



CROP ENTERPRISE BUDGETS OF FRUIT CROPS



2023



Socio Economics and Planning Centre
Department of Agriculture
Peradeniya

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OF

FRUIT CROPS

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Foreword

Sri Lanka has a strong agricultural -based tradition, with fruit cultivation being crucial to the economy having a contributory and cultural values. This publication is a demonstration to the commitment to fostering sustainable agricultural practices, promoting innovation, and ensuring the prosperity of farming communities in the country. In an era marked by dynamic environmental and economic challenges, the need for accurate and up-to-date information is paramount. The Crop Enterprise Budgets are compiled for 18 fruit crops, providing insights into the particulars of production, costs, and revenue associated with various fruits grown across different regions of Sri Lanka.

It is with great pleasure and anticipation that I introduce the latest publication of the Crop Enterprise Budgets of Fruits Crops in Sri Lanka. Published once every five years by the Socio Economics and Planning Centre (SEPC), this document serves as a valuable resource for farmers, policymakers, researchers, and all the stakeholders involved in the agricultural landscape of Sri Lanka.

In this endeavor, the efforts of Ms. P.S.R. Premarathna, ADA (Agri. Econ.) is highly appreciated in overall coordination and supervision. In addition, significant contributions by Ms. R.A.K. Kalyani, Mr. J.A.P. Jayasinghe, Mr. W.M.U. Palipana, and Mr. T. Kugendran Economist Assistants of SEPC played a crucial role in data gathering, analyzing and report compilation of this comprehensive task. Moreover, the support extended by Mr. S.K.S. Basnayake, Statistician, Mr. M.R.M. Rehan Raby, Statistical Officer, and Ms. H.C. Hettiarachchi, Development officer of the Statistical Unit of SEPC are well recognized who contributed in map preparations and book designing. Special thanks to Ms. B.R. Walisinghe, Deputy Director (SEPC), Mr. K.G.C.D.B. Wijesinghe and Mr. N.L. Sudeera, ADAs (Agri. Econ.), for their insightful comments and amendments, which enhanced the quality of this publication.

I would like to extend my sincere thanks to Mr. W. L. Hiran Peiris, Director at the National Agriculture Information and Communication Centre (NAICC) along with his staff and Mr.H.J.K.Keerthirathne, Deputy Director (Agricultural Publications) and his team in bringing this masterpiece of work as an impressive publication.

I extend my earnest appreciation to the dedicated team of scientists, researchers, agricultural instructors, farmers and other contributors, who have collaborated to bring forth this publication. Finally, I expect this edition of the Crop Enterprise Budgets will be instrumental and a road map for the collective efforts in revitalizing Sri Lanka's agricultural sector.

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Abbreviations

ac	-	Acre
°C	-	Celsius
g	-	Grams
ha	-	Hectares
kcal	-	Kilo calories
kg	-	Kilograms
m	-	Meter
mcg	-	Micro gram
Mds	-	Man-days
mg	-	Milligrams
Qty	-	Quantity
Sq.ft.	-	Square feet
4WT	-	Four-wheel tractor

Note:

- Planting season : Most suitable months
Availability : Months in which products reach the market

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Introduction to Crop Enterprise Budgets

With the liberalization of agricultural trade and economic structural adjustments, agricultural policy has undergone a shift towards promoting commercial cultivation, targeting both domestic and export markets. Consequently, there is an increasing demand for up-to-date technical and market information related to the cultivation of high-yielding crops with export potential. Despite the availability of innovative cultivation technologies, accessibility remains a significant barrier, particularly in relation to data on costs and returns associated with commercial cultivation. This study aims to address this issue by compiling and disseminating essential information to benefit farmers, entrepreneurs, policymakers, researchers, and various stakeholders. This publication provides a concise, user-friendly, and single-page summaries on basic technical information and computations on enterprise budgets for selected fruit crops. The technical details for each fruit crop have been sourced from various publications released by the Department of Agriculture (DOA), while maps have been created using statistics from the Department of Census and Statistics and the Provincial and Inter-Provincial Deputy Directors' offices. Each crop budget is tailored to the assumption that the enterprise is established within a chosen district, based on Agro-Climatic suitability and the crop extent. Throughout the budgeting process, adherence to DOA recommendations has been assumed and the costs and returns have been calculated as follows.

Physical inputs - Significant capital assets only, including items like water pumps, drip or sprinkler irrigation systems and agro-wells, were considered in the analysis. The salvage value of these capital items was factored into the income for the final year. Minor implements, such as hoes and sprayers, were omitted for the simplicity in presenting the information on a single page.

The levels of variable inputs (fertilizer and agrochemical) conform to DOA recommendations and prevailing market prices were used in costing.

Cultural practices and crop variety - The assumption made was that the cultural practices advised by the DOA were adhered to, supplementary irrigation was applied when required, and the most popular and recently released crop variety suitable for the district was cultivated.

Labor inputs - Labor requirements were calculated using field-level data obtained from prominent cultivators within the district. Average wage rates were established based on the prevailing market rates in the area.

Level of productivity - The annual yield utilized in the budget preparation was derived from DOA publications and yield data gathered from local cultivators. The average yield provided was estimated by considering the economic lifespan of the crop.

Producer prices - Producer price was based on the data collected in the field level.

Note: The cost of crop establishment in the first year is presented in detail, i.e. Quantity of material inputs and labor with the respective cost of inputs, labor and power separately. In case of maintenance cost, only the estimated total cost is given for each year. For the ease of presentation, except first years, the estimated cost and benefit for the remaining years are aggregated in the last column. In the first year, costs are displayed as establishment and operating costs, with the first-year operating costs being discounted.



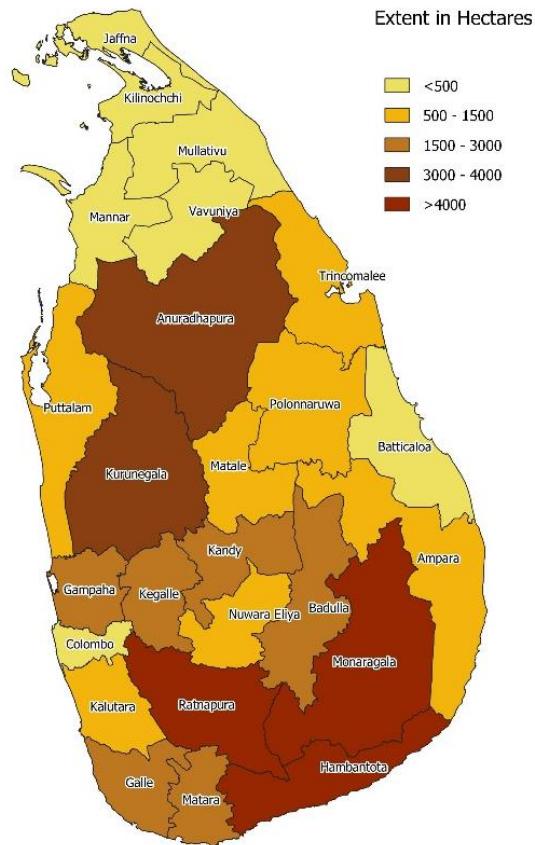
FRUIT CROPS



BANANA

(Musa spp.)

Cultivated Areas of Banana



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Use: Mature fruits are enjoyed fresh, added to fruit salads, and incorporated into a wide range of desserts, including pies, cakes, ice cream, and beverages. They can also be processed into various forms such as chips, dried bananas, and deep-fried snacks, among other culinary uses.



Ecological requirements:

Temperature	: 24 - 29 °C
Rainfall	: 1250-1900mm/year
pH range	: 5.5-7.0
Soil	: Sandy loams or laterite soils

Recommended varieties, bunch weight and suitable Agro-Ecological region:

Variety	Bunch weight (kg)	Suitable Agro-Ecological region
Kolikuttu: Agra	15-20	Dry and Intermediate zone
Ambul: Nadee	16-30	Dry, Intermediate and Wet zone
Seeni: Parakum Gannoruwa Seeni	16-18 22	Dry, Intermediate and wet zone
Embon	15-20	Wet and intermediate zone
Gannoruwa Rath Kesel	25- 32	Wet zone
Anamalu	15-25	Wet and intermediate zone
Millawa Suwandel	14	Wet zone

Nutritive values: (100 g edible portion)

Moisture	70.1g	Iron	0.9mg
Energy	16.0kcal	Carotene	8.0mcg
Protein	1.2g	Thiamine	50.0mcg
Fat	0.3g	Riboflavin	80.0mcg
Carbohydrates	27.2g	Niacin	0.5mg
Calcium	17.0mg	Vitamin C	7.0mg
Phosphorus	36.0mg		

Crop : Ambul Banana (variety- Nadee)

District : Rathnapura

Operation	Crop Establishment				Crop Maintenance -Total Cost (Rs./ha)					
	Input		Power	Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds	Cost Rs./ha	Establishment cost	Operating cost			
Fencing				100	250,000	250,000				
Poles	140	210,000				210,000				
Barbed wires (kg)	250	145,000				145,000				
Nails (kg)	10	9,000				9,000				
Land preparation (4WT)			61,750			61,750				
Preparation of pits				20	50,000	50,000				
Planting (No.of Suckers)*	1000	90,000		25	62,500	152,500				
Fertilizer application										
NPK (kg)**	1575	378,000		13	32,500	54,000	356,500	356,500	356,500	
Compost (kg)	10000	200,000		20	50,000	250,000	250,000	250,000	250,000	
Crop maintenance				26	65,000	65,000	65,000	65,000	65,000	
Weed control (mechanical + manual)			52,685	23	57,500		110,185	110,185	110,185	
Pest control							46,250	46,250	46,250	
Irrigation		980,000	97,650	45	112,500	980,000	210,150	210,150	210,150	
Bunch covering	1000	60,000		7	17,500		77,500	157,500	157,500	157,500
Harvesting							220,000	262,500	225,000	150,000
Land rent		200,000				200,000	200,000	200,000	200,000	200,000
Total Cost (Rs.)	2,272,000	212,085			697,500	2,162,250	1,019,335	1,615,585	1,658,085	1,620,585
Gross Income (Rs./ha)								3,420,000	3,600,000	3,600,000
Yield (kg/ha)								38,000	40,000	40,000
Total labour (Mds)				279				235	252	237
										67

Present Value of Cost (Rs.) 6,499,579

* Spacing 3m x 3m

Life span:

Present Value of Benefit (Rs.) 8,419,679

Agro well 20 years

Net Present Value (Rs.) 1,920,101

**NPK - 1st year

Water pump (Diesel) 10 years

Discounted Benefit Cost Ratio 1.30

Urea 420 kg

Related Information

TSP 280 kg

MOP 875kg

Discount Rate 0.15

Cultivation is under irrigation

Wage Rate (Rs./day) 2,500

Average Yield (kg/ha) 34,000

Average Price (Rs./kg) 90

Crop : Kolikuttu Banana
District : Rathnapura

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)					
	Input Qty./ha	Power	Labour	Establishment cost	1 st year		2 nd year	3 rd year	4 th year	5 th year
		Cost Rs./ha	Cost Rs./ha		Operating cost	year	year	year	year	
Fencing				100	250,000	250,000				
Poles	140	210,000			210,000					
Barbed wire (kg)	250	145,000			145,000					
Nails (kg)	10	9,000			9,000					
Land preparation (4Wt)			61,750		61,750					
Preparation of pits				32	80,000	80,000				
Planting (No. of plants)*	1,600	208,000		25	62,500	270,500				
Fertilizer application										
NPK (kg)**	2,520	614,880		14	35,000	87,840	562,040	562,040	562,040	
Compost (kg)	16,000	400,000		20	50,000	450,000	450,000	450,000	450,000	
Crop maintenance				26	65,000	65,000	65,000	65,000	32,500	
Weed control (mechanical +mannual)			36,324	22	55,000	91,324	91,324	91,324	91,324	
Pest control						37,034	37,034	37,034	37,034	
Irrigation		980,000	126,945	45	112,500	980,000	239,445	239,445	239,445	
Bunch covering	1,600	96,000		11	27,500	123,500	247,000	247,000	247,000	123,500
Harvesting						220,000	262,500	225,000	150,000	
Land rent		220,000				220,000	220,000	220,000	220,000	
Total Cost (Rs.)	2,882,880	225,019	737,500	2,544,090	1,301,309	2,131,843	2,174,343	2,104,343	493,500	
Gross Income (Rs./ha)						10,974,000	11,328,000	11,328,000	6,876,590	
Yield (kg/ha)						46,500	48,000	48,000	24,000	
Total labour (Mds)			295				242	259	231	71

Present value of cost (Rs.)	8,165,830	* Spacing 2.4m x 2.4m	Life span:	
Present value of benefit (Rs.)	25,641,966		Agro well	20 years
Net present value (Rs.)	17,476,135	**NPK - 1 st year	Water pump (Diesel)	10 years
Discounted Benefit Cost Ratio	3.14	Urea 672 kg		
		TSP 448kg		
		MOP 1400kg		

Related information

Discount Rate	0.15	
Wage Rate (Rs./day)	2,500	Cultivation is under irrigation
Average Yield (kg/ha)	41,625	
Average Price (Rs./kg)	236	

Crop : Seeni Banana (variety - Gannoruwa Seeni)

