Volume 75

COST OF CULTIVATION OF AGRICULTURAL CROPS

2018 Yala

Socio Economics and Planning Centre
Department of Agriculture
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COST OF CULTIVATION
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FOREWORD

This is the 75th 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 covers the 2018Yala season and contains the comprehensive information on costs and returns of major food crops which would be useful for those involved in the development of the food crop sector.

This publication is based on the data collected from cost of cultivation survey covering 33 crops cultivated during 2018 Yala in different agro-ecological zones. The chapter one describes the methodology adopted, second and fourth chapters comprise of summary analysis for paddy and other field crops, and third and fifth contain the details of costs, returns and other related information.

Mr. S. Mathangaweera, Assistant Director of Agriculture (Economics) deserves a special word of appreciation for his overall supervision and guidance of this publication. The efforts of Assistant Directors of Agriculture (Economics), Economist Assistants, Statistical Officers, Development Officers, Research Assistants and Technical Assistants who collected, tabulated and processed data contributed greatly to make this publication a success.

The narration on major crops/crop groups were written by Ms.J.K.Galabada (Assisistant Director of Agriculture-Economics), Mr. R.S.B. Yaparatna and Ms. I.U. Sivuratna (Economist Assistants). The contribution of these officers is also gratefully acknowledged.

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I am thankful to all the farmers who provided data for this study.

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ABBREVIATIONS

AEZ	-	Agro-Ecological Zone
ASC	-	Agrarian Service Centre
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	=	0 1.00 kg)
(01 cob	=	150 grams)
Paddy	=	20.87 kg

CHAPTER 1

METHODOLOGY

1.0 Methodology

Stratified random sampling method was used in three stages. In the first stage, representative districts were selected, followed by ASC within the districts in the second stage and finally selection of farmers within the ASC in the third stage.

1.1 Selection of districts

1.1.1 Paddy - Cost of cultivation survey

Nine districts and three Mahaweli systems were selected considering the distribution of cultivated extent under different water management (irrigation and rain-fed) in 2018Yala season. Water management and Agro Ecological Zones of the selected districts, are given in the Table 1.1.

1.1.2 Subsidiary Food Crops (SFC) - Cost of cultivation survey

Eight SFCs, four root and tuber crops and seven vegetable crops were selected for this study (Table 1.2). District having largest extent of each SFC crops were selected.

1.2 Selection of ASC within the districts

Survey sites are the ASC and covering at least 50 percent of the total cultivated extent, were identified.

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 picked from each ASC was assigned proportionately to the cultivated extent of respective ASC.

1.4 Data collection

The survey was conducted by trained enumerators using a pre-tested structured questionnaire.

Table 1.1 Districts selected for cost of cultivation survey of paddy (sample size - 30 per district)

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.	System B	LCDZ	IR
8.	System C	LCDZ	IR
9.	System 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				
1.	Maize	Badulla	LCDZ	IR
2.	Maize	System H	LCDZ	IR
1.1.2 Pulses				
3.	Cowpea	Ampara	LCDZ	RF
1.1.3 Condiments				
4.	Big Onion	Matale	LCDZ	IR
5.	Green chilli	Anuradhapura	LCDZ	IR
6.	Red onion	Puttalam	LCDZ	IR
1.1.4 Oil seeds				
7.	Gingelly	Hambantota	LCDZ	RF
8.	Soya bean	System H	LCDZ	IR
1.1.5 Root & tubers				
9.	Manioc	Gampaha	LCWZ	RF
10.	Potato	Badulla	UCIZ	IR
11.	Potato	Nuwara Eliya	UCWZ	IR
12.	Sweet Potato	Matale	LCDZ	IR
1.1.6 Low country vegetables				
13.	Bitter gourd	Anuradhapura	LCDZ	IR
14.	Brinjal	Anuradhapura	LCDZ	IR
1.1.7 Up country vegetables				
15.	Cabbage	Nuwara Eliya	UCWZ	IR
16.	Carrot	Nuwara Eliya	UCWZ	IR
17.	Pole bean	Badulla	UCIZ	IR
18.	Tomato	Badulla	UCWZ	IR
19.	Tomato	Kandy	UCIZ	IR

1.5 Analysis

All costs and returns were computed for an acre of cultivated extent. Average costs were calculated for important cultural practices and the production process was synthesized by including the most prominent cultural practices in the model. Cost items were divided into three main components; labour, power, and materials. Power cost included cost of draught power for land preparation, irrigation etc, while material cost included seed, fertilizer, pesticide and other materials. Costs and returns were calculated by including as well as excluding cost of farmer owned inputs.

Following aspects were considered in the data analysis.

(a) All costs, returns and yields were reported on per acre basis.

(b) Fixed costs within individual farms have not been taken into account.
However services of fixed capital were accounted

(c) Exchange labour was treated as equivalent to family labour.
Therefore family labour included exchange labour as well.

(d) The imputed wage rate for family labour was same as hired wage rate for respective operations. The imputed value of farmer owned inputs was priced at prevailing market rates.

(e) 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.

(f) As the data in this publication is generally used by planners, policy makers
and investors, figures were rounded up for easy reference.

In addition to the details of costs, following analytical indicators are also presented in the report.

(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 imputed cost	=	Cost of cultivation including imputed cost / Farm-gate price
(h)	Break even yield excluding imputed cost	=	Cost of cultivation excluding 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

For computation of cost of production of paddy for the whole island, sample list of each district for the cost of production survey was taken as the sub-sample frame for the particular district. Then the following formula was used to decide sub-sample sizes to be drawn from different districts.

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

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

Since 10 case studies were conducted under irrigated condition, the aggregate samples of district as 300 sampling units. Out of these sub sample size for each district was determined from the above equation. Polonnaruwa had the largest extent of 26,022 ha under major irrigation. Therefore the sub sample size for Polonnaruwa was decided as 30. The sub sample sizes decided for each district is given in table 1.3.

The maximum extent harvested (16,559 ha). in rain-fed water regime was in Kurunagala district. 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, the initial district sample of 30 was used as the sampling frame and the number of farmers selected for sub sample of each district was drawn by the method of random sampling without replacement.

1.6.2 Biases arising due to methodology of sub-sample selection

The cost of cultivation survey was designed to represent modes of practices rather than to represent average practices. In selection of districts for the survey, districts are arranged in descending order of the harvested extents, and the districts that represent at least the first 75% of the national harvested extent of irrigated paddy and the first 30% of the national harvested extent of rain-fed paddy are selected. In selection of ASCs within a district, the same procedure is followed to select the ASCs with relatively high extents. The sample size for a district for paddy farming is fixed as 30. Then the sub sample size within an ASC is decided based on 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 selection within each ASC within a district is done randomly. The selection of areas with relatively large harvested extents gives a higher probability of selection for modes of practices over means of practices.

Since the design of the cost of cultivation survey gives a higher probability for the modes of practices to be selected, some practices mainly concentrated in districts with relatively large districts only (use of combine harvesters, adoption of some rice varieties such as At 362 and Bg 352) seems to have been over-represented than the published national average figures.

Table 1.3 sub sample size distribution of irrigated and rainfed paddy among districts

District/ region	Extent harvested for irrigated paddy during 2018Yala (ha)	Extent harvested for rain-fed paddy during 2018Yala (ha)	Sub sample size	
			for irrigated whole island sample	for rain-fed whole island sample
Ampara-East	15524	Nr	18	-
Ampara-West	15771	Nr	18	-
(Ampara district)	(31295)	Nr	(36)	-
Polonnaruwa	26022	Nr	30	-
Anuradhapura	15213	Nr	18	-
Hambantota	18919	Nr	22	-
Mahawelisystems				
System B	19445	Nr	22	-
System C	21693	Nr	25	-
System H	16453	Nr	19	-
Trincomalee	17291		20	-
Kurunegala	10916	16559	13	30
Kalutara	Nr	5125	-	9
Gampaha	Nr	2518	-	5
Kandy	Nr	1419	-	3
Total	177,247	25,621	205	47

Nr - Not relevant for computation

CHAPTER 2

PADDY ANALYSIS - SUMMARY

2.0 Comparison of the Cost of Cultivation of Paddy

2.1 Cost of cultivation

The cost of cultivation of paddy was surveyed in nine irrigated regions and four rain-fed districts in Sri Lanka. Per acre total cost of cultivation (cost of cultivation including farmer owned inputs) and percentage share of cash cost (cost of cultivation excluding farmer owned inputs) are given in Figure 2.1 and Table 2.5 respectively. The total cost per acre under irrigated condition ranged from Rs.40,053 in Ampara -East to Rs.54,791 in Mahaweli H. Per acre cost of rain-fed ranged from Rs. 45,118 in Kurunegala district to Rs.59,833 in Kandy district. The percentage share of cash cost component to the total cost was more than 53% in all irrigated and rainfed districts.

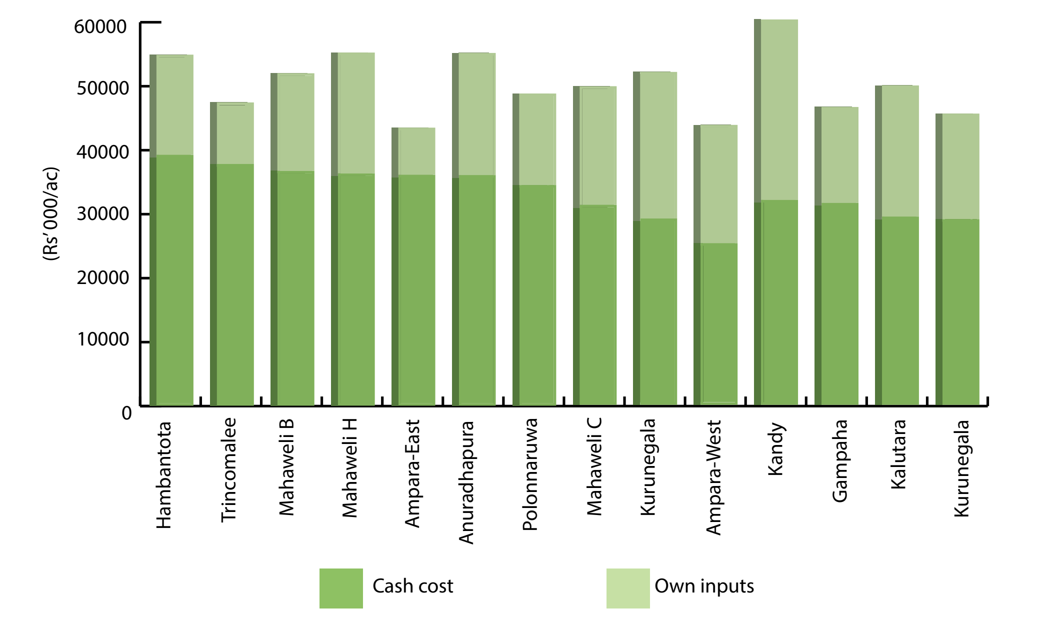


Figure 2.1 Cost of cultivation of paddy

2.2 Cost structure

Total cost is divided into three main components as labour, material and power. The percent share of labour cost in total cost ranged from 40% in Ampara-East (Rs. 17,070) to 50% in Kurunegala district (Rs. 25,761) and Mahaweli C (Rs. 24,604) under irrigated water regime. In rain-fed condition, it varied from 41% (Rs. 18,493) in Kurunegala district to 71% (Rs.42,700) in Kandy district. (Table 2.6 and Fig: 2.2). The cost of labour is comparatively lower in Ampara -East, (Rs.17,070) due to the labour/land ratios (Mean ac 3.73) and recorded lower man days in operation of plastering bunds (2.0 man days per ac).

With respect to the cost on power (machinery) at irrigated paddy, the percent share of power cost to the total cost varied from 30% (Rs.12,796) in Ampara-East to 39% (Rs.18,850) in Polonnaruwa. Under rain-fed condition it ranged from 20% (Rs.11,578) in Kandy district to 40% in Gampaha (Rs. 18,434) and Kurunagala (17,873) districts. Alternatively, the share of material cost varied from 15% in Mahaweli C (Rs. 7,428) and Mahaweli H (8,478) to 31% (Rs. 13,187) Ampara-East at irrigated paddy. In rain-fed condition it varied from 9% (Rs. 5,555) in Kandy district to 19% (Rs. 8,752) in Kurunegala district.

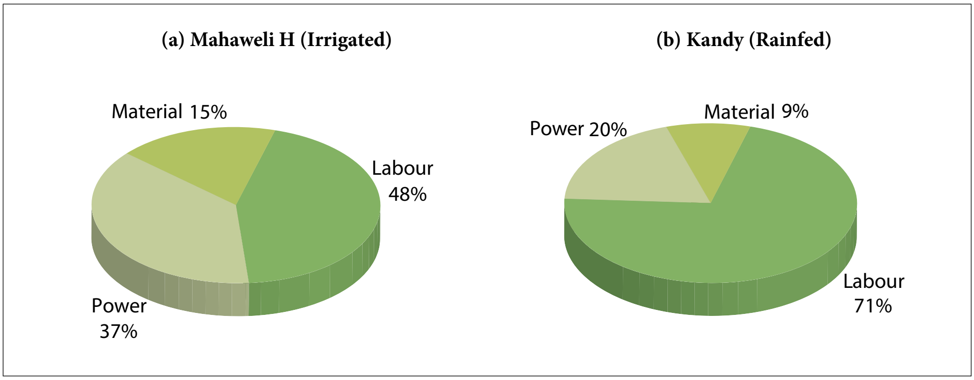


Figure 2.2 Major components of total cost of cultivation

Land preparation (ploughing and leveling), harvesting and drawing, threshing and winnowing are the main operations, which can be mechanized. Most of the farmers interviewed in all districts prepare the land with 4 wheel tractors except Kalutara and Kandy districts. The cost of land preparation (for three ploughing) by 4 wheel tractors ranged from Rs. 5,112 in Ampara-East to Rs. 9,981 in Hambantota. The usage of 2 wheel tractors in Kandy and Kalutara was 43%, and 67% respectively.

Majority of farmers (above 84%) in all irrigated districts used combine harvesters for harvesting and drawing. All paddy farmers under rain-fed condition, in Gampaha and Kurunegala districts used combine harvesters for harvesting. 97% farmers in Kandy district and 30% farmers in Kalutara district have practiced manual harvesting and the cost of manual harvesting, threshing and winowing in Kandy and Kalutara districts were 20,113Rs./ac and 15,897Rs./ac respectively. It is apparent that entire farmer population in Ampara-East and Ampara-West, Hambantota, Polonnaruwa, Trincomalee and Mahawali C totally used combined harvesters. The average cost of harvesting, threshing and winnowing by combine harvesters ranged from Rs.6,014 in Ampara-East to Rs.9,789 in Mahawali H.

Table 2.1 Cost of land preparation and harvesting

District	Operations						
	Land preparation			Manual (Harvesting, Threshing , Winnowing)		Combine Harvester	
	Tractor	% reporting	Cost (Rs/ac)	% reporting	Cost (Rs/ac)	% reporting	Cost (Rs/ac)
Ampara -East	4wt	100	5112			100	6014
Ampara-West	4wt	97#	6504			100	6772
Anuradhapura	4wt	78#	9533	10(****)	16673	90(+)	9479
Hambantota	4wt	100	9981			100	9468
Kurunegala	4wt	60(#)	8232	7(****)	18979	93(+)	8674
Polonnaruwa	4wt	80(#)	9186			100	8850
Mahaweli B	4wt	100	8959	3(****)	23000	97(+)	8897
Mahaweli C	4wt	80	7933			100	8837
Mahaweli H	4wt	81(#)	9317	16(****)	17373	84(+)	9789
Trincomalee	4wt	100	6869			100	7642
Gampaha	4wt	83(#)	8920			100	8687
Kalutara	2wt	67(##*+))	8723	30(+++)	15897	70(+***)	9002
Kandy	2wt	43(+*)	7507	97(+++)	20113	03(+)	6000
Kurunegala	4wt	73(#)	8350			100	8833
whole island							
irrigated	4wt	87#	8191	3(****)	20139	95(+)	8370
Rain fed	4wt	76#	8432	11(+++)	11616	89(+)	8540

* Buffaloes # 2wt ** Combine harvester

+ manually # # 4wt *** Reeper

+++2w thresher **** 4w thresher

2.3 Labour use and wage rate

Total man days per acre ranged from 13 (Ampara-East) to 22 (Kurunegala). As a result of mechanized harvesting in all irrigated areas, labour use was less than 22 man days per acre. Under irrigated condition, Ampara-East (13) and Trincomalee (15) reported lowest man days. Kandy district reported the highest man days per acre (35) due to practices of Transplanting, manual harvesting and drawing. Wage rate varied from Rs.1,171 (Kururnegala) to Rs.1,381 (Mahaweli B). The lowest family labour accounted 38% in Ampara-East (IR) and the highest share of family labour reported 79% in Kurunegala district (RF).

2.4 Fertilizer use

With the introduction of new fertilizer subsidy scheme in 2018 yala, fertilizer cost has been decreased drastically. As a result the total cost of cultivation also decreased during this season remarkably. Almost all farmers have tended to use straight fertilizer. Majority of farmers has used TSP as basal dressing in all districts and farmers in Ampara-West, Anuradhapura and Mahawali C were used TSP, Urea and MOP as basal dressing.

Total quantity used as basal dressing under irrigated condition varied from 20 kg/ac in Hambantota district to 69 kg/ac in Ampara-West. Under rain-fed condition it was reported as 24 kg/ac in Gampaha district to 41 kg/ac in Kurunegala district. Use of Urea as top dressing for paddy varied from 69 kg/ac in Mahaweli B to 105 kg/ac in Trincomalee district in irrigated condition. Similarly, use of Urea as top dressing varied from 40 kg/ac Kalutara district to 65 kg/ac Kurunagala district in rain-fed condition. Under irrigated condition, quantity of MOP used per acre ranged from 19 kg/ac in Ampara-West to 26 kg/ac in Polonnaruwa district. In rain-fed condition it was varied 19 kg/ac in Kurunegala to 37 kg/ac in Gampaha (Table 2.10). The share of fertilizer cost in material cost ranged from 16% (Hambantota and Ampara) to 27% (Mahaweli C). Under rain-fed condition it was reported as 13% (Gampaha) to 21% (Kandy). Compared to the previous yala season percentage share of fertilizer cost to the total cost has reduced remarkably.

2.5 Varieties, yield, farm-gate price and return per acre

Per acre yield under irrigated condition ranged from 1,577 kg/ac (Ampara-West) to 2,554 kg/ac (Hambantota), whereas in rain-fed condition, it ranged from 1,214 kg/ac (Kandy) to 1,486 kg/ac (Kurunegala) and depicted in Table 2.11.

The highest farm gate price among the areas concerned under irrigated condition, (49.75 Rs./kg) was reported in Mahawali C while the lowest price (35.00 Rs./kg) was reported in Hambantota. The farm gate price ranged from 37.26 Rs./kg in Kurunegala to 42.44 Rs./kg in Gampaha district under rain-fed condition. Per acre gross return was highest in Mahawali C (Rs. 100,943) while it was lowest in Kandy (Rs. 48,560). Net return per acre in both cases of including farmer owned inputs and excluding farmer owned inputs was positive in all districts under irrigated condition. Trincomalee (Rs.51,604) and Mahaweli C (Rs.70,083) were the highest in including and excluding farmer owned inputs respectively. Kandy district (Rs-11,273) under rain- fed condition received negative value for net return including cost of farmer owned inputs.

The percentage cultivated extent by variety in each district is given in Table 2.2. According to the survey, At 362 was the most popular variety in Hambantota (100%) and Ampara East (84%), while Bg 360 was the mostly used variety in Mahaweli C (73%) in Irrigated water regime. Bw 367 and Ld 368 were the most popular varieties in rain-fed areas. Bg 352, Bg 366 and Bg 300 were the rest of the popular varieties.

