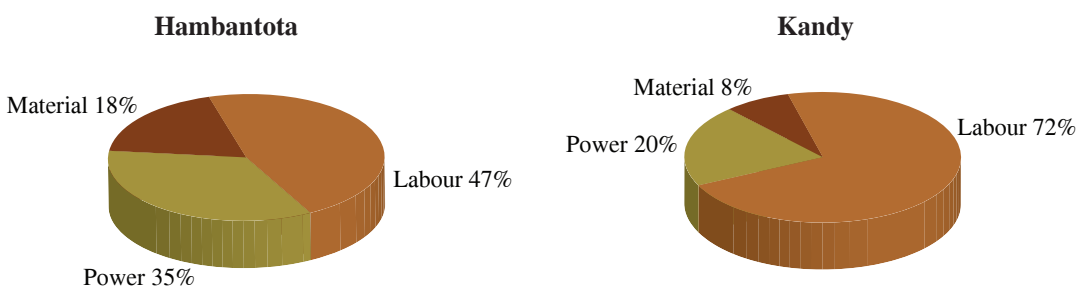


Figure 2.2 Major components of total cost of cultivation

When considering farm mechanization, land preparation (ploughing and levelling), harvesting and drawing, threshing and winnowing are the major mechanized operations in paddy cultivation. Most of the farmers interviewed in the districts have done land preparation with 4 wheel tractors except the farmers in Kandy and Kalutara districts (Table 2.1). The cost of land preparation (for three ploughing) by 4-wheel tractors ranged from Rs. 5,326 in Ampara-East to Rs. 10,212 in Hambantota. The usage of 4-wheel tractors for land preparation was 100% in Ampara-East, Ampara-West, Hambantota, Trincomalee, Mahaweli C and Gampaha.

The Table 2.1 further depicts that 100% of the farmers in Ampara East, Anuradhapura, Hambantota, Kurunagala, Trincomalee and Mahaweli C have used combine harvesters for paddy harvesting in irrigated regimes. Similarly, many of the farmers under rain-fed condition also have used combine harvesters for paddy harvesting. (100%, 84% and 77% respectively in Gampaha, Kurunegala and Kalutara). The average cost of harvesting, threshing and winnowing by combine harvester ranged from Rs. 6,385 in Ampara-East to Rs.10,112 in Mahaweli System H. The cost of manual harvesting and drawing ranged from Rs. 8,955 in Kurunegala to Rs.21,252 in Kandy. In rain-fed condition,82% of farmers in Kandy have used manual harvesting method.

2.3 Labor usage and wage rate

According to Table 2.9, the total per acre man days in paddy cultivation ranged from 13 man days in Trincomalee to 36 man days for Kandy. As a result of mechanized harvesting in all the irrigated areas, the labour usage was between 13-22 man days. At irrigated condition, Kandy district reported the highest labour use (36 man days) due to labour intensive practices such as transplanting, manual harvesting and drawing. The lowest wage rate was reported from Kandy (Rs. 1,263) while the highest in Hambantota (Rs. 1,795). The family labour accounted for over 50% of the total labour usage in all the districts except in Ampara-East and Trincomalee (36% and 46%) respectively.

Table 2.1: Cost of land preparation and harvesting

District	Tractor	% reporting	Cost (Rs/ac)	Manual Harvesting, Threshing , Winnowing		Combine Harvester	
				% reporting	Cost (Rs/ac)	% reporting	Cost (Rs/ac)
Ampara -East	4wt	100	5,326			100	6,385
Ampara-West	4wt	100	7,972	4(****)	22,500	96	7,734
Anuradhapura	4wt	90#	9,448			100	9,311
Hambantota	4wt	100	10,212			100	9,577
Kurunegala (Irr)	4wt	73(#)	9,326			100	9,110
Polonnaruwa	4wt	77(#)	9,531	3(****)	4,200	97	10,033
Mahaweli B	4wt	67#	9,488	10(****)	17,159	90	9,670
Mahaweli C	4wt	100	9,429			100	9,828
Mahaweli H	4wt	53(#)	9,878	19(****)	21,233	81	10,112
Trincomalee	4wt	100	7,394			100	8,543
Gampaha	4wt	100	8,658			100	8,441
Kalutara	4wt	60(#+)	10,539	23(+++)	14,775	77	10,052
Kandy	2wt	70(+*)	4,900	82(+++)	21,252	18	8,173
Kurunegala (Rf)	4wt	78(#)	9,064	13(+)	8,955	84	9,086
Whole island (Irr)	4wt	88#	8,509	3(****)	16,726	96(+)	8,524
Whole island(Rf)	4wt	79#	8,740	11(+++)	13,561	81(+)	8,320

* Buffaloes
\+ manually
\# 2wt
\# # 4wt
++ 2w thresher
**** 4w thresher
** Combine harvester
*** Reeper

2.4 Fertilizer Application

Almost all the paddy farmers have used straight fertilizer in cultivation. The ratio of TSP, Urea and MOP used as basal dressing varied for districts (Table 2.10). The total quantity of fertilizer used as a basal dressing under irrigated condition is 20 kg/ac (minimum) in Hambantota and 64 kg/ac (maximum) in Polonnaruwa. In rain-fed condition the total fertilizer applied is 20 kg/ac each in Gampaha, Kalutara and Kurunegala while 48 kg/ac in Kandy . The Urea application as a top dressing for paddy cultivation ranged between 58 kg/ac in Polonnaruwa to 96 kg/ac in Trincomalee in irrigated condition. Similarly, in rain-fed regime the application of Urea as top dressing was varied from 27 kg/ac in Kandy district to 70 kg/ac in Kurunegala. In case of MOP, acreage application of MOP ranged from 17 kg/ac in Mahaweli C to 27 kg/ac in Polonnaruwa at irrigated paddies. In rain-fed condition, the use of MOP varied from 19 kg/ac in Kurunegala to 39 kg/ac each in Gampaha and Kalutara. The Table 2.10 further illustrates that, the share of fertilizer cost in material cost under irrigation ranged from 12% in Hambantota to 21% in Trincomalee. Under rain-fed condition the fertilizer cost share was reported as 13% in Gampaha to 22% in Kandy.

2.5 Varieties, yield, farm-gate price and returns

The distribution of rice varieties cultivated during the season is detailed in Table 2.2 Among the cultivated varieties, At 362 was the most popular variety in Hambantota (100%) and Ampara-East (75%). Most of the farmers in Mahaweli System B (85%), Trincomalee (76%)and Mahaweli System C (70%) have cultivated Bg 360. The most popular variety in System H was Bg 352 (55%). At rain-fed water regime, 73% of the farmers in Kandy cultivated the variety Bg 359.

Paddy yield showed a significant variation mostly between irrigated and rain fed situations (Table 2.11). The lowest reported yield under irrigated condition was 2,074 kg/ac from Mahaweli H, while the highest yield reported was 2,470 kg/ac in Polonnaruwa. In rain-fed condition, the yield ranged from 1162 kg/ac in Kalutara to 1,351 kg/ac in Gampaha.

The table 2.11 further depicts that the highest farm-gate price of irrigated paddy, Rs. 52.00/kg was reported in Mahaweli system B while the lowest price Rs. 40.00/kg was reported from Hambantota. The-farm gate price was ranged from Rs.37.00/kg in Gampaha to Rs.49.00 /kg in Kurunegala for rain-fed paddy.

The gross return was the highest in Mahawali System B (Rs. 115,232/ac) while it was the lowest in Ampara-West (Rs.91,182/ac). The net return per acre in both the cases of including and excluding farmer owned inputs was positive in all the districts in irrigated condition. The highest net return in both the cases; including and excluding farmer inputs, was reported as Rs.61,778/ac and Rs.82,743/ac respectively in Polonnaruwa district. In rain-fed condition, Kandy has received negative net returns in case of including farmer owned inputs (Rs.13,163/ac).

2.6 Unit cost of production

Unit cost of production of paddy and the break-even yield are presented in Table 2.12. The unit cost including imputed cost of irrigated paddy was the lowest in Ampara-East; (Rs. 19.60/kg), while it was the highest in Hambantota; (Rs. 26.54/kg). has been lower than the farm-gate price in all the irrigated districts (Figure 2.3).

In rain-fed condition, the unit cost varied from Rs. 39.61/kg in Kurunegala to Rs. 53.05/kg in Kandy.

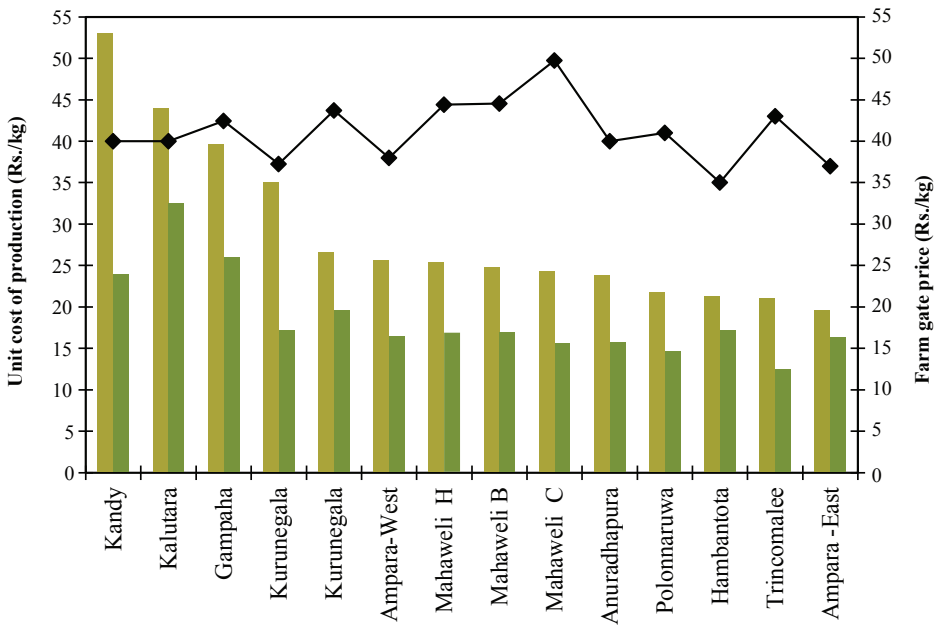


Figure 2.3 Farmgate price and unit cost of production

2.7 Break-even yield of paddy

The break-even yield including imputed cost ranged from 996 kg/ac (Ampara-East) to 1530 kg/ac (Hambantota) (Table 2.12). In case of excluding imputed cost, the break-even yield varied from 666 kg/ac in Mahawali System B to 1130 kg/ac in Hambantota. All the irrigated districts reported a lower break-even yield than the average yield in both the cases, including and excluding imputed cost.

Table 2.2: Cultivated extent by varieties (%)

Ditrict	Bg 94-1	Bg 300	Bg 352	Bg 357	Bg 358	Bg 359	Bg 360	Bg 366	Bg 374	Bg 379-2	Bg 90/2	Bw 272/6/B	Bg 250	Bw 367	At 308	Ld 356	At 362	P'samba	Ld 368	other	Total
Ampara -East	24	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	-	100
Ampara-West	23	-	-	26	-	-	29	-	-	-	12	-	-	-	-	-	-	-	-	10	100
Anuradhapura	-	33	19	9	11	7	-	-	6		-	-	-	-	-	-	-	-	-	15	100
Hambantota	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	100	-	-	-	100
Kurunegala (irr)	-	3	33	-	3	-	9	14	18	-	-	-	-	2	-	-	-	-	-	18	100
Polonnaruwa	-	-	43	-	-	-	-	51	-	-	-	-	-		-	-	-	-	-	6	100
Mahaweli B	-	4	3	-	-	-	85	3	-	-	-	-	-	-	-	-	-	-	-	5	100
Mahaweli C	-	-	7	-	-	10	70	-	-	-	-	-	-	-	-	-	-	-	-	13	100
Mahaweli H	-	16	55	-	4		-	-	-	-	-	-	-	8	-	-	3	2		12	100
Trincomalee	-	-	-	-	-	-	76	18	-	-	-	-	-	-	-	-	-	-	-	6	100
Gampaha	-	18	-	-	-	-	-	3	-	-	-	-	-	64	2	-	-	-	-	9	96
Kalutara	-	21	-	-	-	-	-	-	-	-	-	17	-	-	-	5	-	-	36	21	100
Kandy	-	-	-	-	4	73	4	-	-	9	-	-	-	-	-	-	-	-	-	10	100
Kurunegala (Rf)	-	9	6	-	-	-	14	30	9	-	-	-	-	19	-	-	-	-	-	13	100
Whole island (Irr)	8	4	14	-	-	-	22	12	-	-	-	-	-	-	-	-	27	-	-	13	100
Whole island (Rf)	-	8	4	-	-	6	8	17	4	-	-	-	4	25	-	-	-	-	10	14	100

2.8 Cost of cultivation of paddy whole Island

This section presents the cost and returns of paddy cultivation in 2019 Yala season at national level summarizing the district/region level analysis. The cost structure of paddy at whole island scenario according to cash cost and imputed cost is shown in Figure 2.4. The total cost per acre for irrigated paddy with including imputed cost was Rs. 53,089 and the excluding imputed cost was Rs. 36,096 (Table 2.5). The total cost of cultivating an acre of paddy land was Rs. 52,494 in rain-fed water regime of which Rs. 32,611 was incurred as cash cost while the balance Rs. 19,883 was imputed as the opportunity cost (Table 2.5).

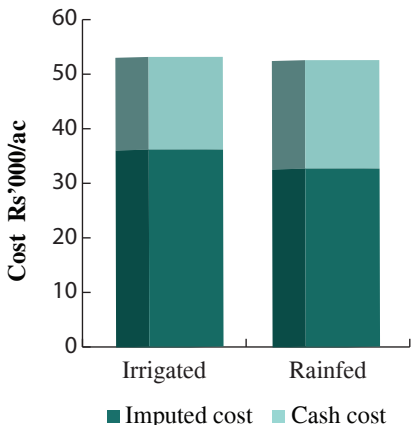


Figure 2.4 Cost of cultivation of paddy (whole island)

2.8.1 Cost structure

The breakdown of the total cost for the three major components; labour, material and power, is presented in Figure 2.5. In irrigated paddy, the share of labour cost was 46% whereas 54% was incurred on power (34%), and material (20%). For rain-fed paddy, thecost share of labour, power and material were 52%, 33% and 15% respectively. Compared to 2018/19 maha season, the labour cost share has increased by 10% in rain-fed paddy. However, the share of power cost remained the same in both the situation.

In whole island situation, the labour usage is 17 md/ac in irrigated paddy while it is 19 md/ac for rain-fed paddy. Compared to previous season (2018/19 maha), the labour use in 2019 Yala season is comparatively higher (16 md/ac and 12 md/ac respectively).

In terms of the power cost, a significant difference in the total power cost was not observed from both water regimes; Rs 18,129/ ac for irrigated and Rs 17,344/ ac for rain-fed (Table 2.6). In irrigated condition, 96% of farmers have used combine harvesters for harvesting, while the usage was 81% for whole island rain-fed paddy cultivation (Table 2.1) which ultimately contributed for increased power cost. The itemized material cost share in the two water regimes is presented in Figure 2.6.

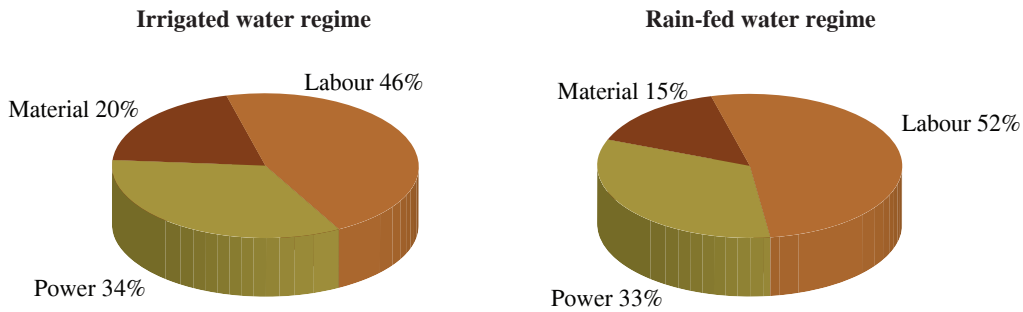


Figure 2.5 Major cost shares of total cost of cultivation (whole island)

The aggregated power cost (Rs. 19,103/ac) in irrigated water regime was higher than in rain-fed (Rs.13,557/ac) water regime (Table 2.6). The higher power costs on land preparation and threshing in irrigated water regime have finally contributed to a increased total power cost in comparison to power cost in rain-fed water regime. In irrigated condition, 97% of farmers use combine harvesters for harvesting, while it was 87% for whole island rain-fed paddy cultivation (Table 2.1). A breakdown of the material cost in the two water regimes is presented in Figure 2.6.

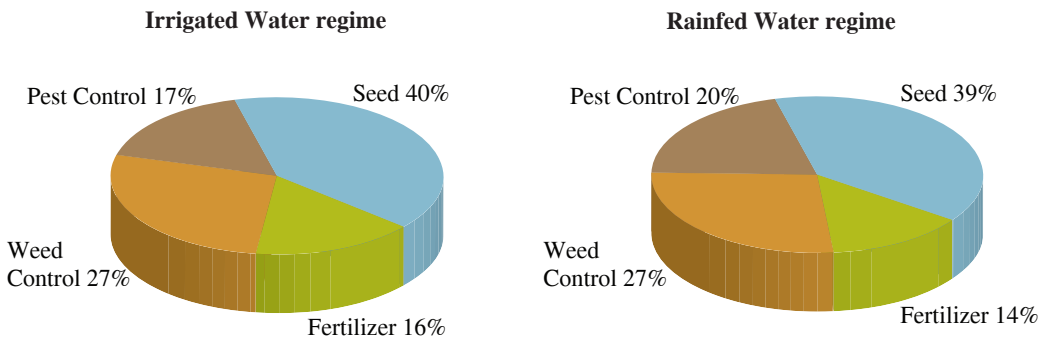


Figure 2.6 Major cost componenets of irrigated and rain-fed paddy (whole island)

2.8.2 Labour use and wage rate

According to the Table 2.9, in whole island situation, the total man days spent in irrigated paddy cultivation was 17 md/ac whereas it was 19 md/ac in rain-fed paddy. The mean wage rate was Rs.1,447/md in irrigated condition and it was Rs.1,439/md in rain-fed condition showing a similar rates irrespective of the region. The percentage use of hired labour was 41% in irrigated paddy while it was 32% in rain-fed paddy. The rain-fed paddy lands are relatively compacted in Kalutara, Kandy and Kurunegala and the holding sizes are 0.82ac ,0.98 ac and 1.26 ac respectively.

2.8.3 Fertilizer use

At whole island situation, farmers have applied larger quantities of fertilizer for irrigated paddy than rain-fed paddy. For instance, the total fertilizer use was 156 kg/ac in irrigated areas and it was 106 kg/ac in rain-fed situation (Table 2.10). The application of the basal mixture for the crop was highly varied and it was 52 kg/ac in irrigated paddy while it was 18 kg/ac in rain-fed paddy. However, a significant difference was not reported in the application of top dressing mixture in the two irrigation modes. When considering the application of top dressing fertilizer, usage of Urea was 83 kg/ac at irrigated water regime while it was 61 kg/ac in rain-fed paddy. The quantity of top dressing fertilizer applied as a whole was 104kg/ac in irrigated and 88 kg/ac rain-fed water regimes conditions.