District : Rathnapura

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)				
	Input		Power	Labour	1 st year		2 nd year	3 rd year	4 th year
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost		
Fencing				100	250,000	250,000			
Poles	140	210,000				210,000			
Barbed wires (kg)	250	145,000				145,000			
Nails (kg)	10	9,000				9,000			
Land preparation (4WT)			61,750			61,750			
Preparation of pits				20	50,000	50,000			
Planting (No.of Suckers)*	1,000	90,000		25	62,500	152,500			
Fertilizer application									
NPK (kg)**	1,575	378,000		13	32,500	54,000	356,500	356,500	356,500
Compost (kg)	10,000	200,000		20	50,000	250,000	250,000	250,000	250,000
Crop maintenance				26	65,000	65,000	65,000	65,000	27,500
Weed control (mechanical + manual)			52,685	23	57,500	110,185	110,185	110,185	110,185
Pest control						46,160	46,160	46,160	46,160
Irrigation		980,000	97,650	45	112,500	980,000	210,150	210,150	210,150
Bunch covering	1,000	60,000		7	17,500		77,500	157,500	157,500
Harvesting							220,000	262,500	225,000
Land rent		220,000					220,000	220,000	220,000
Total Cost (Rs.)	2,292,000	212,085		697,500	2,162,250	1,039,335	1,635,495	1,677,995	1,602,995
Gross Income (Rs./ha)							2,728,000	2,816,000	3,097,600
Yield (kg/ha)							31,000	32,000	35,200
Total labour (Mds)			279				235	252	222
									67

Present Value of Cost (Rs.) 6,545,002 * Spacing 3m x 3m **Life span:**

Present Value of Benefit (Rs.) 8,026,185 Agro well 20 years

Net Present Value (Rs.) 6,979,291 ** NPK - 1st year Water pump (Diesel) 10 years

Discounted Benefit Cost Ratio 1.23 Urea 420 kg

Crop : Embon Banana
District : Rathnapura

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)							
	Input Qty./ha	Power		Labour Mds/ha	Cost Rs./ha	1 st year		2 nd year	3 rd year	4 th year	5 th year	
		Cost Rs./ha	Cost Rs./ha			Establishment cost	Operating cost					
Fencing				100	250,000	250,000						
Poles	140	210,000				210,000						
Barbed wire (kg)	250	145,000				145,000						
Nails (kg)	10	9,000				9,000						
Land Preparation (4WT)			61,750			61,750						
Planting pit preparation				40	100,000	100,000						
Planting (No. of plants)*	740	111,000		10	25,000	136,000						
Fertilizer application												
NPK (kg)**	1,036	252,266		16	40,000	36,038	256,228	256,228	256,228	256,228		
Kieserite (kg)	222	86,580					86,580	86,580	86,580	86,580		
Compost (kg)	7,400	185,000		20	50,000	235,000		235,000	235,000	235,000		
Dolomite (kg)***	370	6,660				6,660		6,660	6,660	6,660		
Crop maintenance				26	65,000		65,000	65,000	65,000	32,500		
Weed control (mechanical + manual)			34,990	22	55,000		89,990	89,990	89,990	89,990		
Pest control								41,060	41,060	41,060		
Bunch covering	740	44,400		5	12,500		56,900	113,800	113,800	113,800	56,900	
Harvesting								220,000	262,500	262,500	150,000	
Land rent		75,000					75,000	75,000	75,000	75,000	75,000	
Total Cost (Rs)	1,124,906	96,740			597,500	1,189,448	629,698	1,189,318	1,231,818	1,199,318	281,900	
Gross income (Rs/ha)								4,232,800	4,656,080	4,656,080	2,810,030	
Yield (kg/ha)								29,600	32,560	32,560	16,280	
Total labour (Mds)				239					187	204	191	65

Present Value of Cost (Rs.) 4,272,115 * Spacing 3.6m x 3.6m

Present Value of Benefit (Rs.) 10,321,263

Net Present Value (Rs.) 6,049,148 ** NPK - 1st year

Discounted Benefit Cost Ratio 2.42 Urea 285 kg

Cultivation is under rain-fed.

Crop : Cavendish Banana

District : Hambanthota

Operation	Crop Establishment				Crop Maintenance -Total Cost (Rs./ha)									
	Input	Power		Labour	1 st year		2 nd year		3 rd year		4 th year		5 th year	
		Qty./ha	Cost Rs./ha		Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost	year	year	year	year	year
Fencing				100	250,000		250,000							
Poles	140	210,000					210,000							
Barbed wires (kg)	250	145,000					145,000							
Nails (kg)	10	9,000					9,000							
Land preparation (4WT)			61,750				61,750							
Preparation of pits (using excavator)	9,375	105,000	234,375	37	92,500		431,875							
Planting (No.of Suckers)*	1,875	225,000		28	70,000		295,000							
Fertilizer application														
NPK (kg)**	4,031	886,875		80	200,000		41,250	1,045,625		1,229,375	1,229,375	1,229,375		
Organic matter (poultry manure)	9,375	105,000		20	50,000		155,000			193,750	193,750	193,750		
Crop maintenance				65	162,500			162,500		325,000	325,000	325,000		
Weed control (mechanical + manual)			20,700	23	57,500			78,200		78,200	63,200	58,200		
Pest control		50,490		6	15,000			65,490		65,490	65,490	65,490		
Irrigation (sprinklers)		1,530,000	190,000	38	95,000	1,530,000	285,000		285,000	285,000	285,000			
Fruit treatment and covering		12,378		13	32,500			44,878		321,256	321,256	321,256	160,628	
Harvesting				48	120,000			120,000		240,000	240,000	240,000	120,000	
Land rent		200,000						200,000		200,000	200,000	200,000	200,000	
Total Cost (Rs.)	3,478,743	506,825	1,145,000		3,128,875	2,001,693	2,938,071	2,923,071	2,918,071	480,628				
Gross Income (Rs./ha)							4,320,000	8,640,000	8,640,000	8,640,000	5,071,557			
Yield (kg/ha)							36,000	72,000	72,000	72,000	36,000			
Total labour (Mds)				458					449	443	441	73		

Present Value of Cost (Rs.)	10,920,422	* Spacing 3m x 1.5m (double row system)
Present Value of Benefit (Rs.)	28,734,032	
Net Present Value (Rs.)	17,813,610	**NPK 1 st year
Discounted Benefit Cost Ratio	2.63	Banana mix 4031kg

Life span:	
Agro well	20 years
Water pump (Diesel)	10 years
Sprinklers	6 years

Related Information	Cultivation is under irrigation
Discount Rate	0.15
Wage Rate (Rs./day)	2,500
Average Yield (kg/ha)***	57,600
Average Price (Rs./kg)	120
	*** Farmer based data

Technology : High density planting

Crop : Kolikuttu Banana
District : Ratnapura

Operation	Crop Establishment			Crop Maintenance	
	Input	Power	Labour	Total Cost (Rs./ha)	
		Cost	Cost	Cost	1 st year
	Qty./ha	Rs./ha	Rs./ha	Mds/ha	Rs./ha
Fencing					
Poles	140	210,000		100	250,000
Barbed wire (kg)	250	145,000			145,000
Nails (kg)	10	9,000			9,000
Land preparation (4Wt)			61,750		61,750
Preparation of pits				33	83,325
Planting (No. of plants)*	3,800	494,000		63	156,750
Fertilizer application					
NPK (kg)**	5,358	1,304,160		25	61,750
Compost (kg)	19,000	475,000		38	95,000
Crop maintenance				46	115,781
Weed control (mechanical +manual)			31,611	22	55,000
Pest control					65,968
Irrigation		980,000	173,939	56	140,625
Bunch covering		201,500		25	63,333
Harvesting				111	277,500
Land rent		220,000			220,000
Total Cost (Rs.)	4,038,660	267,300	1,299,065	4,325,735	1,345,257
Gross income (Rs./ha)					5,670,992
Average yield (kg/ha)					11,682,000
Total salvage value of fence and irrigation system					49,500
Total labour (Mds)			520		1,469,950

Benefit Cost Ratio	2.06	* Spacing 2.5m x1m
Wage rate (Rs./ day)	2500	
Average price (Rs./ kg)	236	**NPK application

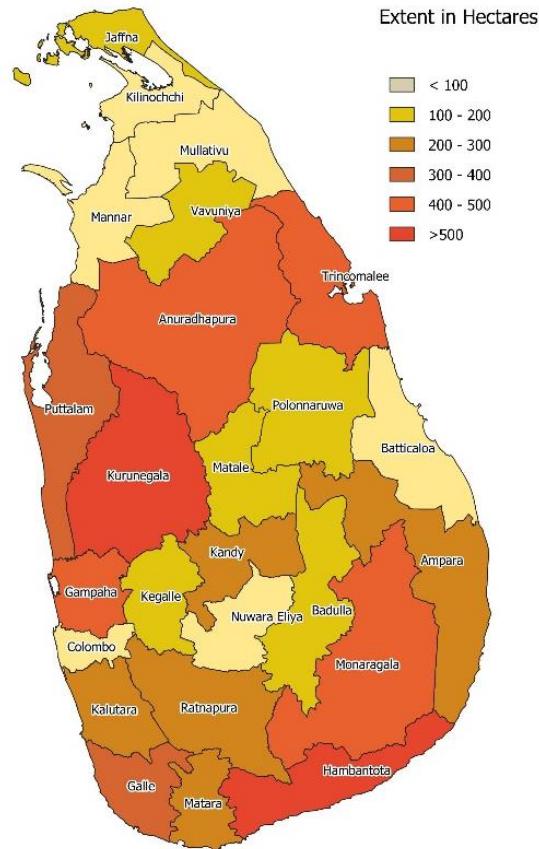
Urea 1482 kg
TSP 456 kg
MOP 3420 kg

Life span	
Agro well	20 years
Water pump (Deisel)	10 years

PAPAYA

(Carica papaya)

Cultivated Areas of Papaya



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season		●	Available	
●			●		

Uses: A fruit abundant in vitamin C that can be consumed fresh, incorporated into fruit salads, or utilized in the creation of soft drinks, preserves and ice cream is a prime example.



Ecological requirements:

Temperature : 28-35 °C
Rainfall : 1000 - 1500 mm
pH : 5.5 - 6.5
Soil : Well drained soil with organic matter

Suitable Districts: Kurunegala, Puttalam, Hambantota, Monaragala, Jaffna, Anuradhapura

Recommended varieties and potential yield:

Variety	Average weight of fruit	No. of fruits per plant / year
Rathna	0.6 - 0.8 kg	30 - 40
Red Lady	1.5 - 2.0 kg	60 - 80
Horana Papaya	1.2 - 2.0 kg	50 - 60
Hybrid 01		

Spacing : 2.0m x 2.5m (2000 plants/ ha)
2.5m x 2.5m (1600 plants/ ha)
2.5m x 3.0m (1333 plants/ ha)

Planting season : September, October

Nutritive values: (100 g edible portion)

Moisture	90.8g	Iron	0.5mg
Energy	32.0kcal	Carotene	666.0mcg
Protein	0.6g	Thiamine	40.0mcg
Fat	0.1g	Riboflavin	250.0mcg
Carbohydrates	7.2g	Niacin	0.2mg
Calcium	17.0mg	Vitamin C	57.0mg
Phosphorus	13.0mg		

Crop : Papaya (variety - Horana Papaya Hybrid 1)

District : Kurunegala

Operation	Crop Establishment				Crop Maintenance Total Cost (Rs./ha)			
	Input Qty./ha	Cost Rs./ha	Power Cost Rs./ha	Labour Mds/ha	1 st year		2 nd year	3 rd year
					Establishment cost	Operating cost		
Fencing				100	250,000	250,000		
Poles	140	210000				210,000		
Barbed wires (kg)	250	145000				145,000		
Nails (kg)	10	9000				9,000		
Land preparation (4WT)			45,000			45,000		
Preparation of pits				21	52,500	52,500		
Planting (No of plants)*	1,600	160,000		14	35,000	195,000		
Fertilizer application								
NPK (kg)**	1,816	444,320		7	17,500	89,920	371,900	450,460
Compost (kg)	32,000	640,000		18	43,750	683,750	683,750	683,750
Manual weeding				20	50,000		50,000	50,000
Irrigation		1,350,000	120,000	30	75,000	1,350,000	195,000	195,000
Pest & Disease control		30,405		9	22,500		52,905	52,905
Fixing support		160,000					160,000	
Harvesting				67	167,500		168,000	288,000
Land Rent		50,000					50,000	50,000
Total Cost (Rs)	3,198,725	165,000		713,750	3,030,170	1,047,805	1,770,115	1,698,115
Gross Income (Rs/ha)						6,451,200	11,059,200	9,247,300
Yield (kg/ha)						67,200	115,200	86,400
Total labour (Mds)				286			199	170

Present Value of Cost (Rs)	6,396,305	* Spacing 2.5m x 2.5m	Life span:
Present Value of Benefit (Rs)	20,052,333		Agro well 20 years
Net Present Value (Rs)	13,656,028	**NPK 1st year	Water pump (Electric) 10 years
Discounted Benefit Cost Ratio	3.13	Urea 464kg	Drip irrigation system 6 years
		TSP 408 kg	
		MOP 944kg	

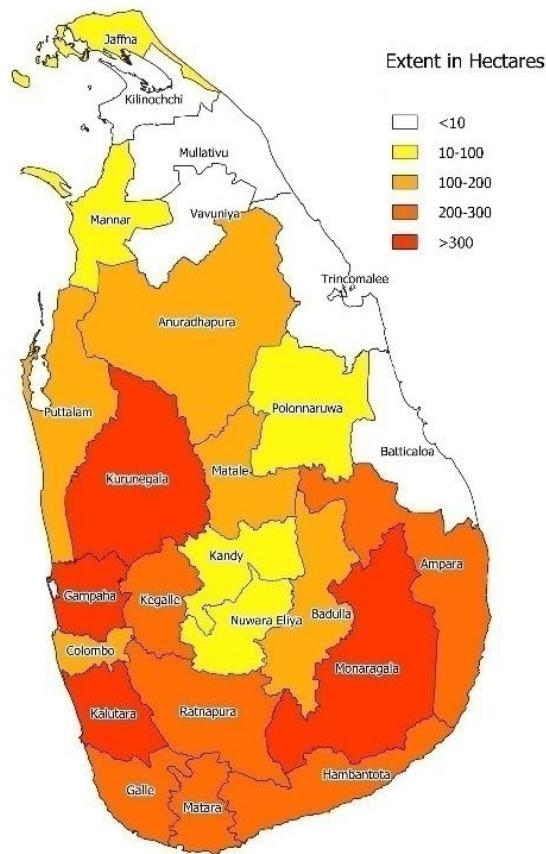
Related Information

Discount Rate	0.15	
Wage Rate (Rs./day)	2500	♦ Planting materials- Seedlings
Average Yield (kg/ha)	89,600	
Average Price (Rs/kg)	96	

PINEAPPLE

(Ananas comosus)

Cultivated Areas of Pineapple



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season				
●	Available		○	Not available	

Uses: Ripe fruit offers a delightful combination of sweetness and tartness. It can be enjoyed fresh, juiced, cooked, and is commonly used in preserving drinks, making jams, confectioneries, and canned fruit products.