2.6 Unit cost of production

Table 2.12 presents cost of production of a kilogram of paddy and break-even yield. In each district, unit cost including imputed cost varied from Rs. 17.91 in Ampara -East to Rs.49.29 in Kandy and this has been lower than farm gate price of respective district in all irrigated and rain-fed areas except Kandy district Unit cost of production excluding imputed cost ranged from Rs.14.85 in Ampara-West to Rs. 26.05 in Kandy and it was lower than farm gate prices in all districts (Fig: 2.3)

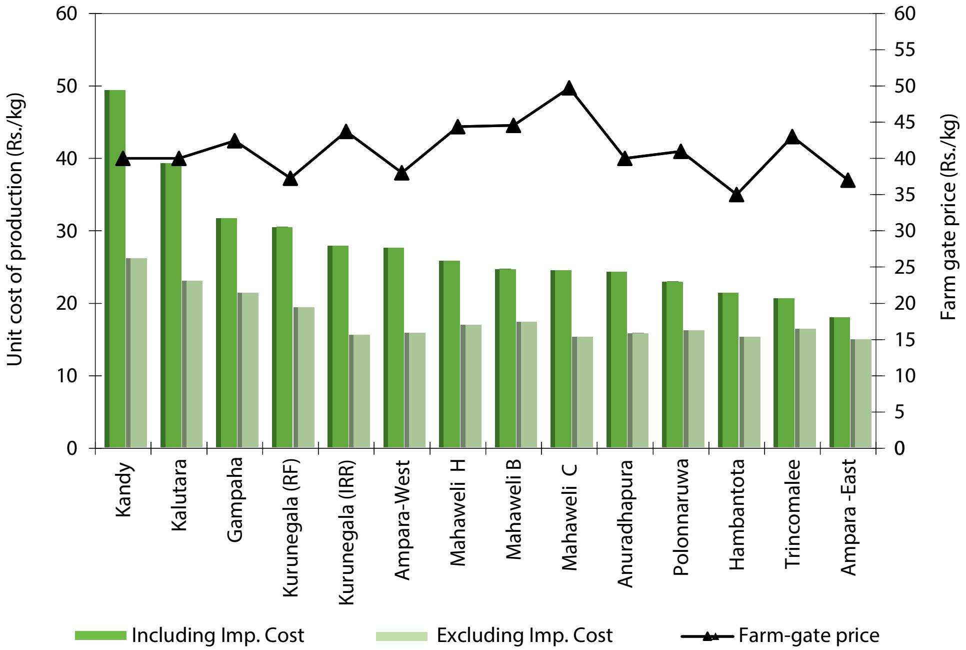


Figure 2.3 Farmgate price and Unit cost of Production

Table 2.2 Cultivated extent by varieties (%)

	Bg 94-1	Bg 300	Bw 372	Bw 364	Bg 352	Bg 374	Bg 357	Bg 358	Bg 359	Bg 360	Bg 366	Bg 379-2	At 308	At 306	At 362	P'samba	Bw 367	Ld 368	other	Total
Ampara -East	6									8					84				2	100
Ampara-West	37				15		22	2			4				20					100
Anuradhapura		10			28										5	7	32		18	100
Hambantota															100					100
Kurunegala		11			32	22					9						8		18	100
Polonnaruwa					19	7					34								40	100
Mahaweli B					10					22	11		10			13	10		24	100
Mahaweli C		4			6					73			4	4					9	100
Mahaweli H		6			30				15		11					24	12		2	100
Tricomalee							7			33	28		10		9				13	100
Gampaha		7			7			13	17	13							40		3	100
Kalutara		5	8												10		9	36	32	100
Kandy	13			7					27			20							33	100
Kurunegala		17			25			19		14									25	100
Whole island																				
Irrigated	2	4			10		5			17	14				24		4		20	100
Rainfed		13			17			12	12	9							12		25	100

2.7 Break-even yield of paddy

Break-even yield including imputed costs ranged from 995 kg/ac (Mahaweli C) to 1,556 kg/ac (Hambantota). In excluding imputed cost, it varied 620 kg/ac (Mahaweli C) to 1,109 kg/ac (Hambantota). It was found that, the break even yield was lower than that of the average yield under irrigated condition in all districts. Same situation exists for including and excluding imputed costs scenarios. It was found that break- even yield excluding imputed cost was lower than average yield in all districts under rain fed condition.

2.8 Cost of cultivation of paddy for whole island

The breakdown of the cost of cultivation per acre for whole island according to cash and imputed cost is graphically shown in figure 2.4. The total cost per acre in irrigated water regime was Rs. 51,306 of which Rs. 13,795 was incurred on opportunity cost of farm family owned inputs. The total cost per acre was Rs. 47,232 in rain-fed water regime of which Rs. 28,358 was incurred on cash cost while the balance Rs. 18,874 was imputed as opportunity cost.

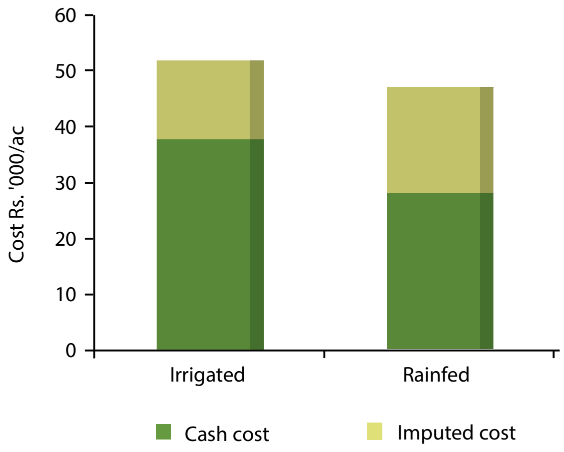


Figure 2.4 Cost of cultivation of paddy (whole island)

2.8.1 Cost structure

The breakdown of the total cost to the three major variable components; labour, material and power is presented in figure 2.5. In irrigated water regime, share of labour cost was 46% whereas the remaining 54% was incurred on power (34%), and material (20%). In the rain-fed water regime, the cost share of labour, power and material were 44%, 38% and 18% respectively.

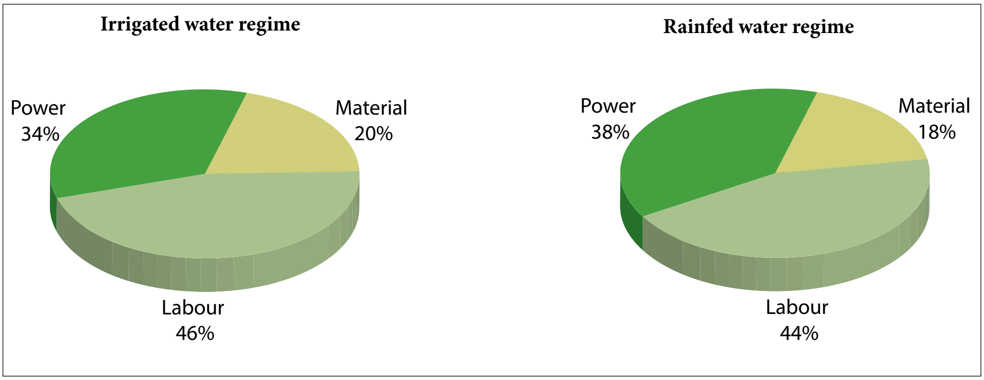


Figure 2.5 Major components of total cost of cultivation

The number of labour units used in irrigated water regime and rain-fed water regime were 17 man days/ac and 18 man days/ac respectively. Considering both water regimes, usage of machinery in land preparation, harvesting and drawing and post-harvest operations was increased. Use of relatively efficient machinery has resulted in marked reduction of the labour requirement in both water regimes.

The aggregate power cost in irrigated water regime was (Rs.17,626.00) and in rain-fed water regime it was (Rs.17,766.00). In both water regimes majority of farmers used combine harvester for harvesting, drawing and, threshing.

A breakdown of the material cost in the two water regimes is presented in Figure 2.6. In comparison to the rain-fed water regime, the percentage share and the absolute value of the material cost is obviously higher in the irrigated water regime that could be attributed to the high material cost incurred on pest control,weed control, seed and fertilizer. In comparison to irrigated and rain-fed paddy cultivation regions, higher use of seed rates in Ampara-East and Hambantota districts that constitute 30 of the sample of irrigated water regime have pulled the mean seed rate up in the irrigated water regime.

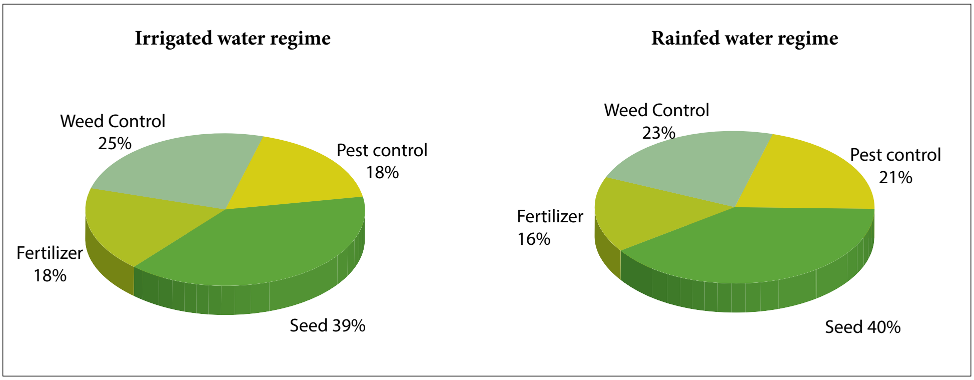


Figure 2.6 Cost componenet of major meterials of irrigated and rainfed paddy (whole island)

2.8.2 Labour use and wage rate

Total man days used in irrigated water regime was 17/ac whereas it was 18/ac in rain-fed regime. The mean wage rate was Rs. 1,381/man day in irrigated water regime and it was Rs. 1,166 in rain-fed water regime.

The percentage use of hired labour was 47% in irrigated water regime whereas it was only 17% in rain-fed water regime. Further, since labour is a flow resource, there is a flexibility of extending periods of operations such as land preparation and harvesting. In irrigated water regime, farmers have to fall in line with the time of water issue for completing land preparation operations, and therefore have lesser for harvesting shortens harvesting and post harvesting period and compels farmers to use higher proportions of hired labour.

2.8.3 Fertilizer use

The price of all fertilizers was varied from 10.00 Rs./kg to 14.00 Rs./kg in all districts . The total fertilizer usage was 152 kg/ac in irrigated water regime and it was 122 kg/ac in rain-fed water regime. The usage of the basal mixture was 51 kg/ac in irrigated water regime whereas it was 38 kg/ac in rain-fed water regime. There were significant differences in both basal and top dressing mixture fertilizer usage, in the two water regimes.

The usage of top dressing fertilizer was 101 kg/ac in irrigated water regime whereas it was only 84 kg/ac in rain-fed water regime. When considering top dressing fertilizer, usage of Urea was 79 kg/ac in irrigated water regime in comparison to 58 kg/ac in rain-fed water regime.

2.8.4 Varieties, yield, farm-gate price and returns per acre

The varietal distribution in the two water regimes is given in Table 2.3. At 362 has the highest adoption rate in irrigated water regime (24%) whereas Bg 360 has second highest (17%). Bg 366 and Bg 352 were also cultivated varieties in selected areas in irrigated water regime. Variety At 362 was primarily grown in Hambantota and Ampara-East in irrigated regions used for the survey. Bg 352 was the most popular variety in selected rain fed areas. Bg 300, Bg 358, Bg 359 and Bg 367 were the other populer varieties having considerable adoption rates in rain-fed water regime.

Table 2.3 Cultivated extent (percentage) in different varieties

Water regime	% of cultivated extent by important varieties											
	Bg 94-1	Bg 300	Bg 352	Bg 357	Bg 358	Bg 359	Bg 360	Bg 366	At 362	Bw 367	Ld 368	other
Irrigated	2	4	10	5	-	-	17	14	24	4	-	20
Rain-fed	-	13	17	-	12	12	9	-	-	12	-	25

The yield, farm-gate price, gross returns, profit including family labour and profit excluding family labour, returns to labour and returns to capital are presented in Table 2.4. The average yield of irrigated water regime was 2,130 kg/ac whereas it was only 1396 kg/ac in rain-fed water regime. The farm-gate prices received in irrigated regime and rain-fed water regime were Rs. 42.00 and Rs. 40.00 per kilogram respectively. Because of the higher yield received, the gross return, net returns including and excluding family labour, return to labour and return to capital in irrigated water regime were markedly higher than the estimates for the rain-fed regime. However, since good prices prevailed, all of these profit parameter estimates for both water regimes are attractive to the farmers in comparison to years of relatively low prices.

2.8.5 Unit cost of production and break-even yield

The unit cost of production and farm-gate prices received are portrayed in figure 2.7. The unit cost of production including imputed cost was Rs. 24.09/kg in irrigated water regime and it was Rs. 33.83/kg in rain-fed water regime. Accordingly, the net-return including imputed cost was Rs. 38,154/ac in irrigated water regime whereas it was Rs.8608/ac in rain-fed water regime.

The net return excluding imputed cost was Rs. 51,949/ac in irrigated water regime and it was Rs. 27,482/ac in rain-fed water regime.

The ratio of unit cost of production including (excluding) family labor to farm-gate price was 0.6 (0.4) for irrigated water regime and 0.9 (0.5) for rain-fed water regime. Accordingly, the break-even yield including (excluding) imputed cost bears similar ratios to yield in respective regimes. The break-even yield including (excluding) imputed cost of family labour was 1,222 (893) per acre in irrigated water regime whereas similar figure for rain-fed water regime was 1,181 (709).

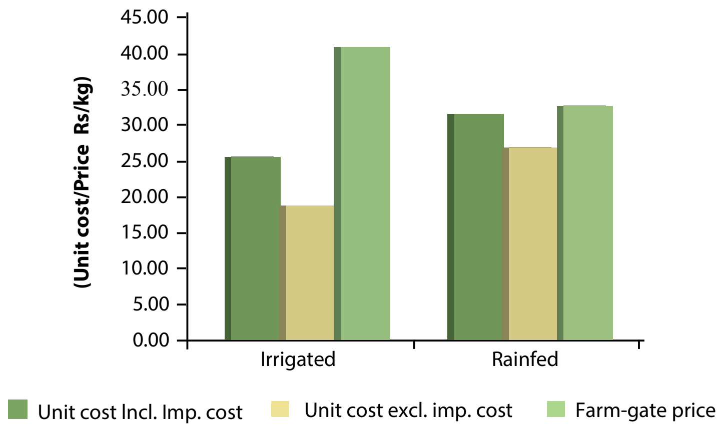


Figure 2.7 Unit cost of production (including and excluding imputed cost) and farm-gate price

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

Water regime	Yield kg/ac	Farm-gate price Rs./kg	Gross return Rs/ac	Net return (Rs/ac		Return to	
				Including family labour	Excluding family labour	Labour Rs.	Capital Rs.
Irrigated	2,130	42.00	89,460	38,154	51,949	3,706	2.38
Rain-fed	1,396	40.00	55,840	8,608	27,492	1,721	1.97

Table 2.5: Comparison of cost of cultivation - Paddy

District/ System	Irrigation	Holding size (ac)		Total cost* (Rs./ac)	Cash cost (Rs./ac)	Cash cost as a percent of total cost
		Mean	Mode			
Ampara-East	IR	3.7	3.0	43,053	35,688	83
Ampara-West	IR	2.6	3.0	43,349	24,861	57
Anuradhapura	IR	2.0	2.0	54,730	35,641	65
Hambantota	IR	2.6	2.0	54,463	38,808	71
Kurunegala	IR	1.4	1.0	51,633	28,720	56
Polonnaruwa	IR	3.4	1.5 & 5.0	48,388	34,084	70
Mahaweli B	IR	2.4	2.5	51,554	36,300	70
Mahaweli C	IR	2.3	2.5	49,487	30,860	62
Mahaweli H	IR	2.0	2.5	54,791	35,910	66
Trincomalee	IR	3.4	3.0	46,995	37,375	80
Gampaha	RF	1.5	1.0	46,152	31,151	67
Kalutara	RF	1.3	1.0	49,520	29,019	59
Kandy	RF	0.6	0.5	59,833	31,620	53
Kurunegala	RF	1.1	1.0	45,118	28,624	63
Whole island	IR	2.5	2.5	51,306	37,511	73
Whole island	RF	1.1	1.0	47,232	28,358	60

*Including cost of farmer owned inputs

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

District/ System	Irrigation	Cost (Rs./ac)			
		Labour	Power	Material	Total
Ampara-East	IR	17,070 (40)	12,796 (30)	13,187 (31)	43,053
Ampara-West	IR	20,073 (46)	13,908 (32)	9,368 (22)	43,349
Anuradhapura	IR	26,098 (48)	19,655 (36)	8,977 (16)	54,730
Hambantota	IR	24,062 (44)	20,578 (38)	9,823 (18)	54,463
Kurunegala	IR	25,761 (50)	17,642 (34)	8,230 (16)	51,633
Polonnaruwa	IR	20,104 (42)	18,850 (39)	9,434 (19)	48,388
Mahaweli B	IR	23,470 (45)	18,859 (37)	9,225 (18)	51,554
Mahaweli C	IR	24,604 (50)	17,455 (35)	7,428 (15)	49,487
Mahaweli H	IR	26,270 (48)	20,043 (37)	8,478 (15)	54,791
Trincomalee	IR	19,753 (42)	16,020 (34)	11,222 (24)	46,995
Gampaha	RF	19,675 (43)	18,434 (40)	8,043 (17)	46,152
Kalutara	RF	24,254 (48)	18,228 (38)	7,038 (14)	49,520
Kandy	RF	42,700 (71)	11,578 (20)	5,555 (09)	59,833
Kurunegala	RF	18,493 (41)	17,873 (40)	8,752 (19)	45,118
Whole island	IR	23,472 (46)	17,626 (34)	10,208 (20)	51,306
Whole island	RF	20,982 (44)	17,766 (38)	8,484 (18)	47,232

Values wihtin parantheses denote as a percentage of the total cost

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

District/ System	Irrigation	Cost (Rs./ac)			
		Labour	Power	Material	Total
Ampara-East	IR	10,504 (29)	12,796 (36)	12,388 (35)	35,688
Ampara-West	IR	7,086 (29)	9,241 (37)	8,534 (34)	24,861
Anuradhapura	IR	8,244 (23)	18,902 (53)	8,495 (24)	35,641
Hambantota	IR	9,624 (25)	20,578 (53)	8,606 (22)	38,808
Kurunegala	IR	5,855 (20)	16,265 (57)	6,600 (23)	28,720
Polonnaruwa	IR	7,542 (22)	17,791 (52)	8,751 (26)	34,084
Mahaweli B	IR	9,667 (27)	18,558 (51)	8,075 (22)	36,300
Mahaweli C	IR	6,475 (21)	17,455 (57)	6,930 (22)	30,860
Mahaweli H	IR	11,259 (31)	18,351 (51)	6,300 (18)	35,910
Trincomalee	IR	10,536 (28)	15,955 (43)	10,884 (29)	37,375
Gampaha	RF	5,248 (17)	18,248 (59)	7,655 (24)	31,151
Kalutara	RF	7,135 (25)	15,258 (52)	6,626 (23)	29,019
Kandy	RF	17,080 (54)	9,574 (30)	4,966 (16)	31,620
Kurunegala	RF	3,963 (13)	16,911 (59)	8,014 (28)	28,888
Whole island	IR	11,048 (29)	17,050 (45)	9,413 (25)	37,511
Whole island	RF	3,498 (12)	16,963 (60)	7,897 (28)	28,358

Values wihtin parantheses denote as 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	62	100	94	83
Ampara-West	IR	35	66	91	57
Anuradhapura	IR	32	96	95	65
Hambantota	IR	40	100	88	71
Kurunegala	IR	23	92	80	56
Polonnaruwa	IR	38	94	93	70
Mahaweli B	IR	41	98	88	70
Mahaweli C	IR	26	100	93	62
Mahaweli H	IR	43	92	74	66
Trincomalee	IR	53	100	97	80
Gampaha	RF	27	99	95	67
Kalutara	RF	29	84	94	59
Kandy	RF	40	83	89	53
Kurunegala	RF	20	95	92	63
Whole island	IR	47	97	92	73
Whole island	RF	17	95	93	60

Table 2.9: Labour use and wage rates - Paddy

District/ System	Irrigation	Labour (md/ac)			Wage rate
		Family	Hired	Total	(Rs./ md)
Ampara-East	IR	05 (38)	08 (62)	13	1,313
Ampara-West	IR	11 (65)	06 (35)	17	1,181
Anuradhapura	IR	13 (68)	06 (32)	19	1,374
Hambantota	IR	09 (60)	06 (40)	15	1,604
Kurunegala	IR	17 (77)	05 (23)	22	1,171
Polonnaruwa	IR	10 (63)	06 (37)	16	1,257
Mahaweli B	IR	10 (59)	07 (41)	17	1,381
Mahaweli C	IR	14 (74)	05 (26)	19	1,295
Mahaweli H	IR	12 (57)	09 (43)	21	1,251
Trincomalee	IR	07 (47)	08 (53)	15	1,317
Gampaha	RF	11 (73)	04 (27)	15	1,312
Kalutara	RF	12 (71)	05 (29)	17	1,427
Kandy	RF	21 (60)	14 (40)	35	1,220
Kurunegala	RF	11 (79)	03 (21)	14	1,321
Whole island	IR	09 (53)	08 (47)	17	1,381
Whole island	RF	15 (83)	03 (17)	18	1,166