2.8.4 Varieties, yield, farm-gate price and returns

The whole island variety distribution in the two water regimes is given in Table 2.3. The variety At 362 was the most widely adopted rice variety in irrigated areas (27% of the area) whereas Bg 360 variety has the second highest (22%) adoption rate. Bg 352 and Bg 366 varieties reported a comparable extent in selected areas in irrigated water regime. Bw 367 was the mostly adopted variety (25%) and Bg 366 was the second highest variety (17%) in rain-fed water regime.

The Table 2.4 summarized the yield, farm-gate price, gross and net returns, profit and related figures at whole island scenario. For instance, the average yield of irrigated paddy was 2,288 kg/ac whereas it was only 1081 kg/ac in rain-fed paddy. The yield in irrigated condition was more than doubled the reported yield in rain-fed areas. The farm-gate price received at both irrigated and rain-fed situations was Rs. 45.00/ kg of paddy. Since the higher yield received, the gross return, net returns including and excluding family labour, return to labour and return to capitalin irrigated paddy were significantly greater than the same for the rain-fed paddy. However, the farm-gate price received for 2019 Yala at both the water regimes (Rs 45.00/kg each) was comparatively higher than the that of 2018 Yala season (Rs 42.00/kg –irrigated , Rs 40.00/kg- rain-fed).

Table 2.3: Cultivated extent by different varieties (%)

Water regime	cultivated extent (%)												
	Bg 94-1	Bg 300	Bg 352	Bg 359	Bg 360	Bg 366	Bg 374	Bg 250	Bw 367	At 362	Ld 368	other	Total
Irrigated	08	04	14	-	22	12	-	-	-	27	-	13	100
Rain-fed	-	08	04	06	08	17	04	04	25	-	10	14	100

2.8.5 Unit cost of production and break-even yield

The unit cost of production and farm-gate prices received at whole island situation are illustrated in Figure 2.7. The unit cost of production including imputed cost was Rs. 23.20/ kg in irrigated water regime and it was Rs. 48.56/kg in rain-fed water regime (Table 2.12). Accordingly, the net-return including imputed cost was Rs. 49,871/ ac in irrigated paddy whereas it was Rs. (-3849)/ac in rain-fed-paddy (Table 2.11). The net return excluding imputed cost wasRs. 66,864/ac in irrigated areas of paddy and Rs. 16,034/ac in rain-fed water regime.

The Table 2.12 further shows that the break-even yield including (excluding) imputed cost of family labour was 1,180 kg (802 kg) per acre in irrigated water regime whereas for rain-fed water regime it was 1,167 kg (725 kg). The break-even yield including (excluding) imputed cost have similar ratios to yield in respective regimes.

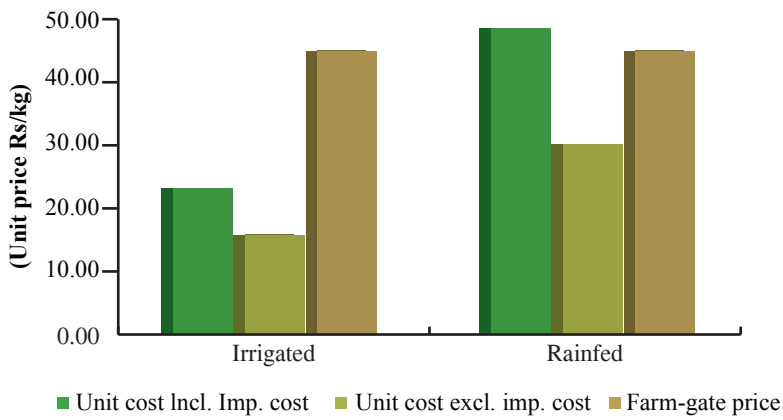


Figure 2.7 Unit cost of production (including and excluding imputed cost) and farm-gate price (whole island)

Table 2.4: Yield, farm-gate price, gross return, net return, return to a labour and return to capital

Water regime	Yield (kg/ac)	Farm-gate price (kg/ac)	Gross return (Rs/ac)	Net return (Rs/ac)		Return to	
				Including family labour	Excluding family Labour	Labour (Rs.)	Capital (Rs.)
Irrigated	2,288	45.00	102,960	49,871	66,864	4,529	2.85
Rain-fed	1,081	45.00	48,645	-3,849	16,034	1,298	1.49

Table 2.5: Comparison of cost of cultivation :Paddy

District/System	Irrigation	Holding size (ac)		Total cost*	Cash cost	Cash cost as a percent of total cost
		Mean	Mode	(Rs./ac)		
Ampara-East	IR	3.9	2.0	43,811	36,562	83
Ampara-West	IR	3.0	3.5	47,355	31,787	67
Anuradhapura	IR	1.7	2.0	53,915	35,543	66
Hambantota	IR	2.3	2.0	61,208	45,195	74
Kurunegala	IR	1.8	1.0	57,296	36,969	65
Polonnaruwa	IR	2.2	2.0	51,842	30,877	60
Mahaweli B	IR	2.9	2.5	53,563	34,648	65
Mahaweli C	IR	2.6	2.5	52,531	35,903	68
Mahaweli H	IR	1.6	1.0	52,649	35,009	66
Trincomalee	IR	2.8	2.0	50,238	40,686	81
Gampaha	RF	1.5	1.0	47,323	23,261	49
Kalutara	RF	0.8	1.0	51,132	37,759	74
Kandy	RF	0.98	0.5,1.0	63,185	28,509	45
Kurunegala	RF	1.3	1.0	48,877	31,951	65
Whole island	IR	2.6	2.0	53,089	36,096	68
Whole island	RF	1.2	1.0	52,494	32,611	62

**Including cost of farmer owned inputs*

Table 2.6: Cost of cultivation (including cost of farmer owned input) : Paddy

District/ System	Irrigation	% Cost			
		Labour	Power	Material	Total
Ampara-East	IR	19,411 (44)	13,168 (30)	11,232 (26)	43,811
Ampara-West	IR	21,552 (45)	16,540 (35)	9,263 (20)	47,355
Anuradhapura	IR	26,045 (48)	19,717 (37)	8,153 (15)	53,915
Hambantota	IR	28,713 (47)	21,182 (35)	11,313 (18)	61,208
Kurunegala	IR	30,498 (53)	19,413 (34)	7,385 (13)	57,296
Polonnaruwa	IR	23,679 (46)	20,494 (39)	7,669 (15)	51,842
Mahaweli B	IR	25,459 (47)	20,305 (38)	7,799 (15)	53,563
Mahaweli C	IR	24,764 (47)	20,081 (38)	7,686 (15)	52,531
Mahaweli H	IR	24,859 (47)	20,452 (39)	7,338 (14)	52,649
Trincomalee	IR	20,703 (41)	17,804 (36)	11,731 (23)	50,238
Gampaha	RF	21,307 (45)	17,852 (38)	8,164 (17)	47,323
Kalutara	RF	23,497 (46)	20,591 (40)	7,044 (14)	51,132
Kandy	RF	45,483 (72)	12,819 (20)	4,883 (08)	63,185
Kurunegala	RF	22,225 (45)	18,765 (38)	7,887 (16)	48,877
Whole island	IR	24,594 (46)	18,129 (34)	10,366 (20)	53,089
Whole island	RF	27,347 (52)	17,344 (33)	7,803 (15)	52,494

Note: Value within pernatheses donate a percentage of the total cost

Table 2.7: Cash cost of cultivation (excluding cost of farmer owned input) : Paddy

District/ System	Irrigation	Cost (Rs.ac)			
		Labour	Power	Material	Total
Ampara-East	IR	12,483 (34)	12,920 (35)	1,1159 (31)	36,562
Ampara-West	IR	7,608 (24)	15,706 (49)	8,473 (27)	31,787
Anuradhapura	IR	9,597 (27)	19,598 (55)	6,348 (18)	35,543
Hambantota	IR	14,360 (32)	21,182 (47)	9,653 (21)	45,195
Kurunegala	IR	11,088 (30)	19,251 (52)	6,630 (18)	36,969
Polonnaruwa	IR	8,358 (27)	16,275 (53)	6,244 (20)	30,877
Mahaweli B	IR	9,898 (28)	17,534 (51)	7,216 (21)	34,648
Mahaweli C	IR	9,632 (27)	18,585 (52)	7,686 (21)	35,903
Mahaweli H	IR	9,156 (26)	20,290 (58)	5,563 (16)	35,009
Trincomalee	IR	11,151 (27)	17,804 (44)	11,731 (29)	40,686
Gampaha	RF	4,260 (18)	11,926 (51)	7,075 (31)	23,261
Kalutara	RF	11,752 (31)	20,064 (53)	5,943 (16)	37,759
Kandy	RF	20,208 (71)	3,769 (13)	4,532 (16)	28,509
Kurunegala	RF	6,945 (22)	17,840 (56)	7,166 (22)	31,951
Whole island	IR	10,129 (28)	16,513 (46)	9,454 (26)	36,096
Whole island	RF	8,634 (26)	16,562 (51)	7,415 (23)	32,611

Note: Value within pernatheses donate a percentage of the total cost

Table 2.8: Cash cost as a percentage of total cost : Paddy

District/ System	Irrigation	Cost %			
		Labour	Power	Material	Total
Ampara-East	IR	64	98	99	83
Ampara-West	IR	35	95	91	67
Anuradhapura	IR	37	99	78	66
Hambantota	IR	50	100	85	74
Kurunegala	IR	36	99	90	65
Polonnaruwa	IR	35	79	81	60
Mahaweli B	IR	39	86	93	65
Mahaweli C	IR	39	93	100	68
Mahaweli H	IR	37	99	76	66
Trincomalee	IR	54	100	100	81
Gampaha	RF	20	67	87	49
Kalutara	RF	50	97	84	74
Kandy	RF	44	29	93	45
Kurunegala	RF	31	95	91	65
Whole island	IR	41	91	91	68
Whole island	RF	32	95	95	62

Table 2.9: Labour use and wage rates : Paddy

District/ System	Irrigation	Labour (md/ac)			
		Family	Hired	Total	Wage rate (Rs./ md)
Ampara-East	IR	5 (36)	9 (64)	14	1,387
Ampara-West	IR	11 (65)	6 (35)	17	1,268
Anuradhapura	IR	12 (63)	7 (37)	19	1,371
Hambantota	IR	8 (50)	8 (50)	16	1,795
Kurunegala	IR	14 (64)	8 (36)	22	1,386
Polonnaruwa	IR	11 (65)	6 (35)	17	1,393
Mahaweli B	IR	11 (61)	7 (39)	18	1,414
Mahaweli C	IR	11 (61)	7 (39)	18	1,376
Mahaweli H	IR	12 (63)	7 (37)	19	1,308
Trincomalee	IR	6 (46)	7 (54)	13	1,593
Gampaha	RF	12 (80)	3 (20)	15	1,420
Kalutara	RF	8 (50)	8 (50)	16	1,469
Kandy	RF	20 (56)	16 (44)	36	1,263
Kurunegala	RF	11 (69)	5 (31)	16	1,389
Whole island	IR	10 (59)	7 (41)	17	1,447
Whole island	RF	13 (68)	6 (32)	19	1,439

Values within parentheses denote as a percentage of the total labour

Table 2.10: Type, quantity and cost of fertilizer : Paddy

District/ System	Irrigation	Quantity (kg/ac)				Cost		
		Basal	Urea	MOP	Other	Total	(Rs./ac)	% of cost share
Ampara-East	IR	49	79	18	5	151	2,153	19
Ampara-West	IR	46	80	25		151	1,590	17
Anuradhapura	IR	40	78	21		139	1,390	17
Hambantota	IR	20	92	22		134	1,340	12
Kurunegala	IR	28	79	26		133	1,330	18
Polonnaruwa	IR	64	58	27		149	1,548	20
Mahaweli B	IR	25	93	24		142	1,420	18
Mahaweli C	IR	48	78	17		143	1,430	19
Mahaweli H	IR	34	86	25		145	1,450	20
Trincomalee	IR	22	96	21	5	139	2,414	21
Gampaha	RF	20	49	39		108	1,080	13
Kalutara	RF	20	44	39		103	1,030	15
Kandy	RF	48	27	30		105	1,050	22
Kurunegala	RF	20	70	19		109	1,090	14
Whole island	IR	52	83	21		156	1,643	16
Whole island	RF	18	61	27		106	1,060	14

Table 2.11: Yield, farm-gate price and returns: Paddy

District/ System	Irrigation	Yield (kg)	Farm-gate Price (Rs./kg)	Return (Rs./ac)			Labour (Rs.)	Capital (Rs.)
				Gross	Net			
					1	2		
Ampara-East	IR	2,235	44.00	98,340	54,529	61,778	5,304	2.69
Ampara-West	IR	2,171	42.00	91,182	43,827	59,395	3,941	2.87
Anuradhapura	IR	2,259	43.00	97,137	43,222	61,594	3,747	2.73
Hambantota	IR	2,306	40.00	92,240	31,032	47,045	3,838	2.04
Kurunegala	IR	2,241	47.50	106,448	49,152	69,479	3,662	2.88
Polonnaruwa	IR	2,470	46.00	113,620	61,778	82,743	5,359	3.68
Mahaweli B	IR	2,216	52.00	115,232	61,669	80,584	5,027	3.33
Mahaweli C	IR	2,117	46.50	98,441	45,910	62,538	4,009	2.74
Mahaweli H	IR	2,074	47.00	97,478	44,829	62,469	3,770	2.78
Trincomalee	IR	2,361	46.00	108,606	58,368	67,920	6,082	2.67
Gampaha	RF	1,351	37.00	49,987	2,664	26,726	2,066	2.15
Kalutara	RF	1,162	45.00	52,290	1,158	14,531	1,643	1.38
Kandy	RF	1,191	42.00	50,022	-13,163	21,513	1,159	1.75
Kurunegala	RF	1,234	49.00	60,466	11,589	28,515	2,216	1.89
Whole island	IR	2,288	45.00	102,960	49,871	66,864	4,529	2.85
Whole island	RF	1,081	45.00	48,645	-3,849	16,034	1,298	1.49

1. Including cost of farmer own inputs
2. Excluding cost of farmer own inputs

Table 2.12: Unit cost and break even yield: Paddy

District/ System	Irrigation	Unit cost (Rs./kg)		Break even yield (kg/ac)	
		1	2	1	2
Ampara- East	IR	19.60	16.36	996	831
Ampara-West	IR	21.81	14.64	1,128	757
Anuradhapura	IR	23.87	15.73	1,254	827
Hambantota	IR	26.54	19.60	1,530	1,130
Kurunegala	IR	25.57	16.50	1,206	778
Polonnaruwa	IR	20.99	12.50	1,127	671
Mahaweli B	IR	24.17	15.64	1,030	666
Mahaweli C	IR	24.81	16.96	1,130	772
Mahaweli H	IR	25.39	16.88	1,120	745
Trincomalee	IR	21.28	17.23	1,092	884
Gampaha	RF	35.03	17.22	1,279	629
Kalutara	RF	44.00	32.49	1,136	839
Kandy	RF	53.05	23.94	1,504	679
Kurunegala	RF	39.61	25.89	997	652
Whole island	IR	23.20	15.78	1,180	802
Whole island	RF	48.56	30.17	1,167	725

1. Including cost of farmer owned input *2. Excluding cost of farmer owned inputs*

CHAPTER 3

PADDY STATISTCS

Table 3.1: Cost of cultivation per acre of Paddy (irrigated)-Ampara-East

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	87	859.00			859.00
1st, 2nd & 3rd plough with 4wt	81	450.00	5326.00		5776.00
(1st & 2 nd plough with 4wt)	(19)		(5000.00)		
(Leveling with buffalo)	(23)		(1237.00)		
Plastering bunds	100	3600.00			3600.00
Levelling & broadcasting	100	1933.00		4224.00	6157.00
Fertilizer application	100	1624.00		2153.00	3777.00
Weed control with weedicides	100	984.00		3014.00	3998.00
Pest & disease control	77	734.00		1841.00	2575.00
Water management	100	4077.00			4077.00
Harvesting & processing with combine harvester	100	1904.00	6385.00		8289.00
Additional drying	65	2684.00			2684.00
Transport produce to stores	100	562.00	1457.00		2019.00
Total including imputed cost		19411.00	13168.00	11232.00	43811.00
Total excluding imputed cost		12483.00	12920.00	11159.00	36562.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					At 362 - 75
Seed		kg	66.00	64.00	Bg 94/1 - 24
LABOUR					Bg 357 - 01
Hired		md	9.00	1387.00	
Family		md	5.00		
Total		md	14.00		
FERTILIZER					
Basel - TSP	100	kg	24.00	10.00	
- Urea	55	kg	16.00	10.00	
- MOP	45	kg	9.00	10.00	
Top Dressing					
Urea	100	kg	79.00	11.00	
MOP	90	kg	18.00	10.00	
Discovery	54	kg	4.80	128.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2235.00	5523.00
Price of Produce (Rs/kg)	44.00	
Gross Income (Rs.)	98340.00	242998
Profit including imputed cost (Rs.)	54529.00	134741
Profit excluding imputed cost (Rs.)	61778.00	152653
Unit cost (including imputed cost) (Rs/kg)	19.60	
Unit cost (excluding imputed cost (Rs/kg)	16.36	

Table 3.2: Cost of cultivation per acre of Paddy (irrigated) - Ampara-West

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	90	917.00			917.00
1st, 2nd, & 3rd Plough with 4wt	94	600.00	7972.00		8572.00
(1st, 2nd, plough with 4wt)	(06)	(860.00)	(6800.00)		
Plastering bunds	100	5145.00			5145.00
Levelling & broadcasting	100	2811.00		3984.00	6795.00
Fertilizer application	100	1051.00		1590.00	2641.00
Weed control with weedicides	100	762.00		2411.00	3173.00
Pest & disease control	73	569.00		1278.00	1847.00
Water management	100	6578.00			6578.00
Harvesting & Proccessing with Combine harvester	96	1090.00	7734.00		8824.00
(Harvesting & drawing manually)	(04)	(12000.00)			
(Threshing winnowing with 4w thresher	`(04)	`(3000.00)	`(7500.00)		
Additional drying	76	1339.00			1339.00
Transport Produce to Stores	84	690.00	834.00		1524.00
Total including imputed cost		21552.00	16540.00	9263.00	47355.00
Total excluding imputed cost		7608.00	15706.00	8473.00	31787.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 360 - 29
Seed		kg	48.00	83.00	Bg 357 - 26
					Bg 94/1 - 23
LABOUR					Bg 90/2 - 12
Hired		md	6.00	1268.00	Bg16/39 - 5
Family		md	11.00		Other - 5
Total		md	17.00		
FERTILIZER					
Basel TSP	100	kg	26.00	10.00	
Urea	40	kg	20.00	10.00	
Top Dressing					
Urea	100	kg	80.00	11.00	
MOP	100	kg	25.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2171.00	5365.00
Price of Produce (Rs/kg)	42.00	
Gross Income (Rs.)	91182.00	225311.00
Profit including imputed cost (Rs.)	43827.00	108297.00
Profit excluding imputed cost (Rs.)	59395.00	146765.00
Unit cost (including imputed cost) (Rs/kg)	21.81	
Unit cost (excluding imputed cost (Rs/kg)	14.64	