Ecological requirements:

Temperature	: 24 -32 °C
Rainfall	: 1500 - 3000 mm/year
pH	: 5.5 - 6.0
Soil	: Sandy loams or laterite soils

Suitable Districts : Gampaha, Kalutara, Galle, Colombo, Kurunegala, Monaragala, Hambanthota (Walasmulla, Beliattha), Ampara (Maha Oya, Padiyathalawa), Anuradhapura, Badulla (Haliela), Rathnapura (Embilipitiya), Mahaweli C and B zones

Recommended varieties: Mauritius and Kew

Spacing:

Method	Within row	Between row	Density/ha
Mono cropping double row	45cm	1.5m	25,000
	30cm	1.5m	37,500
Inter cropping 3 double rows	45cm	Intercropping with coconut	22,500
	30cm		35,000

Nutritive values: (100 g edible portion)

Moisture	87.8g	Iron	1.2mg
Energy	46kcal	Carotene	18mcg
Protein	0.4g	Thiamine	200mcg
Fat	0.1g	Riboflavin	120mcg
Carbohydrates	10.8g	Niacin	0.1mg
Calcium	20mg	Vitamin C	39mg
Phosphorus	9.0mg		

Crop : Pineapple (variety - Mauritius)

District : Gampaha

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)		
	Input Qty./ha	Power Cost Rs./ha	Labour Cost Mds/ha	Cost Rs./ha	1 st year		2 nd year
		Establishment cost	Operating cost		Establishment cost	Operating cost	
Fencing			100	250,000	250,000		
Poles	140	210,000			210,000		
Barbed wire (kg)	250	145,000			145,000		
Nails (kg)	10	9,000			9,000		
Land Preparation (4Wt)		54,340			54,340		
Pre-treatment of planting material		42,833	20	50,000	92,833		
Planting * (No. of suckers) contract	25,000	1,000,000		87,500	1,087,500		
Fertilizer application							
NPK (kg)**	2,250	442,500	23	57,500		442,500	1,154,500
Compost (kg)	10,000	200,000	13	32,500	232,500		
Kieserite (kg)	250	97,500				97,500	263,250
Dolomite (kg)***	2,000	37,000	5	12,500	49,500		
Earthing up and other operations			17	42,500		42,500	63,750
Manual weeding			15	37,500		37,500	22,500
Chemical weeding		11,200	5	12,500		23,700	17,280
Pest and Disease control		22,579	10	25,000		47,579	63,908
Hormone application		8,119	7	17,500		25,619	39,614
Watching						40,000	40,000
Land rent		75,000			75,000	75,000	75,000
Total Cost (Rs.)	2,300,731	54,340		625,000	2,130,673	791,898	1,739,802
Gross income (from fruits) Rs./ha						9,375,000	16,312,500
Gross income (from suckers) Rs./ha						1,600,000	1,600,000
Total gross income (Rs./ha)						10,975,000	18,434,400
Yield (kg/ha)						37,500	65,250
Total labour (Mds)			215			124	16

Present value of cost (Rs.) 4,210,435 * Spacing : within row 45cm x between double row 1.5m

Present value of benefit (Rs.) 20,419,594

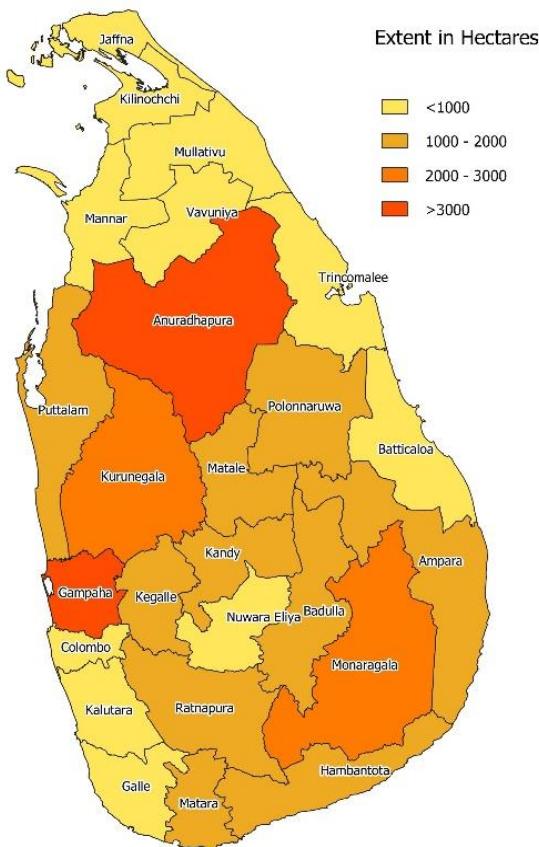
Net present value (Rs.) 16,209,159 ** NPK - 1st year

Discounted Benefit Cost Ratio 4.85 Urea 750 kg

MANGO

(Mangifera indica)

Cultivated Areas of Mango



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses: Mangoes, with their vibrant color and sweet, tropical aroma, are a sensory delight. Whether enjoyed fresh as a juicy snack, blended into refreshing smoothies, or added to both sweet and savory dishes.



Ecological requirements:

Temperature	: 27 -30 °C
Rainfall	: 500 - 2500 mm/year
pH	: 5.5 - 7.5
Soil	: Well drained- Deep soil

Suitable Districts: Kurunegala, Anuradhapura, Hambantota, Puttalam, Moneragala, Matale, Kandy, Jaffna

Recommended varieties:

Dry Zone: Karuthakolomban, Willard, Vellaicolomban, Ambalavi, Chembatan, Tom EJC, Malwana (Underground)

Intermediate Zone: Karuthakolomban, Tom EJC, Vellaicolomban, Bettimba, Willard, Malwana (Underground)

Wet Zone: Vellaicolomban, Giraamba, Peterpasand, Dampara, Horanahiru, GAN Mango 1

Spacing:	Between raw	Within raw
Willard	7m - 8m	7m - 8m
Tom EJC	5m	5m
	4m	2m
Other	8m -10m	8m -10m

Planting season: September, October

Nutritive values: (100 g edible portion)

Moisture	81.0g	Iron	1.3mg
Energy	74kcal	Thiamine	80mcg
Protein	0.6g	Riboflavin	90mcg
Fat	0.4g	Niacin	0.9mg
Carbohydrates	16.9g	Vitamin C	16mg
Calcium	14 mg	Phosphorus	16 mg

Crop : Mango (variety - Karuthakolomban)

District : Kurunegala

Operation	Crop Establishment				Crop Maintenance -Total Cost (Rs./ha)										
	Input		Power	Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th -9 th years	10 th -15 th years	16 th -20 th years		
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost								
Fencing				100	250,000	250,000									
Poles	140	210,000				210,000									
Barbed wire (kg)	250	145,000				145,000									
Nails (kg)	10	9,000				9,000									
Land preparation (manual)				35	87,500	87,500									
Preparation of pits				10	25,000	25,000									
Planting (No. of plants)*	100	30,000		2	5,000	35,000									
Fertilizer application															
NPK (kg)**	90	21,450		3	7,500	10,740	18,240	28,610	34,310	46,820	52,220	353,000	590,560	492,133	
Compost (kg)	1,000	20,000		5	12,500	32,500		32,500	32,500	32,500	32,500	130,000	195,000	162,500	
Mulching						12,500									
Irrigation		1,300,000	83,700	30	75,000	1,300,000	158,700	108,480	108,480	108,480	108,480				
Manual weeding					10	25,000	25,000	18,750	18,750	18,750	18,750	75,000	112,500	93,750	
Pest and disease control												75,600	302,400	453,600	378,000
Pruning								7,250	13,500	20,250	20,250	82,000	127,000	105,833	
Harvesting												82,500	397,500	1,312,500	1,093,750
Land rent		45,000				45,000		45,000	45,000	45,000	45,000	180,000	270,000	225,000	
Total Cost (Rs.)	1,780,450	83,700	500,000		2,104,740	259,440	240,590	252,540	271,800	435,300	1,519,900	3,061,160	2,550,967		
Gross Income (Rs./ha)												1,800,000	8,600,000	28,200,000	25,000,000
Yield (kg/ha)												15,000	71,667	235,000	208,333
Total Labour (Mds)			200					50	53	58	98	299	735	612	

Present Value of Cost (Rs.) 4,348,520 * Spacing 10m x 10m

Present Value of Benefit (Rs.) 11,062,692

Net Present Value (Rs.) 6,714,172

Discounted Benefit Cost Ratio 2.54

Related Information

Discount Rate 0.15

Wage Rate (Rs./day) 2,500

Average Yield (kg/ha) 29,242

Average Price (Rs./kg) 120

** NPK - 1st year

Urea 32 kg

TSP 40 kg

MOP 18 kg

◆ Planting materials- Budded plants

Life span

Agro well 20 years

Water pump (Diesel) 10 years

Crop : Mango (variety -TomEJC)

District : Hambanthota

Operation	Crop Establishment				Crop Maintenance -Total Cost (Rs./ha)													
	Input		Power		Labour		1 st year Establishment cost	2 nd year Operating cost	3 rd year	4 th year	5 th year	6 th year	7 th year	8h -12th year	13th - 15th year	16th -20th year		
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	year			year	year	year	year	year	year	year	year		
Fencing				100	250,000	250,000												
Poles	140	210,000				210,000												
Barb Wires (kg)	250	145,000				145,000												
Nails (kg)	10	9,000				9,000												
Land preparation (machinery)			30,000			30,000												
Preparation of pits (backhoe)			60,000			60,000												
Planting (No of plants) *	500	150,000		10	25,000	175,000												
Fertilizer application																		
NPK** (kg)	450	107,250		3	7,500	53,700	61,050	93,050	121,550	154,100	129,800	178,200	226,600	1,375,000	825,000	1,375,000		
Compost (kg)	5,000	125,000		5	12,500	137,500		137,500	137,500	145,000	145,000	145,000	145,000	725,000	435,000	725,000		
Irrigation		1,300,000	17,424	12	30,000	1,300,000	47,424	47,424	47,424	32,424	32,424	32,424	32,424	162,120	97,272	162,120		
Mechanical weeding		21,700		12	30,000		51,700	73,400	73,400	73,400	73,400	73,400	73,400	258,500	155,100	258,500		
Manual weeding				20	50,000		50,000	125,000	150,000	200,000	200,000	200,000	200,000	1,000,000	600,000	1,000,000		
Bagging									210,000	630,000	1,050,000	1,260,000	9,135,000	6,300,000	10,500,000			
Pest and disease control										88,500	88,500	88,500	88,500	442,500	265,500	442,500		
Pruning		6,250		13	32,500		38,750	75,000	75,000	207,500	207,500	207,500	207,500	1,037,500	622,500	1,037,500		
Hormone application										25,000	75,000	125,000	150,000	1,087,500	750,000	1,250,000		
Harvesting											75,000	75,000	75,000	75,000	375,000	225,000	375,000	
Land rent		75,000				75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000					
Total cost (Rs.)	2,149,200	107,424	437,500		2,370,200	323,924	626,374	679,874	1,210,924	1,656,624	2,175,024	2,458,424	16,449,620	10,867,872	18,013,120			
Gross Income (Rs./ha)										2,250,000	6,750,000	11,250,000	13,500,000	97,875,000	67,500,000	112,500,000		
Yield (kg/ha)											5,000	15,000	25,000	30,000	217,500	150,000	250,000	
Total labour (Mds)					175				84	89	177	237	297	327	2,040	1,341	2,235	