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	Total	(Rs./ac)	%
Ampara-East	IR	47	82	23	152	2,063	16
Ampara-West	IR	69	79	19	167	1,973	21
Anuradhapura	IR	46	83	22	151	1,866	21
Hambantota	IR	20	94	23	137	1,581	16
Kurunegala	IR	35	81	20	136	1,399	17
Polonnaruwa	IR	54	71	26	151	1,940	21
Mahaweli B	IR	51	69	23	143	1,766	19
Mahaweli C	IR	59	78	20	157	2,015	27
Mahaweli H	IR	57	79	24	160	1,723	20
Trincomalee	IR	29	105	21	155	1,923	17
Gampaha	RF	24	47	37	108	1,080	13
Kalutara	RF	25	40	35	100	1,000	14
Kandy	RF	39	41	30	110	1,167	21
Kurunegala	RF	41	65	19	125	1,337	15
Whole island	IR	51	79	22	152	1,824	18
Whole island	RF	38	58	26	122	1,316	16

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

District/ System	Irrigation	Yield (kg)	Farm-gate Price (Rs./kg)	Return (Rs./ac)			Return to	
				Gross	Net		Labour (Rs.)	Capital (Rs.)
					1	2		
Ampara-East	IR	2,404	37.00	88,948	48,895	53,260	4,905	2.49
Ampara-West	IR	1,577	38.00	59,926	16,577	35,065	2,479	2.41
Anuradhapura	IR	2,265	40.00	90,600	35,870	54,959	3,326	2.54
Hambantota	IR	2,554	35.00	89,390	34,927	50,582	4,014	2.3
Kurunegala	IR	1,858	43.70	81,195	29,562	52,475	2,651	2.83
Polonnaruwa	IR	2,119	41.00	86,879	38,491	52,795	3,771	2.55
Mahaweli B	IR	2,098	44.55	93,466	41,912	57,166	3,931	2.57
Mahaweli C	IR	2,029	49.75	100,943	51,456	70,083	4,029	3.27
Mahaweli H	IR	2,128	44.40	94,483	39,692	58,573	3,325	2.63
Trincomalee	IR	2,293	43.00	98,599	51,604	61,224	5,126	2.64
Gampaha	RF	1,462	42.44	62,047	15,895	30,896	2,410	1.99
Kalutara	RF	1,265	40.00	50,600	1,080	21,581	1,689	1.74
Kandy	RF	1,214	40.00	48,560	-11,273	16,940	972	1.54
Kurunegala	RF	1,486	37.26	55,368	10,250	26,480	2,175	1.93
Whole island	IR	2,130	42.00	89,460	38,154	51,949	3,706	2.38
Whole island	RF	1,396	40.00	55,840	8,608	27,482	1,721	1.97

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	17.91	14.85	1,164	965
Ampara-West	IR	27.49	15.76	1,141	654
Anuradhapura	IR	24.16	15.74	1,368	891
Hambantota	IR	21.32	15.19	1,556	1109
Kurunegala	IR	27.79	15.46	1,182	657
Polonnaruwa	IR	22.84	16.08	1,180	831
Mahaweli B	IR	24.57	17.30	1,157	815
Mahaweli C	IR	24.39	15.21	995	620
Mahaweli H	IR	25.75	16.88	1,234	809
Trincomalee	IR	20.49	16.30	1,093	869
Gampaha	RF	31.57	21.31	1,087	734
Kalutara	RF	39.15	22.94	1,238	725
Kandy	RF	49.29	26.05	1,496	791
Kurunegala	RF	30.36	19.44	1,211	768
Whole island	IR	24.09	17.61	1,222	893
Whole island	RF	33.83	20.31	1,181	709

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

CHAPTER 3

PADDY STATISTICS

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
1st, 2nd, & 3rd plough with 4wt	100	480.00	5112.00	-	5592.00
Plastering bunds	100	2812.00	-	-	2812.00
Levelling & broadcasting	100	2067.00	-	3445.00	5512.00
Fertilizer application	100	1695.00	-	2063.00	3758.00
Weed control with weedicides	100	1357.00	-	3604.00	4961.00
Pest & disease control	86	1851.00	-	4075.00	5926.00
Water management	100	2856.00	-	-	2856.00
Harvesting & processing with combine harvester	100	1869.00	6014.00	-	7883.00
Additional drying	60	1845.00	-	-	1845.00
Transport produce to stores	100	238.00	1670.00	-	1908.00
Total including imputed cost		17070.00	12796.00	13187.00	43053.00
Total excluding imputed cost		10504.00	12796.00	12388.00	35688.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				AT 362 - 84
Seed	kg	65.00	53.00	BG 360 - 08
LABOUR				BG 94/1 - 06
Hired	md	8.00	1313.00	Other - 02
Family	md	5.00		
Total	md	13.00		

FERTILIZER	Percent Reported	Unit	Quantity	Unit Price (Rs)
Basal - TSP	100	kg	28.00	14.00
Urea	46	kg	19.00	13.00
Top Dressing				
Urea	100	kg	82.00	14.00
MOP	96	kg	23.00	12.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2404.00	5940.00
Price of Produce (Rs/kg)	37.00	
Gross Income (Rs.)	88948.00	219791.00
Profit including imputed cost (Rs.)	45895.00	113407.00
Profit excluding imputed cost (Rs.)	53260.00	131605.00
Unit cost (including imputed cost) (Rs/kg)	17.91	
Unit cost (excluding imputed cost (Rs/kg)	14.85	

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	83	714.00	-	-	714.00
1st, 2nd, & 3rd Plough with 4wt	97	790.00	6504.00	-	7294.00
1st, 2nd, & 3rd Plough with 2wt	(03)	-	(6000.00)	-	-
Plastering Bunds	100	5082.00	-	-	5082.00
Levelling & broadcasting	100	2382.00	-	3900.00	6282.00
Fertilizer application	100	1207.00	-	1973.00	3180.00
Weed control with weedicides	97	497.00	-	1885.00	2382.00
Pest & disease control	70	630.00	-	1610.00	2240.00
Water management	100	3806.00	-	-	3806.00
Harvesting & processing with combine harvester	100	930.00	6772.00	-	7702.00
Additional drying	53	2785.00	-	-	2785.00
Transport produce to stores	63	1250.00	632.00	-	1882.00
Total including imputed cost		20073.00	13908.00	9368.00	43349.00
Total excluding imputed cost		7086.00	9241.00	8534.00	24861.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bg 1/94 - 37
Seed	kg	52.00	75.00	Bg 357 - 22
LABOUR				Bg 352 - 15
Hired	md	6.00	1181.00	At 362 - 20
Family	md	11.00		Bg 358 - 02
Total	md	17.00		Bg 366 - 04

FERTILIZER	Percent Reported	Unit	Quantity	Unit Price (Rs)
Basal - TSP	100	kg	28.00	11.00
Urea	46	kg	26.00	10.00
MOP	47	kg	15.00	10.00
Top Dressing				
Urea	97	kg	79.00	13.00
MOP	80	kg	19.00	12.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1577.00	3897.00
Price of Produce (Rs/kg)	38.00	
Gross Income (Rs.)	59926.00	148077.00
Profit including imputed cost (Rs.)	16577.00	40962.00
Profit excluding imputed cost (Rs.)	35065.00	86646.00
Unit cost (including imputed cost) (Rs/kg)	27.49	
Unit cost (excluding imputed cost (Rs/kg)	15.76	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	64	870.00	-	-	870.00
1st & 2nd & 3rd plough with 4wt	40	636.00	9533.00	-	10169.00
1st & 2nd & 3rd plough with 2wt	(22)	(1230.00)	(8391.00)	-	-
1st & 2nd plough with 4wt	(38)	(690.00)	(9676.00)	-	-
Plastering bunds	100	6306.00	-	-	6306.00
Levelling & broadcasting	100	3726.00	-	3744.00	7470.00
Fertilizer application	100	1417.00	-	1866.00	3283.00
Weed control with weedieside	94	942.00	-	2353.00	3295.00
Pest & disease control	54	804.00	-	1014.00	1818.00
Water management	100	6744.00	-	-	6744.00
Harvesting & processing with combine harvester	90	1935.00	9479.00	-	11414.00
(do manually)	(10)	(12792.00)	-	-	-
Threshing & winnowing with 4w thresher	(10)	(348.00)	(3533.00)	-	-
Additional drying	64	2058.00	-	-	2058.00
Transport produce to stores	87	660.00	643.00	-	1303.00
Total Including Imputed Cost		26098.00	19655.00	8977.00	54730.00
Total Excluding Imputed Cost		8244.00	18902.00	8495.00	35641.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED					Bw367 - 32
Seed		kg	48.00	78.00	Bg352 - 28
LABOUR					Bg300 - 10
Hired		md	6.00	1374.00	pokuru samba - 07
Family		md	13.00		At362 - 05
Total		md	19.00		Other - 18
FERTILIZER					
	Percent Reported				
Basal - TSP	96	kg	26.00	13.00	
Urea	44	kg	14.00	12.00	
MOP	46	kg	6.00	13.00	
Top Dressing					
Urea	100	kg	83.00	12.00	
MOP	96	kg	22.00	13.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2265.00	5597.00
Price of Produce (Rs/kg)	40.00	
Gross Income (Rs.)	90600.00	223873.00
Profit including imputed cost (Rs.)	35870.00	88635.00
Profit excluding imputed cost (Rs.)	54959.00	135804.00
Unit cost (including imputed cost) (Rs/kg)	24.16	
Unit cost (excluding imputed cost (Rs/kg)	15.74	

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	945.00	-	-	945.00
1st,2nd & 3rd plough with 4wt	100	504.00	9981.00	-	10485.00
Plastering bunds	100	7250.00	-	-	7250.00
Levelling & broadcasting	100	3312.00	-	4220.00	7532.00
Fertilizer application	100	943.00	-	1581.00	2524.00
Weed control with weedíside	100	831.00	-	4022.00	4853.00
Water management	100	7688.00	-	-	7688.00
Harvesting & Processing with combine harvester	100	2354.00	9468.00	-	11822.00
Transport produce to stores	77	235.00	1129.00	-	1364.00
Total including imputed cost		24062.00	20578.00	9823.00	54463.00
Total excluding imputed cost		9624.00	20578.00	8606.00	38808.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				AT 362 -100
Seed	kg	71.00	59.44	
LABOUR				
Hired	md	6.00	1604.00	
Family	md	9.00		
Total	md	15.00		
FERTILIZER				
Percent Reported				
Basal - TSP 100	kg	20.00	10.00	
Top Dressing				
Urea 100	kg	94.00	12.00	
MOP 100	kg	23.00	11.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg)	2554.00	6311.00
Price of Produce (Rs/kg)	35.00	
Gross Income (Rs)	89390.00	220883.00
Profit including imputed cost (Rs.)	34927.00	86305.00
Profit excluding imputed cost (Rs.)	50582.00	124988.00
Unit cost (including imputed cost) (Rs/kg)	21.32	
Unit cost (excluding imputed cost (Rs/kg)	15.19	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	90	1479.00	-	-	1479.00
1st, 2nd, & 3rd plough with 4wt	57	1221.00	8232.00	-	9453.00
(1st, 2nd, & 3rd plough with 2wt)	(40)	(1349.00)	(7800.00)	-	-
(1st plough with 4wt)	(03)		(5000.00)	-	-
(2nd & 3rd plough with 2wt)	(03)		(5000.00)	-	-
Plastering bunds	100	6999.00	-	-	6999.00
Levelling & broadcasting	90	3558.00	-	3103.00	6661.00
(Parachute-transplanting)	(07)	(6798.00)	-	-	-
(machinary transplanting)	(03)	(567.00)	-	-	-
Fertilizer application	100	895.00	-	1399.00	2294.00
Weed control with weedicides	80	751.00	-	1887.00	2638.00
Pest control with pesticide	77	1000.00	-	1841.00	2841.00
Water management	100	6534.00	-	-	6534.00
Harvesting & processing with combine harvester	93	1024.00	8674.00	-	9698.00
(Harvesting by manualy)	(07)	(15312.00)		-	-
(Threshing & winnowing with 4w thresher)	(07)		(3667.00)	-	-
Additional drying	90	1880.00		-	1880.00
Transport produce	97	420.00	736.00	-	1156.00
Total Including Imputed Cost		25761.00	17642.00	8230.00	51633.00
Total Excluding Imputed Cost		5855.00	16265.00	6600.00	28720.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext% Variety
SEED				Bg 352 - 32
Seed	kg	40.40	76.80	Bg 374 - 22
(Parachute)	kg	(14)		Bg 300 - 11
(Transplant)	kg	(15)		Bg 366 - 09
LABOUR				Bw 367 - 08
Hired	md	5.00	1171.00	Other - 18
Family	md	17.00		
Total	md	22.00		
FERTILIZER				
Percent Reported				
Basal - TSP 100	kg	22.00	10.00	
Urea 47	kg	13.00	13.00	
Top Dressing				
Urea 100	kg	81.00	10.00	
MOP 100	kg	20.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1858.00	4591.00
Price of Produce (Rs/kg)	43.70	
Gross Income (Rs.)	81195.00	200633.00
Profit including imputed cost (Rs.)	29562.00	73048.00
Profit excluding imputed cost (Rs.)	52475.00	129666.00
Unit cost (including imputed cost) (Rs/kg)	27.79	
Unit cost (excluding imputed cost (Rs/kg)	15.46	

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	554.00	-	-	554.00
1st, 2nd, & 3rd plough with 4wt	80	765.00	9196.00	-	9961.00
(do with 2wt)	(20)	(1405.00)	(6154.00)	-	-
Plastering bunds	100	5232.00	-	-	5232.00
Levelling & broadcasting	100	2819.00	-	3825.00	6644.00
Fertilizer application	100	744.00	-	1940.00	2684.00
Weed control with weedicides	100	490.00	-	2160.00	2650.00
Pest & disease control	77	407.00	-	1509.00	1916.00
Water management	100	6000.00	-	-	6000.00
Harvesting & processing with combine harvester	100	1797.00	8850.00	-	10647.00
Additional drying	73	1176.00		-	1176.00
Transport produce to stores	43	120.00	804.00	-	924.00
Total including imputed cost		20104.00	18850.00	9434.00	48388.00
Total excluding imputed cost		7542.00	17791.00	8751.00	34084.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					Bg 366	- 34
Seed		kg	45.00	85.00	Bg 352	- 19
LABOUR					Bg 374	- 07
Hired		md	6.00	1257.00	Other	- 40
Family		md	10.00			
Total		md	16.00			
FERTILIZER						
	Percent Reported					
Basal - TSP	93	kg	31.00	13.00		
Urea	67	kg	23.00	12.00		
Top Dressing						
Urea	100	kg	71.00	13.00		
MOP	97	kg	26.00	13.00		

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2119.00	5236.00
Price of Produce (Rs/kg)	41.00	
Gross Income (Rs.)	86879.00	214678.00
Profit including imputed cost (Rs.)	38491.00	95111.00
Profit excluding imputed cost (Rs.)	52795.00	130456.00
Unit cost (including imputed cost) (Rs/kg)	22.84	
Unit cost (excluding imputed cost (Rs/kg)	16.08	

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	100	895.00	-	-	895.00
1st,2nd & 3rd plough with 4wt	100	459.00	8959.00	-	9418.00
Plastering bunds	100	6529.00	-	-	6529.00
Levelling & broadcasting	100	2679.00	-	3724.00	6403.00
Fertilizer application	100	824.00	-	1766.00	2590.00
Weed control with weediside	100	500.00	-	2648.00	3148.00
Pest & disease control	55	421.00	-	1087.00	1508.00
Water management	100	5981.00	-		5981.00
Harvesting & processing with					
combine harvester	97	2775.00	8897.00	-	11672.00
(harvesting manually)	(03)	(20000.00)		-	0.00
(Treshing & winno. with 4w thresher)	(03)		(3000.00)	-	
Additional drying	48	2191.00		-	2191.00
Transport produce to stores	87	216.00	1003.00	-	1219.00
Total including imputed cost		23470.00	18859.00	9225.00	51554.00
Total excluding imputed cost		9667.00	18558.00	8075.00	36300.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bg 360 - 22
Seed	kg	42.80	87.00	At 308 - 10
				Bg 352 - 10
LABOUR				Bw 367 - 10
Hired	md	7.00	1381.00	Pokurusamba- 13
Family	md	10.00		Bg 366 - 11
Total	md	17.00		Other - 24

FERTILIZER	Percent Reported			
Basal - TSP	94	kg	21.00	10.00
Urea	77	kg	30.00	12.00
Top Dressing				
Urea	100	kg	69.00	13.00
MOP	94	kg	23.00	13.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2098.00	5184.00
Price of Produce (Rs/kg)	44.55	
Gross Income (Rs.)	93466.00	230954.00
Profit including imputed cost (Rs.)	41912.00	103565.00
Profit excluding imputed cost (Rs.)	57166.00	141257.00
Unit cost (including imputed cost) (Rs/kg)	24.57	
Unit cost (excluding imputed cost (Rs/kg)	17.30	

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	83	923.00	-	-	923.00
1st, 2nd, & 3rd Plough with 4wt	80	984.00	7933.00	-	8917.00
(do with 2wt)	(20)	-	(7087.00)	-	-
Plastering bunds	100	6725.00	-		6725.00
Levelling & broadcasting	100	3073.00	-	2241.00	5314.00
Fertilizer application	100	792.00	-	2015.00	2807.00
Weed control with weedicides	100	821.00	-	1908.00	2729.00
Pest & disease control	63	970.00	-	1264.00	2234.00
Water management	100	6288.00	-	-	6288.00
Harvesting & processing with combine harvester	100	1176.00	8837.00	-	10013.00
Additional Drying	50	2516.00	-	-	2516.00
Transport produce to stores	87	336.00	685.00	-	1021.00
Total including imputed cost		24604.00	17455.00	7428.00	49487.00
Total excluding imputed cost		6475.00	17455.00	6930.00	30860.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bg 360 - 73
Seed	kg	33.23	67.44	Bg 352 - 06
				Bg 300 - 04
LABOUR				At 308 - 04
Hired	md	5.00	1295.00	At 306 - 04
Family	md	14.00		other - 09
Total	md	19.00		

FERTILIZER	Percent Reported			
Basal - TSP	93	kg	22.00	13.00
Urea	63	kg	24.00	13.00
MOP	53	kg	13.00	11.00
Top Dressing				
Urea	100	kg	78.00	13.00
MOP	83	kg	20.00	13.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2029.00	5014.00
Price of Produce (Rs/kg)	49.75	
Gross Income (Rs.)	100943.00	249430.00
Profit including imputed cost (Rs.)	51456.00	127148.00
Profit excluding imputed cost (Rs.)	70083.00	173175.00
Unit cost (including imputed cost) (Rs/kg)	24.39	
Unit cost (excluding imputed cost (Rs/kg)	15.21	

Remarks - 50% of the sample has repoted , damaged their crop by the pest attack

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	87	910.00	-	-	910.00
1st & 2nd plough with 4wt	65	1040.00	9317.00	-	10357.00
1st & 2nd Plough with 2wt	(19)	-	(7333.00)	-	-
1st, 2nd & 3rd plough with 4wt	(16)	-	(10714.00)	-	-
Plastering bunds	100	7351.00	-	-	7351.00
Levelling & broadcasting	100	3875.00	-	4068.00	7943.00
Fertilizer application	100	780.00	-	1723.00	2503.00
Weed control with weedicides	100	731.00	-	1848.00	2579.00
Pest & disease control	45	627.00	-	839.00	1466.00
Water management	100	5759.00	-	-	5759.00
Harvesting & processing with combine harvester	84	2166.00	9789.00	-	11955.00
(harvesting manually)	(16)	-		-	-
(Threshing & winnowing with 4w thresher)	(16)	-	(3976.00)	-	-
Additional drying	74	2225.00		-	2225.00
Transport produce to market	90	806.00	937.00	-	1743.00
Total including imputed cost		26270.00	20043.00	8478.00	54791.00
Total excluding imputed cost		11259.00	18351.00	6300.00	35910.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bg 352 - 30
Seed	Kg	45.4	89.6	Pokurusamba - 24
				Bg 359 - 15
LABOUR				Bw 367 - 12
Hired	md	9.00	1251.00	Bg 366 - 11
Family	md	12.00		Bg 300 - 06
Total	md	21.00		Bg 369 - 02
FERTILIZER				
Percent Reported				
Basal - TSP 98	kg	29	10.00	
Urea 52	kg	28	10.00	
Top Dressing				
Urea 94	kg	79	11.25	
MOP 90	kg	24	11.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2128.00	5258.00
Price of Produce (Rs/kg)	44.40	
Gross Income (Rs.)	94483.00	233467.00
Profit including imputed cost (Rs.)	39692.00	98079.00
Profit excluding imputed cost (Rs.)	58573.00	144734.00
Unit cost (including imputed cost) (Rs/kg)	25.75	
Unit cost (excluding imputed cost (Rs/kg)	16.88	