Table 3.3: Cost of cultivation per acre of Paddy (irrigated) - Anuradhapura

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
(All nursery preparation)	(10)	(3536.00)		(300.00)	
General land preparation	52	1146.00			1146.00
1st & 2nd plough with 4wt	48	930.00	9448.00		10378.00
(do - with 2wt)	(10)				
(1st 2nd & 3rd plough with 4wt)	(42)	(630.00)	(9852.00)		
Plastering bunds	100	7036.00			7036.00
Levelling & broadcasting	90	4156.00		3196.00	7352.00
(Transplanting)	(10)	(9300.00)			
Fertilizer application	100	1329.00		1390.00	2719.00
Weed control with weedicides	81	860.00		2484.00	3344.00
Pest & disease control	45	717.00		1083.00	1800.00
Water management	100	6007.00			6007.00
Harvesting & processing with combine harvester	100	1870.00	9311.00		11181.00
Additional drying	68	1462.00			1462.00
Transport produce to stores	81	532.00	958.00		1490.00
Total including imputed cost		26045.00	19717.00	8153.00	53915.00
Total excluding imputed cost		9597.00	19598.00	6348.00	35543.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 300 - 33
Broadcasting	90	kg	47.00	68.00	Bg 352 - 19
Transplanting	(10)	kg	(16.50)		Bg 358 - 11
LABOUR					Bg 357 - 9
Hired		md	7.00	1371.00	Bg 359 - 7
Family		md	12.00		Bg 374 - 6
Total		md	19.00		Other - 15
FERTILIZER					
Basal - TSP	90	kg	25.00	10.00	
Urea	40	kg	15.00	10.00	
MOP	(23)	kg	(5)	(10.00)	
Top Dressing					
Urea	97	kg	78.00	10.00	
MOP	90	kg	21.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2259.00	5582.00
Price of Produce (Rs kg)	43.00	
Gross Income (Rs.)	97137.00	240026.00
Profit including imputed cost (Rs.)	43222.00	106802.00
Profit excluding imputed cost (Rs.)	61594.00	152199.00
Unit cost (including imputed cost) (Rs/kg)	23.87	
Unit cost (excluding imputed cost (Rs/kg)	15.73	

Table 3.4: Cost of cultivation per acre of Paddy (irrigated) - Hambantota

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	100	1470.00			1470.00
1st,2nd & 3rd plough with 4wt	100	360.00	10212.00		10572.00
Plastering bunds	100	8276.00			8276.00
Levelling & broadcasting	100	3843.00		4554.00	8397.00
Fertilizer application	100	1080.00		1340.00	2420.00
Weed control with weediside	93	888.00		3732.00	4620.00
Pest & disease control	40	1156.00		1687.00	2843.00
Water management	100	8280.00			8280.00
Harvesting & processing with combine harvester	100	3108.00	9577.00		12685.00
Transport produce to stores	70	252.00	1393.00		1645.00
Total including imputed cost		28713.00	21182.00	11313.00	61208.00
Total excluding imputed cost		14360.00	21182.00	9653.00	45195.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					At 362 - 100
Seed		kg	69.00	66.00	
LABOUR					
Hired		md	8.00	1795.00	
Family		md	8.00		
Total		md	16.00		
FERTILIZER					
Basal- TSP	100	kg	20.00	10.00	
Top Dressing					
Urea	100	kg	92.00	10.00	
MOP	100	kg	22.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2306.00*	5698.00
Price of Produce (Rs kg)	40.00	
Gross Income (Rs.)	92240.00	227925.00
Profit including imputed cost (Rs.)	31032.00	76680.00
Profit excluding imputed cost (Rs.)	47045.00	116248.00
Unit cost (including imputed cost) (Rs/kg)	26.54	
Unit cost (excluding imputed cost (Rs/kg)	19.60	

*Low yield due to rain & disease

Table 3.5: Cost of cultivation per acre of Paddy (irrigated) - Kurunagala

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
(All nursery preparation)	(6)	(2457.00)			(2457.00)
General land preparation	88	1215.00			1215.00
1st , 2nd & 3rd plough with 4wt	73	875.00	9326.00		10201.00
(do with 2wt)	(27)	(1250.00)	(8455.00)		
Plastering bunds	100	8818.00			8818.00
Leveling & broadcasting	94	4856.00		3034.00	7890.00
(Parachute)	(3)	(4005.00)		(1867.00)	
(Transplanting)	(3)	(2250.00)		(1350.00)	
Fertilizer application	97	1756.00		1330.00	3086.00
Weed control with weedicides	100	1145.00		1600.00	2745.00
Pest & disease control	64	1203.00		1421.00	2624.00
Water management	100	5075.00			5075.00
Harvesting & processing with combine harvester	100	2479.00	9110.00		11589.00
Additional drying	97	2413.00			2413.00
Transport produce	97	663.00	977.00		1640.00
Total including imputed cost		30498.00	19413.00	7385.00	57296.00
Total excluding imputed cost		11088.00	19251.00	6630.00	36969.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 352 - 33
Broadcasting		kg	37.00	82.00	Bg 374 - 18
(Parachute)	3		(20.00)		Bg 366 - 14
(Transplanting)	3		(15.00)		Bg 360 - 09
					Bg 300 - 03
LABOUR					Bg 358 - 03
Hired		md	8.00	1386.00	Bg 403 - 02
Family		md	14.00		Bw 367 - 02
Total		md	22.00		other - 16
FERTILIZER					
Basal- TSP	100	kg	28.00	10.00	
Top Dressing					
Urea	100	kg	79.00	10.00	
MOP	100	kg	26.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2241.00	5538.00
Price of Produce (Rs kg)	47.50	
Gross Income (Rs.)	106448.00	263032.00
Profit including imputed cost (Rs.)	49152.00	121453.00
Profit excluding imputed cost (Rs.)	69479.00	171681.00
Unit cost (including imputed cost) (Rs/kg)	25.57	
Unit cost (excluding imputed cost (Rs/kg)	16.50	

Table 3.6: Cost of cultivation per acre of Paddy (irrigated) - Polonnaruwa

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	100	1050.00			1050.00
1st,2nd & 3rd plough with 4wt	77	891.00	9531.00		10422.00
(do with 2wt)	(23)	(1668.00)	(7000.00)		
Plastering bunds	100	6482.00			6482.00
Levelling & broadcasting	100	3297.00		3806.00	7103.00
Fertilizer application	100	1275.00		1548.00	2823.00
Weed control with weediside	100	536.00		2315.00	2851.00
Pest & disease control	(33)	(315.00)		(853.00)	
Water management	100	4928.00			4928.00
Harvesting & processing with combine harvester	97	2010.00	10033.00		12043.00
(Harvesting & drawing nanually)	(3)	(6000.00)			
(Threshing & processing with 4w thresher)	(3)	(3000.00)	(4200.00)		
Additional drying	63	2190.00			2190.00
Transport produce to stores	60	1020.00	930.00		1950.00
Total including imputed cost		23679.00	20494.00	7669.00	51842.00
Total excluding imputed cost		8358.00	16275.00	6244.00	30877.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 366 - 51
Seed		kg	44.00	86.50	Bg 352 - 43
LABOUR					Other - 06
Hired		md	6.00	1393.00	
Family		md	11.00		
Total		md	17.00		
FERTILIZER					
Basal- TSP	100	kg	25.00	10.00	
Urea	93	kg	39.00	10.00	
Top Dressing					
Urea	93	kg	58.00	11.00	
MOP	100	kg	27.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2470.00	6103.00
Price of Produce (Rs kg)	46.00	
Gross Income (Rs.)	113620.00	280755.00
Profit including imputed cost (Rs.)	61778.00	152653.00
Profit excluding imputed cost (Rs.)	82743.00	204458.00
Unit cost (including imputed cost) (Rs/kg)	20.99	
Unit cost (excluding imputed cost (Rs/kg)	12.50	

Table 3.7: Cost of cultivation per acre of Paddy (irrigated) - Mahaweli B

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	93	1027.00			1027.00
1st, 2nd, & 3rd Plough with 4wt	67	1671.00	9488.00		11159.00
(do with 2wt)	(33)	(1488.00)	(7500.00)		
Plastering bunds	100	6750.00			6750.00
Leveling & broadcasting	100	3330.00		3690.00	7020.00
Fertilizer application	100	1185.00		1420.00	2605.00
Weed control with weedicides	100	960.00		2689.00	3649.00
Pest & disease control	(37)	(450.00)		(1127.00)	
Water management	100	5640.00			5640.00
Harvesting & processing with combine harvester	90	1980.00	9670.00		11650.00
(Harvesting & drawing with manually)	(10)	(10667.00)			
(Threshing and winnowing with 4w thresher)	(10)	(2850.00)	(3642)		
Additional drying	97	2448.00			2448.00
Transport produce to stores	100	468.00	1147.00		1615.00
Total including imputed cost		25459.00	20305.00	7799.00	53563.00
Total excluding imputed cost		9898.00	17534.00	7216.00	34648.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 360 - 85
Seed		kg	41.00	90.00	Bg 300 - 04
					Bg 352 - 03
					Bg 366 - 03
LABOUR					Other - 05
Hired		md	7.00	1414.00	
Family		md	11.00		
Total		md	18.00		
FERTILIZER					
Basal - TSP	100	kg	25.00	10.00	
Top Dressing					
Urea	100	kg	93.00	10.00	
MOP	100	kg	24.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2216.00	5476.00
Price of Produce (Rs kg)	52.00	
Gross Income (Rs.)	115232.00	284738.00
Profit including imputed cost (Rs.)	61669.00	152384.00
Profit excluding imputed cost (Rs.)	80584.00	199123.00
Unit cost (including imputed cost) (Rs/kg)	24.17	
Unit cost (excluding imputed cost (Rs/kg)	15.64	

Table 3.8: Cost of cultivation per acre of Paddy (irrigated) - Mahaweli C

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	77	988.00			988.00
1st , 2nd, & 3rd Plough with 4wt	100	825.00	9429.00		10254.00
Plastering bunds	100	7365.00			7365.00
leveling & broadcasting	100	3874.00		3465.00	7339.00
Fertilizer application	100	810.00		1430.00	2240.00
Weed control with weedicides	100	450.00		1849.00	2299.00
Pest & disease control	50	420.00		942.00	1362.00
Water management	100	5551.00			5551.00
Harvesting & processing with combine harvester	100	1140.00	9828.00		10968.00
Additional drying	100	2704.00			2704.00
Transport produce to stores	93	637.00	824.00		1461.00
Total including imputed cost		24764.00	20081.00	7686.00	52531.00
Total excluding imputed cost		9632.00	18585.00	7686.00	35903.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 360 - 70
Seed		kg	35.00	99.00	Bg 359 - 10
					Bg 352 - 7
					Other - 13
LABOUR					
Hired		md	7.00	1376.00	
Family		md	11.00		
Total		md	18.00		
FERTILIZER					
Basal - Urea	63	kg	14.00	10.00	
TSP	100	kg	24.00	10.00	
MOP	53	kg	10.00	10.00	
Top Dressing					
Urea	100	kg	78.00	10.00	
MOP	100	kg	17.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2117.00	5231.00
Price of Produce (Rs kg)	46.50	
Gross Income (Rs.)	98441.00	243246.00
Profit including imputed cost (Rs.)	45910.00	113442.00
Profit excluding imputed cost (Rs.)	62538.00	154530.00
Unit cost (including imputed cost) (Rs/kg)	24.81	
Unit cost (excluding imputed cost (Rs/kg)	16.96	

Table 3.9: Cost of cultivation per acre of Paddy (irrigated) - Mahaweli H

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	88	952.00			952.00
1st , 2nd , & 3rd plough with 4wt	53	696.00	9,878.00		10574.00
(do with 2wt)	(47)	(1488.00)	(9015.00)		
Plastering bunds	100	7304.00			7304.00
Levelling & broadcasting	100	3969.00		3960.00	7929.00
Fertilizer application	100	793.00		1450.00	2243.00
Weed control with weedicides	97	660.00		1928.00	2588.00
(Pest & disease control)	(38)	(600.00)		(1039.00)	
Water management	100	6705.00			6705.00
Harvesting & processing with combine harvester	81	1392.00	10112.00		11504.00
(do manually)	(19)	(14294.00)			
(Thresing with 4w thresher)	(19)	'(2496.00)	(4443.00)		
Additional drying	75	2176.00			2176.00
Transport Produce to Stores	91	212.00	462.00		674.00
Total including imputed cost		24859.00	20452.00	7338.00	52649.00
Total excluding imputed cost		9156.00	20290.00	5563.00	35009.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 352 - 55
Seed		kg	45.00	88.00	Bg 300 - 16
					Bw 367 - 8
					Bg 358 - 4
LABOUR					At 362 - 3
Hired		md	7.00	1308.00	P'samba - 2
Family		md	12.00		Other - 12
Total		md	19.00		
FERTILIZER					
Basal - TSP	100	kg	34.0	10.00	
Urea	(33)		(14)	(10.00)	
Top Dressing					
Urea	100	kg	86.00	10.00	
MOP	100	kg	25.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2074.00*	5125.00
Price of Produce (Rs kg)	47.00	
Gross Income (Rs.)	97478.00	240868.00
Profit including imputed cost (Rs.)	44829.00	110772.00
Profit excluding imputed cost (Rs.)	62469.00	154361.00
Unit cost (including imputed cost) (Rs/kg)	25.39	
Unit cost (excluding imputed cost (Rs/kg)	16.88	

** low yeild due to inadequate of water and pest & disease*

Table 3.10: Cost of cultivation per acre of Paddy (irrigated) - Trincomalee

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	57	476.00			476.00
1st,2nd & 3rd plough with 4wt	100	840.00	7394.00		8234.00
Plastering bunds	100	4766.00			4766.00
Levelling & broadcasting	100	3738.00		4752.00	8490.00
Fertilizer application	100	1350.00		2414.00	3764.00
Weed control with weediside	100	655.00		2942.00	3597.00
Pest & disease control	67	627.00		1623.00	2250.00
Water management	100	3850.00			3850.00
Harvesting & processing with combine harvester	100	2113.00	8543.00		10656.00
Additional drying	53	1980.00			1980.00
Transport produce to stores	93	308.00	1867.00		2175.00
Total including imputed cost		20703.00	17804.00	11731.00	50238.00
Total excluding imputed cost		11151.00	17804.00	11731.00	40686.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 360 - 76
Seed		kg	48.00	99.00	Bg 366 - 18
					Other - 06
LABOUR					
Hired		md	7.00	1593.00	
Family		md	6.00		
Total		md	13.00		
FERTILIZER					
TSP	100	kg	22.00	10.00	
Urea	(33)	kg	(18.00)	(10.00)	
MOP	(13)	kg	(14.00)	(10.00)	
Top Dressing					
Urea	100	kg	96.00	14.00	
MOP	100	kg	21.00	10.00	
Discovery	60	kg	5.00	128.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average Yield (kg.)				2361.00	5834.00
Price of Produce (Rs kg)				46.00	
Gross Income (Rs.)				108606.00	268365.00
Profit including imputed cost (Rs.)				58368.00	144227.00
Profit excluding imputed cost (Rs.)				67920.00	167830.00
Unit cost (including imputed cost) (Rs/kg)				21.28	
Unit cost (excluding imputed cost (Rs/kg)				17.23	

Table 3.11: Cost of cultivation per acre of Paddy (rain-fed) - Gampaha

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	93	2015.00			2015.00
1st ,2nd , 3rd plough with 4wt	43	1110.00	8658.00		9768.00
(1st & 2nd plough with 4wt)	(30)		(8167.00)		
(1st plough with 4wt)	(27)		(6523.00)		
(2nd plough with 4wt)	(7)		(5000.00)		
Plastering bunds	93	6153.00			6153.00
Levelling & broadcasting	97	3372.00		3492.00	6864.00
(Transplanting)	(03)				
Fertilizer application	97	1524.00		1080.00	2604.00
Weed control with weediside	87	928.00		1986.00	2914.00
Pest & desease control	93	1133.00		1606.00	2739.00
Harvesting & processing with combine harvester	100	2266.00	8441.00		10707.00
Additional drying	57	2646.00			2646.00
Transport produce to stores	90	160.00	753.00		913.00
Total including imputed cost		21307.00	17852.00	8164.00	47323.00
Total excluding imputed cost		4260.00	11926.00	7075.00	23261.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bw 367 - 64
Broadcasting &		kg	36.00	97.00	Bg 300 - 18
Transplanting		kg	(6.00)		Suwandel - 4
LABOUR					Bg 366 - 3
Hired		md	3.00	1420.00	At 308 - 2
Family		md	12.00		Other - 9
Total		md	15.00		
FERTILIZER					
Basal -TSP	90	kg	20.00	10.00	
Top Dressing					
Urea	87	kg	49.00	10.00	
MOP	83	kg	39.00	10.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average Yield (kg.)				1351.00*	3338.00
Price of Produce (Rs kg)				37.00	
Gross Income (Rs.)				49987.00	123518.00
Profit including imputed cost (Rs.)				2664.00	6583.00
Profit excluding imputed cost (Rs.)				26726.00	66040.00
Unit cost (including imputed cost) (Rs/kg)				35.03	
Unit cost (excluding imputed cost (Rs/kg)				17.22	

* *Low yeild due to flood*

Table 3.12: Cost of cultivation per acre of Paddy (rain-fed) - Kalutara

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	73	2500.00			2500.00
1st, 2 nd, & 3rd plough with 4wt	60	750.00	10539.00		11289.00
(do with 2wt)	(36)	(270.00)	(8088.00)		
(do manually)	(4)	(19950.00)			
Plastering bunds	100	7130.00			7130.00
Levelling & broadcasting	100	6697.00		3888.00	10585.00
Fertilizer application	100	1110.00		1030.00	2140.00
Weed control with weedicides	87	915.00		2126.00	3041.00
Pest & diseace control	(27)	(825.00)		(1737.00)	
Harvesting & processing with combine harvester	77	2040.00	10052.00		12092.00
(do manually)	(23)	(9064.00)			
(Threshing & winnowing with engine powered paddy thresher)	(23)	(2205.00)	(3506.00)		
Additional drying	97	2355.00			2355.00
Transport to stores	(37)	(345.00)	(434.00)		
Total including imputed cost		23497.00	20591.00	7044.00	51132.00
Total excluding imputed cost		11752.00	20064.00	5943.00	37759.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Ld 368 - 36
Seed		kg	36.00	108.00	Bw 272- 6b - 17
					Bg 300 - 21
LABOUR					Ld 356 - 05
Hired		md	8.00	1469.00	Bw 361 - 04
Family		md	8.00		other - 17
Total		md	16.00		
FERTILIZER					
Basal -TSP	100	kg	20.00	10.00	
Top Dressing					
Urea	100	kg	44.00	10.00	
MOP	100	kg	39.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1162.00	2871.00
Price of Produce (Rs kg)	45.00	
Gross Income (Rs.)	52290.00	129209.00
Profit including imputed cost (Rs.)	1158.00	2861.00
Profit excluding imputed cost (Rs.)	14531.00	35906.00
Unit cost (including imputed cost) (Rs/kg)	44.00	
Unit cost (excluding imputed cost (Rs/kg)	32.49	

1: Heavy Rainfall, Pest disease Mite damaged,unfilled grains
2: Power cost is high in this season

Table 3.13: Cost of cultivation per acre of Paddy (rain-fed) - Kandy

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nersery preparation	47	2604.00		342.00	2946.00
Nersery management (parachute)	(12)	(864.00)		(920.00)	
General land preparation	91	2791.00			2791.00
1st Plough with 2wt	70	1200.00	4,900.00		6100.00
(do manually)	(18)	(7441.00)			
(do with buffolow)	(12)	(615.00)	(5950.00)		
2nd Plough with 2wt	58	1320.00	4,263.00		5583.00
(do manually)	(32)	(6276.00)			
(do with buffolow)	(9)	(2052.00)	(3800.00)		
Plastering Bunds	100	9307.00			9307.00
Transplanting - manually	47	4677.00		2095.00	6772.00
(Levelling & broadcasting)	(41)	(4564.00)			
(Transplanting - Parachute)	(12)	(2750.00)			
Fertilizer application	100	1485.00		1050.00	2535.00
Weed control with weediside	(38)	(1103.00)		(1669.00)	
Pest & disease control	41	910.00		1,396.00	2306.00
Harvesting & drawing manually	82	15415.00			15415.00
(Harvesting & processing with combine harvester)	(18)	(2760.00)	(8173.00)		
Threshing & winnowing with engine powered paddy thresher	67	2714.00	3,123.00		5837.00
(Threshing & winnowing with 4w thresher)	(9)	(2460.00)	(4000.00)		
(Threshing with buffolow)	(6)	(5040.0)	(3200.00)		
Additional drying	65	2376.00			2376.00
Transport produce to stores	94	684.00	533.00		1217.00
Total including imputed cost		45483.00	12819.00	4883.00	63185.00
Total excluding imputed cost		20208.00	3769.00	4532.00	28509.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 359 - 73
Seed	47	kg	24.50	85.50	Bg 379/2 - 9
Broadcasting	41		(29.8)		Bg 358 - 4
Parachute	12		(14.00)		Bg 360 - 4
LABOUR					Other - 10
Hired		md	16.00	1263.00	
Family		md	20.00		
Total		md	36.00		

contd...