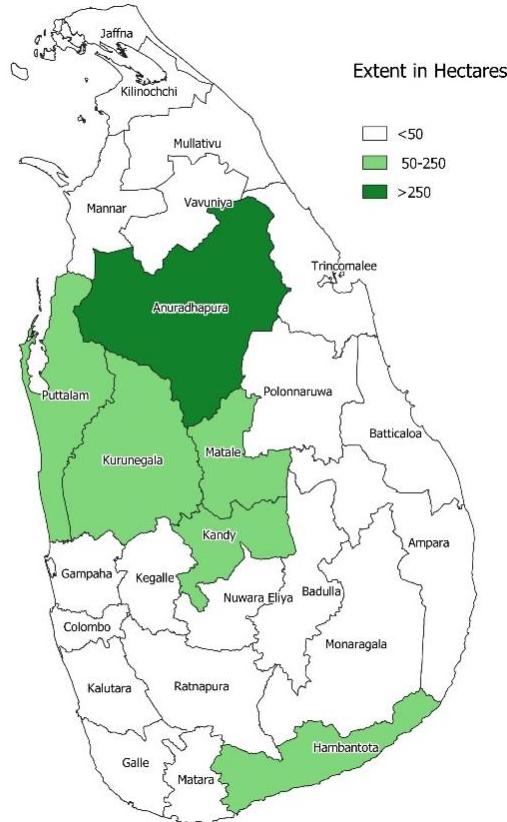
Present Value of Cost (Rs.)	13,881,754	* 200 plants per acre	
Present Value of Benefit (Rs.)	58,120,655		
Net Present Value (Rs.)	44,238,901	** NPK 1 st year	
Discounted Benefit Cost Ratio	4.19	Urea 162.5kg	
		TSP 197.5kg	
		MOP 90kg	
Related Information		♦ Planting materials- Budded plants	
Discount Rate	0.15		
Wage Rate (Rs./day)	2,500		
Average Yield (kg/ha)	36,875		
Average Price (Rs./kg)	450		

Life span:
 Agro well 20 years
 Water pump (Electric) 10 years
 Micro jets irrigation system 6 years

GUAVA

(Psidium guajava)

Cultivated Areas of Guava



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available



Uses: Guava consumed in fresh as a rich source of vitamin C. It is commonly used in both fruit and vegetable salads. Additionally, guava is processed into a range of products such as juice, nectar, jelly, jam, and ice cream.



Ecological requirements:

Temperature	: 23-28 °C
Rainfall	: 1000-4000mm
pH range	: 4.5-9.0
Soil	: Light sandy loamy to clay soil

Suitable Districts: Puttalam, Kurunegala, Anuradhapura

Recommended varieties and potential yield:

Variety	Yield
Bangkok Giant, Lanka Giant	46t/ha
Horana Sweet, Red Giant	40t/ha
Horana Rosy	35t/ha
Horana white, Pubudu	20t/ha
Horana red, Kanthi	17t/ha

Spacing : 5 m x 5 m/ 6 m x 6 m (270 - 400 plants/ha)

Cultivar: Apple guava

Nutritive values: (100 g edible portion)

Moisture	81.7g	Iron	1.4mg
Energy	51kcal	Thiamine	30mcg
Protein	0.9g	Riboflavin	30mcg
Fat	0.3g	Niacin	0.4mg
Carbohydrates	11.2g	Vitamin C	212mg
Calcium	10mg	Phosphorus	28mg

Crop : Guava (Farmer selection - Apple Guava)

District : Anuradhapura

Operation	Crop Establishment					Crop Maintenance - Total Cost (Rs./ha)					
	Input		Power		Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost				
Fencing				100	250,000	250,000					
Poles	140	210,000				210,000					
Barbed wire (kg)	250	145,000				145,000					
Nails (kg)	10	9,000				9,000					
Land preparation (4WT)			62,500			62,500					
Preparation of pits				32	80,000	80,000					
Planting (No. of plants)*	1,250	437,500		13	32,500	470,000					
Fertilizer application											
NPK (kg)**	800	192,250		6	15,000	27,000	180,250	329,000	886,500	1,074,500	1,074,500
Compost (kg)	6,250	100,000		13	32,500	132,500					
Poultry manure (kg)	25,000	400,000		25	62,500	462,500	462,500	925,000	925,000	925,000	925,000
Mechanical weeding			14,920	10	25,000	39,920	39,920	31,936	31,936	29,940	29,940
Irrigation		1,600,000	432,000	38	95,000	1,600,000	527,000	527,000	527,000	527,000	527,000
Pest control			25,000	52	130,000	155,000	90,000	90,000	90,000	90,000	90,000
Bagging and Pruning	6,250	6,250		23	34,250	40,500	390,000	545,000	745,000	850,000	850,000
Harvesting					13	31,250	31,250	100,000	300,000	750,000	1,250,000
Land rent		125,000				125,000	125,000	125,000	125,000	125,000	125,000
Total Cost (Rs.)	3,250,000	509,420		788,000	2,986,000	1,561,420	2,063,420	3,430,436	4,268,436	4,871,440	4,871,440
Gross Income (Rs./ha)						1,187,500	4,560,000	13,680,000	34,200,000	57,000,000	58,819,600
Yield (kg/ha)						6,250	37,500	50,000	62,500	62,500	62,500
Total Labour (Mds)				324			320	486	758	1,028	1,028

Present Value of Cost (Rs.) 15,128,083

* Spacing 3m x 2.5m (farmer based data)

Life span:

Present Value of Benefit (Rs) 86,797,817

Agro well 20 yrs

Net Present Value (Rs.) 71,669,734

Water pump (Electric) 10 yrs

Discounted Benefit Cost Ratio 5.74

Drip irrigation system 6 yrs

Related Information

Discount Rate 0.15

**NPK - 1st year

Urea 315 kg

TSP 405kg

MOP 240kg

Wage Rate (Rs./day) 2,500

◆ Planting materials - Layered plants

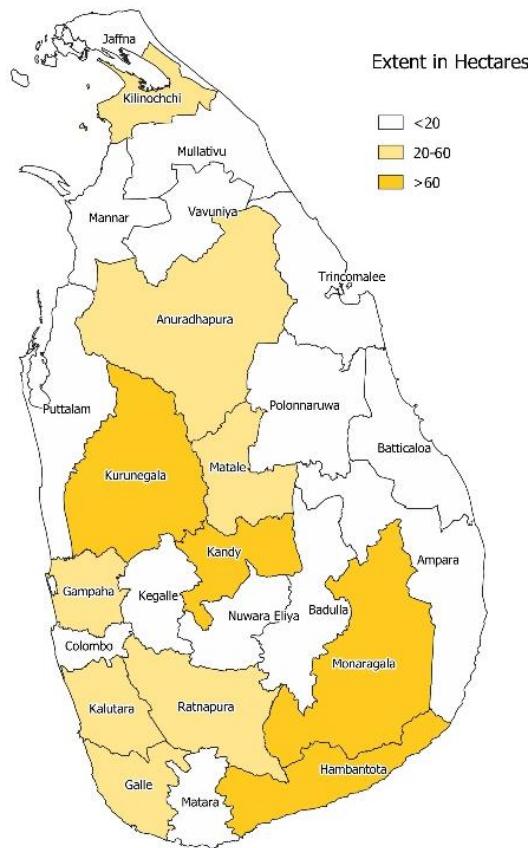
Average Yield (kg/ha) 46,875

Average Price (Rs./kg) 190

PASSION FRUIT

(Passiflora spp)

Cultivated Areas of Passion Fruit



Jan	Feb	Mar	Apr	May	Jun	
●	●	●	●	●	●	
●	●	Season				
●	●	Available		○	Not available	

Uses: It finds applications in preparing cake icing, candy, ice cream, jelly, mousses, sauces, sherbets, syrups, and pies. Furthermore, the tender leaves are also consumed as a leafy vegetable.



Ecological requirements:

Temperature	: 22-32 °C
Rainfall	: 1000-1500mm/year
pH range	: 6.0 -7.5
Soil	: Sandy loams , clay loams

Suitable Districts: Gampaha, Kurunegala, Kalutara, Rathnapura, Kandy, Matale, Monaragala, Hambanthota

Recommended varieties and weight of a fruit:

Yellow cultivar (Low country)	80-150 g/fruit
Purple cultivar (Up country)	30-50g/fruit
Rahangala hybrid	80-100 g/fruit
Bandarawela purple	100-120g/fruit
Horana Gold	135-150g/fruit

Spacing: 2 .0m x 4.5m (1125 plants/ha)
2.5m x 4.0m (1000 plants/ha)
2.5m x 2.25m (1700 plants/ha)

Planting season: September, October

Nutritive values: (100 g edible portion)

Moisture	89g	Iron	.7mg
Energy	7kcal	Carotene	1968mcg
Protein	1.2g	Thiamine	10mcg
Fat	.2g	Riboflavin	20mcg
Carbohydrates	7.7g	Vitamin C	.7mg

Crop : Passion fruit (variety - Horana Gold)

District : Kurunegala

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)			
	Input		Power	Labour	1 st year		2 nd year	3 rd year
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost	
Fencing				100	250,000	250,000		
Poles	140	210,000				210,000		
Barbed wires (kg)	250	145,000				145,000		
Nails (kg)	10	9,000				9,000		
Land preparation (4WT)			62,500	19	47,500	110,000		
Planting (No.of plants)*	1,125	112,500	80,000	22	55,000	247,500		
Fertilizer application								
NPK (kg) **	675	210,938		7	17,500	88,931	139,506	244,806
Compost (kg)	11,250	225,000		20	50,000	275,000		275,000
Dolomite*** (kg)	563	10,406				10,406		10,406
Trellising and training				35	87,500	87,500		
Poles	1125	540,000				540,000		
wires	150	60,000				60,000		
Pruning							22,500	22,500
Weed control (mechanical + manual)			52,685	30	75,000	127,685	127,685	127,685
Pest and disease control							112,985	112,985
Pollination				30	75,000	75,000	75,000	75,000
Irrigation	1,350,000	100,170		10	25,000	1,350,000	125,170	125,170
Harvesting					20	50,000	50,000	100,000
Land rent		50,000				50,000	50,000	50,000
Total cost (Rs.)	2,922,844	295,355		732,500	3,383,338	567,361	1,143,552	1,240,801
Gross Income (Rs/ha)						2,500,000	7,000,000	8,852,900
Yield (kg/ha)						10,000	28,000	29,000
Total labor (mds)				293			158	156

Present Value of Cost (Rs.)

5,557,232

* Spacing 2m x 4m

Life span:

Present Value of Benefit (Rs.)

13,287,844

Agro well 20 years

Net Present Value (Rs.)

7,730,613

Water pump (Diesel) 10 years

Discounted Benefit Cost Ratio

2.39

Drip irrigation system 6 years

Related Information

Discount Rate

0.15

Urea 247.5 kg

Life span:

Wage Rate (Rs./day)

2,500

TSP 247.5 kg

Agro well 20 years

Average Yield (kg /ha)

22,333

MOP 180 kg

Water pump (Diesel) 10 years

Average Price (Rs./kg)

250

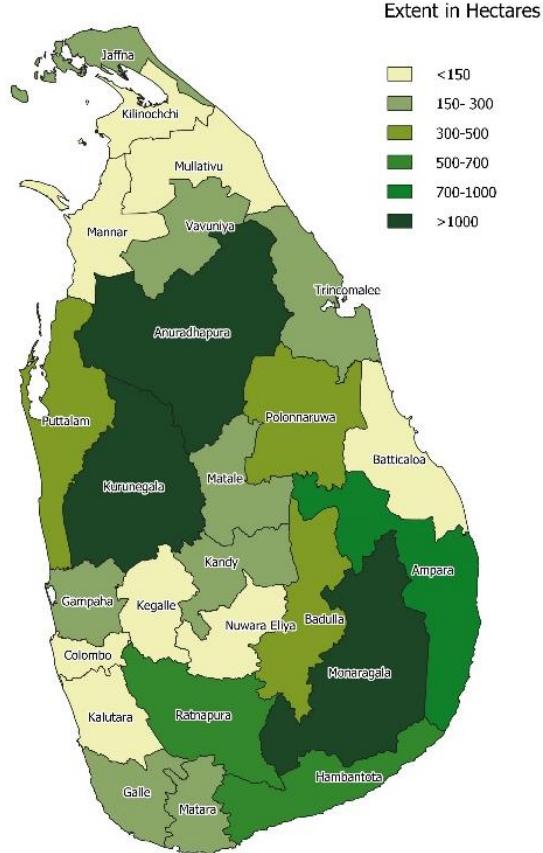
♦ Planting materials - Seedlings

Drip irrigation system 6 years

LIME

(Citrus aurantifolia)

Cultivated Areas of Lime



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses: Lime enhances the flavor of everyday dishes. Its juice imparts a tangy taste to soups, salads, and vegetables. Moreover, it is utilized in the preparation of desserts, pickles, jams, jellies, snacks, and candies.