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	43	1287.00	-	-	1287.00
1st,2nd & 3rd plough with 4wt	100	598.00	6869.00	-	7467.00
Plastering Bunds	100	5020.00	-	-	5020.00
Levelling & broadcasting	100	3154.00	-	3970.00	7124.00
Fertilizer Application	100	995.00	-	1923.00	2918.00
Weed Control with weediside	97	692.00	-	3197.00	3889.00
Pest & Disease Control	53	869.00	-	2132.00	3001.00
Water management	100	5148.00	-	-	5148.00
Harvesting & processing combine harvester	100	1743.00	7642.00	-	9385.00
Transport produce to stores	87	247.00	1509.00	-	1756.00
Total Including Imputed Cost		19753.00	16020.00	11222.00	46995.00
Total Excluding Imputed Cost		10536.00	15955.00	10884.00	37375.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				BG 360 - 33
Seed	kg	46.58	85.24	BG 366 - 28
				At 308 - 10
LABOUR				At 362 - 09
Hired	md	8.00	1317.00	Bg 357 - 07
Family	md	7.00		Other - 13
Total	md	15.00		

FERTILIZER	Percent Reported			
Basal - TSP	100	kg	29.00	12.00
Top Dressing				
Urea	100	kg	105.00	13.00
MOP	93	kg	21.00	10.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	2293.00	5666.00
Price of Produce (Rs/kg)	43.00	
Gross Income (Rs.)	98599.00	243638.00
Profit including imputed cost (Rs.)	51604.00	127513.00
Profit excluding imputed cost (Rs.)	61224.00	151285.00
Unit cost (including imputed cost) (Rs/kg)	20.49	
Unit cost (excluding imputed cost (Rs/kg)	16.30	

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	60	1810.00	-	-	1810.00
1st, & 2nd, plough with 4wt	83	840.00	8789.00	-	9629.00
1st & 2nd , plough with 2wt	(17)		(6500.00)	-	-
Plastering bunds	100	6043.00	-	-	6043.00
Levelling & broadcasting	100	4302.00	-	3249.00	7551.00
Fertilizer application	100	1212.00	-	1080.00	2292.00
Weed control with weedicides	93	906.00	-	1964.00	2870.00
Pest & disease control	67	883.00	-	1750.00	2633.00
Harvesting & processing combine harvester	100	1555.00	8687.00	-	10242.00
Additional drying	73	1932.00	-	-	1932.00
Transport produce to stores	87	192.00	958.00	-	1150.00
Total including imputed cost		19675.00	18434.00	8043.00	46152.00
Total excluding imputed cost		5248.00	18248.00	7655.00	31151.00

* Fertilizer (material) cost is lower than the last season because of government policy

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bw 367 - 40
Seed	kg	39.14	83.00	Bg 359 - 17
				Bg 358 - 13
LABOUR				Bg 360 - 13
Hired	md	4.00	1312.00	Bg 300 - 07
Family	md	11.00		Bg 352 - 07
Total	md	15.00		Kurulutuda - 03

FERTILIZER	Percent Reported			
Basal - TSP	100	kg	24.00	10.00
Top Dressing				
- Urea	100	kg	47.00	10.00
MOP	100	kg	37.00	10.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1462.00	3613.00
Price of Produce (Rs/kg)	42.44	
Gross Income (Rs.)	62047.00	153318.00
Profit including imputed cost (Rs.)	15895.00	39277.00
Profit excluding imputed cost (Rs.)	30896.00	76344.00
Unit cost (including imputed cost) (Rs/kg)	31.57	
Unit cost (excluding imputed cost (Rs/kg)	21.31	

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	60	2355.00	-	-	2355.00
1st, 2nd, & 3rd plough with 2wt	67	1129.00	8723.00	-	9852.00
(do with 4wt)	(27)	(1350.00)	(9578.00)	-	-
(do with buffaloes)	(3)	(3000.00)	-	-	-
(do manually)	(3)	(13500.00)		-	-
Plastering bunds	100	6806.00	-	-	6806.00
Levelling & broadcasting	100	6583.00	-	4172.00	10755.00
Fertilizer application	100	1470.00	-	1000.00	2470.00
Weed control with weedicides	80	420.00	-	1866.00	2286.00
Harvesting & processing combine harvester	70	2251.00	9002.00	-	11253.00
(Harvesting with Manual)	(27)	(9855.00)		-	-
(Harvesting with Reeper)	(3)	(1200.00)	(675.00)	-	-
(Threshing & winnowing by engine powerd paddy thresher)	(30)	(3690.00)	(2352.00)	-	-
Additional drying	93	2355.00	-	-	2355.00
Transport produced to store	50	885.00	503.00	-	1388.00
Total including imputed cost		24254.00	18228.00	7038.00	49520.00
Total excluding imputed cost		7135.00	15258.00	6626.00	29019.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Ld 368 - 36
Seed	kg	40.50	103.00	Bw 367 - 09
				Bw 372 - 08
LABOUR				At 362 - 10
Hired	md	5.00	1427.00	Bg 300 - 05
Family	md	12.00		Other - 32
Total	md	17.00		
FERTILIZER Percent Reported				
Basal - TSP 100	kg	25.00	10.00	
Top Dressing				
Urea 100	kg	40.00	10.00	
MOP 100	kg	35.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1265.00	3126.00
Price of Produce (Rs/kg)	40.00	
Gross Income (Rs.)	50600.00	125033.00
Profit including imputed cost (Rs.)	1080.00	2669.00
Profit excluding imputed cost (Rs.)	21581.00	53327.00
Unit cost (including imputed cost) (Rs/kg)	39.15	
Unit cost (excluding imputed cost (Rs/kg)	22.94	

* majority of tha sample repoted higher seed price

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
Nursery preparation (Mud)	40	2551.00	-	369.00	2920.00
Nursery preparation (Parachute)	(23)		-	(821.00)	-
General land preparation	100	2184.00	-	-	2184.00
1st & 2nd Plough with 2wt	43	936.00	7507.00	-	8443.00
1st & 2nd Plough manually	(30)	(18691.00)	-	-	-
(do with buffaloes)	(17)	(2370.00)	(8000.00)	-	-
1st & 2nd Plough with 4wt	(10)	(1390.00)	-	-	-
Plastering bunds	100	9189.00	-	-	9189.00
Transplanting - Manually	40	5060.00	-	2706.00	7766.00
(Boardcarsting)	(37)	(6048.00)	-	(2780.00)	-
(by Parachute)	(23)	(5529.00)	-	(1481.00)	-
Fertilizer application	100	1606.00	-	1167.00	2773.00
Weed control with weedicides	47	900.00	-	1313.00	2213.00
Pest &disease control	(37)	(1560.00)	-	(1751.00)	-
Havesting and drawing Manually	97	13866.00	-	-	13866.00
(with Com.harvestor)	(3)	(1995.00)	(6000.00)	-	-
Threshing & winnowing with engine powerd paddy thresher	73	3036.00	3211.00	-	6247.00
(by 4w thresher)	(17)	(2915.00)	(4533.00)	-	
(by buffaloes)	(7)	(5712.00)	(2400.00)	-	-
Additional drying	70	2232.00		-	2232.00
Transport produce to stores	80	1140.00	860.00	-	2000.00
Total including imputed cost		42700.00	11578.00	5555.00	59833.00
Total excluding imputed cost		17080.00	9574.00	4966.00	31620.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Bg359 - 27
Transplanting (Manually) 40	kg	33.00	82.00	Bg379/2 - 20
Broadcasting (37)	kg	(37.00)		Bg 94/1 - 13
Transplanting(parachute) (23)	kg	(17.7)		Bw 364 - 07
LABOUR				Other - 33
Hired	md	14.00	1220.00	
Family	md	21.00		
Total	md	35.00		

cont...

FERTILIZER					
	Percent Reported				
Basal - TSP	93	kg	26.00	10.00	
Urea	60	kg	13.00	12.00	
Top Dressing					
Urea	97	kg	41.00	11.00	
MOP	97	kg	30.00	10.00	
YIELD AND RETURNS				**Per ac**	**Per ha**
Average Yield (kg.)				1214.00	3000.00
Price of Produce (Rs/kg)				40.00	
Gross Income (Rs.)				48560.00	119992.00
Profit including imputed cost (Rs.)				-11273.00	-27856.00
Profit excluding imputed cost (Rs.)				16940.00	41859.00
Unit cost (including imputed cost) (Rs/kg)				49.29	
Unit cost (excluding imputed cost (Rs/kg)				26.05	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	83	1524.00		-	1524.00
1st, 2nd, & 3rd plough with 4wt	63	602.00	8350.00	-	8952.00
(do with 2wt)	(27)	(2352.00)	(8000.00)	-	-
(1st plough with 4wt)	(10)	(516.00)	(7636.00)	-	-
(2nd & 3rd plough with 2wt	(10)	(780.00)	(7000.00)	-	-
Plastering bunds	100	6128.00	-	-	6128.00
Levelling & broadcasting	93	3630.00	-	3306.00	6936.00
(Transplanting - parachute)	(7)	(2556)	-	(1087.00)	-
Fertilizer application	100	1170.00	-	1337.00	2507.00
Weed control with weedicides	93	696.00	-	1959.00	2655.00
Pest control with pesticide	90	978.00	-	2150.00	3128.00
Harvesting & processing combine harvester	100	1485.00	8833.00	-	10318.00
Additional drying	87	2088.00	-	-	2088.00
Transport produce	90	192.00	690.00	-	882.00
Total including imputed cost		18493.00	17873.00	8752.00	45118.00
Total excluding imputed cost		3963.00	16911.00	8014.00	28888.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext% Variety
SEED					Bg 352 - 25
Broadcasting		kg	41.00	80.64	Bg 358 - 19
(Parachute)		kg	(13.5)		Bg 300 - 17
LABOUR					Bg 360 - 14
Hired		md	3.00	1321.00	Bg 350 - 11
Family		md	11.00		Bg 251 - 08
Total		md	14.00		Other - 06
FERTILIZER	**Percent Reported**				
Basal - TSP	93	kg	22.00	11.00	
Urea	53	kg	19.00	10.00	
Top Dressing					
Urea	100	kg	65.00	11.00	
MOP	100	kg	19.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1486.00	3672.00
Price of Produce (Rs/kg)	37.26	
Gross Income (Rs.)	55368.00	136814.00
Profit including imputed cost (Rs.)	10250.00	25328.00
Profit excluding imputed cost (Rs.)	26480.00	65432.00
Unit cost (including imputed cost) (Rs/kg)	30.36	
Unit cost (excluding imputed cost) (Rs/kg)	19.44	

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	82	807.00	-	-	807.00
1st, 2nd, & 3rd plough with 4wt	87	638.00	8191.00	-	8829.00
1st, 2nd, & 3rd plough with 2wt	(13)	0.00	(7071.00)	-	-
Plastering bunds	93	6138.00	-	-	6138.00
(contract)	(07)	(6620.00)	-	-	-
Levelling & broadcasting	100	3159.00	-	3952.00	7111.00
Fertilizer application	100	1074.00	-	1824.00	2898.00
Weed control with weedicides	99	743.00	-	2541.00	3284.00
Pest & disease control	56	885.00	-	1891.00	2776.00
Water management	100	5616.00	-	-	5616.00
Harvesting & processing with combine harvester	95*	2074.00	8370.00	-	10444.00
(do manually)	(03)	(15191.00)		-	-
(Threshig & wino. with 4w thresher)	(03)	(1496.00)	(3452.00)	-	-
Additional drying	54	1992.00		-	1992.00
Transport produce to stores	88	346.00	1065.00	-	1411.00
Total including imputed cost		23472.00	17626.00	10208.00	51306.00
Total excluding imputed cost		11048.00	17050.00	9413.00	37511.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				At 362 - 24
Seed	kg	52.00	76.00	Bg 360 - 17
	kg			Bg 366 - 14
LABOUR				Bg 352 - 10
Hired	md	8.00	1381.00	Bw 367 - 04
Family	md	9.00		Bg 357 - 05
Total	md	17.00		Bg 300 - 04
				Bg 94/1 - 02
				Other - 20
FERTILIZER Percent Reported				
Basal - TSP 97	kg	27.00	12.00	
Urea 49	kg	24.00	12.00	
Top Dressing				
- Urea 99	kg	79.00	12.00	
MOP 97	kg	22.00	12.00	

cont...

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg)	2130.00	5263.00
Price of Produce (Rs/kg)	42.00	
Gross Income (Rs.)	89460.00	221056.00
Profit including imputed cost (Rs.)	38154.00	94279.00
Profit excluding imputed cost (Rs.)	51949.00	128366.00
Unit cost (including imputed cost) (Rs/kg)	24.09	
Unit cost (excluding imputed cost (Rs/kg)	17.61	

* 2% of the sample totally damged by the pest attack

Table 3.16: Cost of cultivation per acre of Paddy (rain-fed) - whole island

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	82	1757.00	-	-	1757.00
1st, 2nd, & 3rd plough with 4wt	53	1464.00	8432.00	-	9896.00
(do with 2wt)	(24)	(1166.00)	(7314.00)	-	-
1st,2nd plough 4wt	(13)	(1056.00)	(8231.00)	-	-
1st plough with 4wt	(10)	(516.00)	(5667.00)	-	-
2nd & 3rd plough with 2wt	(10)	(792.00)	-	-	-
Plastering bunds	100	5723.00	-	-	5723.00
Levelling & broadcasting	96	4915.00	-	3380.00	8295.00
(Transplanting)	(4)	(2312.00)	-		-
Fertilizer application	100	1177.00	-	1316.00	2493.00
Weed control with weedicides	85	659.00	-	1981.00	2640.00
Pest & disease control	70	959.00	-	1807.00	2766.00
Harvesting & processing					
combine harvester	89	1576.00	8540.00	-	10116.00
(do manually)	(11)	(8136.00)		-	-
(Threshig & winnowing with paddy thresher)	(11)	(3480.00)	-	-	-
Additional drying	85	2472.00	-	-	2472.00
Transport produce to stores	79	280.00	794.00	-	1074.00
Total including imputed cost		20982.00	17766.00	8484.00	47232.00
Total excluding imputed cost		3498.00	16963.00	7897.00	28358.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED					Bg 352 - 17
Seed		kg	40.00	84.50	Bg 300 - 13
LABOUR					Bg 358 - 12
Hired		md	3.00	1166.00	Bw 367 - 12
Family		md	15.00		Bg 359 - 12
Total		md	18.00		Bg 360 - 09
					Other - 25
FERTILIZER	**Percent Repored**				
Basal - TSP	94	kg	16.00	11.00	
Urea	57	kg	22.00	11.00	
Top Dressing					
Urea	98	kg	58.00	11.00	
MOP	100	kg	26.00	10.00	

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg.)	1396.00	3450.00
Price of Produce (Rs/kg)	40.00	
Gross Income (Rs.)	55840.00	137981.00
Profit including imputed cost (Rs.)	8608.00	21270.00
Profit excluding imputed cost (Rs.)	27482.00	67908.00
Unit cost (including imputed cost) (Rs/kg)	33.83	
Unit cost (excluding imputed cost (Rs/kg)	20.31	

Chapter 4

SUBSIDIARY FOOD CROPS, ROOT AND TUBERS AND VEGETABLE - SUMMARY

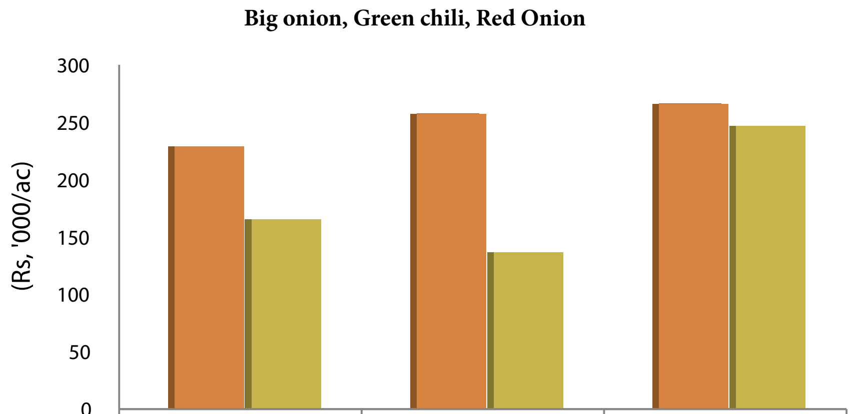
4.0 Comparison of the cost of cultivation of subsidiary food crops (SFCs)

4.1 Condiments

4.1.1 Cost of cultivation

Total cost and cash cost of cultivation of condiments under irrigated condition (big onion, green chili,and red onion) are depicted in the figure 4.1.The total cost of cultivation was 228,641 Rs./ac for big onion in Matale district, 257,275Rs./ac for green chilli in Anuradhapura district, and 266,121Rs./ ac for red onion in Puttalam district. The cash cost of cultivation was 165,415 Rs./ac for big onion in Matale district, 134,328 Rs./ac for green chilli in Anuradhapura district, and 246,743 Rs./ac for red onion in Puttalam district. The cash cost of cultivation as a percentage of total costs of cultivation was 72% for big onion in Matale district, 52% for green chilli in Anuradhapura district and 93% for red onion in Puttalam district. (Figure 4.1).

The total cost of cultivation was decreased in big onion in Matale district and green chilli in Anuradhapura district due to seed and fertilizer price reduction. Provincial authorities implemented a seed subsidy program for big onion in Matale district during this season and government decided to reduce fertilizer prices from 2018 yala season. Red onion cost of cultivation in puttalam district was increased, from 263,199.00 Rs/ac (2017 Yala) to 266,121.00 Rs/ac (2018 yala).



	Big Onion- Matale	Green Chilli - A'pura	Red Onion - Puttalam
Total Cost	228,641	257,275	266,121
Cash cost	165,415	136,398	246,743

Figure 4.1 Cost of cultivation of condiments

4.1.2 Components of the total cost

Major components of the total cost of cultivation of condiments under irrigated condition have been categorized as, labour, material and power (machinery) that is illustrated in the figure 4.2. Labour cost as a percentage of total cost was 64% for big onion in Matale, 75% for green chilli in Anuradhapura, and 32% for red onion in Puttalam district. Material cost as a percentage of total cost was 23% for big onion, 15% for green chilli, and 62% for red onion. The machinery cost as a percentage of total cost was 13% for big onion in Matale district, 10% for green chilli in Anuradhapura district, and 6% for red onion in Puttalam district (Figure 4.2).

Labour units used per acre were 125 man days for big onion, 161 man days for green chilli, and 88 man days for red onion. Relatively higher use of labour in green chilli cultivation has contributed to high labour share. The relatively lower units of labour have used (88 md/ac) in red onion cultivation. The relatively high share of material cost in total cost of red onion in Puttalam district was mainly due to high cost of seed bulb onions (134,775 Rs./ac). The machinery cost includes land preparation, drip irrigation and transport costs in all condiments. The machinery cost of green chilli (Rs. 26,501) in Anuradhapura and, big onion (Rs. 29,458) in Matale were higher than red onion (Rs.15,755) in Puttalam.

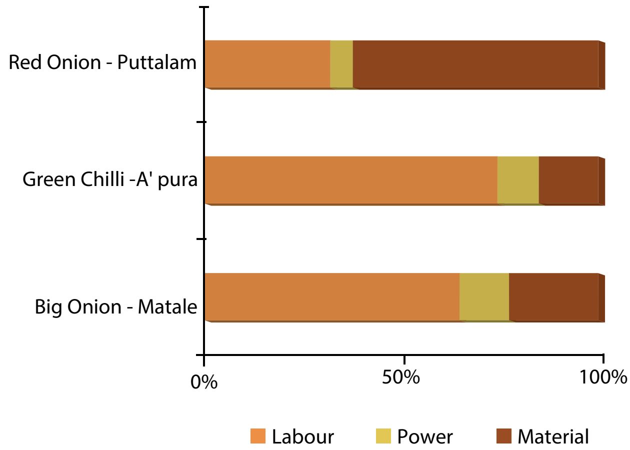


Figure 4.2 Major Component of the total cost

4.1.3 Cost of major operations

Nursery activities and transplanting (21%), water management (16%), fertilizer application (11%), harvesting and processing (17%), and pest and disease control (10%) were the major cost components of big onion cultivation.