FERTILIZER	Percent Reported	Unit	Quantity	Unit Price (Rs)	
Basal					
TSP	97	kg	20.00	10.00	
Urea	67	kg	17.00	10.00	
MOP	65	kg	11.00	10.00	
Top Dressing					
Urea	97	kg	27.00	10.00	
MOP	94	kg	30.00	10.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average Yield (kg.)				1191.00	2943.00
Price of Produce (Rs kg)				42.00	
Gross Income (Rs.)				50022.00	123604.00
Profit including imputed cost (Rs.)				-13163.00	-32526.00
Profit excluding imputed cost (Rs.)				21513.00	53159.00
Unit cost (including imputed cost) (Rs/kg)				53.05	
Unit cost (excluding imputed cost (Rs/kg)				23.94	

Table 3.14: Cost of cultivation per acre of Paddy (rain-fed) - Kurunagala

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
(All nursery preperation)	(22)	(4816.90)		(618.00)	
General land preparation	75	1625.00			1625.00
1st, 2nd, & 3rd plough with 4wt	78	1185.00	9064.00		10249.00
(do with 2wt)	(22)	(1305.00)	(8300.00)		
Plastering bunds	100	7203.00			7203.00
Levelling & broadcasting	78	3892.00		3024.00	6916.00
(Transplanting)	(22)	(5621.18)			0.00
Fertilizer application	100	1493.00		1090.00	2583.00
Weed control with weedicides	88	975.00		2130.00	3105.00
Pest & disease control	56	1365.00		1643.00	3008.00
Harvesting & processing with combine harvester	84	2007.00	9086.00		11093.00
Harvesting and drawing manually	(13)	(6300.00)			
Threshing and winnowing manually	(13)	(2655.00)			
Additional drying	78	2156.00			2156.00
Transport Produce to Stores	59	324.00	615.00		939.00
Total including imputed cost		22225.00	18765	7887.00	48877.00
Total excluding imputed cost		6945.00	17840.00	7166.00	31951.00

3% Yield losse due to drought

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bg 366 - 30
Broadcasting		kg	36.00	84.00	Bw 367 - 19
Transplanting		kg	(25.00)		Bg 360 - 14
LABOUR					Bg 374 - 09
Hired		md	5.00	1389.00	Bg 300 - 09
Family		md	11.00		Bg 352 - 06
Total		md	16.00		Other - 13
FERTILIZER					
Basal -TSP	94	kg	20.00	10.00	
Top Dressing					
Urea	94	kg	70.00	10.00	
MOP	91	kg	19.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1234.00*	3049.00
Price of Produce (Rs kg)	49.00	
Gross Income (Rs.)	60466.00	149411.00
Profit including imputed cost (Rs.)	11589.00	28636.00
Profit excluding imputed cost (Rs.)	28515.00	70461.00
Unit cost (including imputed cost) (Rs/kg)	39.61	
Unit cost (excluding imputed cost (Rs/kg)	25.89	

**Low yield due to drought and 3% of cultivators have not harvested*

Table 3.15: Cost of cultivation per acre of Paddy (irrigated) - Whole island

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	86	1028.00			1028.00
1st, 2nd, & 3rd plough with 4wt	79	597.00	8,509.00		9106.00
(do with 2wt)	(12)	(1726.00)	(6600.00)		
(1st, 2nd plough with 4wt)	(09)	(792.00)	(7354.00)		
Plastering bunds	100	6574.00			6574.00
Levelling & broadcasting	100	3326.00		4187.00	7513.00
Fertilizer application	100	1155.00		1643.00	2798.00
Weed control with weedicides	98	765.00		2813.00	3578.00
Pest & disease control	48	788.00		1723.00	2511.00
Water management	100	5192.00			5192.00
Harvesting & processing with combine harvester	96	2091.00	8524.00		10615.00
(do manually)	(04)	(10006.00)			
(Threshing with 4w thresher)	(04)	(2097.00)	(4623.00)		
Additional drying	63	2506.00			2506.00
Transport produce to stores	87	572.00	1096.00		1668.00
Total including imputed cost		24594.00	18129.00	10366.00	53089.00
Total excluding imputed cost		10129.00	16513.00	9454.00	36096.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					At 362 - 27
Seed		kg	53.00	79.00	Bg 360 - 22
					Bg 352 - 14
LABOUR					Bg 366 - 12
Hired		md	7.00	1447.00	Bg 94/1 - 08
Family		md	10.00		Bg 300 - 04
Total		md	17.00		Other - 13
FERTILIZER					
Basal -TSP	99	kg	24.00	10.00	
-Urea	46	kg	28.00	10.00	
Top Dressing					
Urea	100	kg	83.00	11.00	
MOP	98	kg	21.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2288.00	5654.00
Price of Produce (Rs kg)	45.00	
Gross Income (Rs.)	102960.00	254414.00
Profit including imputed cost (Rs.)	49871.00	123231.00
Profit excluding imputed cost (Rs.)	66864.00	165221.00
Unit cost (including imputed cost) (Rs/kg)	23.20	
Unit cost (excluding imputed cost (Rs/kg)	15.78	

Table 3.16: Cost of Cultivation per acre of Paddy (rain-fed) - Whole island

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
(All nursery preparation)	(15)	(3188.00)			
General land preparation	80	2038.00			2038.00
1st, 2nd, & 3rd plough with 4wt	69	1305.00	8740.00		10045.00
(do with 2wt)	(19)	(2745.00)	(7391.00)		
(1st plough with 4wt)	(06)	(1995.00)	(7200.00)		
(do with 2wt)	(2)				
(1st & 2nd plough with 4wt)	(04)				
Plastering bunds	100	7792.00			7792.00
Levelling & broadcasting	85	5040.00		3045.00	8085.00
(Transplanting)	(15)	(5198.00)			
Fertilizer application	100	1405.00		1060.00	2465.00
Weed control with weediside	83	844.00		2112.00	2956.00
Pest & desease control	44	1359.00		1586.00	2945.00
Harvesting & processing with combine harvester	81*	2944.00	8320.00		11264.00
(do manually)	(17)	(8427.00)			
(Threshing & winnowing with engine powered paddy thresher)	(17)		(1354.00)		
Additional drying	81	4335.00			4335.00
Transport produce to stores	65	285.00	284.00		569.00
Total including imputed cost		27347.00	17344.00	7803.00	52494.00
Total excluding imputed cost		8634.00	16562.00	7415.00	32611.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Bw 367 - 25
Broadcasting	85	kg	35.00	87.00	Bg 366 - 17
(Transplanting)	15	kg	(25.29)		Ld 368 - 10
LABOUR					Bg 360 - 08
Hired		md	6.00	1439.00	Bg 300 - 08
Family		md	13.00		Bg 359 - 06
Total		md	19.00		Bg 374 - 04
					Bg 250 - 04
					Bg 352 - 04
					Other - 14

contd...

FERTILIZER	Percent Reported	Unit	Quantity	Unit Price (Rs)	
Basal -TSP	94	kg	18.00	10.00	
-Urea	`(12)	kg	`(8.00)	`(10.00)	
Top Dressing					
Urea	94	kg	61.00	10.00	
MOP	92	kg	27.00	10.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average Yield (kg.)				1081.00	2671.00
Price of Produce (Rs kg)				45.00	
Gross Income (Rs.)				48645.00	120202.00
Profit including imputed cost (Rs.)				-3849.00	-9511.00
Profit excluding imputed cost (Rs.)				16034.00	39620.00
Unit cost (including imputed cost) (Rs/kg)				48.56	
Unit cost (excluding imputed cost (Rs/kg)				30.17	

** 2% farmers have not harvested because of yield loss due to drought*

CHAPTER 4

SUBSIDERY FOOD CROPS, ROOT & TUBERS AND VEGETABLES - SUMMERY

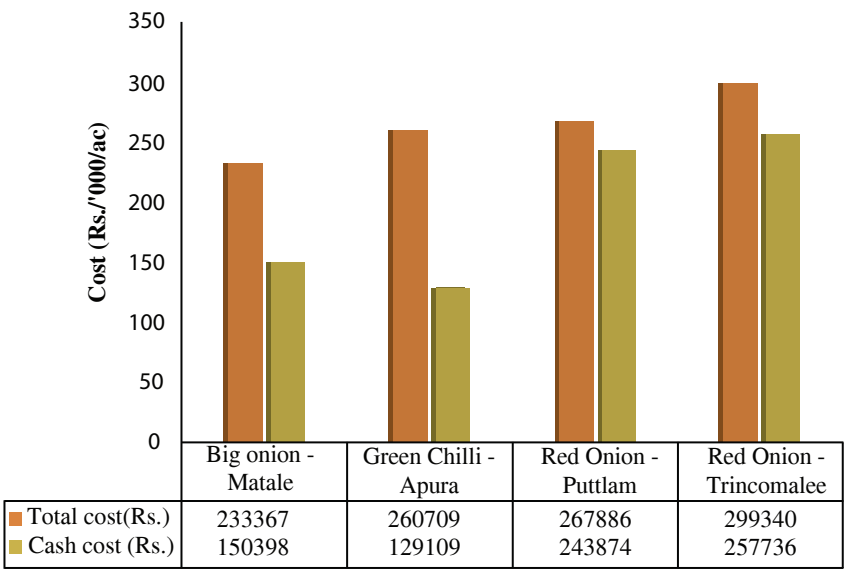
4.0 Comparison of the cost of cultivation of Subsidery Food Crops (SFCs)

This chapter includes a comprehensive description of the cost structure of Subsidiary Food Crops (condiments, coarse grains and pulses, oil crops, root and tuber crops, low country and up country vegetables). The cost items are computed for one acre of the crop cultivated in respective district. A detailed analysis of the above crops is tabled in Chapter 5 for further information.

4.1 Condiments

Big onion, green chilli and red onion were considered as condiments.

4.1.1 Cost of cultivation



	Big onion - Matale	Green Chilli - Apura	Red Onion - Puttlam	Red Onion - Trincomalee
Total cost(Rs.)	233367	260709	267886	299340
Cash cost (Rs.)	150398	129109	243874	257736

Figure 4.1 Total cost and cash cost of cultivation in condiments

Cost of cultivation and respective cash cost components of condiments (big onion in Matale, green chilli in Anuradhapura, red onion in Puttlam and Trincomalee districts) are depicted in Figure 4.1. The total cost of cultivation of big onion was Rs.233,367/ac and was Rs. 260,709/ac for green chilli. The total cultivation cost for red onion was Rs.267,886/ac in Puttlam and Rs.299,340/ac in Trincomalee respectively. A lower total cost for red onion was reported in Puttlam than Trincomalee and the popular variety grown was "Vedalan" in both districts (100% area) (Table 5.5 and Table 5.6). Frequently adopted green chilli varieties in Anuradhapura district were MICH-Hybrid 1(53%), Galkiriyagama (32%) and other vareties (15%) (Table 5.4). The cash cost components of big onion

was reported as Rs.150,398/ac in Matale, for green chili it was Rs.129,109/ac in Anuradhapura. For red onion the reported cash cost was Rs.243,874/ac in Puttlam, where as Rs.257,736/ac in Trincomalee.(Table 4.1). The cash cost as a percentage of total cost in big onion is 64% in Matale and 50% in Anuradhapura for green chilli. The shares of cash cost in total cost for red onion in Puttlam and Trincomalee were 91% and 86% respectively.

4.1.2 Components of the total cost

Major components of the total cost in cultivating condiments are also categorized as labour, power and material and the cost break down is given in Table 4.2 and Table 4.3. The labour cost as a percentage of total cost in big onion cultivation was 64% and 74% in chilli while the labour cost share for red onion was 36% for Puttlam and 34% for Trincomalee respectively. The highest labour cost share of green chilli (74%) was reported in Anuradhapura district. The labour requirement varied depending on the district and it was 157 man days for green chilli in Anuradhapura, 126 man days for big onion in Matale, 89 man days for red onion in both Puttlam and Trincomalee (Table 4.4).

The machinery cost as a percentage of total cost has shown a lower share in condiments. For instance, in big onion the power cost share was 13% in Matale, 9% for green chilli in Anuradhapura while it was 5% and 7% for red onion in Puttlam and Trincomalee districts (Table 4.2). The cost of machinery has often incurred on lift irrigation and land preparation in all condiments. However, the material cost as a percentage of total cost has shown a bigger share and for red onion it was 59% in both the districts while 23% for big onion in Matale and 17% for green chilli in Anuradhapura. High cost of planting materials has accounted for relatively a bigger share of material cost in red onion cultivation (Figure 4.2).

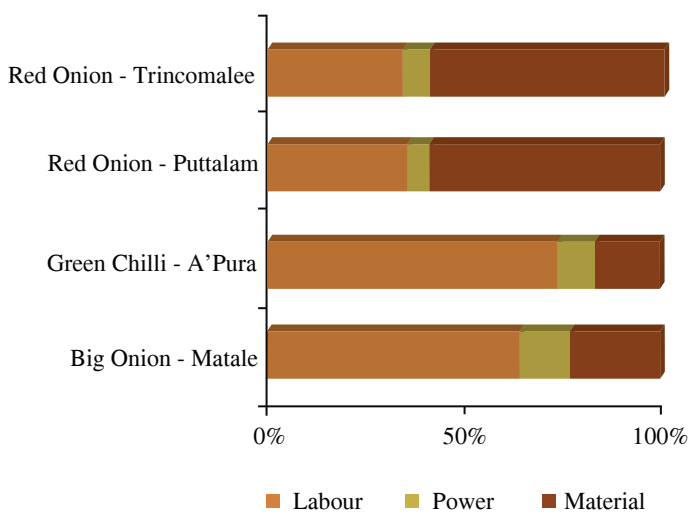


Figure 4.2 Major Components of the total cost

4.1.3 Cost of major operations

The shares of cost with seeding, fertilizer application, water management, harvesting and processing are relatively bigger for red onion cultivation in both the districts. The total cost share of above operations in red onion cultivation was accounted for 83% in Trincomalee while 91% in Puttlam (Table 5.5 and Table 5.6). In big onion cultivation it was 59% of the total cost. In green chilli cultivation, except for nursery preparation and general land preparation, 88% of the total cost of cultivation has incurred on the succeeding agronomic practices such as transplanting, fertilizer application, weeding and earthling-up, pest and disease control, water management and harvesting.(Table 5.4)

4.1.4 Net income

Table 4.6 illustrates the yield, farm-gate price and returns of the SFCs included in the analysis. Per acre net income received varied depending of the crop. For big onion, the net income obtained was Rs. 845,841 in Matale, for red onion Rs. 192,420 and Rs. 410,490 respectively in Puttlam and Trincomalee whereas it was Rs.785,295 for green chilli in Anuradhapura. During last 2018 Yala season, the net income received per acre was Rs. 185,409 for big onion, Rs. 162,159 for red onion in Puttlam, and Rs.621,195 for green chilli in Anuradhapura. Hence the net income has increased in this season compared to last Yala 2018.

The reported yield in 2019 Yala of big onion and green chilli were comparably higher than previous yala season while it was lower in red onion.The average yield reported in this season of big onion was 6918kg/ac, for red onion it was 4697 kg/ac in Puttlam and 5258 kg/ac in Trincomalee.The reported average yield of green chilli was 5204 kg/ac in Anuradhapura (Table 4.6).

4.1.5 Average farm-gate price

Table 4.6 further depicts that the average farm-gate price received for big onion was Rs.156.00/kg in Matale, for red onion Rs.98.00/kg in Puttlam, and Rs. 135.00/ kg in Trincomalee, while it was Rs. 201.00/kg for green chilli in Anuradhapura. During previous yala season, the average farm-gate prices received for big onion Rs. 65.00/kg in Matale, red onion was Rs.86.00/kg in Puttlam respectively. The farm-gate price of green chilli in previous yala was Rs. 214.00/kg. Hence it was obvious that the farm gate price fetched in this Yala for big onion was more than doubled the price of last 2018 Yala. However, green chilli received a lower farm-gate price in this season compared to the previous season.

4.1.6 Unit cost of production

The unit cost of production of the SFCs selected is illustrated in Figure 4.3and Table 4.7. The unit cost of cultivation in producing one kilogram of big onion (including imputed cost) was 33.74./ kg in Matale. Similarly, for red onion the unit cost was Rs.57.03/kg in Puttalam and Rs.56.93/kg in Trincomalee. For green chilli production in Anuradhapura, the unit cost was Rs.50.10/kg.The unit cost of production has decreased for Big onion in Matale and Green chilli in Anuradhapura in comparison 2018 Yala season.

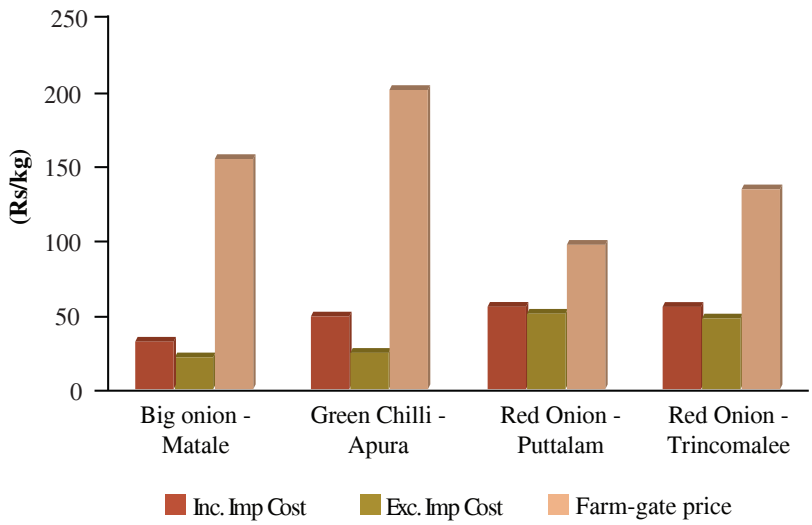


Figure 4.3 Farm-gate price and unit cost of production

4.2 Coarse Grains and Pulses

Maize and cowpea were selected to analyze the cost involved in coarse grains and pulse crop groups respectively. Maize crop cultivated in Badulla area was considered in the analysis as Badulla has the highest extent cultivated in Yala seasons.