Ecological requirements:

Temperature	:	22-32 °C
Rainfall	:	1000 - 1500 mm/year
pH	:	5.0 - 6.0
Soil	:	Sandy loams or laterite soils

Suitable Districts :Monaragala, Anuradhapura, Kurunegala, Badulla, Rathnapura, Ampara

Recommended varieties:

HR Lime 1, Local cultivar

Spacing : Dry Zone - 6.0 x 3.5m (470 plants/ ha)
Intermediate Zone - 5.0m x 3.0m (660 plants/ ha)

Planting season: September, October

Nutritive values: (100 g edible portion)

Moisture	84.6g	Iron	0.3mg
Energy	59kcal	Carotene	15mcg
Protein	1.5g	Thiamine	20mcg
Fat	1.0g	Riboflavin	30mcg
Carbohydrates	10.9g	Niacin	0.1mcg
Calcium	90mg	Vitamin C	63mg
Phosphorus	20mg		

Crop : Lime
District : Monaragala

Operation	Input	Crop Establishment			Crop Maintenance Total Cost (Rs./ha)								
		Qty./ha	Cost Rs./ha	Power Cost Rs./ha	Labour Mds/ha	Cost Rs./ha	1 st year Establishment cost	2 nd year Operating cost	3 rd year	4 th year	5 th year	6 th year	7 th -15 th years
Fencing					100	250,000	250,000						
Poles	140	210,000					210,000						
Barbed Wire (kg)	250	145,000					145,000						
Nails (kg)	10	9,000					9,000						
Land preparation (4WT)				50,000			50,000						
Preparation of pits (Excavator & labour)		87,500			6	15,000	102,500						
Planting (No. of plants)*	470	47,000			6	15,000	62,000						
Fertilizer application													
NPK(kg)**	300	70,331			5	12,500	25,239	57,592	83,226	108,859	134,493	156,884	168,164
Compost (kg)	4,700	94,000			8	20,000	114,000		114,000	114,000	114,000	114,000	1,026,000
Mulching						8	20,000	20,000					
Irrigation		1,050,000	25,776		6	15,000	1,050,000	40,776	40,776				
Weed control			32,220		12	30,000		62,220	62,220	62,220	62,220	62,220	559,980
Pest & disease control		34,500			5	12,500		47,000	47,000	47,000	47,000	47,000	423,000
Harvesting									125,000	175,000	225,000	275,000	2,475,000
Land rent		75,000					75,000	75,000	75,000	75,000	75,000	75,000	675,000
Total cost (Rs.)	1,822,331	107,996	390,000			2,017,739	302,588	422,222	532,079	607,713	680,104	741,384	6,672,456
Gross Income (Rs./ha)									225,600	1,316,000	1,880,000	2,820,000	25,733,500
Yield (kg/ha)									3,760	6,580	9,400	14,100	126,900
Total labour (Mds)					156			44	88	108	128	148	1,332

Present Value of Cost (Rs.) 5,485,476
 Present Value of Benefit (Rs.) 8,871,961
 Net Present Value (Rs.) 3,386,485
 Discounted Benefit Cost Ratio 1.62

* Spacing 6m x 3.5m

Life span:

Agro well 20 years
 Water pump (diesel) 10 years

** NPK - 1st year

Urea 129 kg

TSP 139 kg

MOP 32 kg

Related information

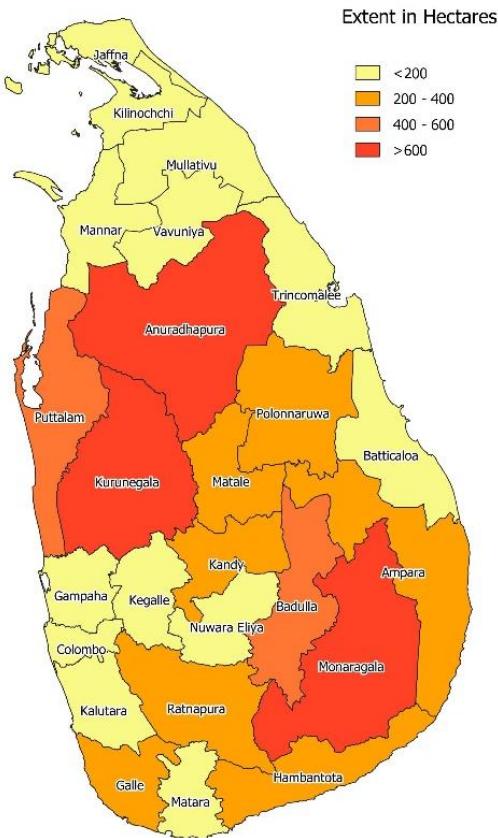
Discount Rate 0.15
 Wage Rate (Rs./day) 2,500
 Average Yield (kg/ha) 12,365
 Average Price (Rs./kg) 300

◆ Planting materials- Budded plants

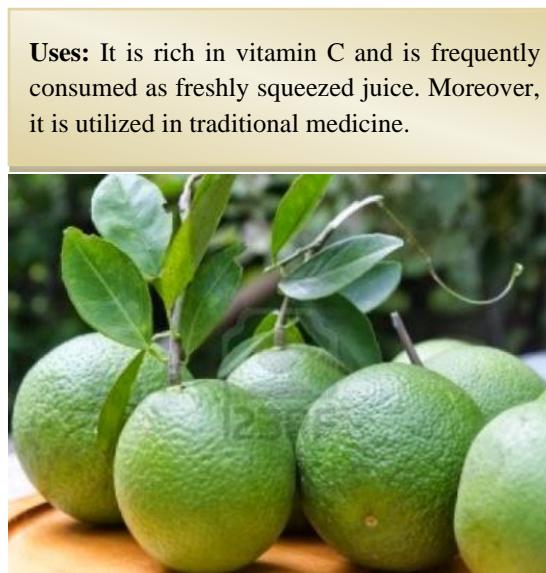
ORANGE

(Citrus sinensis)

Cultivated Areas of Orange



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available



Ecological requirements:

Temperature	: 22-32°C
Rainfall	: 1000-1500mm/year
pH range	: 5.0 - 6.0
Soil	: Sandy loams or laterite soils

Suitable Districts: Moneragala, Badulla, Anuradhapura, Kurunegala, Puttalam, Hambanthota

Recommended varieties and potential yield:

Bibile sweet	250-300 Fruits/Plant
Bibile seedless	
Arogya	

Spacing : 4.0 - 4.5 m x 4.0 - 4.5m (500-625 plants/ha)
Planting season : October, November

Nutritive values: (100 g edible portion)

Moisture	84.6g	Iron	0.3mg
Energy	59kcal	Carotene	15mcg
Protein	1.5g	Thiamine	20mcg
Fat	1.0g	Riboflavin	30mcg
Carbohydrates	10.9g	Niacin	0.1mcg
Calcium	90mg	Vitamin C	63mg
Phosphorus	20mg		

Crop : Orange (variety - Bibile Sweet)

District : Monaragala

Operation	Crop Establishment					Crop Maintenance - Total Cost (Rs./ha)							
	Input		Power	Labour		1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th -15 th years
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost						
Fencing				100	250,000	250,000							
Poles	140	224,000				224,000							
Barbed wire (kg)	250	210,000				210,000							
Nails (kg)	10	9,000				9,000							
Land preparation (4WT)			37,500	16	40,000	77,500							
Preparation of pits				20	50,000	50,000							
Planting* (No. of plants)	600	180,000		5	12,500	192,500							
Fertilizer application													
NPK (kg)**	567	133,740		6	15,000	32,220	116,520	153,240	189,960	213,720	213,720	213,720	1,923,480
Compost (kg)	6,000	150,000		10	25,000	175,000		175,000	175,000	175,000	175,000	175,000	1,575,000
Dolomite***	1,800	33,318				33,318							
Mulching				10	25,000	25,000		25,000	25,000	25,000			
Irrigation	980,000	65,100	25	62,500	980,000	127,600	127,600	127,600	127,600	127,600	127,600	127,600	1,148,400
Weed control		62,730	20	50,000		112,730	86,730	112,730	102,730	102,730	102,730	102,730	280,000
Pest and disease control	469,800		5	12,500		482,300	482,300	482,300	482,300	482,300	482,300	482,300	4,340,700
Pruning				10	25,000	25,000		25,000	25,000	50,000	50,000	57,500	517,500
Watching										24,000	24,000	24,000	216,000
Harvesting										107,143	142,857	142,857	1,521,429
Land rent	75,000					75,000	75,000	75,000	75,000	75,000	75,000	75,000	675,000
Total Cost (Rs.)	2,464,858	165,330	227	567,500	2,233,538	964,150	1,149,870	1,212,590	1,382,493	1,393,207	1,400,707	12,197,509	
Gross Income (Rs./ha)										3,600,000	4,800,000	4,800,000	51,258,000
Yield (kg/ha)										15,000	20,000	20,000	213,000
Total Labour (Mds)			227				86	86	155	159	162	1,522	

Present Value of Cost (Rs.) 9,972,634

* Spacing 4m x 4m

Life span:

Present Value of Benefit (Rs.) 19,737,368

Agro well (years) 20 years

Net Present Value (Rs.) 9,764,734

Water pump (diesel) 10 years

Discounted Benefit Cost Ratio 1.98

** NPK - 1st year

Urea 228 kg

Related Information

TSP 276kg

Discount Rate 0.15

MOP 63kg

Wage Rate (Rs./day) 2,500

Dolomite 1800kg *** Apply only pH<5

Average Yield (kg/ha) 22,333

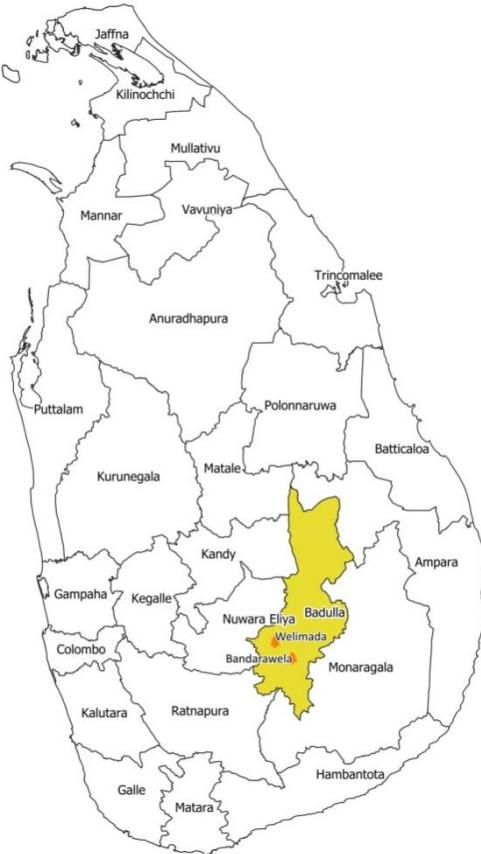
◆ Planting materials- Budded plants

Average Price (Rs./kg) 240

MANDARIN

(Citrus reticulata)

Cultivated Areas of Yellow Mandarin



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses: Mandarin is commonly eaten fresh or processed for canned segments. It can be pressed or squeezed to produce juice which is used in many beverages.



Ecological requirements:

Rainfall	: Need 2-3 months dry period
pH	: 5.5 - 6.5
Soil	: well drained loamy soils

Recommended varieties, weight of fruits and suitable areas:

Variety	weight of a fruit	Suitable area for cultivation
Madu	100-150g	Uva and Central Province (Intermediate zone)
Rahangala	70-90g	
Horana-Ehime 1	80-100g	
Horana-Ehime 2	80-90g	
Horana-Ehime 3	70-80g	
Indu	90-120g	Wet and Dry zone
Horana Juicy	100-130g	Wet zone
ANK Tangerin-1	90g	Dry zone

Planting season: October, November



Crop : Mandarin (variety - Ehime)

District : Badulla

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)										
	Input		Power	Labour	Establishment cost	Operating cost	2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year	8 th year	9 th -15 th years	
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha											
Fencing				100	200,000	200,000									
Poles	140	224,000				224,000									
Barbed wire (kg)	250	210,000				210,000									
Nails (kg)	10	9,000				9,000									
Land preparation (Contract)					50,000	50,000									
Preparation of pits				55	110,000	110,000									
Planting* (No. of plants)	1,000	300,000		15	30,000	330,000									
Fertilizer application															
NPK (kg)**	1,095	257,400		10	20,000	61,700	215,700	319,400	430,800	348,600	348,600	348,600	348,600	2,440,200	
Compost (kg)	10,000	200,000		15	30,000	230,000		230,000	230,000	230,000	230,000	230,000	230,000	1,610,000	
Dolomite***	500	9,000				9,000		9,000	9,000	9,000	9,000	9,000	9,000	9,000	
Irrigation	110,383	30,720		16	32,000	173,103		62,720	62,720	62,720	62,720	62,720	62,720	439,040	
Weed control				15	30,000		30,000	30,000	30,000	30,000	30,000	30,000	30,000	210,000	
Pest and disease control	37,938			8	16,000		53,938	53,938	53,938	53,938	53,938	53,938	53,938	377,563	
Crop maintenance				13	26,000		26,000	26,000	30,000	30,000	36,000	36,000	36,000	720,000	
Harvesting								10,000	32,000	66,000	110,000	132,000	176,000	1,032,000	
Land rent		75,000				75,000		75,000	75,000	75,000	75,000	75,000	75,000	525,000	
Total Cost (Rs.)	1,432,721	30,720			544,000	1,606,803	400,638	806,058	927,458	871,258	905,258	955,258	977,258	1,021,258	7,362,803
Gross Income (Rs./ha)								479,167	1,562,500	3,125,000	5,208,333	6,250,000	8,333,333	48,966,179	
Yield (kg/ha)									1917	6250	12500	20833	25000	33333	195,833
Total Labour (Mds)			247					77	84	96	112	137	148	170	1,104