These operations contributed to more than 70% of the total cost of big onion cultivation in Matale district. Fertilizer application (13%), harvesting (15%), water management (18%), land preparation (15%), pest and diseases control (16%), weeding and earthing up (10%), and transplanting (6%), were the major cost components of chilli cultivation. Altogether, these activities have contributed to 94% of the total cost of green chilli cultivation in Anuradhapura district. The cost of seeding (55%), water management (16%) and fertilizer application (10%) have been the major components of total costs of red onion in Puttalam. Costs of these operations have contributed to more than 82% of cost of cultivation in red onion in Puttalam.

4.1.4 Net income

The net income received was 185,409Rs./ac for big onion, 621,195Rs./ac for green chilli, and 162,159Rs./ac for red onion. In Yala 2017, the net income received was 61,316Rs./ac for big onion in Matale, 669,652 Rs./ac for green chilli in Anuradhapura and 392,337 Rs./ac for red onion in Puttalam. Accordingly, there was marked increase of net income from big onion in Matale district but net income of green chilli and red onion were decreased during this season.Whereas an increase of net income in big onion was observed, due to high yield and better farm-gate price received by big onion farmers in Matale district. Due to decreased farm gate price of green chilli in Anuradhapura and red onion in Puttalam, lower net income received farmers in both districts compared with 2017 Yala.

4.1.5 Average farm-gate price

The average farm-gate prices received were 65.00 Rs./kg for big onion, 214.00 Rs./kg for green chilli, and 86.00 Rs./kg for red onion. During 2017 yala season, farm-gate prices received were 57.64Rs./kg for big onion, 231.00 Rs./kg for green chilli, and 168.00 Rs./kg for red onion. With comparison to Yala 2017, farm gate prices of 2018 Yala were higher for big onion (13%) in Matale district, while it was lower (7%) for green chilli in Anuradhapura, and (49%) red onion in Puttalam district.

4.1.6 Unit cost of production

The unit cost of production including cost of farmer owned inputs was 35.89Rs./kg for big onion, 62.67 Rs./kg for green chilli, and 53.44 Rs./kg for red onion (Fig: 4.3). There were small amount of decrease of unit cost of production of big onion in Matale district (22%), red onion in Puttalam district (21%), and green chilli in Anuradhapura (3%) compared to 2017 yala season.

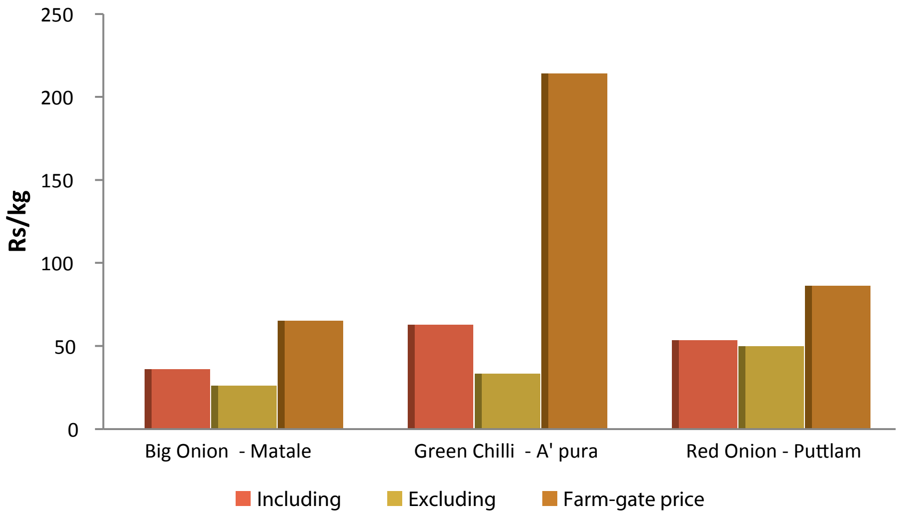


Figure 4.3 Farm-gate price in unit cost of production

4.2 Coarse Grains and Pulses

4.2.1 Cost of Cultivation

Cost of cultivation and respective cost components of the coarse grains and pulses in Yala 2018 are presented in table 4.2. The total cost of cultivation per acre of maize in Badulla district and Mahaweli system H under irrigated condition were 73,678 Rs/ac and 76,414Rs./ac. As usual, total cost for maize in System H was greater than that of the Badulla district. The cash cost component of maize in Badulla district and system H were 39,810 Rs./ac and 49,203 Rs./ac respectively. The total cost of cowpea in Ampara district including imputed cost was 37,158 Rs./ac while excluding imputed cost was 21,189 Rs/ac.

4.2.2 Component of the total cost

Major components of the total cost have been categorized as labour, material and power. Labour cost was the largest cost component of both coarse grains and pulse crops which incurred 65%, 66% and 71% for maize in Badulla, Maize in Mahaweli system H and cowpea in Ampara district respectively.

The second major cost component was material cost and it ranged 24% maize (Badulla), 20% Maize (System H) and 13% for Cowpea (Ampara). Power cost was varied from 11% and 14% of the total cost of maize in Badulla and System H respectively while it was 16% for cowpea in Ampara district.

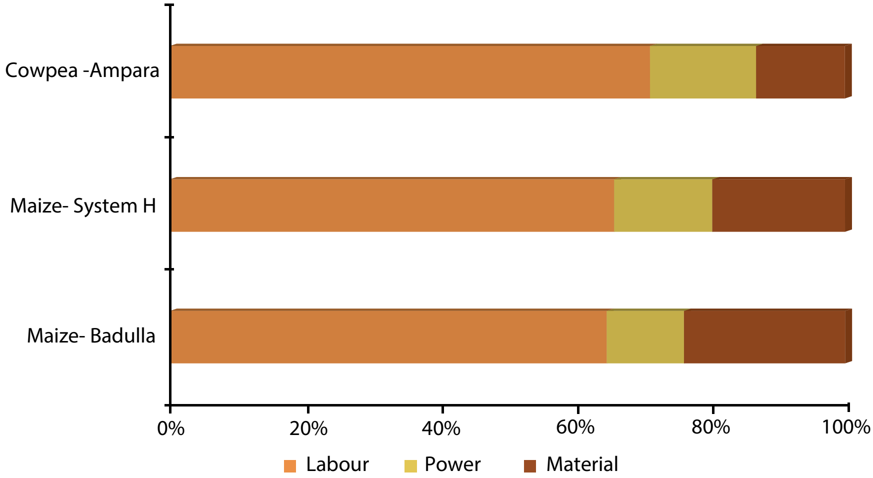


Figure 4.4 Major component as a percentage of total cost of production

4.2.3 Cost of major operations

The cost of seeding and fertilizer application were the most costly operations for maize production in both Badulla district and Mahaweli System H which incurred 37% and 33% of the total cost of respective areas. Weeding was the third highest cost operation in maize production in Mahaweli H area (14%) while harvesting was the fourth highest cost operation in Mahaweli H (11%) for maize production. In Badulla district third highest cost operation was harvesting (16%). Water management and weeding operations were the next important activities of the maize cultivation in Badulla district. The highest cost operation of cowpea production was harvesting and drawing in Ampara district which was incurred 23% of the total cost. Another 19% of the total cost was incurred for weeding and earthing up while 16% of the total cost was incurred for seeding in cowpea production.

4.2.4 Labour use and wage rate

Labour utilization in coarse grain production looks quite higher as average labour usage of maize production in Badulla district and Mahaweli H area were 44 and 42 mandays respectively. Cowpea production in Ampara district has utilized 22 md/ac.

4.2.5 Average yield

Average yield of maize in Badulla, System H and cowpea in Ampara, Yala 2018 are depicted in table 4.6

4.2.6 Net income

Net return (excluding imputed cost) reported for maize in Badulla district was 54,123 Rs./ac while it was 40,761 Rs./ac in Mahaweli system H for the same crop. In case of pulses, net income (excluding imputed cost) for cowpea was 15,249 Rs./ac in Ampara district.

4.2.7 Average farm- gate price

Maize farmers in Badulla district received an average farm-gate price of 49.70Rs./kg which was quite higher than that of 44.10Rs./kg in system H. In terms of pulses, cowpea farmers received 153.10 Rs./kg. Farm gate prices received in 2018 yala for coarse grain and pulses were lower than that of previous yala season (2017 Yala).

4.2.8 Unit cost of production

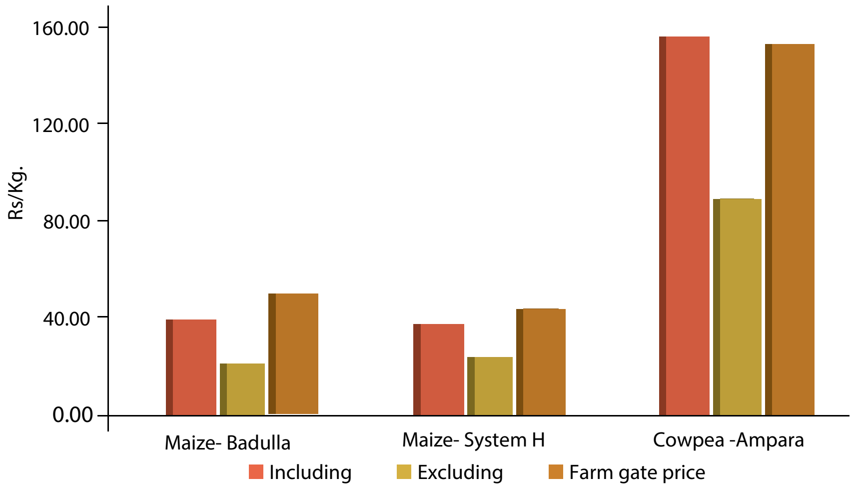


Figure 4.5 Unit cost of production and Farm-gate price

Unit cost of production of maize ranged Rs. 37.46 – 38.98 and it was Rs. 156.13 for cowpea in Ampara district.

4.3 Oil Crops

4.3.1 Cost of Cultivation

Cost of cultivation and respective cash cost component (excluding imputed cost) of gingelly and soya bean are depicted in figure 4.6. The total cost of cultivation per acre of gingelly under rainfed condition in Anuradhapura was Rs.19, 493 whereas it was Rs. 64,926 for soya bean in Mahaweli system H under irrigated condition.

The cash cost component of soya beans in system H (46,797 Rs/ac) was noticeably higher relative to the similar cost in gingelly cultivation in Anuradhapura district under rainfed condition (14,448 Rs/ac).

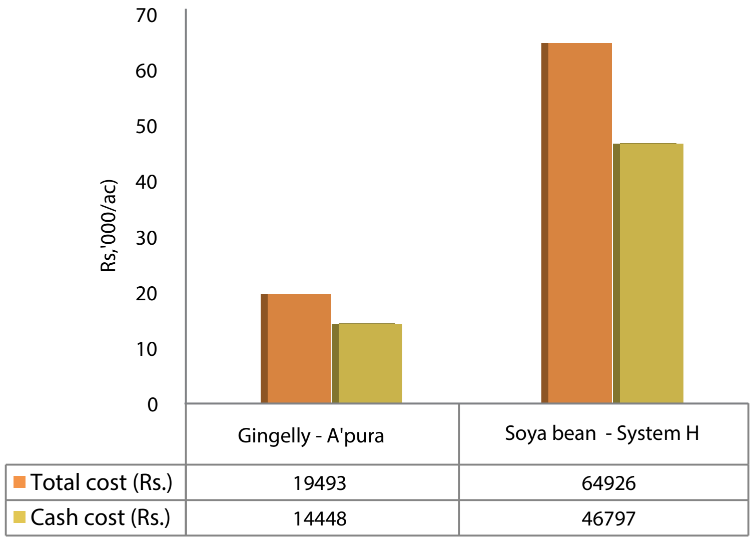


Figure 4.6 Cost of cultivation of oil crops

4.3.2 Components of total cost.

Major components of the total cost have been categorized as labour, material and power. In the cost of gingelly cultivation, 62% was incurred on labour, while 31% and 7% were incurred on machinery and material inputs respectively. From the total cost of soya bean cultivation, 67%, 17% and 16% were incurred on labour, machinery, and material inputs respectively (Figure 4.7). Soyabean cultivation has substantial material cost component that mainly comprised seed (17% of total cost or 30% of material cost), pesticides (6% of total cost or 25% of material cost), fertilizer (6% of total cost or 27% of material cost) and weedicides (4% of total cost or 17% of material cost).

Only material input applied in gingelly cultivation was seeds which is occupied 10% of the total cost (Figure 4.7).

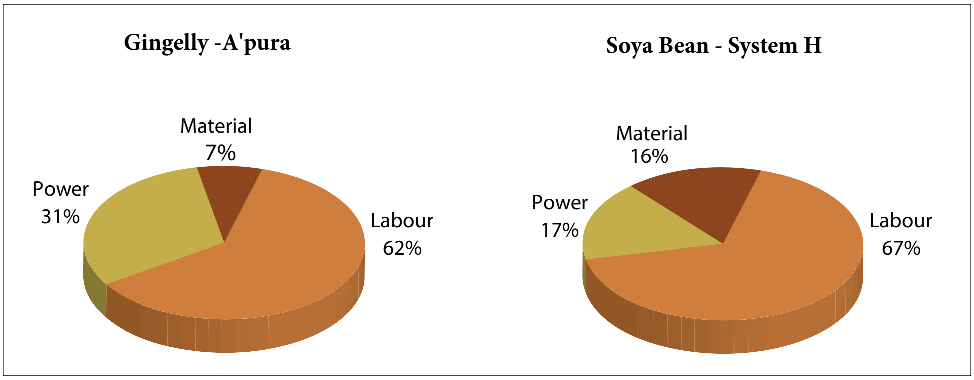


Figure 4.7 Major component as a percentage of total cost of production

4.3.3 Cost of major operations

The cost of seeding, weeding, harvesting and processing have been relatively higher for soya bean cultivation. The cost of these operations accounted 58% of the total cost of production of soya bean in Mahaweli system H. Total cost of production of gingelly was comprised of land preparation (41%), broadcasting (10%) harvesting (37%) and processing (09%).

4.3.4 Net income

Net income excluding imputed cost of soya bean cultivation in system H was 50,149 Rs./ac, whereas net income excluding imputed cost of gingelly cultivation in Anuradhapura district was 23,352 Rs./ac.

4.3.5 Average farm-gate price

Soya bean farmers in system H received an average farm-gate price of 106.30 Rs./kg, while gingelly farmers in Anuradhapura district received 168.00 Rs./kg .

4.3.6 Unit cost of production

The unit cost of production of soya bean in system H was 71.19 Rs./kg and unit cost of production of gingelly in Anuradhapura was 86.64Rs./kg.

4.4 Potato

4.4.1 Cost of cultivation

The cost of cultivation survey was conducted for irrigated potato production in Nuwara- Eliya and Badulla districts for the 2018 yala season. As the production environments in these two districts are different, the costs are not directly comparable. The total cost of potato cultivation, including imputed cost (family contribution) was Rs.340,801 and Rs.363,071 per acre in Badulla and Nuwara- Eliya districts respectively. Total cost was decreased during this yala, as a result of government fertilizer subsidy programme.

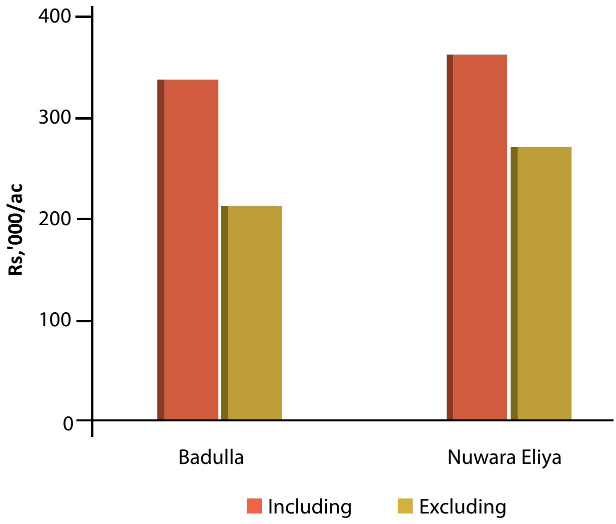


Figure 4.8. Total cost and cash cost share in potato cultivation

4.4.2 Components of the total cost

The highest cost component of the potato cultivation was material cost (seeds, agro-chemicals and other inputs) where it was 54% and 57% of the total cost of cultivation in Badulla and Nuwara-Eliya districts respectively. The second largest cost component was labour and it accounted for 40% and 39% of total cost in Badulla and Nuwara-Eliya districts respectively. All farmers in Badulla and 97% farmers in Nuwara-Eliya have cultivated the variety “Granola”.

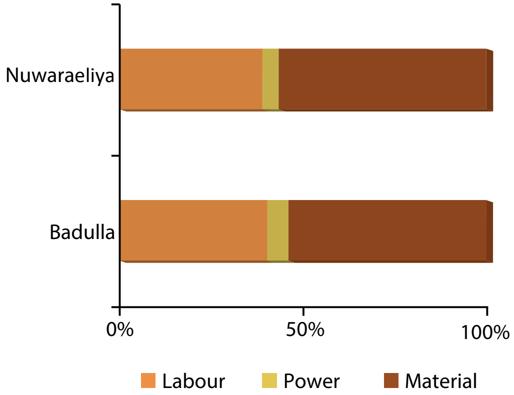


Figure 4.9 Major component of the total cost of production in potato

4.4.3 Cultural practices

The cultural practices of potato production in both districts are similar. 100% of the selected farmers have used two wheel tractors for land preparation in both districts. In Badulla district, costs on harvesting and drawing (28%), water management (12%) and seeding (12%) account for the highest share of labour cost. In Nuwara eliya district, cost share of labour was higher on same practices. Both harvesting and drawing, water management accounts 16% of the labour cost while seeding accounts 14% of the labour cost.

4.4.4 Labour usage

Potato cultivation is a labour intensive activity. The average labour usage per acre of potato cultivation in Badulla and Nuwara eliya were 111 and 114 man days respectively. Hired labour accounted 55% (56% in yala 2017) and 54% (55% in yala 2017) of total labour usage in Badulla and Nuwara eliya respectively. In Badulla district average wage rate for hired labour was Rs.1242.00 and it was Rs.1243.00 in Nuwara eliya.

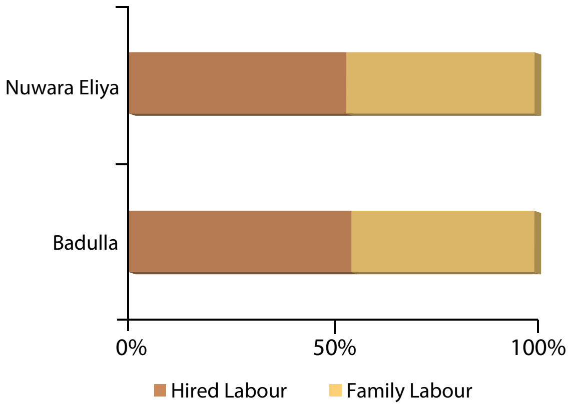


Figure 4.10. Labour usage in potato cultivation

4.4.5 Average yield

Average yield obtained by potato farmers was 5,744 kg/ac (14,193 kg/ha) in Badulla district and 6,207 kg/ac (15,337 kg/ha) in Nuwara eliya district. When compared to yala 2017, average yield of both districts was slightly low.

4.4.6 Net income

The net return is calculated considering the imputed costs as well as without imputed costs. The net return excluding imputed cost was 301,174 Rs./ac and 288,814Rs./ac for Badulla and Nuwara eliya districts respectively.

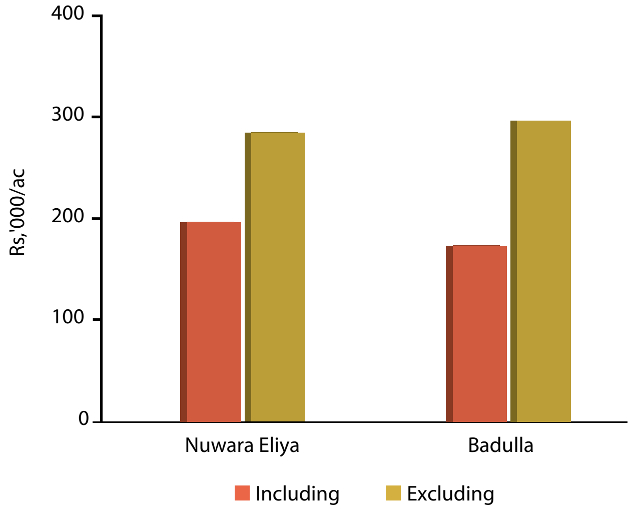


Figure 4.11. Net income in potato cultivation

4.4.7 Average farm-gate price

The farm gate price of potato in Badulla and Nuwaraeliya districts were 90.00Rs./kg (85.00Rs./kg in yala 2017) and 90.80Rs./kg (90.00Rs./kg in yala 2017) respectively. When compared to previous yala the producer price has increased in Badulla district while it has remained same in Nuwara eliya district.