4.2.1 Cost of cultivation

The cost of cultivation and respective cost components of the above crops are presented in Table 4.1. The total cost of cultivation of maize in Badulla was Rs, 74,694/ac and for cowpea in Ampara was Rs. 38,058/ac at including cost of farmer owned input.

4.2.2 Components of the total cost

Major components of the total cost were categorized as labour, material and power similar to the previous discussion (Table 4.2).The labour cost incurred for maize was 64% while for cowpea it was 72% of the total cost. The material cost share for maize was 25% and for pulses it was 13% of the total cost. However the power cost was the minimum for both the crops and it was 11% for maize while for pulses it was reported as 15%.

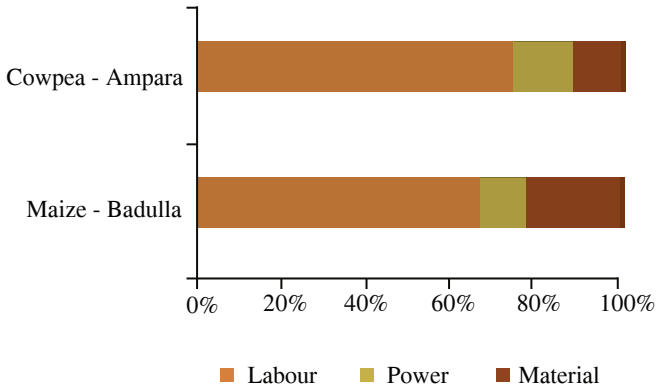


Figure 4.4 Major component as a percentage of total cost of production

4.2.3 Cost of major operations

Land preparation, digging holes and seeding, harvesting and drawing, threshing and winnowing were the costly operations reported for maize and cowpea. Particularly in maize, the cost of above operations have incurred more than 50% of the total cost. Fertilizer has been applied only for maize but not for cowpea.

4.2.4 Labour usage and wage rate

Labour usage and wage rate details are given in Table 4.4. Usage of family labour was intense in maize reporting 75% (31 man days) in Badulla and for cowpea the labour share was 60% (13 man days) in Ampara. The wage rate was relatively higher in Ampara district for cowpea (Rs 1251/ man day).

4.2.5 Average yield

The average yield for maize in Badulla was 1,835 kg/ac) and for cowpea at Ampara it was 264 kg/ac (Table 4.6).The reported cowpea yield was comparably low due to prevailed drought conditions.

4.2.6 Net income

The net income (including farmer owned inputs) of maize in Badulla was Rs. 17,056 while it was Rs.7, 878 for cowpea in Ampara.

4.2.7 Average farm- gate price

Maize received Rs. 50.00/ kg at the farm-gate while cowpea in Ampara received Rs. 174.00/kg (Table 4.6).

4.2.8 Unit cost of production

The unit cost of production (including farmer owned inputs) for maize was Rs. 40.71/kg. Comparatively, cowpea in Ampara reported a higher unit cost and it was Rs. 144.16 /kg (Table 4.7and Figure 4.5).

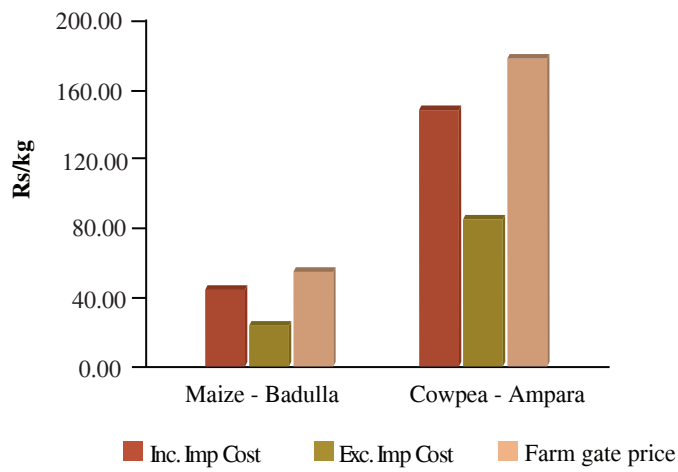


Figure 4.5 Unit cost of production and Farm-gate price

4.3 Oil Crops

Cost of cultivation details are given for two oil crops; gingelly and soya bean.

4.3.1 Cost of cultivation

Cost of cultivation surveys were conducted for gingelly in Anuradhapura and soya bean in Mahaweli System H for 2019 yala season and gingelly has cultivated under rain-fed condition. Majority of the farmers have (100%) cultivated local variety of gingelly (Table 5.7). Soya bean growers in system H area, 100% of the farmers used variety PB 1 (Table 5.8). As depicted in Figure 4.6, the total cost of gingelly cultivation (including imputed cost) was Rs. 20,904/ac where as it was Rs. 69,225/ac for soya bean.

In comparing the total cost, the total cost for gingelly cultivation was lower than that of soya bean cultivation, due to limited labour utilization and material input used. Furthermore, compared to previous yala season, the total cost for gingelly cultivation has increased by 8%. The cash cost component of gingelly and soya bean wereRs. 11,514/ac and Rs. 50,622/ac respectively and the cash cost shares were 55% and 73% respectively (Table 4.1and Figure 4.6).

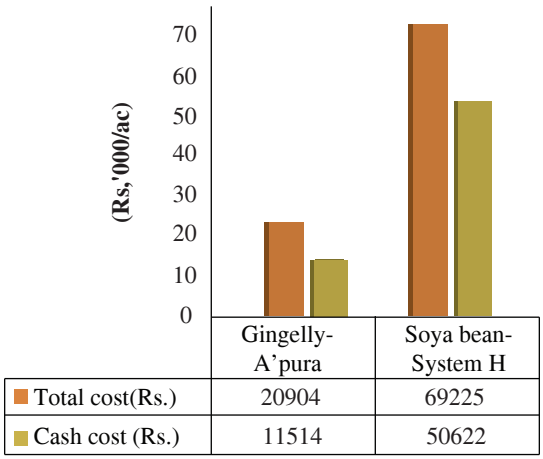


Figure 4.6 Cost of cultivation of oil crops

4.3.2 Components of total cost

Major components of the total cost have been categorized as labour, material and power. In gingelly cultivation, 67% of the total cost has incurred on labour, 26% on machinery and 7% on materials inputs (seeds) (Table 4.2). Out of the total cost related to soya bean, 66%, 20% and 14% were incurred on labour, material and machinery /power respectively (Figure 4.7).The material cost in both crops was entirely occupied by seed cost and it was comparatively higher in soya bean cultivation. No fertilizer, pesticide or herbicides were applied in gingelly.

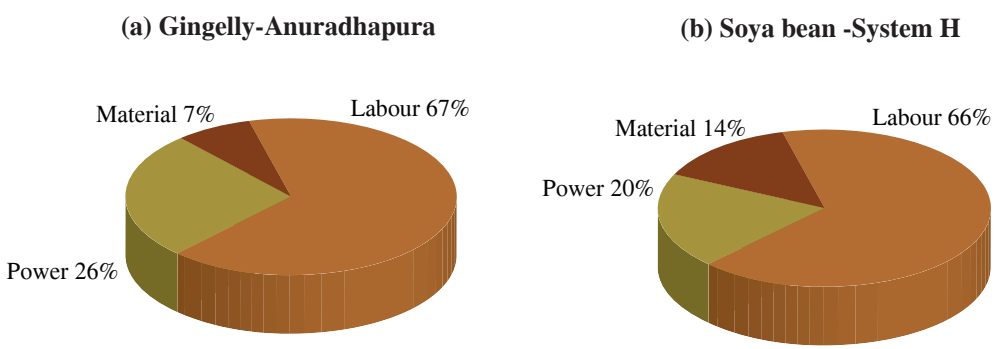


Figure 4.7 Major cost component as a percentage of total cost of production-oil crops

4.3.3 Cost of major operations

The composition of total cost among different operations of gingelly cultivationin Anuradhapura district was not much different to that of the previous yala season. Costly operations in gingelly cultivation were land preparation (33%), broadcasting (9%), harvesting and processing (55%) while it was reported in soya bean cultivation as 28% on land preparation, 16% on seeding, 16% on weeding, 23% on harvesting and processing (Table 5.7 and Table 5.8).

4.3.4 Net income

The net income received by the farmer from gingelly cultivation in Anuradhapura was Rs. 24,180 / ac while from soya bean in System H was Rs. 88,836/ac (Table 4.6). In contrast to the previous 2018 yala season, the net income has increased by 32% from gingelly cultivation in Anuradhapura . The net income of soya bean in System H has increased from previous Yala owing to the increased average yield.

4.3.5 Average farm-gate price

The average farm-gate price fetched for gingelly in Anuradhapura was Rs. 204/kg and it was Rs. 141/kg for soya bean in System H (Table 4.6).

4.3.6 Unit cost of production

The unit cost of production was Rs. 94.59/kg for gingelly cultivation in Anuradhapura while it was Rs. 61.75/kg for soya bean in System H (Table 4.7).

4.4 Potato

Potato was considered as root and tuber crops category in the following discussion.

4.4.1 Cost of cultivation

The cost of cultivation survey was conducted for irrigated potato production in Nuwara Eliya and Badulla districts for 2019 Yala season. As the production environments in these two districts are different, the costs and returns are not directly comparable. The total cost of potato cultivation, including imputed cost was Rs.343,454 and Rs.370,866 per acre in Badulla and Nuwara Eliya districts respectively. (Table 4.1 and Figure 4.8)

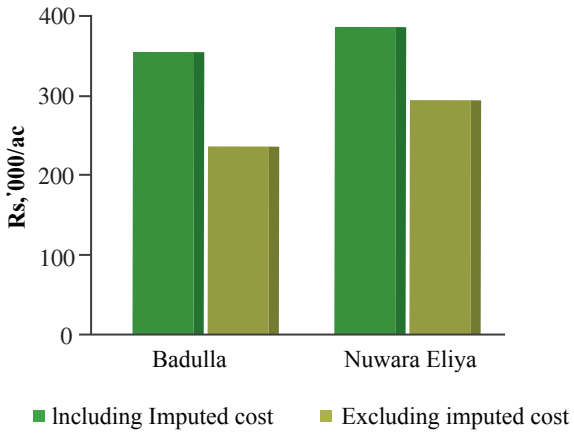


Figure 4.8 Total cost and cash cost share in potato cultivation

4.4.2 Components of the total cost

The highest cost in potato cultivation has incurred on the materials such as seeds, agro-chemicals and other inputs, whereas it was 54% and 55% of the total cost of cultivation (including imputed cost) in Badulla and Nuwara Eliya respectively (Table 4.2). The second highest cost component is labour and it was accounted for 41% for the total cost in both the districts (Figure 4.9). Most of the farmers in Badulla and Nuwara Eliya have continued cultivation of 'Granola' variety (93% and 97% respectively) (Table 5.10 and 5.11).

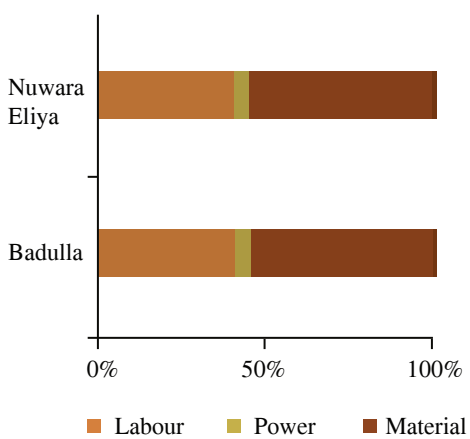


Figure 4.9 Major component of the total cost of production in potato

4.4.3 Cultural practices

The cultural practices of potato production in both the districts are similar and around 90% and 87% of the selected farmers in Badulla and Nuwara Eliya respectively have used two wheel tractors for land preparation (Table 5.10 and Table 5.11) .

4.4.4 Labour usage

Potato cultivation is a labour intensive farming. The average labour usage per acre of potato cultivation in Badulla and Nuwara Eliya was 108 man days and 114 man days respectively (Table 4.4).Both hired and family labour used in equal proportions and the hired labour accounted 53% and 50% of the total labour in Badulla and Nuwara Eliya areas (Figure 4.10).

In Badulla, the average wage rate for hired labour was Rs.1309 per day and it was Rs.1334 per day in Numara Eliya.

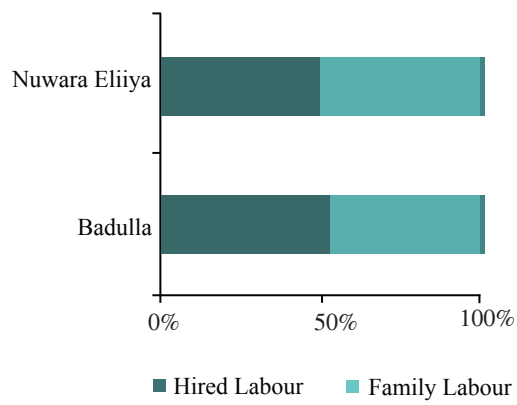


Figure 4.10. Labour usage in potato cultivation

4.4.5 Average yield

The average yield obtained by potato farmers was 6,262 kg/ac (15,473 kg/ha) in Badulla district and 6,438 kg/ac (15,908 kg/ha) in Nuwara Eliya district. In this season, the average yield of potato cultivation has marginally increased in both the districts compared to 2018 Yala season (Table 5.10 and Table 5.11).

4.4.6 Net income

The net return is calculated including the imputed costs as well as without imputed costs. The net return including imputed cost was Rs. 289,008 per acre and Rs. 369,504 per acre for Badulla and Nuwara Eliya respectively (Table 4.6).

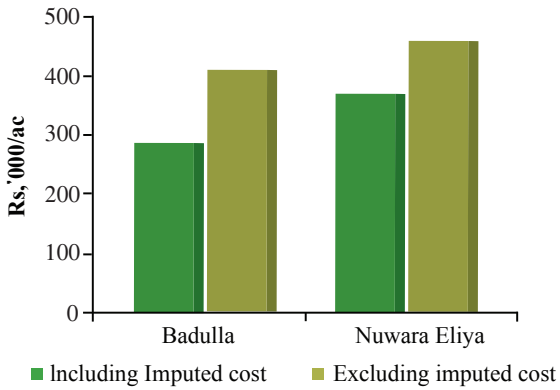


Figure 4.11. Net income in potato cultivation

4.4.7 Average farm-gate price

The farm-gate price of potato in Badulla and Nuwara Eliya were Rs. 101/kg and Rs. 115.00/kg respectively. However, the price fetched at the farm gate during last 2018 Yala season were Rs. 90.00/kg and Rs. 115.00/kg for the same districts. Compared to previous Yala season, the producer price has increased in both the districts during 2019 Yala (Table 4.6 and Figure 4.12).

4.4.8 Unit cost of production

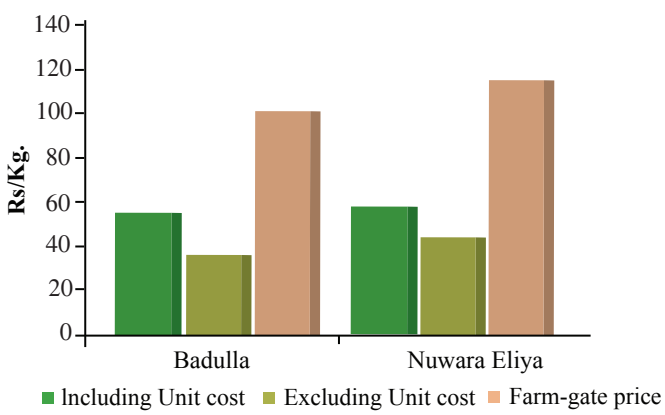


Figure 4.12 Unit cost of production and farm-gate price in potato

The unit cost of production (including imputed cost) of potato has moderately decreased to Rs. 54.85/ kg and Rs. 57.61/kg in Badulla and Nuwara Eliya districts (Rs. 59.33/kg and Rs. 58.49/kg in 2018 Yala) (Table 4.7).

4.5 Sweet Potato and Manioc

4.5.1 Cost of cultivation

The cost of cultivation survey was conducted for irrigated sweet potato production in Matale and manioc production in Gampaha for 2019 Yala season. The total cost of cultivation (including family owned inputs) of sweet potato and manioc in relevant districts were Rs. 116,549/ac. and Rs.51,920/ac. respectively.

4.5.2 Components of the total cost

The labour has accounted for 81% of the total cost and ,12% and 7% of total cost has incurred on material and machinery of sweet potato cultivation. The shares of corresponding labour, material and machinery for manioc production were 63%,21% and 16% (Figure 4 .13)

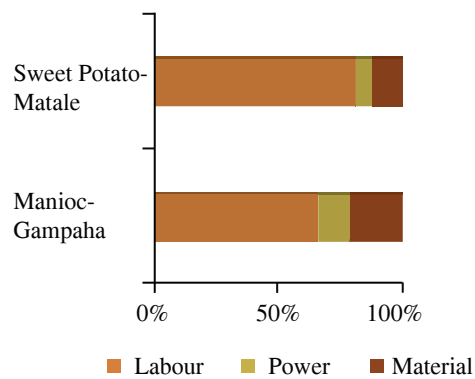


Figure 4.13 Major componenets of total cost - Sweet potato & Manioc

4.5.3 Cultural practices

Cultural practices adopted for manioc and sweet potato production in both districts are similar. Majority of farmers used four wheel tractors for land preparation (100%, 93%). Costs on fertilizer application (34%) and weeding and earthing up (21%) were the costly operations in manioc cultivation in Gampaha, while it was 35% for harvesting and drawing and 17% for preparation of bed and ridges in sweet potato cultivation at Matale.

4.5.4 Labour usage and wage rate

The application of hired labour was relatively high in sweet potato (51 man days) in Matale. The reported wage rate; Rs. 1433/md was comparatively bigger Gampaha in manioc cultivation.

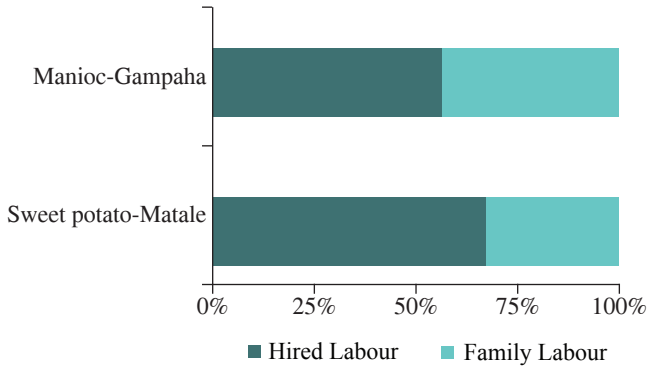


Figure 4.14 Labour usage of sweet potato & manioc

4.5.5 Net income

The net income received by the manioc cultivating farmers in Gampaha was Rs. 206,752/ac while it was Rs. 152,251/ac for sweet potato in Matale (Table 4.6). In contrast to the previous Yala season, the net income of manioc cultivation in Gampaha has increased by 32% . The net income of sweet potato in Matale has increased by 19% as of 2019 Yala .