Present Value of Cost (Rs.) 6,667,475 * Spacing 3m x 3.5m

Present Value of Benefit (Rs.) 20,092,585

Net Present Value (Rs.) 13,425,110 ** NPK 1st year

Discounted Benefit Cost Ratio 3.01 Urea 455 kg

Life span:
Water pump (Diesel) 10 years

Related Information TSP 550kg

MOP 90kg

Discount Rate 0.15
Wage Rate (Rs./day) 2,000 Dolomite 500kg *** Apply only pH<5

Average Yield (kg/ac) 22,744

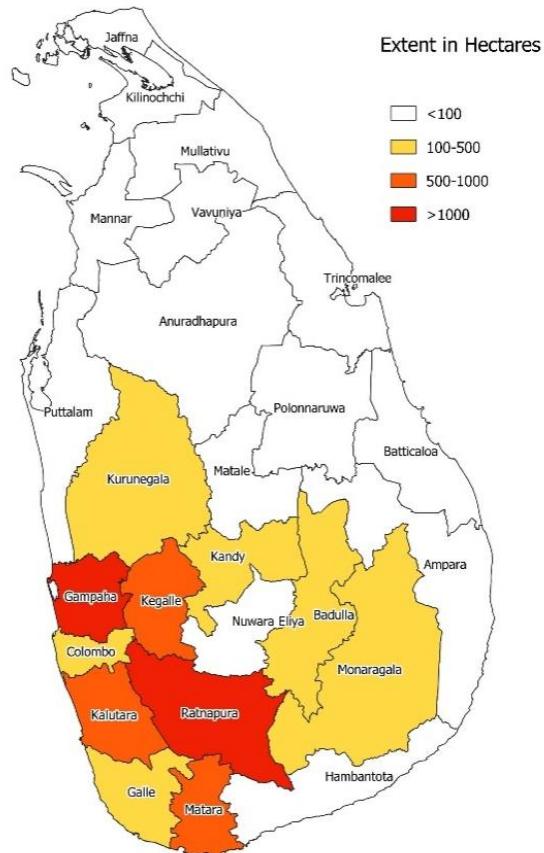
◆ Planting materials- Budded plants

Average Price (Rs./kg) 250

RAMBUTAN

(*Nephelium lappaceum*)

Cultivated Areas of Rambutan



Jan	Feb	Mar	Apr	May	Jun
●	●	○	○	○	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	○	○	○	●
●	Season	●	Available	○	Not available

Uses : The fruit is typically consumed fresh or mixed with other fruits in syrups. Additionally, it serves as a decorative element for cakes and various sweet treats.



Ecological requirements:

Temperature	: 27-30 °C
Rainfall	: 1500 – 2000mm/year
pH	: 4.5 – 6.5
Soil	: Well drained loamy soil

Suitable Districts: Gampaha, Kegalle, Kalutara, Rathnапura, Kandy, Galle, Matara

Other potential area: Monaragala (Medagama, Bibila, Badalkumbura), Badulla (Passara, Ella, Haliela, Haldummulla, Koslanda, UvaParanagama)

Recommended varieties Malwana Special, Malayan Red, Malayan Yellow

Potential yield: 200- 250 kg/ tree/ year

Spacing: 10m x 10m (100 plants/ ha)
10m x 8m (125 plants/ha)

Planting season: April, May and October, November

Nutritive values: (100 g edible portion)

Moisture	82g	Iron	1.9mg
Energy	64kcal	Thiamine	10mcg
Protein	1.0g	Riboflavin	60mcg
Fat	0.1g	Niacin	0.4mcg
Carbohydrates	16.5g	Vitamin C	53mg
Calcium	20mg	Phosphorus	15mg

Crop : Rambutan (variety - Malwana Special)

District : Gampaha

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)									
	Input	Power	Labour	Establishment cost	Operating cost	2 nd year	3 rd year	4 th year	5 th year	6 th - 9 th years	10 th -15 th years	16 th -20 th years		
		Qty./ha	Cost Rs./ha			year	year	year	year	years	years	years		
Fencing				100	250,000	250,000								
Poles	140	210000				210,000								
Barbed wire (kg)	250	145000				145,000								
Nails (kg)	10	9000				9,000								
Land Preparation (4Wt)			49,400			49,400								
Digging holes with excavator			12,000			12,000								
Planting* (No.of plants)	100	30,000		8	20,000	50,000								
Fertilizer application														
NPK (kg)**	91	11,330		3	7,500	5,405	13,425	19,350	23,895	40,000	40,000	178,800	296,400	247,000
Compost (kg)	1,000	25,000		8	20,000	45,000		45,000	45,000	45,000	45,000	180,000	270,000	225,000
Kieserite (kg)	10	3,900								3,900	3,900	15,600	23,400	19,500
Dolomite (kg)***	50	925		2	5,000	5,925		5,925	5,925	5,925	5,925	23,700	35,550	29,625
Manual weeding				10	25,000		25,000	25,000	20,000	20,000	20,000	50,000	45,000	37,500
Irrigation			84,000	10	25,000		109,000	109,000						
Pest and disease control										25,500	25,500	102,000	153,000	127,500
Pruning & other operation										13,000	25,500	102,500	155,500	130,000
Watching (Inc. crackers, electricity)										96,000	83,000	332,000	498,000	415,000
Harvesting										7,500	37,500	637,500	3,857,143	3,214,286
Land rent		62,500				62,500		62,500	62,500	62,500	62,500	250,000	375,000	312,500
Total Cost (Rs.)	497,655	145,400	352,500		781,730	209,925	266,775	157,320	319,325	348,825	1,872,100	5,708,993	4,757,911	
Gross Income (Rs./ha)										72,000	360,000	5,580,000	32,400,000	27,000,000
Yield (kg/ha)										400	2,000	31,000	180,000	150,000
Total Labour (Mds)			141					33	21	219	236	1,127	2,839	2,366

Present value of cost (Rs.)	3,898,111	* Spacing 10m x 10m	◆ Planting materials- Budded plants
Present value of benefit (Rs.)	11,793,143		
Net present value (Rs.)	7,895,032	** NPK 1 st year	
Discounted Benefit Cost Ratio	3.03	Urea 24 kg	
		MOP 22 kg	
		ROP 45 kg	
Related Information			
Discount Rate	0.15		
Wage Rate (Rs./day)	2,500	Kieserite 10 kg	
Average Yield (kg/ha)	22,800	Dolomite 50 kg	*** Apply only if pH < 5
Average Price (Rs./kg)	180		

DURIAN

(Durio zibethinus)

Cultivated Areas of Durian



Jan	Feb	Mar	Apr	May	Jun
●	●	●	○	○	●
●	Season				
●	Available	●	○	○	○
●	Not available				



Uses: Flesh or pulp of durian is consumed. It is also used prepare jam, candy and mixed in ice cream. As well it takes as a flavoring agent in culinary and sweet preparations.

Ecological requirements:

Temperature	: 24 -30 °C
Rainfall	: 1600 - 3000mm/ year
pH range	: 5.0 - 6.5
Soil	: Clay with sandy loamy alluvial

Suitable Districts: Kegalle, Kandy, Rathnapura, Gampaha, Kalutara, Matale, Matara, Galle, Colombo

Potential area: Badulla, Monaragala, Nuwara Eliya

Potential yield : 10-15 years tree- 200 fruits/plant

Spacing : 10m x 10m (100 plants/ha)

Recommended varieties

Variety	Average fruit weight (kg)
Ambatenna	1.6
Kasun	1.6
Horana Gold	2.5
Horana Jambo	2.8
Gannoruwa Sweet	2-4.5

Nutritive values: (100 g edible portion)

Moisture	66.8g	Iron	0.9mg
Energy	520.0kcal	Carotene	10.0mg
Protein	2.5g	Thiamine	0.27mg
Fat	1.6g	Riboflavin	0.29mg
Carbohydrates	23.8g	Fiber	1.4g
Calcium	20mg	Vitamin C	57mg
Phosphorus	63mg	Potassium	601mg

Crop : Durian (variety - Horana Jumbo)

District : Kandy

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)									
	Input	Power	Labour		1 st year	Operating cost	2 nd year	3 rd year	4 th year	5 th year	6 th - 9 th year	10 th - 16 th year	17 th - 20 th year	
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha									
Fencing				100	200,000	200,000								
Poles	140	210000				210,000								
Barbed wire (kg)	250	145000				145,000								
Nails (kg)	10	9000				9,000								
Land preparation (Manual)				20	40,000	40,000								
Preparation of pits				8	16,000	16,000								
Planting (No. of plants)*	100	30,000		15	30,000	60,000								
Fertilizer application														
NPK (kg)**	52	12,560		3	6,000	3,140	15,420	24,840	39,000	53,160	71,320	375,480	860,920	934,400
Kieserite (kg)	6	2,340					2,340		4,680		9,360	19,500	54,600	39,000
Compost (kg)	2,000	50,000		5	10,000	60,000		60,000	60,000	60,000	60,000	240,000	420,000	240,000
Dolomite (kg)***	50	925				925		925	925	925	925	3,700	6,475	3,700
Irrigation		85,860		30	60,000	145,860	94,344	94,344	94,344					
Manual weeding				30	60,000	60,000	60,000	60,000	60,000	50,000	100,000	175,000	100,000	
Pest and disease control	92,850			8	16,000	108,850	108,850	108,850	108,850					
Pruning and other practices										17,500	71,000	129,000	64,000	
Watching										150,000	600,000	1,050,000	600,000	
Harvesting										20,000	80,000	200,000	120,000	
Land rent	100,000					100,000	100,000	100,000	100,000	100,000	400,000	700,000	400,000	
Total Cost (Rs.)	652,675	85,860		438,000		744,065	432,470	448,959	467,799	477,279	479,105	1,889,680	3,595,995	2,501,100
Gross Income (Rs./ha)											400,000	8,000,000	44,400,000	32,000,000
Yield (kg/ha)											1,000	20,000	111,000	80,000
Total Labour (Mds)			219					76	76	76	173	649	1175	674

Present Value of Cost (Rs.) 3,747,154 * Spacing 10m x 10m

Present Value of Benefit (Rs.) 12,979,887

Net Present Value (Rs.) 9,232,733

Discounted Benefit Cost Ratio 3.5

Related Information

Discount Rate 0.15

Wage Rate (Rs./day) 2,000

Average Yield (kg/ha) 13,250

Average Price (Rs./kg) 400

◆ Planting materials- Budded plants

**NPK 1st year

Urea 16 kg

TSP 24 kg

MOP 12 kg

Kieserite 6 kg

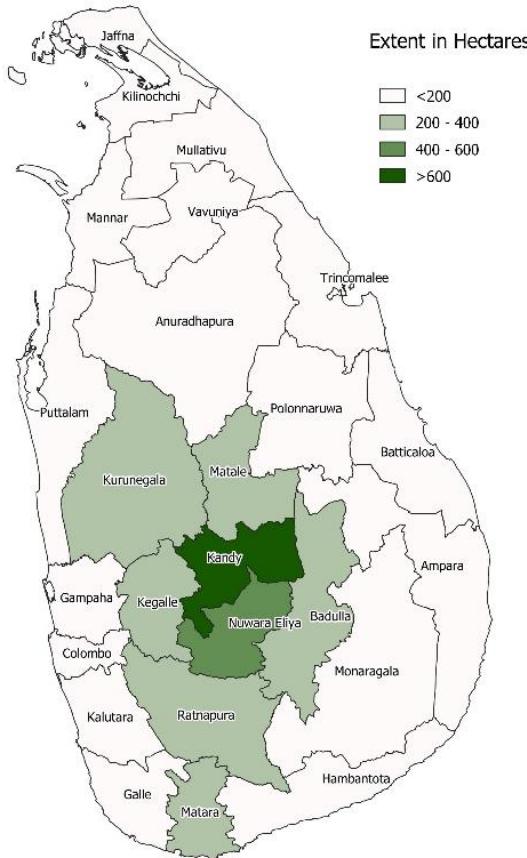
Dolomite 50kg

*** Apply only pH<5

AVOCADO

(Persea americana)

Cultivated Areas of Avocado



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	● Available	○ Not available		

Uses: It contains lots of fiber and rich in Vitamins C, K, and B and minerals. It is used to prepare fruit juice and ice cream. Extensively used for skin, hair and beauty care.