4.4.8 Unit cost of production

The unit cost of production (including imputed cost) of potato was 59.33 Rs./kg and 58.49 Rs./kg in Badulla and Nuwara eliya respectively.

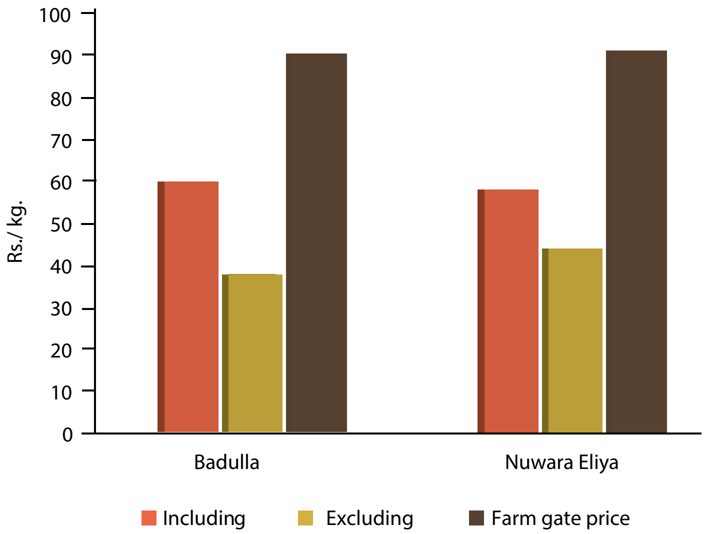


Figure 4.12 Unit cost of production and farm-gate price in potato

4.5 Sweet Potato (Matale) and Manioc (Gampaha)

4.5.1 Cost of cultivation

The cost of cultivation survey was conducted for irrigated sweet potato production in Matale district and manioc production in Gampaha district for 2018 yala season. The total cost of cultivation (including family owned inputs) of sweet potato and manioc in relevant districts were Rs.114,318 and Rs.60,307 per acre respectively.

4.5.2 Major components of the total cost

The labour accounts for major cost component (72%) and 16% and 12% of total cost account for material and machinery of sweet potato production. The share of labour, material and machinery from total cost for manioc production was 54%, 33% and 13% respectively (Figure 4.13).

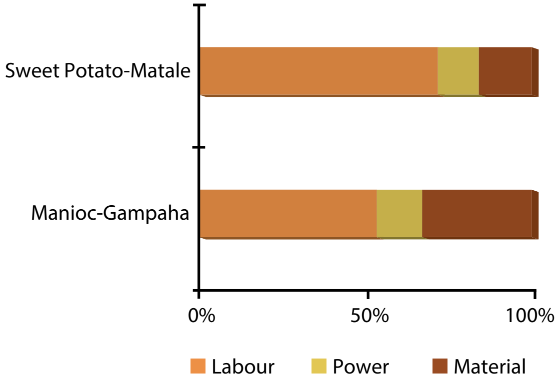


Figure 4.13. Major components of the total cost - Sweet potato and Manioc

4.5.3 Cultural practices

Ploughing was done mostly using machinery in both sweet potato and manioc (100%) cultivation. The labour cost was predominant on harvesting and drawing which accounts 31% of total labour cost for sweet potato cultivation.

4.5.4 Use of labour

Hired labour accounted for 65% in sweet potato cultivation and wage rate was Rs.1,113.00 per day and it was 63% in manioc cultivation and wage rate was Rs.1,358 per day (Figure 4.14).

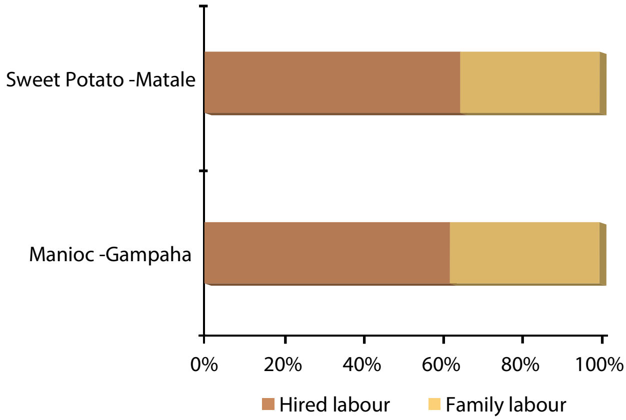


Figure 4.14 Laboour usage of sweet potato and manioc

4.5.5 Net Income

The net returns of sweet potato cultivation including and excluding imputed cost were Rs.128, 354 and Rs.160,399 per acre respectively. The net returns from manioc cultivation including imputed cost and excluding imputed cost were 156,195Rs./ac and 170,374 Rs./ac respectively.

4.5.6 Average farm-gate price

Average farmgate price of sweet potato and manioc were 38.18 Rs./kg and 34.30 Rs./kg respectively.

4.5.7 Unit cost of production

The unit cost (including imputed cost) of production was 17.99 Rs. /kg and 9.55 Rs. /kg of sweet potato and manioc respectively (Figure 4.15).

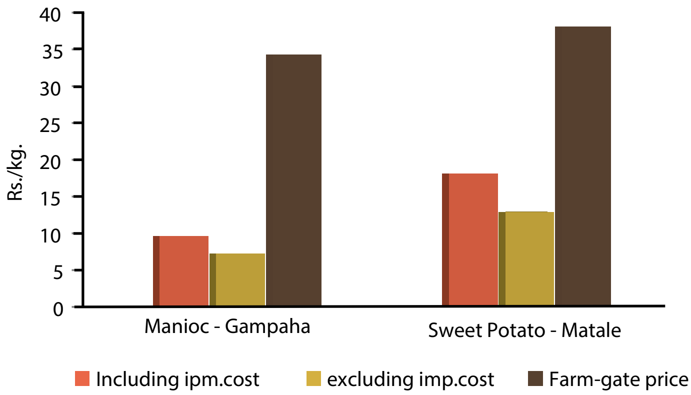


Figure 4.15 Unit cost and farm-gate price

4.6 Up-country vegetables

4.6.1 Cost of cultivation

The cost of cultivation surveys for up country vegetables were conducted for cabbage and carrot in Nuwara eliya district, tomato and pole bean in Badulla district and tomato cultivation in Kandy district. All crops were cultivated under irrigated condition. Hybrid varieties are more popular among farmers. The total cost of cultivation (including imputed cost) reported for Yala 2018 season for these up country vegetables varies from Rs.197,131 to 267,319 (Figure 4.16). Cabbage cultivation in Nuwara eliya district reported the lowest cost and tomato cultivation in Badulla district reported the highest.

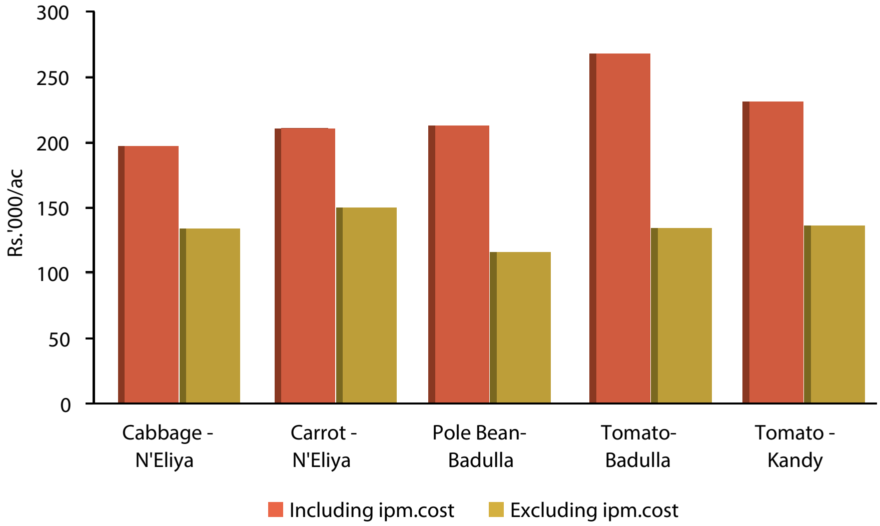


Figure 4.16 Total cost and cash cost share in up country vegetable

4.6.2 Components of the total cost

More than 58% from the total cost was comprised of labour as vegetable cultivation is a labour intensive activity (Figure 4.17). Machinery cost as a percentage of total cost was very low (5% -7%) as only few farmers use tractors for ploughing at the initial stage. Seeds, fertilizer and agro chemicals are the materials used for crop cultivation and the cost varied from 29% to 36% from total cost of cultivation.

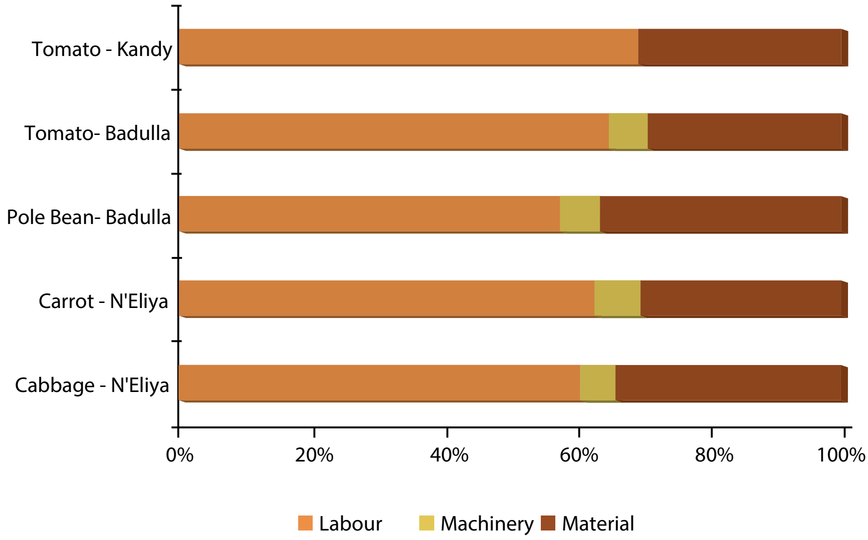


Figure 4.17 Major componenets of total cost of production - Up country vegetable

4.6.3 Use of labour

The cultivation of vegetables is a labour intensive activity and the usage of labour changes with the type of crop and field conditions. In general 100 to 161 total man days were required for up country vegetable cultivation and use of family labour was more prominent for pole bean and tomato cultivation in Badulla district. The usage of hired labour and family labour in up-country vegetable cultivation in Yala 2018 is shown in Figure 4.18.

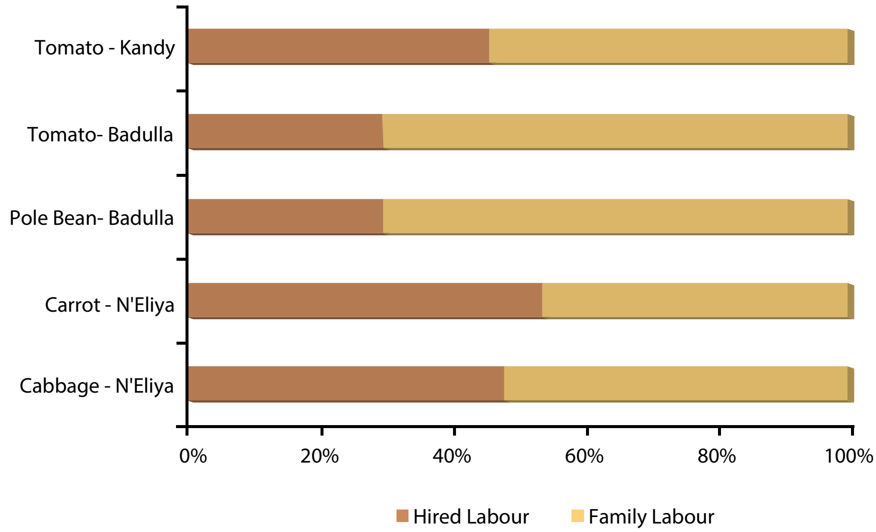


Figure 4.18 Labour usage of up country vegetable production

4.6.4 Average yield

Yield levels of selected up-country vegetables in Yala 2018 season are presented in Figure 4.19.

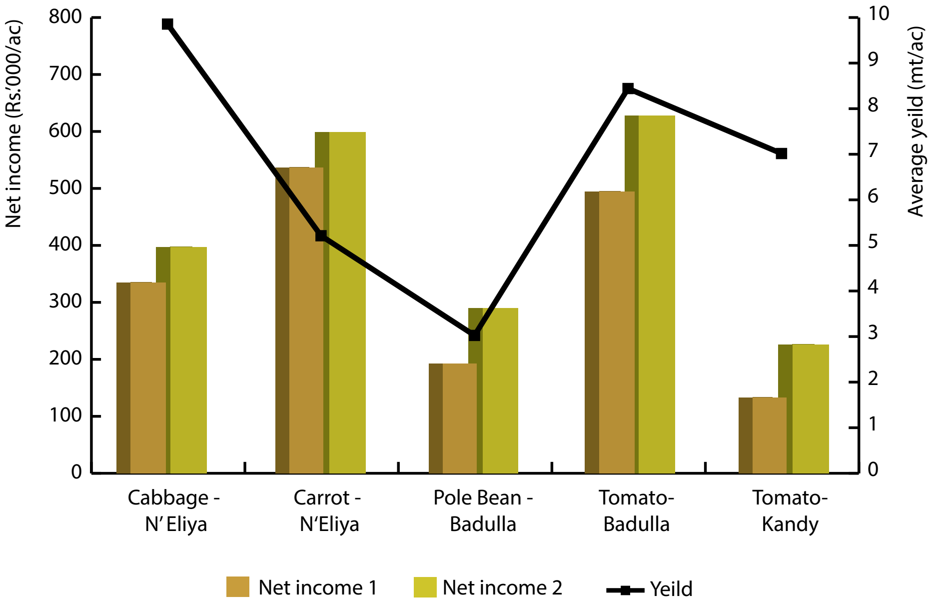


Figure 4.19 Average yield and net income of up country vegetable

4.6.5 Net Income

The net income from vegetable cultivation is estimated with and without farmer owned inputs. The farmer earned profit (excluding imputed cost) per acre in general varied from Rs.226, 093 (tomato - Kandy) to Rs. 627,870 (tomato- Badulla).

4.6.6 Average Farm-gate price

The difference between the unit cost and farm-gate price indicates the level of profitability from each unit (kg) of produce. Highest unit margin was received for carrot (Nuwara eliya) and pole bean (Badulla). The lowest profit margin was reported for tomato cultivation in Kandy district (18.97 Rs./ kg) (Fig 4.20). The highest farm gate price was received for carrot 143.50 Rs./kg (Nuwara eliya) and pole bean 134.00 Rs./kg (Badulla).

4.6.7 Unit cost of production

Unit cost of production (Including imputed cost) of up country vegetables were varied from 20.00 Rs./kg (cabbage-Nuwara eliya) to 70.29 Rs./kg (pole bean - Badulla).

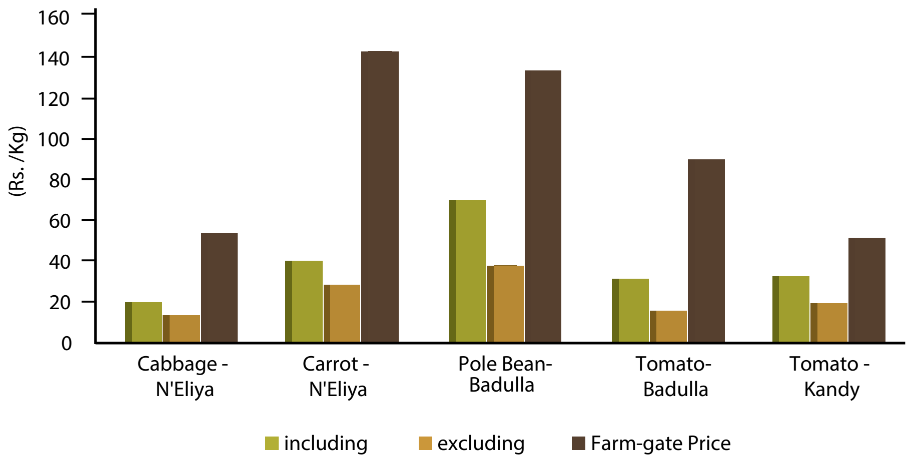


Figure. 4.20 Unit cost and farm-gate price of up country vegetable

4.7 Low country vegetables

4.7.1 Cost of cultivation

Bitter gourd and brinjal crops cultivated under irrigated condition in Hambantota district were selected for low country vegetable analysis. The variety composition of brinjal recorded 90% of hybrid and 10% of local varieties. The variety composition of bitter gourd has been changed significantly as 97% local varieties and 03% of imported varieties, while it was 77% for hybrid and 23% local varieties in previous season. The total cost (including imputed cost) of brinjal and bitter gourd were 181,182 Rs/ac and 239,331 Rs/ac respectively.

4.7.2 Component of the total cost

The distribution of labour, material and machinery cost for bitter gourd were 62%, 31% and 7% whereas it was 64%, 25% and 11% respectively for brinjal. Considering bitter gourd, the greater share of the cost (including imputed cost) was contributed by trellising and training (20%), pest and disease control (17%), fertilizer application (16%), harvesting and drawing (15%), water management (11). The operations harvesting and drawing (26%) pest and disease control (23%), water management (14%), fertilizer application (14%), and were the operations possess greater share of cost of cultivation of brinjal in Hambantota.

4.7.3 Labour usage, average yield and net income

Bitter gourd cultivation engages with labour intensive activities and it needed 112 man-days, whereas brinjal needed 85 man-days per acre. Average yield of bitter gourd and brinjal were 5,995 kg/ac and 9,124 kg/ac respectively in Hambantota district.

4.7.4 Unit cost of production

Unit cost of production (including imputed cost) of low country vegetables varied from 39.92 Rs./kg for bitter gourd to 19.86Rs./kg for brinjal in Hambantota district.