4.5.6 Average yield

Average yield for sweet potato in Matale was 7680 kg/ac and for manioc in Gampaha was 5072 kg/ac. Compared to previous 2018 Yale season, the average yield has increased by 21% in sweet potato, but manioc cultivation in Gampaha the average yield has slightly decreased.

4.5.7 Average farm-gate price

The farm-gate price of sweet potato in Matale and manioc in Gampaha were Rs.35.00/kg and Rs. 51.00/kg respectively. Compared to previous Yala 2018, the farm-gate price received for sweet potato (Rs.38.00/kg in 2018 Yala) was not significantly different in 2019 Yala season. However, manioc has picked a better price during this Yala (Rs. 34.00/kg in 2018 Yala).

4.5.8 Unit cost of production

Unit cost of production (including imputed cost) for manioc was Rs. 10.24/kg, while it was Rs.15.18/kg for sweet potato cultivation in Matale.

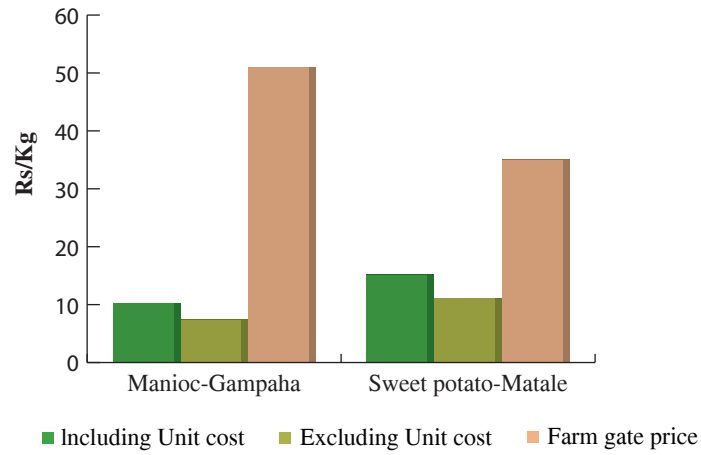


Figure 4.15 Unit cost and farm-gate price of sweet potato and manioc

4.6 Up-country Vegetables

Four up country vegetables; cabbage, carrot, pole bean and tomato were considered for the analysis of cost and returns of up country vegetable cultivation in 2019 Yala season.

4.6.1 Cost of cultivation

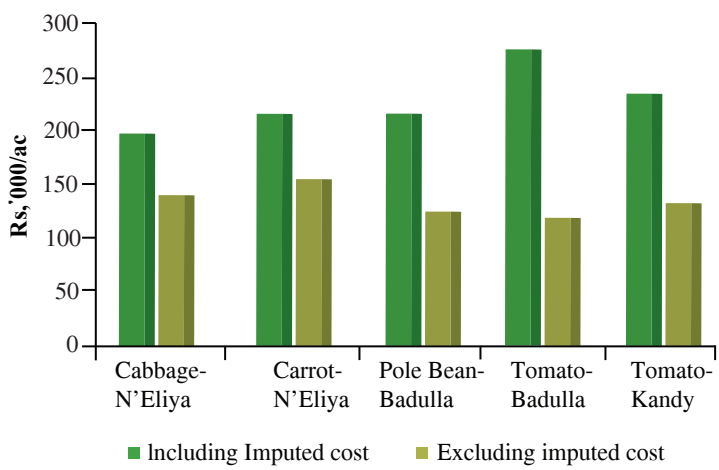


Figure 4.16 Total cost and cash cost share in up country vegetables

The cost of cultivation surveys for up country vegetables were conducted for cabbage and carrot in Nuwara Eliya, tomato in Badulla and Kandy, and pole bean in Badulla. All the crops were cultivated under irrigated condition. Hybrid varieties were popular among farmers in up country vegetable cultivation. The total cost of cultivation per acre (including imputed cost) reported for 2019 Yala season for the above vegetables varied from Rs.195,541 (for cabbage in Nuwara Eliya) to Rs. 273,149 (for tomato in Badulla) (Table 4.1 and Figure 4.16).

4.6.2 Components of the total cost

The total cost included three cost components as labour, power and materials. More than 66% of the total cost comprises of labour as vegetable cultivation is a labour intensive activity (Figure 4.17). Machinery cost as a percentage of total cost is the minimum in the three components. Approximately, 80% of the cabbage growing farmers in Nuwara Eliya used machinery for ploughing.The machinery usage of carrot in Nuwara Eliya was 100%, 69% for pole bean in Badulla, and 57% of tomato in Badulla and 53% for tomato in Kandy Farmer owned inputs were not reported in up country vegetables since seeds, fertilizer and agro chemicals have been purchased by the farmer. Material cost varied from 20% to 30% of the total cost of cultivation (Table 4.2).

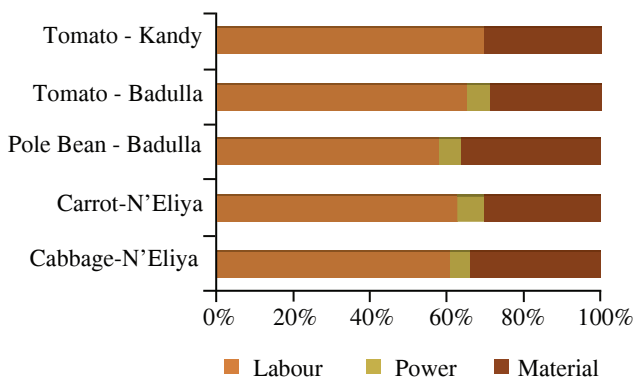


Figure 4.17 Major components of total cost of production –up country vegetables

4.6.3 Labour usage

The cultivation of vegetables is a labour intensive activity and the usage of labour changes with the type of crop, the management practice adopted and field conditions. For up country vegetable cultivation, 97 (for cabbage in Nuwara Eliya) to 165 (tomato in Badulla) total man days have been spent and the use of family labour was prominent except in cabbage and carrot cultivation in Nuwara Eliya (Table 4.4). The share of hired labour was relatively higher in Nuwara Eliya 58% for cabbage, and 62% for carrot (Figure 4.18).

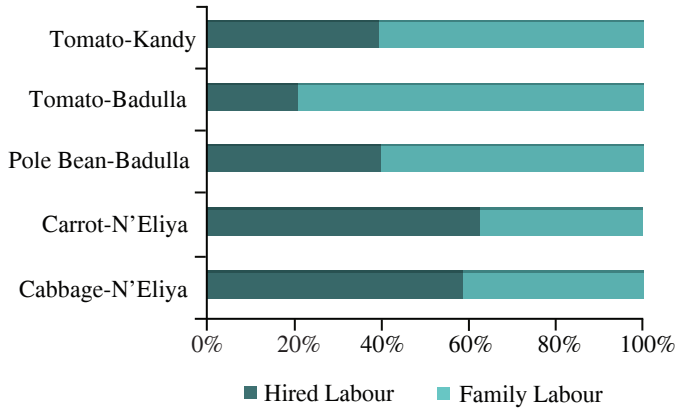


Figure 4.18 Labour usage for up-country vegetable cultivation

4.6.4 Average yield

Yield levels of selected up-country vegetables in 2019 Yala season is presented in Figure 4.19. The average yield reported for tomato in Badulla (8782 kg/ac) was higher than that of Kandy (7110 kg/ac). In Nuwara Eliya, reported average yield in cabbage was 7636 kg/ac while for carrot, it was 5770 kg/ac.

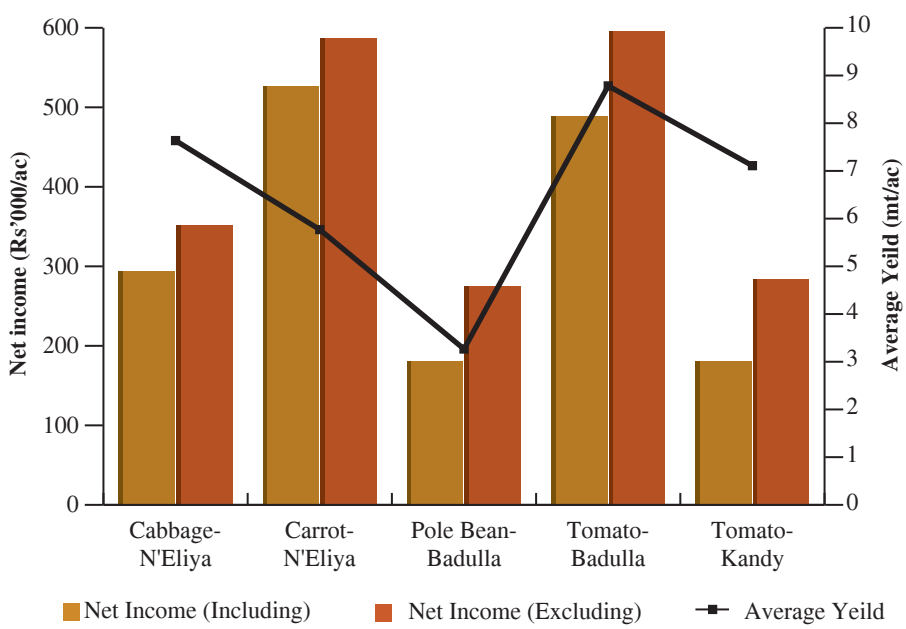


Figure 4.19 Average yield and net income of up country vegetables

4.6.5 Net income

The net income from up-country vegetable cultivation is estimated with and without farmer owned inputs (Figure 4.19). The farmer earned profit (excluding imputed cost) per acre varied from Rs.274,257 (pole bean in Badulla) to Rs. 595,431 (tomato in Badulla) (Table 4.6).

4.6.6 Average farm-gate price

The producer prices received during the season ranged from Rs. 58.00 per kg (tomato in Kandy) to Rs. 128.00 per kg (carrot in Nuwara Eliya) (Table 4.6 and Figure 4.20). A lower farm-gate price was received for carrot (Rs. 128.00 in NuwaraEliya), pole bean (Rs. 121.00 in Badulla) and tomato (Rs. 81.00 in Badulla) during this season compared to the previous Yala season. However, cabbage and tomato at Kandy received a higher farm gate price than that of 2018 Yala season.

4.6.7 Unit cost of production

The unit cost of production (including imputed cost) of up country vegetables varied from Rs. 25.61/ kg for cabbage in NuwaraEliya toRs. 65.85/kg for pole bean in Badulla (Table 4.7). The unit cost for cultivating carrot in NuwaraEliya was Rs. 36.81/kg. For tomato cultivation in both the districts, the unit cost did not show a significant difference (Rs.31.10/kg in Badulla and Rs. 32.60 in Kandy).

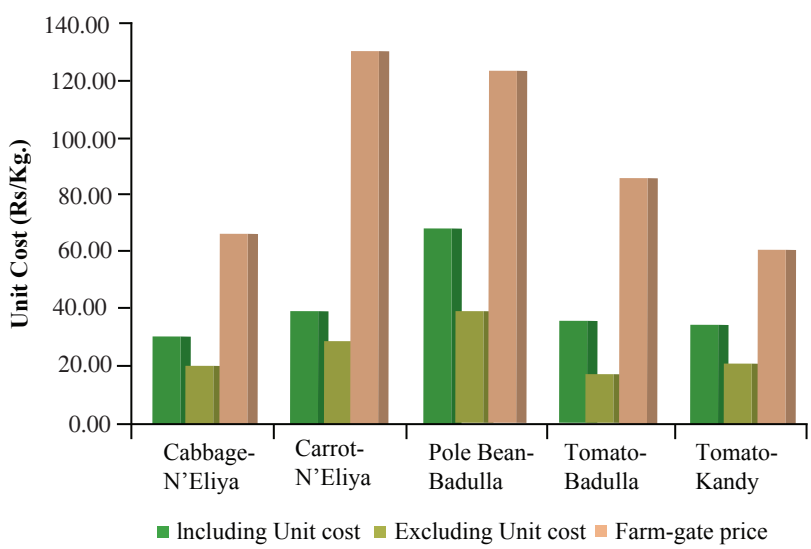


Figure 4.20 Unit cost and farm-gate price of up country vegetables

4.7 Low Country Vegetables

As low country vegetables, bitter gourd and brinjal cultivated in Hambanthota district were considered in the following discussion.

4.7.1 Cost of cultivation

The selected low country vegetable crops for the survey; bitter gourd and brinjal have cultivated under irrigated condition in Hambantota. The total cost of cultivation (including imputed cost) reported for bitter gourd and brinjal was Rs.259,731 and Rs. 182,753 per acre respectively (Table 4.2). The Table 5.14 shows that 93% of farmers in the sample have grown hybrid variety, while 7% of farmers have cultivated local varieties of brinjal. In bitter gourd cultivation at Hambantota, 64% hybrid and 36% of farmers have used local varieties.

4.7.2 Component of the total cost

Labour was the highest incurred cost component for brinjal (67%) and bitter gourd (58%). The costs shares of labour, material and machinery were 67%, 11%, 22% for brinjal and 58%, 07%, 35% for bitter gourd respectively. Material cost was the second highest cost component for bitter gourd (35%) and (22%) for brinjal (Table 4.2)

4.7.3 Labour usage, average yield and net income

The average labour usage per acre of bitter gourd and brinjol cultivation in Hambanthota district was 106 man days and 87 man days respectively. Average yield for brinjal and bitter gourd were 8861 kg/ ac and 5073 kg/ ac respectively in Hambantota (Table 4.6).The net return (excluding imputed cost) received was Rs. 680,276/ac for brinjal and Rs. 576,368 /ac for bitter gourd cultivation. The farm-gate price received for bitter gourd was Rs. 145.00/kg and Rs. 89.00/kg for brinjal.

4.7.4 Unit cost of production

Unit cost of production of low country vegetables are depicted in Table 4.7. The unit cost including imputed cost was Rs.51.20 /kg for bitter gourd and Rs.20.62 /kg for brinjal. The unit cost excluding the imputed cost was reported as Rs. 31.29/kg and Rs. 12.23/kg respectively for bitter gourd and brinjal.

SUMMARY
SUBSIDIARY FOOD CROPS

Table 4.1: Comparison of cost of cultivation of SFCs, root and tubers and vegetables

Crop	Irrigation	District	Holding size (ac)		Cost of cultivation (Rs./ac)		Cash cost % of total cost
			Mean	Mode	Total cost	Cash cost	
4.1.1 Coarse grains							
Maize	IR	Badulla	1.7	1.0	74,694	37,408	50
4.1.2 Pulses							
Cowpea	RF	Ampara	1.7	1.0	38,058	21,349	56
4.1.3 Condiments							
Big onion	IR	Matale	1.1	1.3	233,367	150398	64
Green chilli	IR	Anuradhapura	0.4	0.5	260,709	129,109	50
Red onion	IR	Puttalam	1.9	1.0	267,886	243874	91
Red onion	IR	Trincomalee	1.6	1.0	299,340	257736	86
4.1.4 Oil crops							
Gingelly	RF	Anuradhapura	2.8	3.0	20,904	11,514	55
Soya bean	IR	System H	1.7	1.0	69,225	50,622	73
4.1.5 Root & tubers							
Manioc	RF	Gampaha	1.7	1.0	51,920	37,413	72
Potato	IR	Badulla	0.5	0.5	343,454	222,968	65
Potato	IR	N'Eliya	0.5	0.5	370,866	281,310	76
Sweet Potato	IR	Matale	1.1	1.4	116,549	85,182	73
4.1.6 Low country vegetables							
Bitter gourd	IR	Hambantota	1.3	1.5	259,731	159,217	61
Brinjal	IR	Hambantota	0.8	0.5	182,753	108,353	59
4.1.7 Up country vegetables							
Cabbage	IR	N'Eliya	0.6	0.5	195,541	137,115	70
Carrot	IR	N'Eliya	0.5	0.3	212,388	152,238	72
Pole bean	IR	Badulla	0.5	0.3	215,140	121,050	56
Tomato	IR	Badulla	0.4	0.3	273,149	115,911	42
Tomato	IR	Kandy	0.8	0.5	231,788	129,383	56

Table 4.2: Cost of cultivation (including cost of farmer owned inputs) : SFCs, root and tubers and vegetables

Crop	Irrigation	District	Cost (Rs./ac)			
			Labour	Power	Material	Total
4.1.1 Coarse grains						
Maize	IR	Badulla	47,922 (64)	8,433 (11)	18,339 (25)	74,694
4.1.2 Pulses						
Cowpea	RF	Ampara	27,527 72)	5,610 (15)	4,921 (13)	38,058
4.1.3 Condiments						
Big onion	IR	Matale	149,174 (64)	29,639 (13)	54,554 (23)	233,367
Green chilli	IR	Anuradhapura	192,331 (74)	23,310 (09)	45,068 (17)	260,709
Red onion	IR	Puttalam	96,093 (36)	14,909 (05)	156,884 (59)	267,886
Red onion	IR	Trincomalee	101,877 (34)	21,498 (07)	175,965 (59)	299,340
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	13,847 (67)	5,538 (26)	1,519 (07)	20,904
Soya bean	IR	System H	45,983 (66)	13,724 (20)	9,518 (14)	69,225
4.1.5 Root & tubers						
Manioc	RF	Gampaha	32,948 (63)	8,070 (16)	10,902 (21)	51,920
Potato	IR	Badulla	141,367 (41)	16,453 (05)	185,634 (54)	343,454
Potato	IR	N'Eliya	152,023 (41)	16,419 (04)	202,424 (55)	370,866
Sweet Potato	IR	Matale	94,501 (81)	7,829 (07)	14,219 (12)	116,549
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	150,440 (58)	17,725 (07)	91,566 (35)	259,731
Brinjal	IR	Hambantota	122,136 (67)	19,921 (11)	40,696 (22)	182,753
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	134,159 (69)	22,002 (11)	39,380 (20)	195,541
Carrot	IR	N'Eliya	154,191 (73)	9,535 (04)	48,662 (23)	212,388
Pole bean	IR	Badulla	142,832 (66)	9,367 (04)	62,941 (30)	215,140
Tomato	IR	Badulla	191,936 (70)	9,279 (03)	71,934 (27)	273,149
Tomato	IR	Kandy	164,013 (71)	11,411 (05)	56,364 (24)	231,788

Values within parentheses denote % of the total cost

Table 4.3: Cost of cultivation (excluding cost of farmer owned inputs) : SFCs, root and tubers and vegetables