Ecological requirements:

Temperature	: 25-36 °C
Rainfall	: 1200-1300mm
pH range	: 5.0-7.0
Soil	: well drained loamy soil

Suitable Districts : Kandy, Badulla, Kegalle, Nuwara Eliya Matale, Kurunegala, Gampaha

Recommended varieties: Pollock, Gottfried, Fuerte, Hass Simmonds, Tower II, Booth – 7, Peradeniya selection

Potential yield : 29800 kg/ha

Spacing : 8m x 8m (150 Plants/ha)
5m x 5m (400 Plants/ha)



Nutritive values: (100 g edible portion)

Moisture	33.6g	Iron	0.5mg
Energy	215kcal	Carotene	666mg
Protein	1.7g	Niacin	0.2mg
Fat	0.1g	Calcium	17mg
Carbohydrates	7.2g	Phosphorus	13mg

Crop : Avocado (varieties - Pollock and Simmonds)

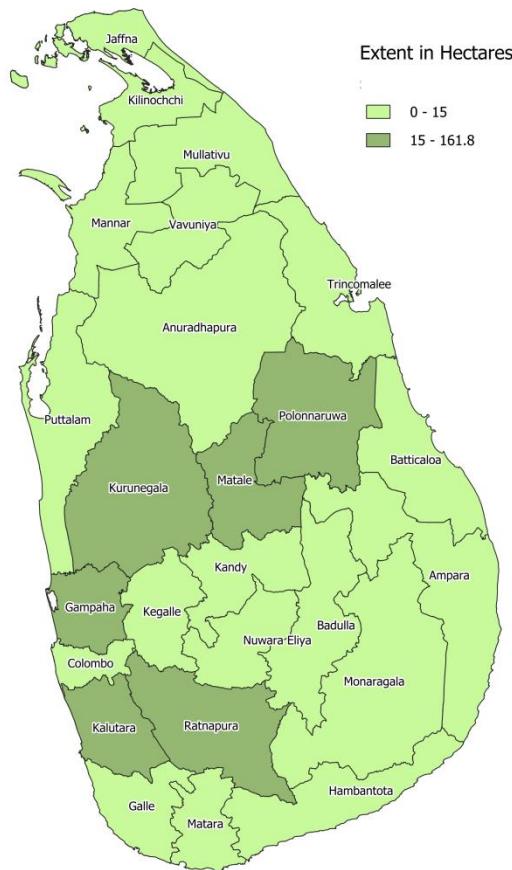
District : Kandy

Operation	Crop Establishment				Crop Maintenance -Total Cost (Rs./ha)											
	Input		Power	Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year	8 th - 30 th years			
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost									
Fencing					100	250,000	250,000									
Poles	140	210,000				210,000										
Barbed wire (kg)	250	145,000				145,000										
Nails (kg)	10	9,000				9,000										
Land preparation (manual)					35	87,500	87,500									
Preparation of pits					15	37,500	37,500									
Planting* (No. of plants)	150	45,000			3	7,500	52,500									
Fertilizer application																
NPK (kg)**	134	17,220			4	10,000	8,513	18,708	27,415	33,468	53,230	53,230	53,230	1,224,290		
Kieserite (kg)											5,850	5,850	5,850	134,550		
Compost (kg)	1,500	37,500			3	7,500	45,000		45,000	45,000	45,000	45,000	45,000	427,800		
Dolomite (kg)***	75	1,388					1,388		1,388	1,388	1,388	1,388	1,388	13,800		
Irrigation					35,000	20	50,000		85,000	60,260	60,260	60,260				
Manual weeding						6	15,000		15,000	15,000	15,000	12,000	12,000	10,500	241,500	
Pest and disease control										79,881	79,881	79,881	79,881	79,881	1,837,263	
Pruning										8,456	8,456	8,456	8,456	8,456	208,200	
Harvesting										9,375	15,000	18,750	28,125	1,944,375		
Land rent		90,000							90,000	90,000	90,000	90,000	90,000	2,070,000		
Total Cost (Rs.)	555,108	35,000	465,000		846,400	208,708	239,063	245,115	368,440	310,805	314,555	322,430	8,101,778			
Gross Income (Rs./ha)										270,000	432,000	540,000	810,000	55,998,000		
Yield (kg/ha)										3,750	6,000	7,500	11,250	777,750		
Total Labour (Mds)					186					33	33	46	27	28	31	1242
Present Value of Cost (Rs.)	2,839,564	* Spacing 8m x 8m					♦Planting materials- Budded plants									
Present Value of Benefit (Rs.)	5,799,819															
Net Present Value (Rs.)	2,960,254	** NPK	1 st year				A mix of avocado varieties that are well-synchronized for pollination can enhance production.									
Discounted Benefit Cost Ratio	2.0	Urea	36 kg				(Ex: Pollock and Simmonds)									
		ROP	67 kg													
		MOP	31 kg													
Related Information																
Discount Rate	0.15															
Wage Rate (Rs./day)	2,500	Dolomite	75 kg	*** Apply only pH < 5												
Average Yield (kg/ha)	29,861															
Average Price (Rs./kg)	70															

SOURSOP

(Annona muricata)

Cultivated Areas of Soursop



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available



Uses: A tropical fruit enjoyed fresh or processed into cordials, juices, candies, and ice cream flavorings. Its unripe fruit adds a unique tropical twist to savory curries. Beyond its culinary uses, soursop is also valued for potential health benefits, making it a distinctive and flavorful addition to various applications.

Ecological requirements:

Temperature	: 18-30 °C
Rainfall	: above 1500 mm
pH range	: 5.5 - 6.5
Soil	: Deep soil with organic matter
	Well drain and aerated soil

Suitable Districts: Across the country,
Excluding specific regions in Nuwara Eliya.

Recommended varieties and potential yield:

Local cultivars: 35- 40 kg/ tree (matured plant)

Spacing : 5.0m x 5.0m (400 plants/ha)
4.0 m x 4.0m (625 plants/ha)

Nutritive values: (100 g edible portion)

Moisture	73.0g	Iron	1.5mg
Energy	104.0kcal	Thiamine	170.0 mcg
Protein	1.6g	Riboflavin	17.0 mcg
Fat	0.4g	Niacin	0.8 mg
Carbohydrates	23.5g	Vitamin C	37.0 mg
Calcium	17.0 mg	Phosphorus	47.0mg

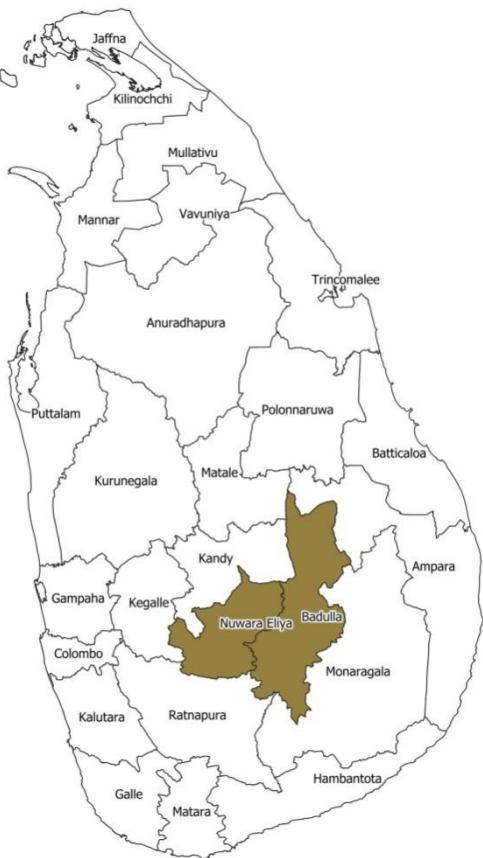
**Crop : Soursop
District: Matale**

Operation	Input	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)										
		Qty./ha	Cost Rs./ha	Power Cost Rs./ha	Labour Mds/ha	Cost Rs./ha	1 st year Establishment cost	Operating cost	2 nd year	3 rd year	4 th year	5 th year	6th- 9th year	10th- 15th year	16th -20th year	
Fencing					100	200,000	200,000									
Poles	140	210,000					210,000									
Barbed wires (kg)	250	145,000					145,000									
Nails (kg)	10	9,000					9,000									
Land preparation			50,000				50,000									
Digging holes with excavator & Preparation of pits			100,000	13	26,000	126,000										
Planting (No. of plants)*	625	187,500		8	16,000	203,500										
Fertilizer application																
NPK (kg)**	553	132,750		8	16,000	67,500	81,250	101,500	139,750	139,750	139,750	559,000	838,500	698,750		
Compost (kg)	6,250	125,000		10	20,000	145,000		145,000	145,000	145,000	145,000	580,000	870,000	725,000		
Irrigation		980,000	150,808	44	88,000	980,000	238,808	155,280	155,280	155,280	155,280	538,737	808,105	776,400		
Weeding (mechanical + manual)			12,450	27	54,000		66,450	66,450	66,450	53,160	53,160	212,640	318,960	265,800		
Pest & disease control		35,700		10	20,000		55,700	55,700	55,700	55,700	55,700	222,800	334,200	278,500		
Pollination								9,125	14,600	27,375	45,625	246,375	383,250	319,378		
Training and pruning		625		4	8,000		8,625	8,625	12,750	16,750	6,750	27,600	41,400	34,500		
Harvesting								20,000	34,000	62,000	104,167	562,500	875,000	730,000		
Land rent		112,500					112,500	112,500	112,500	112,500	112,500	450,000	675,000	562,500		
Total Cost (Rs.)	1,938,075	313,258	448,000			2,136,000	563,333	674,180	736,030	767,515	817,932	3,399,652	5,144,415	4,390,828		
Gross Income (Rs./ha)								703,125	1,125,000	2,109,375	3,515,625	18,984,375	29,531,250	24,609,375		
Yield (kg/ha)								4,688	7,500	14,063	23,438	126,563	196,875	164,063		
Total Labour (Mds)				224					104	115	138	163	756	1,158	945	

PEARS

(Pyrus pyrifolia)

Cultivated Areas of Pears



Jan ●	Feb ●	Mar ●	Apr ●	May ●	Jun ●
Jul ●	Aug ●	Sep ●	Oct ●	Nov ●	Dec ●
●	Season	●	Available	●	Not available



Uses: Consumed fresh, canned as juice and dried. The juice can also be used for preparing jellies and jams.

Ecological requirements:

Temperature	: 15-25 °C
Rainfall	: 1500-3000mm
pH range	: 6.0 - 6.5
Soil	: Red Yellow Podzolic deep loamy soil

Suitable Districts :Nuwara Eliya, Badulla

Recommended varieties and potential yield:

Rahangala pears: 300 fruits/plants/year (10-12yrs)
Local (Ragala) : 250 fruits/plant/year

Spacing : 4.0 m x 3.5 m (625 plants/ha)
4.5 m x 4.0 m (550 plants/ha)

Planting season: November, December, January

Nutritive values: 100 g edible portion)

Moisture	83.0g	Fiber	1.4g
Energy	61.0kcal	Vitamin C	4.0mg
Protein	0.7g	Potassium	130.0mg
Fat	0.4g	Calcium	8.0 mg
Carbohydrates	0.7g	Phosphorus	11.0mg

Crop : Pears (variety : Rahangala)

District : Nuwara Eliya

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)							
	Input		Power	Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th - 10 th years	11 th - 25 th years
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost					
Fencing				100	250,000	250,000						
Poles	140	210000				210,000						
Barbed wire (kg)	250	145000				145,000						
Nails (kg)	10	9000				9,000						
Land preparation (Manual)				20	50,000	50,000						
Preparation of pits				43	107,500	107,500						
Planting * (No. of plants)	550	165,000		6	15,000	180,000						
Fertilizer application												
NPK (kg)**	319	39,105		10	25,000	15,565	48,540	73,015	97,490	121,965	333,990	665,640
Compost (kg)	5,500	110,000		10	25,000	135,000		135,000	135,000	135,000	135,000	675,000
Dolomite (kg)***	275	5,088		5	12,500		17,588	17,588	17,588	17,588	87938	2,025,000
Manual weeding				10	25,000		25,000	25,000	20,000	20,000	20,000	300,000
Irrigation			28,125	8	20,000	48,125		48,125	32,100	32,100		
Pest and disease control										25,620	128,100	384,300
Pruning										19,513	32,013	167,075
Watching											37,500	550,313
Harvesting											34,375	687,500
Land rent		50,000				50,000		50,000	50,000	50,000	250,000	5,671,875
Total Cost (Rs.)	733,193	28,125	530,000		1,102,065	189,253	348,728	352,178	396,165	686,085	2,873,753	11,680,600
Gross Income (Rs./ha)											1,375,000	27,500,000
Yield (kg/ha)											4,583	91,667
Total Labour (Mds)			212	530,000				43	43	48	107	740
												3,664

Present Value of Cost (Rs.) 4,412,911 * Spacing 4.5m x 4m

Present Value of Benefit (Rs.) 29,329,789

Net Present Value (Rs.) 24,916,878

Discounted Benefit Cost Ratio 6.65

**NPK 1st year

Urea 77 kg

ROP 170 kg

MOP 72 kg

Related Information

Discount Rate 0.15

Wage Rate (Rs./day) 2,500

Dolomite 275 kg ***Apply only pH<5

Average Yield (kg/ha) 40,595

◆ Planting materials–Budded plants

Average Price (Rs./kg) 300

DRAGON FRUIT

(Hylocereus polyrhizus)

Cultivated Areas of Dragon Fruit



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses: It is enjoyed fresh for its mildly sweet and tangy flavor, often added to fruit salads and smoothies. Furthermore, dragon fruit's subtle taste makes it a unique addition to jams, jellies, desserts, and cocktails, providing a distinctive and exotic twist to various culinary creations.