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
			Mean	Mode	Total cost	Cash cost	total cost
4.1.1 Coarse grains							
Maize	IR	Badulla	1.97	1	73,678	39,810	54
Maize	IR	System H	1.24	1	76,414	49,203	64
4.1.2 Pulses							
Cowpea	RF	Ampara	1.52	0.5	37,158	21,189	57
4.1.3 Condiments							
Big onion	IR	Matale	1.15	1	228,641	16,5415	72
Green chilli	IR	Anuradhapura	0.5	0.45	257,275	134,328	52
Red onion	IR	Puttalam	2.2	2	266,121	24,6743	93
4.1.4 Oil crops							
Gingelly	RF	Anuradhapura	3.2	2	19,493	14,448	74
Soya bean	IR	System H	1.6	1	64,926	46,797	72
4.1.5 Root & tubers							
Manioc	RF	Gampaha	1.3	1	60,307	46,128	76
Potato	IR	Badulla	0.7	0.5	340,801	215,786	63
Potato	IR	N'Eliya	0.56	0.25	363,071	274,782	76
Sweet Potato	IR	Matale	1.1	1	114,318	82,273	72
4.1.6 Low country vegetables							
Bitter gourd	IR	Hambantota	1.2	1	239,331	148,906	62
Brinjal	IR	Hambantota	0.9	1	181,182	111,090	61
4.1.7 Up country vegetables							
Cabbage	IR	N'Eliya	0.4	0.3	197,131	134,866	68
Carrot	IR	N'Eliya	0.5	0.5	210,812	149,144	71
Pole bean	IR	Badulla	0.5	0.3	212,632	115,433	54
Tomato	IR	Badulla	0.4	0.3	267,319	134,443	50
Tomato	IR	Kandy	0.5	0.5	230,364	137,336	60

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	47,675 (65)	8,386 (11)	17,617 (24)	73,678
Maize	IR	System H	50,359 (66)	10,892 (14)	15,163 (20)	76,414
4.1.2 Pulses						
Cowpea	RF	Ampara	26,322 (71)	5,894 (16)	4,942 (13)	37,158
4.1.3 Condiments						
Big onion	IR	Matale	147,374 (64)	29,458 (13)	51,809 (23)	228,641
Green chilli	IR	Anuradhapura	191,427 (75)	26,501 (10)	39,347 (15)	257,275
Red onion	IR	Puttalam	85,202 (32)	15,755 (06)	165,164 (62)	266,121
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	12,017 (62)	6,020 (31)	1,456 (07)	19,493
Soya bean	IR	System H	43,724 (67)	10,972 (17)	10,230 (16)	64,926
4.1.5 Root & tubers						
Manioc	RF	Gampaha	32,592 (54)	8,047 (13)	19,668 (33)	60,307
Potato	IR	Badulla	137,816 (40)	19,533 (06)	183,452 (54)	340,801
Potato	IR	N'Eliya	141,743 (39)	16,134 (04)	205,194 (57)	363,071
Sweet Potato	IR	Matale	82,340 (72)	13,515 (12)	18,463 (16)	114,318
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	147,707 (62)	17,839 (07)	73,785 (31)	239,331
Brinjal	IR	Hambantota	116,842 (64)	19,238 (11)	45,102 (25)	181,182
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	119,769 (61)	10,471 (05)	66,891 (34)	197,131
Carrot	IR	N'Eliya	132,422 (63)	14,535 (07)	63,855 (30)	210,812
Pole bean	IR	Badulla	122,515 (58)	12,998 (06)	77,119 (36)	212,632
Tomato	IR	Badulla	173,981 (65)	15,578 (06)	77,760 (29)	267,319
Tomato	IR	Kandy	159,595 (69)	0	70,769 (31)	230,364

Values within parentheses denote %

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	15,176 (38)	7,017 (18)	17,617 (44)	39,810
Maize	IR	System H	23,980 (49)	10,060 (20)	15,163 (31)	49,203
4.1.2 Pulses						
Cowpea	RF	Ampara	10,764 (51)	5,655 (27)	4,770 (23)	21,189
4.1.3 Condiments						
Big onion	IR	Matale	88,425 (53)	28,796 (17)	48,194 (29)	165,415
Green chilli	IR	Anuradhapura	70,151 (52)	25,253 (19)	38,924 (29)	134,328
Red onion	IR	Puttalam	65,824 (27)	15,755 (06)	165,164 (67)	246,743
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	8,407 (58)	5,380 (37)	661 (05)	14,448
Soya bean	IR	System H	26,232 (56)	10,399 (22)	10,166(22)	46,797
4.1.5 Root & tubers						
Manioc	RF	Gampaha	20,370 (44)	6,090 (13)	19,668 (43)	46,128
Potato	IR	Badulla	75,762 (35)	12,685 (06)	127,339 (59)	215,786
Potato	IR	N'Eliya	75,823 (28)	15,849 (06)	183,110 (67)	274,782
Sweet Potato	IR	Matale	53,424 (65)	10,386 (13)	18,463 (22)	82,273
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	59,355 (40)	17,693 (12)	71,858 (48)	148,906
Brinjal	IR	Hambantota	46,750 (42)	19,238 (17)	45,102 (41)	111,090
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	57,504 (43)	10,471 (08)	66,891 (49)	134,866
Carrot	IR	N'Eliya	71,316 (48)	13,973 (09)	63,855 (43)	149,144
Pole bean	IR	Badulla	36,518 (32)	9,829 (08)	69,086 (60)	115,433
Tomato	IR	Badulla	51,840 (39)	12,415 (09)	70,188 (52)	134,443
Tomato	IR	Kandy	73,200 (53)	0	64,136 (47)	137,336

Values within parentheses denote %

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

Crop	Irrigation	District	Labour (md/ac)			Wage rate
			Family	Hired	Total	(Rs./md)
4.1.1 Coarse grains						
Maize	IR	Badulla	30	14	44	1,084
Maize	IR	System H	22	20	42	1,199
4.1.2 Pulses						
Cowpea	RF	Ampara	13	9	22	1,196
4.1.3 Condiments						
Big onion	IR	Matale	50	75	125	1,179
Green chilli	IR	Anuradhapura	102	59	161	1,189
Red onion	IR	Puttalam	20	68	88	968
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	3	7	10	1,201
Soya bean	IR	System H	16	24	40	1,093
4.1.5 Root & tubers						
Manioc	RF	Gampaha	9	15	24	1,358
Potato	IR	Badulla	50	61	111	1,242
Potato	IR	N'Eliya	53	61	114	1,243
Sweet Potato	IR	Matale	26	48	74	1,113
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	67	45	112	1,319
Brinjal	IR	Hambantota	51	34	85	1,375
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	52	48	100	1,198
Carrot	IR	N'Eliya	54	63	117	1,132
Pole bean	IR	Badulla	73	31	104	1,178
Tomato	IR	Badulla	113	48	161	1,080
Tomato	IR	Kandy	72	61	133	1,200

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	222	-	7,978	45
Maize	IR	System H	199	-	7,063	47
4.1.2 Pulses						
Cowpea	RF	Ampara	-	-	939	19
4.1.3 Condiments						
Big onion	IR	Matale	439	-	17,881	35
Green chilli	IR	Anuradhapura	428	-	17,207	44
Red onion	IR	Puttlam	238	3263	23,186	14
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	-	-	-	-
Soya bean	IR	System H	61	-	2,760	27
4.1.5 Root & tubers						
Manioc	RF	Gampaha	440	-	19,668	100
Potato	IR	Badulla	539	586	29,927	16
Potato	IR	N’Eliya	499	6,881	43,098	21
Sweet Potato	IR	Matale	193	-	8,713	47
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	329	-	23,227	31
Brinjal	IR	Hambantota	341	-	14,835	33
4.1.7 Up country vegetables						
Cabbage	IR	N’Eliya	318	-	14,628	22
Carrot	IR	N’Eliya	96	1,074	35,993	56
Pole bean	IR	Badulla	331	552	19,050	25
Tomato	IR	Badulla	399	946	25,315	33
Tomato	IR	Kandy	341	-	17,911	25

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	1,890	49.70	93,933	20,255	54,123	1,575	2.36
Maize	IR	System H	2,040	44.10	89,964	13,550	40,761	1,541	1.83
4.1.2 Pulses									
Cowpea	RF	Ampara	238	153.10	36,438	-720	15,249	1,182	1.72
4.1.3 Condiments									
Big onion	IR	Matale	6,370	65.00	414,050	185,409	248,635	2,696	2.50
Green chilli	IR	Anuradhapura	4,105	214.00	878,470	621,195	744,142	5,058	6.54
Red onion	IR	Puttalam	4,980	86.00	428,280	162,159	181,537	2,811	1.74
4.1.4 Oil crops									
Gingelly	RF	Anuradhapura	225	168.00	37,800	18,307	23,352	3,176	2.62
Soya bean	IR	System H	912	106.30	96,946	32,020	50,149	1,910	2.07
4.1.5 Root & tubers									
Manioc	RF	Gampaha	6,312	34.30	216,502	156,195	170,374	7,948	4.69
Potato	IR	Badulla	5,744	90.00	516,960	176,159	301,174	3,396	2.40
Potato	IR	N'Eliya	6,207	90.80	563,596	200,525	288,814	3,199	2.05
Sweet Potato	IR	Matale	6,356	38.18	242,672	128,354	160,399	2,890	2.95
4.1.6 Low country vegetables									
Bitter gourd	IR	Hambantota	5,995	113.20	678,634	439,303	529,728	5,260	4.56
Brinjal	IR	Hambantota	9,124	89.40	815,686	634,504	704,596	8,839	7.34
4.1.7 Up country vegetables									
Cabbage	IR	N'Eliya	9,856	54.00	532,224	335,093	397,358	4,549	3.95
Carrot	IR	N'Eliya	5,212	143.50	747,922	537,110	598,778	5,727	5.01
Pole bean	IR	Badulla	3,025	134.00	405,350	192,718	289,917	3,139	3.51
Tomato	IR	Badulla	8,442	90.30	762,313	494,994	627,870	4,222	5.67
Tomato	IR	Kandy	7,016	51.80	363,429	133,065	226,093	2,250	2.65

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	39.98	21.06	1,482	801
Maize	IR	System H	37.46	24.12	1,733	1,116
4.1.2 Pulses						
Cowpea	RF	Ampara	156.13	89.03	243	138
4.1.3 Condiments						
Big onion	IR	Matale	35.89	25.97	3,518	2,545
Green chilli	IR	Anuradhapura	62.67	32.72	1,202	628
Red onion	IR	Puttalam	53.44	49.55	3,094	2,869
4.1.4 Oil crops						
Gingelly	RF	Anuradhapura	86.64	64.21	116	86
Soya bean	IR	System H	71.19	51.31	611	440
4.1.5 Root & tubers						
Manioc	RF	Gampaha	9.55	7.31	1,758	1,345
Potato	IR	Badulla	59.33	37.57	3,787	2,398
Potato	IR	N'Eliya	58.49	44.27	3,999	3,026
Sweet Potato	IR	Matale	17.99	12.94	2,994	2,155
4.1.6 Low country vegetables						
Bitter gourd	IR	Hambantota	39.92	24.84	2,114	1,315
Brinjal	IR	Hambantota	19.86	12.18	2,027	1,243
4.1.7 Up country vegetables						
Cabbage	IR	N'Eliya	20.00	13.68	3,651	2,498
Carrot	IR	N'Eliya	40.45	28.62	1,469	1,039
Pole bean	IR	Badulla	70.29	38.16	1,587	861
Tomato	IR	Badulla	31.67	15.93	2,960	1,489
Tomato	IR	Kandy	32.83	19.57	4,447	2,651

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

CHAPTER 5

SUBSIDIARY FOOD CROPS, ROOT AND TUBERS AND VEGETABLES STATISTICS

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	(29)	(4432)	-	-	-
1st plough with2wt	76	1232.00	4978.00	-	6210.00
(do Buffaloes)	(24)	-	(3455.00)	-	-
Digging holes & seeding	100	8378.00	-	6440.00	14818.00
Fertilizer application	100	4763.00	-	7978.00	12741.00
Weed control with weedicides	50	815.00	-	1983.00	2798.00
Weeding & earthing up	50	6253.00	-		6253.00
Pest & disease control	62	1305.00	-	1216.00	2521.00
Water management	100	6528.00	-	-	6528.00
Harvesting & drawing	100	11750.00	-	-	11750.00
Thershing & processing with engine powered thresher	76	2880.00	2070.00	-	4950.00
Additional drying	75	2640.00	-	-	2640.00
Transport produce to market	62	1131.00	1338.00	-	2469.00
Total including imputed cost		47675.00	8386.00	17617.00	73678.00
Total excluding imputed cost		15176.00	7017.00	17617.00	39810.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED					
Seed	Kg	5.30	1215.00	Pacific	74
LABOUR				Other	26
Hired	md	14.00	1084.00		
Family	md	30.00			
Total	md	44.00			

FERTILIZER	Percent Reported			
TSP	44	kg	46.00	38.00
Urea	53	kg	81.00	30.00
Mix fertilizer	62	kg	95.00	40.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	1890.00	4670.00
Price of produce (Rs./kg)	49.70	
Gross income (Rs.)	93933.00	232108.00
Profit incl. imputed cost (Rs.)	20255.00	50050.00
Profit excl. imputed cost (Rs.)	54123.00	133738.00
Unit cost (incl.imputed cost) (Rs/kg)	38.98	
Unit cost (excl. imputed cost) (Rs/kg)	21.06	

Table 5.2: Cost of cultivation per acre of Maize (irrigated) - System H

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General Land Preparation	41	2760.00	-	-	2760.00
1st & 2nd plough with 4wt	100	480.00	6950.00	-	7430.00
Preparation of beds & ridges	100	6000.00	-	-	6000.00
Seeding	100	6360.00	-	6666.00	13026.00
Fertilizer application	100	5160.00	-	7063.00	12223.00
Weeding & earthing up	100	11040.00	-	-	11040.00
Pest & disease control	91	2135.00	-	1434.00	3569.00
Water management	100	5400.00	-	-	5400.00
Harvesting & drawing	100	8652.00	-	-	8652.00
Threshing with 4w thresher	100	1652.00	3266.00	-	4918.00
Transport produce to market	53	720.00	676.00	-	1396.00
Total including imputed cost		50359.00	10892.00	15163.00	76414.00
Total excluding imputed cost		23980.00	10060.00	15163.00	49203.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED					
Seed	Kg	5.50	1212.00		Pacific - 86
LABOUR					Other - 14
Hired	md	20.00	1199.00		
Family	md	22.00			
Total	md	42.00			

FERTILIZER	Percent Reported			
TSP	75	kg	51.00	37.00
Urea	97	kg	110.00	36.00
MOP	63	kg	38.00	32.00

YIELD AND RETURNS	Per ac	Per ha
Average Yield (kg)	2040.00	5041.00
Price of produce (Rs./kg)	44.10	
Gross income (Rs.)	89964.00	222301.00
Profit incl. imputed cost (Rs.)	13550.00	33482.00
Profit excl. imputed cost (Rs.)	40761.00	100720.00
Unit cost (incl.imputed cost) (Rs./kg)	37.46	
Unit cost (excl. imputed cost) (Rs./kg)	24.12	

Table 5.3: Cost of cultivation per acre of Cowpea (rain-fed) - Ampara district

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	60	3240.00	-	-	3240.00
1st plough with 4wt	100	240.00	3789.00	-	4029.00
2 nd plough with 4wt	60	480.00	2105.00	-	2585.00
Seeding	76	2880.00	-	3186.00	6066.00
(Seeding with buffaloes)	(24)	(2400.00)	(1152.00)	-	-
Fertilizer application	70	471.00	-	939.00	1410.00
Weeding & earthing up	100	7180.00	-	-	7180.00
Pest & disease control	83	480.00	-	817.00	1297.00
Harvesting & drawing	100	8700.00	-	-	8700.00
Threshing & processing manually	100	1811.00	-	-	1811.00
Additional drying	80	840.00	-	-	840.00
Total Including Imputed Cost		26322.00	5894.00	4942.00	37158.00
Total Excluding Imputed Cost		10764.00	5655.00	4770.00	21189.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED				Red	100
Seeding	Kg	13.50	236.00		
LABOUR					
Hired	md	9.00	1196.00		
Family	md	13.00			
Total	md	22.00			

FERTILIZER			
	Percent Reported		
Liquid fertilizer	70	Cost(Rs)	939.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	238.00*	588.00
Price of produce (Rs./kg)	153.10	
Gross income (Rs.)	36438.00	90038.00
Profit incl. imputed cost (Rs.)	-720.00	-1779.00
Profit excl. imputed cost (Rs.)	15249.00	37680.00
Unit cost (incl.imputed cost) (Rs/kg)	156.13	
Unit cost (excl. imputed cost) (Rs/kg)	89.03	

*Low yield due to drought

Table 5.4: Cost of cultivation per acre of Big onion (irrigated) - Matale district

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preperation	100	9120.00	-	3209.00	12329.00
1st & 2nd plough with 4wt	63	1080.00	10982.00	-	12062.00
1st & 2nd Plough with 2wt	(17)	-	-	-	-
1st 2nd & 3rd plough with 4wt	(20)	-	(12765.00)	-	-
Preparation of beds & ridges	100	22037.00	-	-	22037.00
Transplanting	100	24247.00	-	12235.00	36482.00
Fertilizer application	100	7800.00	-	17881.00	25681.00
Weed control with weedicides	90	1800.00	-	5209.00	7009.00
Weeding & earthing up	74	9536.00	-		9536.00
Pest & disease control	100	9121.00	-	13275.00	22396.00
Water management	100	22950.00	14506.00	-	37456.00
Harvesting & drawing	100	20311.00	-	-	20311.00
Processing manually	77	17422.00	-	-	17422.00
(do on contract)	(23)	(18245.00)	-	-	-
Transport produce to Stores	70	1950.00	3970.00	-	5920.00
Total including imputed cost		147374.00	29458.00	51809.00	228641.00
Total excluding imputed cost		88425.00	28796.00	48194.00	165415.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					Local	97
Seed Local seed		kg	2.13	5744.00*	Imported	3
Imported seed		kg	(3.00)	(5000.00)		
LABOUR						
Hired		md	75.00	1179.00		
Family		md	50.00			
Total		md	125.00			
FERTILIZER	**Percent Reported**					
TSP	87	kg	139.00	34.00		
Urea	97	kg	83.00	33.00		
Onion mixture	70	kg	217.00	48.00		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	6370.00**	15740.00
Price of produce (Rs./kg)	65.00	
Gross income (Rs.)	414050.00	1023118.00
Profit incl. imputed cost (Rs.)	185409.00	458146.00
Profit excl. imputed cost (Rs.)	248635.00	614377.00
Unit cost (incl.imputed cost) (Rs/kg)	35.89	
Unit cost (excl. imputed cost) (Rs/kg)	25.97	

Remarks. *Big onion seed price subcidies by the government ** Heavy rain prevailed in harvesting period

Table 5.5: Cost of cultivation per acre of Green chilli (irrigated) - Anuradhapura district

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preperation	100	6720.00	-	1180.00	7900.00
General land preparation	40	7800.00	-	-	7800.00
(1st plough with 4wt)	(30)	(891.00)	(6447.00)	-	-
(1st plough manually)	(10)	(29120.00)	-	-	-
(1st plough with 2wt)	(7)	(650.00)	-	-	-
1st & 2nd Plough with 4wt	40	1820.00	10400.00	-	12220.00
(1st & 2nd plough with 2wt)	(13)	(650.00)	-	-	-
Preparation of beds & ridges	100	19018.00	-	-	19018.00
Transplanting	100	12067.00	-	2381.00	14448.00
Fertilizer application	100	17374.00	-	17207.00	34581.00
Weeding & earthing up	100	26706.00	-		26706.00
Pest & disease control	100	22050.00	-	18579.00	40629.00
Water management	100	35024.00	11703.00	-	46727.00
Harvesting & drawing	100	38826.00	-	-	38826.00
Transport produce to market	77	4022.00	4398.00	-	8420.00
Total including imputed cost		191427.00	26501.00	39347.00	257275.00
Total excluding imputed cost		70151.00	25253.00	38924.00	134328.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED				MI2	36
Seed	kg	0.41	5807.00	Galkiriyagama	18
LABOUR				KA 2	18
Hired	md	59.00	1189.00	MICH 1	18
Family	md	102.00		Other	10
Total	md	161.00			

FERTILIZER	Percent Reported			
TSP	63	kg	71.00	39.00
Urea	67	kg	127.00	34.00
Chilli mixture	83	kg	230.00	44.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	4105.00*	10143.00
Price of produce (Rs./kg)	214.00	
Gross income (Rs.)	878470.00	2170699.00
Profit incl. imputed cost (Rs.)	621195.00	1534973.00
Profit excl. imputed cost (Rs.)	744142.00	1838775.00
Unit cost (incl.imputed cost) (Rs/kg)	62.67	
Unit cost (excl. imputed cost) (Rs/kg)	32.72	

*Low yield due to disease

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	67	3389.00	-	-	3389.00
1st plough with 4wt	100	377.00	3588.00	-	3965.00
Seed processing	100	3105.00	-	-	3105.00
Seeding	100	7291.00	-	134775.00	142066.00
Fertilizer application	100	4714.00	-	23186.00	27900.00
Weed control with weedicides	90	655.00	-	1593.00	2248.00
Weeding & loosening soil	43	7450.00	-	-	7450.00
Pest & disease control	80	1606.00	-	3042.00	4648.00
Water management	57	34889.00	8944.00	-	43833.00
New technology adoption (Sprnikler)	43	709.00	525.00	-	1234.00
Harvesting & drawing	100	8362.00	-	-	8362.00
Processing	100	12175.00	-	2568.00*	14743.00
Transport produce to market	93	480.00	2698.00	-	3178.00
Total Including Imputed Cost		85202.00	15755.00	165164.00	266121.00
Total Excluding Imputed Cost		65824.00	15755.00	165164.00	246743.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					Vedalan	94
Seedling		Kg	599.00	225.00	Other	06
LABOUR						
Hired		md	68.00	968.00		
Family		md	20.00			
Total		md	88.00			
FERTILIZER						
	Percent Reported					
TSP	80	kg	89.00	38.00		
Urea	40	kg	40.00	38.00		
Onion mixture	100	kg	109.00	48.00		
Cowdung	73	kg	3263.00	4.00		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	4980.00	12306.00
Price of produce (Rs./kg)	86.00	
Gross income (Rs.)	428280.00	1058280.00
Profit incl. imputed cost (Rs.)	162159.00	400695.00
Profit excl. imputed cost (Rs.)	181537.00	448578.00
Unit cost (incl.imputed cost) (Rs/kg)	53.44	
Unit cost (excl. imputed cost) (Rs/kg)	49.55	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	71	1768.00	-	-	1768.00
1st plough with 4wt	100	480.00	5750.00	-	6230.00
Broadcasting	100	545.00	-	1456.00	2001.00
Harvesting & drawing	100	7283.00	-	-	7283.00
Processing	100	1821.00	-	-	1821.00
Transport produce to stores	68	120.00	270.00	-	390.00
Total including imputed cost		12017.00	6020.00	1456.00	19493.00
Total excluding imputed cost		8407.00	5380.00	661.00	14448.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED				Black	70
Seed	kg	5.80	251.00	White	24
LABOUR				Other	6
Hired	md	7.00	1201.00		
Family	md	3.00			
Total	md	10.00			