Crop	Irrigation	District	Cost (Rs./ac)			
			Labour	Power	Material	Total
4.1.1 Coarse grains						
Maize	IR	Badulla	10,782 (29)	8,287 (22)	18,339 (49)	37,408
4.1.2 Pulses						
Cowpea	RF	Ampara	11,259 (53)	5,504 (26)	4,586 (21)	21,349
4.1.3 Condiments						
Big onion	IR	Matale	87,616 (58)	27,832 (19)	34,950 (23)	150,398
Green chilli	IR	Anuradhapura	61,250 (47)	22,791 (18)	45,068 (35)	129,109
Red onion	IR	Puttalam	73,440 (30)	13,550 (06)	156,884 (64)	243,874
Red onion	IR	Trincomalee	61,830 (24)	19,941 (08)	175,965 (68)	257,736
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	6,295 (54)	43,44 (38)	875 (08)	11,514
Soya bean	IR	System H	27,600 (55)	13,504 (26)	9,518 (19)	50,622
4.1.5 Root & tubers						
Manioc	RF	Gampaha	18629 (50)	7,882 (21)	10,902 (29)	37,413
Potato	IR	Badulla	74,613 (33)	12,411 (06)	135,944 (61)	222,968
Potato	IR	N'Eliya	76,038 (27)	12,944 (05)	192,328 (68)	281,310
Sweet Potato	IR	Matale	63,393 (74)	7,570 (09)	14,219 (17)	85,182
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	51,084 (32)	16,567 (10)	91,566 (58)	159,217
Brinjal	IR	Hambantota	47,736 (44)	19,921 (18)	40,696 (38)	108,353
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	77,448 (56)	20,287 (15)	39,380 (29)	137,115
Carrot	IR	N'Eliya	96,214 (63)	7,362 (05)	48,662 (32)	152,238
Pole bean	IR	Badulla	55,020 (44)	6,118 (05)	59,912 (51)	121,050
Tomato	IR	Badulla	36,352 (31)	7,625 (07)	71,934 (62)	115,911
Tomato	IR	Kandy	62,150 (48)	10,869 (08)	56,364 (44)	129,383

Values within parentheses denote % of the total cost

Table 4.4: Labour use and wage rate : SFCs, root and tubers and vegetables

Crop	Irrigation	District	Labour (md/ac)			Wage rate (Rs./md)
			Family	Hired	Total	
4.1.1 Coarse grains						
Maize	IR	Badulla	31	9	40	1,198
4.1.2 Pulses						
Cowpea	RF	Ampara	13	9	22	1,251
4.1.3 Condiments						
Big onion	IR	Matale	52	74	126	1,184
Green chilli	IR	Anuradhapura	107	50	157	1,225
Red onion	IR	Puttalam	21	68	89	1,080
Red onion	IR	Trincomalee	35	54	89	1,145
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	6	5	11	1,259
Soya bean	IR	System H	16	24	40	1,150
4.1.5 Root & tubers						
Manioc	RF	Gampaha	10	13	23	1,433
Potato	IR	Badulla	51	57	108	1,309
Potato	IR	N'Eliya	57	57	114	1,334
Sweet Potato	IR	Matale	25	51	76	1,243
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	70	36	106	1,419
Brinjal	IR	Hambantota	53	34	87	1,404
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	41	56	97	1,383
Carrot	IR	N'Eliya	44	73	117	1,318
Pole bean	IR	Badulla	67	42	109	1,310
Tomato	IR	Badulla	133	32	165	1,136
Tomato	IR	Kandy	82	50	132	1,243

Table 4.5: Quantity and cost of fertilizer : SFCs , root and tubers, and vegetables

Crop	Irrigation	District	Inorganic manure (kg/ac)	Organic manure (kg/ac)	Total cost (Rs./ac)	Cost as % of total input cost
4.1.1 Coarse grains						
Maize	IR	Badulla	244	-	5,999	33
4.1.2 Pulses						
Cowpea	RF	Ampara		-		
4.1.3 Condiments						
Big onion	IR	Matale	429	-	10,781	20
Green chilli	IR	Anuradhapura	389	-	9,119	20
Red onion	IR	Puttalam	301	3791	26,105	17
Red onion	IR	Trincomalee	179	1.9 LL	21,860	12
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	-	-	-	-
Soya bean	IR	System H	66	-	1,622	17
4.1.5 Root & tubers						
Manioc	RF	Gampaha	474	-	10,902	100
Potato	IR	Badulla	644	718	19,690	11
Potato	IR	N'Eliya	504	1410	21,564	11
Sweet Potato	IR	Matale	68	94	4,050	28
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	334	-	17,602	19
Brinjal	IR	Hambantota	329	-	8,066	20
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	451	-	10,898	28
Carrot	IR	N'Eliya	388	1247	17,570	36
Pole bean	IR	Badulla	222	630	8,478	13
Tomato	IR	Badulla	294	933	13,009	18
Tomato	IR	Kandy	381	-	14,512	26

Table 4.6: Yield, farm-gate price and returns :SFCs, root and tubers and vegetables

Crop	Irrigation	District	Yield (kg)	Farm-gate Price (Rs./kg)	Return (Rs./ac)			Return (Rs.)	
					Gross	Net		Labour	Capital
						1	2		
4.1.1 Coarse grains									
Maize	IR	Badulla	1835	50	91,750	17,056	54,342	1,628	2.45
4.1.2 Pulses									
Cowpea	RF	Ampara	264	174	45,936	7,878	24,587	1,629	2.15
4.1.3 Condiments									
Big onion	IR	Matale	6918	156	1,079,208	845,841	958,810	8,067	7.18
Green chilli	IR	Anuradhapura	5204	201	1,046,004	785,295	916,895	6,230	8.1
Red onion	IR	Puttalam	4697	98	460,306	192,420	216,432	3,257	1.89
Red onion	IR	Trincomalee	5258	135	709,830	410,490	452,094	5,774	2.75
4.1.4 Oil crops									
Gingelly	RF	Anuradhapura	221	204	45,084	24,180	33,570	3,624	3.92
Soya bean	IR	System H	1121	141	158,061	88,836	107,439	3,376	3.12
4.1.5 Root & tubers									
Manioc	RF	Gampaha	5072	51	258,672	206,752	221,259	10,430	6.91
Potato	IR	Badulla	6262	101	632,462	289,008	409,494	4,482	2.84
Potato	IR	N'Eliya	6438	115	740,370	369,504	459,060	4,694	2.63
Sweet Potato	IR	Matale	7680	35	268,800	152,251	183,618	3,250	3.16
4.1.6 Low country vegetables									
Bitter gourd	IR	Hambantota	5073	145	735,585	475,854	576,368	5,919	4.62
Brinjal	IR	Hambantota	8861	89	788,629	605,876	680,276	8,368	7.28
4.1.7 Up country vegetables									
Cabbage	IR	N'Eliya	7636	64	488,704	293,163	351,589	4,423	3.56
Carrot	IR	N'Eliya	5770	128	738,560	526,172	586,322	5,834	4.85
Pole bean	IR	Badulla	3267	121	395,307	180,167	274,257	3,021	3.27
Tomato	IR	Badulla	8782	81	711,342	438,193	595,431	3,829	6.14
Tomato	IR	Kandy	7110	58	412,380	180,592	282,997	2,615	3.19

1 Including cost of farmer owned inputs

2 Excluding cost of farmer owned inputs

Table 4.7: Unit cost and break even yield: SFCs, root and tubers and vegetables

Crop	Irrigation	District	Unit cost (Rs/kg)		Break-even yield (kg./ac)	
			1	2	1	2
4.1.1 Coarse grains						
Maize	IR	Badulla	40.71	20.39	1,494	748
4.1.2 Pulses						
Cowpea	RF	Ampara	144.16	80.87	219	123
4.1.3 Condiments						
Big onion	IR	Matale	33.74	21.74	1,496	964
Green chilli	IR	Anuradhapura	50.10	24.81	1,297	642
Red onion	IR	Puttalam	57.03	51.92	2,734	2,489
Red onion	IR	Trincomalee	56.93	49.02	2,217	1,909
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	94.59	52.10	102	56
Soya bean	IR	System H	61.75	45.16	491	359
4.1.5 Root & tubers						
Manioc	RF	Gampaha	10.24	7.38	1,018	734
Potato	IR	Badulla	54.85	35.61	3,401	2,208
Potato	IR	N'Eliya	57.61	43.70	3,225	2,446
Sweet Potato	IR	Matale	15.18	11.09	3,330	2,434
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	51.20	31.29	1,791	1,098
Brinjal	IR	Hambantota	20.62	12.23	2,053	1,217
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	25.61	17.96	3,055	2,142
Carrot	IR	N'Eliya	36.81	26.38	1,659	1,189
Pole bean	IR	Badulla	65.85	37.05	1,778	1,000
Tomato	IR	Badulla	31.10	13.20	3,372	1,431
Tomato	IR	Kandy	32.60	18.20	3,996	2,231

1 Including cost of farmer owned inputs
2 Excluding cost of farmer owned inputs

CHAPTER 5

SUBSIDERY FOOD CROPS, ROOT & TUBERS AND VEGETABLES - STATISTICS

Table 5.1: Cost of cultivation per acre of Maize (irrigated) - Badulla

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
Pre weedicide application	47	893.00		2022.00	2915.00
General land preparation	(27)	(4673.00)			
1st plough with 4wt	40	638.00	4942.00		5580.00
(do - manually)	(33)	(15820.00)			
Digging holes & seeding	100	8709.00		6715.00	15424.00
Weeding & earthing up	60	9544.00			9544.00
Weed control with weedicide	40	893.00		2471.00	3364.00
Fertilizer application	100	4176.00		5999.00	10175.00
Pest & disease control	87	765.00		1132.00	1897.00
Water management	100	6545.00			6545.00
Harvesting & drawing	100	10353.00			10353.00
Threshing & processing with engine powered thresher	83	1309.00	2093.00		3402.00
(do - manually)	(17)	(5100.00)			
Drying	67	3332.00			3332.00
Transport produce to stores	67	765.00	1398.00		2163.00
Total including imputed cost		47922.00	8433.00	18339.00	74694.00
Total excluding imputed cost		10782.00	8287.00	18339.00	37408.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Hybrid -100
Seed		kg	5.30	1267.00	
LABOUR					
Hired		md	9.00	1198.00	
Family		md	31.00		
Total		md	40.00		
FERTILIZER					
TSP	(33)	kg	(64.00)	(25.00)	
Urea	73	kg	101.00	24.00	
MOP	50	kg	46.00	25.00	
Mix fertilizer	73	kg	97.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	1835.00	4534.00
Price of Produce (Rs/kg)	50.00	
Gross Income (Rs.)	91750.00	226714.00
Profit including imputed cost (Rs.)	17056.00	42145.00
Profit excluding imputed cost (Rs.)	54342.00	134279.00
Unit cost (including imputed cost) (Rs/kg)	40.71	
Unit cost (excluding imputed cost (Rs/kg)	20.39	

Table 5.2: Cost of cultivation per acre of Cowpea (rain-fed) - Ampara

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	(27)	(3094.00)			
1st & 2nd plough with 4wt	94	720.00	5610.00		6330.00
(do - manually)	(6)	(3264.00)			
Digging holes & seeding	41	4320.00		3616.00	7936.00
(do-with 4wt)	(31)	(2450.00)	(3072.00)		
(do- with buffaloes)	(28)	(3164.00)	(1667.00)		
Weeding & earthing up	100	7680.00			7680.00
Pest & disease control	67	1027.00		1305.00	2332.00
Harvesting	100	10270.00			10270.00
Threshing & processing	100	3510.00			3510.00
Total including imputed cost		27527.00	5610.00	4921.00	38058.00
Total excluding imputed cost		11259.00	5504.00	4586.00	21349.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Red cowpea- 84
Seed		kg	13.10	276.00	Waruni - 16
LABOUR					
Hired		md	9.00	1251.00	
Family		md	13.00		
Total		md	22.00		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	264.00	652.00
Price of Produce (Rs/kg)	174.00	
Gross Income (Rs.)	45936.00	113508.00
Profit including imputed cost (Rs.)	7878.00	19467.00
Profit excluding imputed cost (Rs.)	24587.00	60754.00
Unit cost (including imputed cost) (Rs/kg)	144.16	
Unit cost (excluding imputed cost (Rs/kg)	80.87	

Table 5.3: Cost of cultivation per acre of Big onion (irrigated)-Matale

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	100	9330.00		1506.00	10836.00
General land preparation	53	3530.00			3530.00
1st &2nd plough with 4wt	73	1417.00	10840.00		12257.00
(do - with 2wt)	(17)	(1819.00)	(6000.00)		
(1st plough with 4wt)	(10)	(638.00)	(8000.00)		
Preparation beds & ridges	100	24184.00			24184.00
Transplanting	100	25619.00		24770.00	50389.00
Fertilizer application	100	6480.00		10781.00	17261.00
Weeding & earthing up	83	10150.00			10150.00
Weed control with weedicides	93	1901.00		4339.00	6240.00
Pest & disease control	100	8626.00		13158.00	21784.00
Water management	100	20640.00	14452.00		35092.00
Harvesting & drawing	100	20633.00			20633.00
Processing manually	100	14384.00			14384.00
Transport produce to stores	100	2280.00	4347.00		6627.00
Total including imputed cost		149174.00	29639.00	54554.00	233367.00
Total excluding imputed cost		87616.00	27832.00	34950.00	150398.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					
Seed		kg	2.50	9908.00	Local - 100
LABOUR					
Hired		md	74.00	1184.00	
Family		md	52.00		
Total		md	126.00		
FERTILIZER					
TSP	80	kg	118.00	26.00	
Urea	67	kg	62.00	24.00	
Onion mixture	93	kg	249.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	6918.00*	17094.00
Price of Produce (Rs/kg)	156.00	
Gross Income (Rs.)	1079208.00	2666723.00
Profit including imputed cost (Rs.)	845841.00	2090073.00
Profit excluding imputed cost (Rs.)	928810.00	2295090.00
Unit cost (including imputed cost) (Rs/kg)	33.74	
Unit cost (excluding imputed cost (Rs/kg)	21.74	

* Heavy rains prevailed during the harvesting period

Table 5.4: Cost of cultivation per acre of Green chilli (irrigated)- Anuradhapura

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	100	5830.00		1167.00	6997.00
General land preparation	(26)	(11232.00)			
1st & 2nd plough with 4wt	100	1825.00	6861.00		8686.00
Preparation beds & ridges	100	22464.00			22464.00
Transplanting	100	14672.00		13568.00	28240.00
Fertilizer application	100	15584.00		9119.00	24703.00
Weeding & earthing up	100	35595.00			35595.00
Pest & disease control	100	21131.00		21214.00	42345.00
Water management	100	30240.00	16449.00		46689.00
Harvesting & drawing	100	44990.00			44990.00
Total including imputed cost		192331.00	23310.00	45068.00	260709.00
Total excluding imputed cost		61250.00	22791.00	45068.00	129109.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					MICH (Hy1) - 53
Seed	Hybrid seed	kg	0.15	90453.00	Galkiriyagama - 32
	Local seed	kg	(0.47)	(5529.00)	Other - 15
LABOUR					
Hired		md	50.00	1225.00	
Family		md	107.00		
Total		md	157.00		
FERTILIZER					
TSP	57	kg	91.00	23.00	
Urea	47	kg	106.00	21.00	
Chilli mixture	73	kg	192.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	5204.00	12859.00
Price of Produce (Rs/kg)	201.00	
Gross Income (Rs.)	1046004.00	2584676.00
Profit including imputed cost (Rs.)	785295.00	1940464.00
Profit excluding imputed cost (Rs.)	916895.00	2265648.00
Unit cost (including imputed cost) (Rs/kg)	50.10	
Unit cost (excluding imputed cost (Rs/kg)	24.81	

Table 5.5: Cost of cultivation per acre of Red onion (irrigated) - Puttlam

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	83	2090.00			2090.00
1st plough with 4wt	100	306.00	3221.00		3527.00
Seed processing	100	3575.00			3575.00
Seeding	100	7519.00		122412.00	129931.00
Fertilizer application	100	4030.00		26105.00	30135.00
Weed control with weedicide	97	623.00		2179.00	2802.00
Weeding & loosening soil	67	8339.00			8339.00
Pest & disease control	83	1331.00		3455.00	4786.00
Water management	100	32656.00	8533.00		41189.00
Harvesting manually	100	12189.00		2733*	14922.00
Processing manually	100	22135.00			22135.00
Transport produce to stores	60	1300.00	3155.00		4455.00
Total Including Imputed Cost		96093.00	14909.00	156884.00	267886.00
Total Excluding Imputed Cost		73440.00	13550.00	156884.00	243874.00

**Canjan cost*

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Vedalan - 100
Seed		kg	606.00	202.00	
LABOUR					
Hired		md	68.00	1080.00	
Family		md	21.00		
Total		md	89.00		
FERTILIZER					
TSP	57	kg	74.00	23.00	
Urea	63	kg	40.00	24.00	
Onion mixture	73	kg	107.00	24.00	
Cowdung	63	kg	3791.00	5.00	
CU 3	47	kg	80.00	24.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	4697.00	11606.00
Price of Produce (Rs/kg)	98.00	
Gross Income (Rs.)	460306.00	1137416.00
Profit including imputed cost (Rs.)	192420.00	475470.00
Profit excluding imputed cost (Rs.)	216432.00	534803.00
Unit cost (including imputed cost) (Rs/kg)	57.03	
Unit cost (excluding imputed cost (Rs/kg)	51.92	

Table 5.6: Cost of cultivation per acre of Red onion (irrigated) - Trincomalee

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	90	1200.00			1200.00
1st & 2nd plough with 4 wt	100	793.00	9860.00		10653.00
Preparation beds & ridges	100	15750.00			15750.00
Seed processing on contract	100	4138.00			4138.00
Seeding	100	6615.00		142688.00	149303.00
Fertilizer application	100	6759.00		21860.00	28619.00
Weeding & loosning soil	100	8119.00			8119.00
Weed control with weedicides	90	900.00		2349.00	3249.00
Pest & disease control	97	2400.00		9068.00	11468.00
Water management	100	26850.00	9038.00		35888.00
Harvesting & drawing	100	13823.00			13823.00
Processing manually	100	14080.00			14080.00
Transport produce to stores	67	450.00	2600.00		3050.00
Total including imputed cost		101877.00	21498.00	175965.00	299340.00
Total excluding imputed cost		61830.00	19941.00	175965.00	257736.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Vedalan-100
Seed		kg	686.00	208.00	
LABOUR					
Hired		md	54.00	1145.00	
Family		md	35.00		
Total		md	89.00		
FERTILIZER					
TSP	77	kg	61.00	27.00	
Urea	90	kg	62.00	28.00	
MOP	67	kg	56.00	31.00	
Cowdung	100	LL	1.9	8811.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average yield (kg.)				5258.00	12993.00
Price of Produce (Rs/kg)				135.00	
Gross Income (Rs.)				709830.00	1753990.00
Profit including imputed cost (Rs.)				410490.00	1014321.00
Profit excluding imputed cost (Rs.)				452094.00	1117124.00
Unit cost (including imputed cost) (Rs/kg)				56.93	
Unit cost (excluding imputed cost (Rs/kg)				49.02	

Table 5.7: Cost of cultivation per acre of Gingelly (rain-fed)- Anuradhapura

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	61	1500.00			1500.00
1st plough with 4wt	54	125.00	5338.00		5463.00
(1st & 2nd plough with 4wt)	(46)		(5925.00)		
Broadcasting	100	375.00		1519.00	1894.00
Harvesting & drawing	100	8652.00			8652.00
Processing	100	1890.00			1890.00
Drying	54	945.00			945.00
Transport produce to stores	54	360.00	200.00		560.00
Total including Iiputed Cost		13847.00	5538.00	1519.00	20904.00
Total excluding imputed cost		6295.00	4344.00	875.00	11514.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Black -57
Seed		kg	6.20	245.00	White - 43
LABOUR					
Hired		md	5.00	1259.00	
Family		md	6.00		
Total		md	11.00		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	221.00*	546.00
Price of Produce (Rs/kg)	204.00	
Gross Income (Rs.)	45084.00	111403.00
Profit including imputed cost (Rs.)	24180.00	59749.00
Profit excluding imputed cost (Rs.)	33570.00	82951.00
Unit cost (including imputed cost) (Rs/kg)	94.59	
Unit cost (excluding imputed cost (Rs/kg)	52.10	

Table 5.8: Cost of cultivation per acre of Soya bean (irrigated) - System H

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	50	1500.00			1500.00
1st & 2nd plough with 4wt	80	650.00	9770.00		10420.00
(do - with 2wt)	(20)	(1166.00)			
Preparation beds & ridges	100	7375.00			7375.00
Seeding	100	7592.00		3507.00	11099.00
Fertilizer application	100	600.00		1622.00	2222.00
Weed control with weedicide	80	759.00		1778.00	2537.00
Weeding & earthing up	100	8500.00			8500.00
Pest & disease control	100	1632.00		2611.00	4243.00
Water management	100	4875.00			4875.00
Harvesting & drawing	100	10125.00			10125.00
Processing with 4w thresher	100	2000.00	3405.00		5405.00
Transport produce to stores	83	375.00	549.00		924.00
Total including imputed cost		45983.00	13724.00	9518.00	69225.00
Total excluding imputed cost		27600.00	13504.00	9518.00	50622.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					PB -1 - 100
Seed		kg	21.00	167.00	
LABOUR					
Hired		md	24.00	1150.00	
Family		md	16.00		
Total		md	40.00		
FERTILIZE					
TSP	77	kg	38.00	25.00	
Urea	80	kg	28.00	24.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	1121.00	2770.00
Price of Produce (Rs/kg)	141.00	
Gross Income (Rs.)	158061.00	390569.00
Profit including imputed cost (Rs.)	88836.00	219514.00
Profit excluding imputed cost (Rs.)	107439.00	265482.00
Unit cost (including imputed cost) (Rs/kg)	61.75	
Unit cost (excluding imputed cost (Rs/kg)	45.16	

Table 5.9: Cost of cultivation per acre of Manioc (rain-fed) -Gampaha

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	70	4345.00			4345.00
1st ,2nd & 3rd plough with 4wt	100	1002.00	8070.00		9072.00
Digging holes & planting	100	9738.00			9738.00
Fertilizer application	97	6692.00		10902.00	17594.00
Weeding & earthing up	90	11171.00			11171.00
Field protection	(37)	(5850.00)			
Harvesting & drawing by buyer	80				
(do- manually)	(20)	(14532.00)			
Total including imputed cost		32948.00	8070.00	10902.00	51920.00
Total excluding imputed cost		18629.00	8070.00	10902.00	37601.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Kalu peradeni - 91
Planting material		sticks	3969.00		Kirikawadi - 09
LABOUR					
Hired		md	13.00	1433.00	
Family		md	10.00		
Total		md	23.00		
FERTILIZER					
Coconut mixture	90	kg	474.00	23.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	5072.00	12533.00
Price of Produce (Rs/kg)	51.00	
Gross Income (Rs.)	258672.00	639179.00
Profit including imputed cost (Rs.)	206752.00	510884.00
Profit excluding imputed cost (Rs.)	221071.00	546266.00
Unit cost (including imputed cost) (Rs/kg)	10.24	
Unit cost (excluding imputed cost (Rs/kg)	7.41	

Table 5.10: Cost of cultivation per acre of Potato (irrigated) - Badulla

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	70	11276.00			11276.00
1st Plough with 2wt	90	1968.00	11100.00		13068.00
(do - manually)	(10)	(14391)			
Prperation beds & ridges	100	13900.00		3130.00	17030.00
Digging holes & seeding	100	15651.00		143276.00	158927.00
Fertilizer application	100	6500.00		19690.00	26190.00
Weed control with weedicide	57	893.00		2472.00	3365.00
Weeding & earthing up	100	14036.00			14036.00
Pest & disease control	100	15718.00		17066.00	32784.00
Water management	100	21692.00	5353.00		27045.00
Harvesting & drawing	100	39733.00			39733.00
Total including imputed cost		141367.00	16453.00	185634.00	343454.00
Total excluding imputed cost		74613.00	12411.00	135944.00	222968.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Granola - 93
Seed		kg	731.00	196.00	Other - 07
LABOUR					
Hired		md	57.00	1309.00	
Family		md	51.00		
Total		md	108.00		
FERTILIZER					
Poultry manure	50	kg	718.00	5.00	
Potato mixture	93	kg	644.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	6262.00	15473.00
Price of Produce (Rs/kg)	101.00	
Gross Income (Rs.)	632462.00	1562814.00
Profit including imputed cost (Rs.)	289008.00	714139.00
Profit excluding imputed cost (Rs.)	409494.00	1011860.00
Unit cost (including imputed cost) (Rs/kg)	54.85	
Unit cost (excluding imputed cost (Rs/kg)	35.61	

Table 5.11: Cost of cultivation per acre of Potato (irrigated) - Nuwara Eliya

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	100	14113.00			14113.00
1st Plough with 2wt	87	1328.00	9760.00		11088.00
(do manually)	(13)	(20265.00)			
Prperation beds & ridges	100	16334.00		4558.00	20892.00
Seeding	100	18214.00		154874.00	173088.00
Fertilizer application	100	17547.00		21564.00	39111.00
Weeding & earthing up	100	18026.00			18026.00
Pest & disease control	100	18300.00		21428.00	39728.00
Water Management	100	20520.00	6659.00		27179.00
Harvesting & drawing	100	27641.00			27641.00
Total including imputed cost		152023.00	16419.00	202424.00	370866.00
Total excluding imputed cost		76038.00	12944.00	192328.00	281310.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Granola - 97
Seed		kg	734.00	211.00	Other - 03
LABOUR					
Hired		md	57.00	1334.00	
Family		md	57.00		
Total		md	114.00		
FERTILIZER					
Poultry manure	63	kg	1410.00	6.00	
Potato mixture	45	kg	504.00	26.00	
(Cowdung)	(33)	kg	(5675.00)	(6.60)	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	6438.00	15908.00
Price of Produce (Rs/kg)	115.00	
Gross Income (Rs.)	740370.00	1829454.00
Profit including imputed cost (Rs.)	369504.00	913044.00
Profit excluding imputed cost (Rs.)	459060.00	1134337.00
Unit cost (including imputed cost) (Rs/kg)	57.61	
Unit cost (excluding imputed cost (Rs/kg)	43.70	

Table 5.12: Cost of cultivation per acre of Sweet potato (irrigated) - Matale

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	(37)	(1800.00)			
1st plough with 4wt	77	750.00	7829.00		8579.00
(do with 2wt)	(7)				
1st & 2nd plough with 4wt	(16)	(1350.00)	(8000.00)		
Preparation beds & ridges	100	19620.00			19620.00
Processing materials & planting	100	15805.00			15805.00
Fertilizer applicatiion	100	2990.00		4050.00	7040.00
(Weeding & earthing up)	(37)	(10499.00)			
Weed control with weedicide	93	1375.00		4027.00	5402.00
Pest & disease control	100	4461.00		6142.00	10603.00
Water management	100	8000.00			8000.00
Harvesting & drawing	100	41500.00			41500.00
Total including imputed cost		94501.00	7829.00	14219.00	116549.00
Total excluding imputed cost		63393.00	7570.00	14219.00	85182.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Wariyapola Red - 100
Cuttings		kg	1119.00	-	
LABOUR					
Hired		md	51.00	1243.00	
Family		md	25.00		
Total		md	76.00		
FERTILIZER					
TSP	60	kg	68.00	25.00	
Potato mixture	67	kg	94.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	7680.00	18977.00
Price of Produce (Rs/kg)	35.00	
Gross Income (Rs.)	268800.00	664205.00
Profit including imputed cost (Rs.)	152251.00	376212.00
Profit excluding imputed cost (Rs.)	183618.00	453720.00
Unit cost (including imputed cost) (Rs/kg)	15.18	
Unit cost (excluding imputed cost (Rs/kg)	11.09	

Table 5.13: Cost of cultivation per acre of Bitter gourd (irrigated) -Hambantota

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
1st plough with 4wt	60	1014.00	6441.00		7455.00
(do - with 2wt)	(40)	(1500.00)	(6120.00)		
Digging holes & seeding	100	12598.00		30356.00	42954.00
Fertilizer application	100	14625.00		17602.00	32227.00
Weeding & earthing up	100	21960.00			21960.00
Pest & disease control	100	15900.00		23951.00	39851.00
Trelising & training	100	27512.00		19657.00	47169.00
Water management	100	16827.00	11284.00		28111.00
Harvesting & drawing	100	40004.00			40004.00
Total including imputed cost		150440.00	17725.00	91566.00	259731.00
Total excluding imputed cost		51084.00	16567.00	91566.00	159217.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Hybrid - 64
Seed	Hybrid	kg	1.00	30356.00	Local - 36
	Local	kg	(1.00)	(7119.00)	
LABOUR					
Hired		md	36.00	1419.00	
Family		md	70.00		
Total		md	106.00		
FERTILIER					
TSP	60	kg	98.00	24.00	
Vegetable mixture	40	kg	151.00	25.00	
Yaramila	43	kg	85.00	135.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average yield (kg.)				5073.00*	12535.00
Price of Produce (Rs/kg)				145.00	
Gross Income (Rs.)				735585.00	1817631.00
Profit including imputed cost (Rs.)				475854.00	1175835.00
Profit excluding imputed cost (Rs.)				576368.00	1424205.00
Unit cost (including imputed cost) (Rs/kg)				51.20	
Unit cost (excluding imputed cost (Rs/kg)				31.39	

**low yeild due to rain & diseases*

Table 5.14: Cost of cultivation per acre of Brinjal (irrigated) - Hambantota

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	100	925.00		483.00	1408.00
General land preparation	53	4573.00			4573.00
1st 2nd & 3rd plough with 4wt	67	738.00	7549.00		8287.00
(do-manually)	(3)				
Digging holes & transplanting	100	9440.00		3568.00	13008.00
Fertilizer application	100	11948.00		8066.00	20014.00
Weeding & earthing up	100	18244.00			18244.00
Pest & disease control	100	13950.00		28579.00	42529.00
Water management	100	16520.00	12372.00		28892.00
Harvesting & drawing	100	45798.00			45798.00
Total including imputed cost		122136.00	19921.00	40696.00	182753.00
Total excluding imputed cost		47736.00	19921.00	40696.00	108353.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Hybrid - 93
Seed		kg	0.15	23786.00	Local - 07
LABOUR					
Hired		md	34.00	1404.00	
Family		md	53.00		
Total		md	87.00		
FERTILIZER					
TSP	60	kg	50.00	25.00	
Urea	67	kg	159.00	24.00	
Vegetable mixture	40	kg	120.00	25.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	8861.00	21896.00
Price of Produce (Rs/kg)	89.00	
Gross Income (Rs.)	788629.00	1948702.00
Profit including imputed cost (Rs.)	605876.00	1497120.00
Profit excluding imputed cost (Rs.)	680276.00	1680962.00
Unit cost (including imputed cost) (Rs/kg)	20.62	
Unit cost (excluding imputed cost (Rs/kg)	12.23	

Table 5.15: Cost of cultivation per acre of Cabbage (irrigated) - Nuwara Eliya

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	57	9300.00		1109.00	10409.00
General land preparation	87	15407.00			15407.00
1st plough with 2wt	80	1350.00	9412.00		10762.00
(do manually)	(20)	(13177.00)			
Prperation beds & ridges	100	17050.00		5826.00*	22876.00
Digging holes & transplanting	100	21313.00		7327.00	28640.00
Fertilizer application	100	12650.00		10898.00	23548.00
Weeding & earthing up	100	20350.00			20350.00
Pest & disease control	100	11301.00		14220.00	25521.00
Water management	100	25438.00	12590.00		38028.00
Harvesting & drawing**	(17)	(12000.00)			
Total including imputed cost		134159.00	22002.00	39380.00	195541.00
Total excluding imputed cost		77448.00	20287.00	39380.00	137115.00

**Lime* ***Rest done by buyer*

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					AS cross -22
Seed	57	kg	0.084	87222.00	Other -28
Plants	(43)	plants	(16760.00)	(2.30)	
LABOUR					
Hired		md	56.00	1383.00	
Family		md	41.00		
Total		md	97.00		
FERTILIZER					
Urea	40	kg	74.00	25.00	
Vegetable mixture	83	kg	377.00	24.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	7636.00***	18869.00
Price of Produce (Rs/kg)	64.00	
Gross Income (Rs.)	488704.00	1207588.00
Profit including imputed cost (Rs.)	293163.00	724406.00
Profit excluding imputed cost (Rs.)	351589.00	868776.00
Unit cost (including imputed cost) (Rs/kg)	25.61	
Unit cost (excluding imputed cost (Rs/kg)	17.96	

****Low yield due to heavy rains*

Table 5.16: Cost of cultivation per acre of Carrot (irrigated) - Nuwara Eliya

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	100	17609.00			17609.00
1st plough with 2wt	100	2100.00	9535.00		11635.00
Prperation beds & ridges	100	25560.00		5578.00*	31138.00
Seeding	100	19691.00		13702.00	33393.00
Fertilizer application	100	27898.00		17570.00	45468.00
Weeding & thining out	100	20717.00			20717.00
Pest & disease control	100	10200.00		11812.00	22012.00
Water management	100	30416.00			30416.00
Harvesting done by buyer	100				
Total including imputed cost		154191.00	9535.00	48662.00	212388.00
Total excluding imputed cost		96214.00	7362.00	48662.00	152238.00

* *Lime*

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Takis - 51
Seed		kg	1.60	8564.00	Terakota - 35
					Other - 14
LABOUR					
Hired		md	73.00	1318.00	
Family		md	44.00		
Total		md	117.00		
FERTILIZER					
Poultry manure	43	kg	1247.00	6.00	
potato mixture	63	kg	388.00	26.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	5770.00	14258.00
Price of Produce (Rs/kg)	128.00	
Gross Income (Rs.)	738560.00	1824982.00
Profit including imputed cost (Rs.)	526172.00	1300171.00
Profit excluding imputed cost (Rs.)	586322.00	1448802.00
Unit cost (including imputed cost) (Rs/kg)	36.81	
Unit cost (excluding imputed cost (Rs/kg)	26.38	

Table 5.17: Cost of cultivation per acre of Pole bean (irrigated) - Badulla

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	81	11889.00			11889.00
1st plough with 2wt	69	1300.00	9367.00		10667.00
(do - manually)	(31)	(9851.00)			
Preparation beds & ridges	100	13867.00		2445.00*	16312.00
Digging holes & seeding	100	15670.00		16956.00	32626.00
Fertilizer application	100	9982.00		8478.00	18460.00
Weeding & earthing up	100	13507.00			13507.00
Pest & disease control	100	17100.00		11529.00	28629.00
Fixing support	100	11792.00		23533.00	35325.00
Water management	100	18147.00			18147.00
Harvesting & drawing	100	29578.00			29578.00
Total Including Imputed Cost		142832.00	9367.00	62941.00	215140.00
Total Excluding Imputed Cost		55020.00	6118.00	59912.00	121050.00

* *Lime*

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Capri - 90
Seed		kg	13.5	1256.00	Other - 10
LABOUR					
Hired		md	42.00	1310.00	
Family		md	67.00		
Total		md	109.00		
FERTILIZER					
Vegetable mixture	100	kg	222.00	24.00	
Poultry manure	59	kg	630.00	5.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	3267.00	8073.00
Price of Produce (Rs/kg)	121.00	
Gross Income (Rs.)	395307.00	976804.00
Profit including imputed cost (Rs.)	180167.00	445193.00
Profit excluding imputed cost (Rs.)	274257.00	677689.00
Unit cost (including imputed cost) (Rs/kg)	65.85	
Unit cost (excluding imputed cost (Rs/kg)	37.05	

Table 5.18: Cost of cultivation per acre of Tomato (irrigated) - Badulla

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	83	6162.00		843.00	7005.00
General land preparation	83	10310.00			10310.00
1st Plough with 2wt	57	1067.00	9279.00		10346.00
(do manually)	(43)	(14213.00)			
Preparation of beds & ridges	100	12238.00		2037.00*	14275.00
Digging holes & transplanting	100	18492.00		8052.00	26544.00
Fertilizer application	100	7874.00		13009.00	20883.00
Weeding & earthing up	100	15809.00			15809.00
Pest & disease control	100	25233.00		24802.00	50035.00
Fixing support	100	12309.00		23191.00	35500.00
Training	100	12061.00			12061.00
Water Management	100	23461.00			23461.00
Harvesting & drawing	100	46920.00			46920.00
Total Including Imputed Cost		191936.00	9279.00	71934.00	273149.00
Total Excluding Imputed Cost		36352.00	7625.00	71934.00	115911.00

* *Lime*

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Padma - 98
Seed	83	kg	0.052	154837.00	Thilina - 02
(Plants)	(17)		(6400.00)	(2.40)	
LABOUR					
Hired		md	32.00	1136.00	
Family		md	133.00		
Total		md	165.00		
FERTILIZER					
Urea	43	kg	61.00	26.00	
Vegetable mixture	70	kg	233.00	25.00	
Poultry manure	87	kg	933.00	6.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	8782.00	21700.00
Price of Produce (Rs/kg)	81.00	
Gross Income (Rs.)	711342.00	1757726.00
Profit including imputed cost (Rs.)	438193.00	1082775.00
Profit excluding imputed cost (Rs.)	595431.00	1471310.00
Unit cost (including imputed cost) (Rs/kg)	31.10	
Unit cost (excluding imputed cost (Rs/kg)	13.20	

Table 5.19: Cost of cultivation per acre of Tomato (irrigated)-Kandy

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preparation	100	9539.00		1587.00	11126.00
General land preparation	50	8568.00			8568.00
1st Plough with 2wt	53	1650.00	5911.00		7561.00
(do manually)	(47)	(14296.00)			
2nd Plough with 2wt	47	1350.00	5500.00		6850.00
(do manually)	(30)	(9438.00)			
Preparation of beds & ridges	100	12842.00			12842.00
Digging holes & transplanting	100	11824.00		9322.00	21146.00
Fertilizer application	100	10518.00		14512.00	25030.00
Weeding & earthing up	100	19446.00			19446.00
Pest & disease control	100	11467.00		15487.00	26954.00
Fixing support	100	20429.00		15456.00	35885.00
Water management	100	13942.00			13942.00
Harvesting & drawing	100	42438.00			42438.00
Total including imputed cost		164013.00	11411.00	56364.00	231788.00
Total excluding imputed cost		62150.00	10869.00	56364.00	129383.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Percent Reported	Unit	Quantity	Unit Price (Rs)	Ext% of Variety
SEED					Abiman -69
Seed		kg	0.070	133178.00	Padma - 16
					Other - 15
LABOUR					
Hired		md	50.00	1243.00	
Family		md	82.00		
Total		md	132.00		
FERTILIZER					
Vegetable mixture	100	kg	334.00	26.00	
Nilketa	60	kg	47.00	124.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg.)	7110.00	17569.00
Price of Produce (Rs/kg)	58.00	
Gross Income (Rs.)	412380.00	1018991.00
Profit including imputed cost (Rs.)	180592.00	446243.00
Profit excluding imputed cost (Rs.)	282997.00	699286.00
Unit cost (including imputed cost) (Rs/kg)	32.60	
Unit cost (excluding imputed cost (Rs/kg)	18.20	

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