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	225.00*	556.00
Price of produce (Rs./kg)	168.00	
Gross income (Rs.)	37800.00	93404.00
Profit incl. imputed cost (Rs.)	18307.00	45237.00
Profit excl. imputed cost (Rs.)	23352.00	57703.00
Unit cost (incl.imputed cost) (Rs/kg)	86.64	
Unit cost (excl. imputed cost) (Rs/kg)	64.21	

*Low yield due to drought

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	(33)	(1624)	-	-	
1st & 2nd plough with 4wt	100	840.00	7180.00	-	8020.00
Preparation of beds & ridges	100	7085.00	-	-	7085.00
Seeding	100	8123.00	-	3102.00	11225.00
Fertilizer application	93	1200.00	-	2760.00	3960.00
Weed control with weedicides	43	898.00	-	1781.00	2679.00
Weeding & earthing up	100	8546.00	-	-	8546.00
Pest & disease control	100	1282.00	-	2587.00	3869.00
Water management	100	3590.00	-	-	3590.00
Harvesting & drawing	100	9715.00	-	-	9715.00
Processing with 4w thresher	100	2205.00	3328.00	-	5533.00
Transport produce to stores	70	240.00	464.00	-	704.00
Total including imputed cost		43724.00	10972.00	10230.00	64926.00
Total excluding imputed cost		26232.00	10399.00	10166.00	46797.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext% Variety
SEED				PB 1 91
Seed	Kg	22.00	141.00	Other 9
LABOUR				
Hired	md	24.00	1093.00	
Family	md	16.00		
Total	md	40.00		

FERTILIZER	Percent Reported			
TSP	53	kg	31.00	30.00
Urea	80	kg	30.00	30.00
Liquid Fertilizer	53	Cost (Rs)	930.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	912.00	2254.00
Price of produce (Rs./kg)	106.30	
Gross income (Rs.)	96946.00	239554.00
Profit incl. imputed cost (Rs.)	32020.00	79121.00
Profit excl. imputed cost (Rs.)	50149.00	123918.00
Unit cost (incl.imputed cost) (Rs/kg)	71.19	
Unit cost (excl. imputed cost) (Rs/kg)	51.31	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General Land Preparation	55	5387.00	-	-	5387.00
1st 2nd plough with 4wt	100	1102.00	8047.00	-	9149.00
Digging holes & Planting	100	9226.00	-	-	9226.00
Fertilizer Application	100	6781.00	-	19668.00	26449.00
Weeding & earthing up	87	10096.00	-	-	10096.00
(weedicide application)	(13)	-	-	(10556.00)	-
Harvesting & drawing by buyer	81	-	-	-	-
'(do manually)	(19)	(12779)	-	-	-
Total including imputed cost		32592.00	8047.00	19668.00	60307.00
Total excluding imputed cost		20370.00	6090.00	19668.00	46128.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Kalu Peradeni- 97
Planting material	sticks	3855.00	-	Kirikawadi - 3
LABOUR				
Hired	md	15.00	1358.00	
Family	md	9.00		
Total	md	24.00		

FERTILIZER	**Percent Reported**			
Coconut				
Mixture	77	kg	440.00	44.70

YIELD AND RETURNS	**Per ac**	**Per ha**
Average yield (kg)	6312.00	15597.00
Price of produce (Rs./kg)	34.30	
Gross income (Rs.)	216502.00	534976.00
Profit incl. imputed cost (Rs.)	156195.00	385958.00
Profit excl. imputed cost (Rs.)	170374.00	420994.00
Unit cost (incl.imputed cost) (Rs/kg)	9.55	
Unit cost (excl. imputed cost) (Rs/kg)	7.31	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	67	11266.00	-	-	11266.00
1st plough with 2wt	100	1560.00	10787.00	-	12347.00
Preparation of beds & ridges	100	15850.00	-	2907.00*	18757.00
Digging holes & seeding	100	16683.00	-	131406.00	148089.00
Fertilizer application	100	5057.00	-	29927.00	34984.00
Weed control with weedicides	50	584.00	-	1490.00	2074.00
Weeding & earthing up	100	16524.00	-	-	16524.00
Pest & disease control	100	12300.00	-	17722.00	30022.00
Water management	100	17100.00	5304.00	-	22404.00
Harvesting & drawing	100	37950.00	-	-	37950.00
Transport produce to market	83	2942.00	3442.00	-	6384.00
Total including imputed cost		137816.00	19533.00	183452.00	340801.00
Total excluding imputed cost		75762.00	12685.00	127339.00	215786.00

* lime

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED				Granola	100
Seed	Kg	724.00	181.50		
LABOUR					
Hired	md	61.00	1242.00		
Family	md	50.00			
Total	md	111.00			

FERTILIZER	Percent Reported			
Potato Mixture	100	kg	539.00	49.00
Poultry manure	67	kg	586.00	6.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	5744.00	14193.00
Price of produce (Rs./kg)	90.00	
Gross income (Rs.)	516960.00	1277408.00
Profit incl. imputed cost (Rs.)	176159.00	435289.00
Profit excl. imputed cost (Rs.)	301174.00	744201.00
Unit cost (incl.imputed cost) (Rs/kg)	59.33	
Unit cost (excl. imputed cost) (Rs/kg)	37.57	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	87	13680.00	-	-	13680.00
1st plough with 2WT	100	868.00	9150.00	-	10018.00
Preparation of beds & ridges	100	17732.00	-	3308.00*	21040.00
Digging holes and seeding	100	19656.00	-	137472.00	157128.00
Fertilizer application	100	13800.00	-	43098.00	56898.00
Weeding & earthing up	100	15240.00	-	-	15240.00
Pest & disease control	100	14419.00	-	21316.00	35735.00
Water management	100	23091.00	6984.00		30075.00
Harvesting & drawing	100	23257.00	-	-	23257.00
Total including imputed cost		141743.00	16134.00	205194.00	363071.00
Total excluding imputed cost		75823.00	15849.00	183110.00	274782.00

* lime

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Granola 97
Seed	Kg	716.00	192.00	Other 3
LABOUR				
Hired	md	61.00	1243.00	
Family	md	53.00		
Total	md	114.00		

FERTILIZER	Percent Reported			
Potato				
Mixture	100	kg	499.00	45.00
Cowdung	47	kg	6881.00	3.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	6207.00	15337.00
Price of produce (Rs./kg)	90.80	
Gross income (Rs.)	563596.00	1392646.00
Profit incl. imputed cost (Rs.)	200525.00	495497.00
Profit excl. imputed cost (Rs.)	288814.00	713659.00
Unit cost (incl.imputed cost) (Rs/kg)	58.49	
Unit cost (excl. imputed cost) (Rs/kg)	44.27	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	40	2640.00	-	-	2640.00
1st & 2nd plough with 2wt	91	720.00	7780.00	-	8500.00
1st & 2nd plough with 4wt	(9)		(4800.00)	-	
Preparation of beds & ridges	56	17167.00	-	-	17167.00
(do on contract)	(44)	(22750.00)	-	-	
Material processing and planting	100	12810.00	-	-	12810.00
Fertilizer application	100	1365.00	-	8713.00	10078.00
Weed control with weedicides	75	1298.00	-	4159.00	5457.00
Weeding & earthing up	59	9064.00	-	-	9064.00
Pest & disease control	97	3757.00	-	5591.00	9348.00
Water management	100	5269.00	-	-	5269.00
Harvesting & processing	100	25335.00	-	-	25335.00
Transport produce to market	87	2915.00	5735.00	-	8650.00
Total including imputed cost		82340.00	13515.00	18463.00	114318.00
Total excluding imputed cost		53424.00	10386.00	18463.00	82273.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					
Cutting	Kg	1068.00	-	Wariyapola	100
LABOUR					
Hired	md	48.00	1113.00		
Family	md	26.00			
Total	md	74.00			

FERTILIZER	Percent Reported			
TSP	44	kg	73.00	49.00
Urea	50	kg	39.00	32.00
Potato - mixture	50	kg	81.00	48.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	6356.00	15706.00
Price of produce (Rs./kg)	38.18	
Gross income (Rs.)	242672.00	599643.00
Profit incl. imputed cost (Rs.)	128354.00	317163.00
Profit excl. imputed cost (Rs.)	160399.00	396346.00
Unit cost (incl.imputed cost) (Rs/kg)	17.99	
Unit cost (excl. imputed cost) (Rs/kg)	12.94	

Table5.13:Cost of cultivation per acre of Bitter gourd (irrigated)-Hambantota district

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
1st plough with 4wt	63	1260.00	7021.00	-	8281.00
(do with 2wt)	(37)	-	(6429.00)	-	-
Digging holes & seeding	100	10126.00	-	7745.00	17871.00
Fertilizer application	100	16028.00	-	23227.00	39255.00
Weeding & earthing up	100	21847.00	-	-	21847.00
Pest & disease control	100	16950.00	-	23283.00	40233.00
Trelising & training	100	28482.00	-	19530.00	48012.00
Water management	100	16660.00	10818.00	-	27478.00
Harvesting & drawing	100	36354.00		-	36354.00
Total including imputed cost		147707.00	17839.00	73785.00	239331.00
Total excluding imputed cost		59355.00	17693.00	71858.00	148906.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED				Local	97
Seed Local	Kg	1.20	6454.00	Imported	3
Implorted	Kg	(0.99)	(31059.00)		
LABOUR					
Hired	md	45.00	1319.00		
Family	md	67.00			
Total	md	112.00			

FERTILIZER	Percent Reported			
TSP	60	kg	95.00	41.00
Vegetable mixture	57	kg	153.00	48.00
Yaharamila	50	kg	81.00	148.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	5995.00*	14814.00
Price of produce (Rs./kg)	113.20	
Gross income (Rs.)	678634.00	1676905.00
Profit incl. imputed cost (Rs.)	439303.00	1085518.00
Profit excl. imputed cost (Rs.)	529728.00	1308958.00
Unit cost (incl.imputed cost) (Rs/kg)	39.92	
Unit cost (excl. imputed cost) (Rs/kg)	24.84	

* Low yield due to deseases

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preperation	100	980.00	-	546.00	1526.00
1st 2nd & 3rd plough with 4wt	70	866.00	7231.00	-	8097.00
(do manually)	(30)	(12410)	-	-	-
Digging holes & transplanting	100	9360.00	-	3620.00	12980.00
Fertilizer application	100	9866.00	-	14835.00	24701.00
Weeding & earthing up	100	19296.00	-	-	19296.00
Pest & disease control	100	15960.00	-	26101.00	42061.00
Water management	100	13763.00	12007.00	-	25770.00
Harvesting & drawing	100	46751.00	-	-	46751.00
Total including imputed cost		116842.00	19238.00	45102.00	181182.00
Total excluding imputed cost		46750.00	19238.00	45102.00	111090.00

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					Hybrid	90
Seed		kg	0.20	18098.00	Local	10
LABOUR						
Hired		md	34.00	1375.00		
Family		md	51.00			
Total		md	85.00			
FERTILIZER						
	Percent Reported					
Urea	87	kg	170.00	40.00		
TSP	50	kg	43.00	41.00		
Vegetable- Mixture	53	kg	128.00	49.00		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	9124.00	22545.00
Price of produce (Rs./kg)	89.40	
Gross income (Rs.)	815686.00	2015560.00
Profit incl. imputed cost (Rs.)	634504.00	1567859.00
Profit excl. imputed cost (Rs.)	704596.00	1741057.00
Unit cost (incl.imputed cost) (Rs/kg)	19.86	
Unit cost (excl. imputed cost) (Rs/kg)	12.18	

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

Operation	Percent Reported	Cost (Rs./ac) Labour	Machinary	Material	Total
All nursery preperation	(50)	(6200.00)	-	(1877.00)	-
General land preparation	66	10712.00	-	-	10712.00
1st plough manually	56	17537.00	-	-	17537.00
(do with 2wt)	(44)	-	(9467.00)	-	-
Preparation of beds ridges & adding lime	100	14493.00	-	4896.00	19389.00
Digging holes & transplanting	100	19578.00	-	32335.00	51913.00
Fertilizer application	100	7640.00	-	14628.00	22268.00
Weeding & earthing up	100	14895.00	-	-	14895.00
Pest & disease control	100	13350.00	-	15032.00	28382.00
Water management	100	21564.00	10471.00	-	32035.00
Harvesting & drawing by buyer	56	-	-	-	-
'(do manually)	(44)	(19270.00)	-	-	-
Total including imputed cost		119769.00	10471.00	66891.00	197131.00
Total excluding imputed cost		57504.00	10471.00	66891.00	134866.00

RELATED INFORMATION

Quantity and Price of Inputs

Input	%	Unit	Quantity	Unit Price (Rs)	Ext % Variety	
SEED					AS cross	32
Plants	50	plants	16331.00	1.98	Green coronet	27
Seed	(50)	gram	(967)	(86.00)	Super coronut	8
					other	33
LABOUR						
Hired		md	48.00	1198.00		
Family		md	52.00			
Total		md	100.00			
FERTILIZER	**Percent Reported**					
Vegetable Mixture	88	kg	318.00	46.00		
(Urea)	(32)	kg	(81.00)	(50.00)		

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	9856.00	24354.00
Price of produce (Rs./kg)	54.00	
Gross income (Rs.)	532224.00	1315126.00
Profit incl. imputed cost (Rs.)	335093.00	828015.00
Profit excl. imputed cost (Rs.)	397358.00	981872.00
Unit cost (incl.imputed cost) (Rs/kg)	20.00	
Unit cost (excl. imputed cost) (Rs/kg)	13.68	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	91	14542.00	-	-	14542.00
1st plough with 2wt	72	2250.00	9325.00	-	11575.00
'(do manually)	(27)	(22787.00)	-	-	-
Preparation of beds & ridges	100	23167.00	-	5416.00*	28583.00
Seeding	100	14351.00	-	11745.00	26096.00
Fertilizer application	100	22176.00	-	35993.00	58169.00
Weeding & thinning out	100	13149.00	-		13149.00
Pest & disease control	100	9450.00	-	10701.00	20151.00
Water management	100	15015.00	5210.00	-	20225.00
Harvesting & drawing	55	18322.00	-	-	18322.00
(by buyer)	(45)	-	-	-	-
Total including imputed cost		132422.00	14535.00	63855.00	210812.00
Total excluding imputed cost		71316.00	13973.00	63855.00	149144.00

*Lime cost

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext% Variety
SEED				Kuroda - 41
Seed	kg	1.70	6909.00	Turkish - 26
				Terracotta - 13
LABOUR				Vilmoria - 3
Hired	md	63.00	1132.00	Other -17
Family	md	54.00		
Total	md	117.00		

FERTILIZER	Percent Reported			
Potato Mixture	79	kg	369.00	49.00
Vegetable Mixture	42	kg	244.00	47.00
Poultry Manure	58	kg	1074.00	6.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	5212.00	12879.00
Price of produce (Rs./kg)	143.50	
Gross income (Rs.)	747922.00	1848115.00
Profit incl. imputed cost (Rs.)	537110.00	1327199.00
Profit excl. imputed cost (Rs.)	598778.00	1479580.00
Unit cost (incl.imputed cost) (Rs/kg)	40.45	
Unit cost (excl. imputed cost) (Rs/kg)	28.62	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
General land preparation	77	8750.00	-	-	8750.00
1st plough with 2wt	70	1375.00	9269.00	-	10644.00
(do manually)	(30)	(11476.00)	-	-	-
Preparation of beds & ridges	100	12750.00	-	1950.00*	14700.00
Digging holes & seeding	100	16375.00	-	19474.00	35849.00
Fertilizer application	100	9750.00	-	19050.00	28800.00
Weeding & earthing up	100	14239.00	-	-	14239.00
Pest & disease control	100	13039.00	-	11852.00	24891.00
Fixing support	100	11116.00	-	24793.00	35909.00
Water management	100	10078.00	-	-	10078.00
Harvesting & drawing	100	23923.00	-	-	23923.00
Transport produce to market	83	1120.00	3729.00	-	4849.00
Total including imputed cost		122515.00	12998.00	77119.00	212632.00
Total excluding imputed cost		36518.00	9829.00	69086.00	115433.00

*Lime cost

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext %	Variety
SEED				Capri	90
Seed	kg.	13.00	1498.00	Other	10
LABOUR					
Hired	md	31.00	1178.00		
Family	md	73.00			
Total	md	104.00			

FERTILIZER	Percent Reported			
Vegetable- mixture	80	kg	181.00	48.00
TDM	80	kg	150.00	47.00
Poultry manure	60	kg	552.00	6.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	3025.00	7475.00
Price of produce (Rs./kg)	134.00	
Gross income (Rs.)	405350.00	1001620.00
Profit incl. imputed cost (Rs.)	192718.00	476206.00
Profit excl. imputed cost (Rs.)	289917.00	716385.00
Unit cost (incl.imputed cost) (Rs/kg)	70.29	
Unit cost (excl. imputed cost) (Rs/kg)	38.16	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All Nursery Preperation	93	4080.00	-	840.00	4920.00
General Land Preparation	93	9600.00	-	-	9600.00
1 st plough with 2wt	53	1907.00	9831.00	-	11738.00
(do manually)	(47)	(17391)	-	-	-
Preparation of beds & ridges	100	13701.00	-	2676.00*	16377.00
Digging holes & transplanting	100	16662.00	-	8556.00	25218.00
Fertilizer application	100	6807.00	-	25315.00	32122.00
Weeding & earthing up	100	17242.00	-	-	17242.00
Pest & disease control	100	23280.00	-	23076.00	46356.00
Fixing support & training	100	10900.00	-	17297.00	28197.00
Water management	100	22688.00	-	-	22688.00
Harvesting & drawing	100	37712.00	-	-	37712.00
Transport produce to market	70	9402.00	5747.00	-	15149.00
Total including imputed cost		173981.00	15578.00	77760.00	267319.00
Total excluding imputed cost		51840.00	12415.00	70188.00	134443.00

*Lime cost

RELATED INFORMATION

Quantity and Price of Inputs

Input		Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED					Padma - 83
Seed		kg	0.079	108300.00	Thilina - 17
LABOUR					
Hired		md	48.00	1080.00	
Family		md	113.00		
Total		md	161.00		
FERTILIZER					
	Percent Reported				
Urea	73	kg	66.00	43.00	
Vegetable mixture	70	kg	299.00	43.00	
Nilketa	63	kg	34.00	116.00	
Poultry manure	93	kg	946.00	6.00	

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	8442.00	20860.00
Price of produce (Rs./kg)	90.30	
Gross income (Rs.)	762313.00	1883675.00
Profit incl. imputed cost (Rs.)	494994.00	1223130.00
Profit excl. imputed cost (Rs.)	627870.00	1551467.00
Unit cost (incl.imputed cost) (Rs/kg)	31.67	
Unit cost (excl. imputed cost) (Rs/kg)	15.93	

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

Operation	Percent Reported	Cost (Rs./ac)			
		Labour	Machinary	Material	Total
All nursery preperation	100	10080.00	-	1351.00	11431.00
General land preparation	57	8710.00	-	-	8710.00
1st plough with manually	57	14820.00	-	-	14820.00
1st Plough with 2wt	(43)		(10250.00)	-	-
Preparation of beds & ridges	100	13706.00	-	2788.00*	16494.00
Digging holes & transplanting	100	11712.00	-	12155.00	23867.00
Fertilizer application	100	10080.00	-	17911.00	27991.00
Weeding & earthing up	100	17857.00	-	-	17857.00
Pest & disease control	100	12154.00	-	16555.00	28709.00
Fixing support & training	100	19133.00	-	20009.00	39142.00
Water management	100	12845.00	-	-	12845.00
Harvesting & drawing	100	28498.00	-	-	28498.00
Total including imputed cost		159595.00	-	70769.00	230364.00
Total excluding imputed cost		73200.00	-	64136.00	137336.00

*Lime cost

RELATED INFORMATION

Quantity and Price of Inputs

Input	Unit	Quantity	Unit Price (Rs)	Ext % Variety
SEED				Abiman - 64
Seed	kg	0.102	119170.00	Padma - 25
				Glory - 6
LABOUR				Dhana - 2
Hired	md	61	1200	Local - 3
Family	md	72		
Total	md	133		

FERTILIZER	Percent Reported	Unit	Quantity	Unit Price (Rs)
Nilketa	73	kg	56.00	101.00
Vegetable Mixture	100	kg	285.00	43.00

YIELD AND RETURNS	Per ac	Per ha
Average yield (kg)	7016.00	17337.00
Price of produce (Rs./kg)	51.80	
Gross income (Rs.)	363429.00	898033.00
Profit incl. imputed cost (Rs.)	133065.00	328804.00
Profit excl. imputed cost (Rs.)	226093.00	558676.00
Unit cost (incl.imputed cost) (Rs/kg)	32.83	
Unit cost (excl. imputed cost) (Rs/kg)	19.57	

* Later part of the season price was very Low & heavy rain also affect yield

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