Ecological requirements:

Temperature	: 25-35 °C
Rainfall	: 500-2000mm
pH range	: 5.5-6.5
Soil	: well drained Red Yellow Podzolic, and Reddish-Brown soil with organic matter

Suitable Districts: Rathnapura, Anuradhapura, Hambanthota, Kurunegala, Matale., Kalutara

Recommended species and average weight of a fruit:

Species	Weight of fruit
White flesh and red peel <i>Hylocereus undatus</i>	300g or more
Red flesh and red peel <i>Hylocereus polyrhizus</i>	400g or more

Spacing:

Spacing	Plant density (3 plants per one pole/ha)
2m x 2m	7500
3m x 3m	3300
2m x 3m	4998

Nutritive values: (100 g edible portion)

Moisture	87.0g	Iron	1.9 mg
Energy	57.0cal	Fiber	2.9g
Protein	1.1g	Vitamin C	20.5mg
Fat	0.4g	Vitamin B1	0.04mg
Carbohydrates	11.1g	Vitamin B2	0.05mg
Calcium	8.5mg	Vitamin B3	0.16mg
Phosphorus	22.5mg		

Crop : Dragon fruit (Red flesh and red peel type)

District : Rathnapura

Operation	Crop Establishment				Crop Maintenance - Total Cost (Rs./ha)										
	Input		Power		Labor		1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year	8-25 th year
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost	year	year	year	year	year	year	year	
Fencing				100	200000	200000									
Poles	140	210,000				210000									
Barbed wires (kg)	250	145,000				145000									
Nails (kg)	10	9,000				9000									
Land preparation			45,000	10	20,000	65000									
Preparation of pits					24	48,000	48000								
Planting* (3 plants per post)	3,000	300,000		40	80,000	380000									
Fertilizer application															
NPK (kg)**	720	171,000		24	48,000		219,000	219,000	188,100	188,100	188,100	188,100	188,100	3,385,800	
Poultry manure (kg)	15,000	187,500		30	60,000	247,500		219,000	219,000	219,000	219,000	219,000	219,000	3,942,000	
Trellising and training				67	134,000	134,000									
Post	1,000	2,800,000				2,800,000									
Bar wires,Tires and Concrete		805,789				805,789									
Pruning			25	50,000		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	900,000	
Weed control (mechanical + manual)	27,900		39	78,000		105,900	105,900	105,900	105,900	105,900	105,900	105,900	105,900	1,906,200	
Pest control	45,778		8	16,000		61,778	61,778	61,778	61,778	61,778	61,778	61,778	61,778	1,111,997	
Irrigation		80,000	24	48,000		128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000	2,304,000	
Harvesting			16	32,000		32,000	54,000	90,000	180,000	180,000	180,000	180,000	180,000	3,240,000	
Land rent	150,000					150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	2,700,000	
Total Cost (Rs.)	4,851,967	125,000	407	814,000	5,044,289	746,678	987,678	992,778	1,082,778	1,082,778	1,082,778	1,082,778	1,082,778	19,489,997	
Gross Income (Rs./ha)							2,400,000	5,400,000	9,000,000	15,000,000	15,000,000	15,000,000	15,000,000	270,000,000	
Yield (kg/ha)							4,000	9,000	15,000	25,000	25,000	25,000	25,000	450,000	
Total Labour (Mds)			407					186	210	272	272	272	272	4,896	

Present Value of Cost (Rs.) 11,620,179 * Spacing 3mx3m

Present Value of Benefit (Rs.) 74,801,638

Net Present Value (Rs.) 63,181,459

Discounted Benefit Cost Ratio 6.44

Related Information

Discount Rate 0.15

Wage Rate (Rs./day) 2000

Average Yield (kg/ha) 23120

Average Price (Rs./kg) 600

Life span

Water pump (Electric) 10 years

** NPK - 1st year

Urea 270kg

TSP 300kg

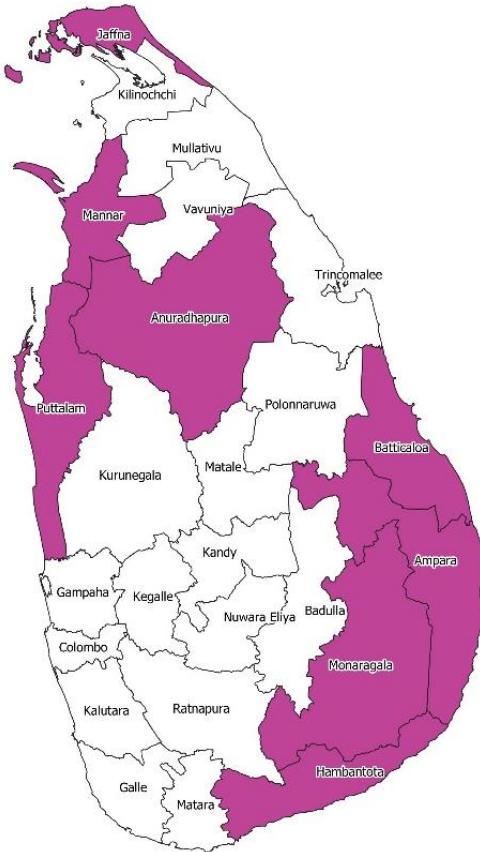
MOP 150kg

♦Planting materials- Rooted stem cuttings

POMEGRANATE

(Punica granatum)

Cultivated Areas of Pomegranate



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses Eaten fresh, garnished on sweet and desserts. Make into juice, drinks and mixed with ice cream and milk. It extensively uses as a source of traditional medicines.



Ecological requirements:

Temperature	: 23 -30 °C
Rainfall	: 750 - 1000 mm/year
pH	: 5.5 - 7.0
Soil	: Sandy loams, laterite soil and clay loam

Suitable Districts: Vauniya, Ampara, Puttalam, Hambanthota, Anuradhapura, Kurunegala

Recommended varieties: Nimali, Daya, Nayana, Kalpitiya hybrid

Newly released verities (2023): PVIC Pomegranate 1 (Lanka Red) and PVIC Pomegranate 2 (Malee Pink)

Cultivar: Red Angel

Potential yield : 100-150 fruits/ plant/year

Planting season : September, October

Nutritive values: (100 g edible portion)

Moisture	78g	Iron	0.3mg
Energy	65kcal	Thiamine	60mcg
Protein	1.6g	Riboflavin	100mcg
Fat	0.1g	Niacin	0.3mg
Carbohydrates	14.5g	Vitamin C	16mg
Calcium	10mg	Phosphorus	70mg

Crop : Pomegranate (variety : Nimalee)

District : Puttalam

Operation	Crop Establishment					Crop Maintenance - Total Cost (Rs./ha)							
	Input		Power	Labour		1 st year Establishment cost	Operating cost	2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th - 15 th years
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha								
Fencing						250,000							
Poles	140	210,000				210,000							
Barbed wire (kg)	250	145,000				145,000							
Nails (kg)	10	9,000				9,000							
Land preparation (4WT)			30,000			30,000							
Preparation of pits				28	70,000	70,000							
Planting (No. of plants)*	1,000	100,000		12	30,000	130,000							
Fertilizer application													
NPK (kg)**	730	175,400		14	35,000	85,100	125,300	258,800	308,900	364,460	506,000	506,000	4,554,000
Compost (kg)	15,000	375,000		20	50,000	425,000		425,000	425,000	425,000	425,000	425,000	3,825,000
Manual weeding				40	100,000		100,000	100,000	100,000	100,000	100,000	100,000	900,000
Irrigation	1,530,000	100,000	48	52,800	1,530,000	152,800	152,800	152,800	152,800	152,800	152,800	152,800	1,375,200
Pest control							27,481	27,481	27,481	27,481	27,481	27,481	247,325
Pruning and other practices				16	40,000		40,000	40,000	40,000	40,000	40,000	40,000	405,000
Harvesting							9,091	34,091	68,182	90,909	102,273	1,414,773	
Land rent	100,000					100,000		100,000	100,000	100,000	100,000	100,000	900,000
Total Cost (Rs.)	2,644,400	130,000	278	627,800		2,884,100	518,100	1,113,171	1,188,271	1,277,922	1,442,190	1,453,553	13,621,297
Gross Income (Rs./ha)								800,000	3,750,000	7,500,000	10,000,000	11,250,000	155,625,000
Yield (kg/ha)								1,600	7,500	15,000	20,000	22,500	311,250
Total Labour (Mds)				278				147	157	170	179	184	819

Present Value of Cost (Rs.) 10,150,188

* Spacing 3m x3m

Present Value of Benefit (Rs.) 52,239,852

** NPK - 1st year

Net Present Value (Rs.) 42,089,664

Urea 264 kg

Discounted Benefit Cost Ratio 5.15

TSP 297 kg

MOP 242 kg

Related Information

Discount Rate 0.15

Life span

Wage Rate (Rs./day) 2,500

Agro well

20 years

Newly released variety - 2023

Name	Fruits production per tree (per year)		
	1 st	2 nd	3 rd
PVIC Pomegranate 1 (Lanka Red)	5kg to 6kg	9kg	15kg

Average fruit weight - 200g

Average Yield (kg/ha) 26,989

Water pump (diesel)

10 years

Average Price (Rs./kg) 500

Irrigation system

10 years

◆ Planting materials– Layered plants

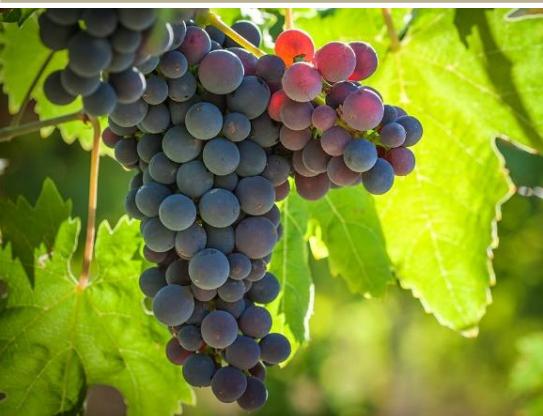
GRAPES

(Vitis vinifera)

Cultivated Areas of Grapes



Jan	Feb	Mar	Apr	May	Jun
○	○	●	●	○	○
Jul	Aug	Sep	Oct	Nov	Dec
○	●	●	●	○	○
●	Season	●	Available	○	Not available



Uses: Grapes are enjoyed fresh as a juicy and sweet snack, used in culinary dishes, and fermented to produce wine. Rich in antioxidants, vitamins, and minerals, grapes offer health benefits and are a popular ingredient in salads, desserts, and beverages.



Ecological requirements:

Temperature	: 25-32°C
Rainfall	: Less than 750mm
pH range	: 6.5-7.5
Soil	: well-drained soil that is one to two meters deep

Suitable Districts : Dry Zone (Jaffna District)

Recommended varieties: Israel blue, Cardinal, Black Muscat, Muscat MI, French MI, Isabela, Thompson seedless, Semillon

Potential yield: 30kg/vine

Spacing :

Method	Spacing
Trellised	8.0m x 4.0m
Fence	3.6m x 1.8m
Bush	1.8m x 1.8m

Planting season: February- March and June to August

Nutritive values: (100 g edible portion)

Moisture	33.6g	Fiber	1g
Energy	62kcal	Vitamin C	3.7mg
Protein	0.6g	Vitamin K	13.4mg
Fat	0.3g	Vitamin A	4.6mg
Carbohydrates	16g		

Crop : Grapes (variety-Israel Blue)

District : Jaffna

Operation	Crop Establishment					Crop Maintenance - Total Cost (Rs./ha)								
	Input		Power		Labour	1 st year		2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th - 20 th year	
	Qty./ha	Cost Rs./ha	Cost Rs./ha	Mds/ha	Cost Rs./ha	Establishment cost	Operating cost							
Fencing				100	250,000	250,000								
Poles	140	210,000				210,000								
Barbed wire (kg)	250	145,000				145,000								
Nails (kg)	10	9,000				9,000								
Land preparation			105,000			105,000								
Digging holes, preparation of pits and adding organic matter (kg)	15,000	225,000		50	125,000	350,000								
Planting (No. of plants)	365	54,750		3	7,500	62,250								
Trellise		5,295,000				5,295,000								
Fertilizer application														
NPK (kg)*	246	49,275		6	15,000	16,425	47,850	147,475	218,175	286,375	302,800	302,800	4,239,200	
Folier application (kg)	12	12,000		10	25,000		37,000	37,000	37,000	37,000	37,000	37,000	518,000	
Irrigation		950,000	104,446	150	375,000	950,000	479,446	104,446	104,446	104,446	104,446	104,446	1,462,241	
Weeding (Chemical + manual)		46,000		11	27,500		73,500	97,985	97,985	97,985	97,985	97,985	1,371,794	
Pest & disease control		540,958		60	150,000		690,958	690,958	690,958	690,958	690,958	690,958	9,673,415	
Training and pruning				44	110,000		110,000	110,000	110,000	110,000	110,000	110,000	1,540,000	
Harvesting					11	27,500		27,500	230,422	230,422	230,422	230,422	3,225,904	
Land rent		50,000					50,000	50,000	50,000	50,000	50,000	50,000	700,000	
Total Cost (Rs.)	7,586,983	209,446	445	1,112,500	7,392,675	1,516,254	1,468,286	1,538,986	1,607,186	1,623,611	1,623,611	22,730,554		
Gross Income (Rs./ha)						750,000	6,000,000	6,750,000	6,750,000	6,750,000	6,750,000	2,532,600,000		
Yield (kg/ha)							1,500	12,000	13,500	13,500	13,500	13,500	189,000	
Total Labour (Mds)				445				371	372	372	372	372	5,208	

Present Value of Cost (Rs.)	17,381,822	*NPK - 1 st year	Life span
Present Value of Benefit (Rs.)	36,465,988	Urea 66 kg	Agro well 20 years
Net Present Value (Rs.)	19,084,166	TSP 44kg	Water pump (Electric) 10 years
Discounted Benefit Cost Ratio	2.10	MOP 136 kg	

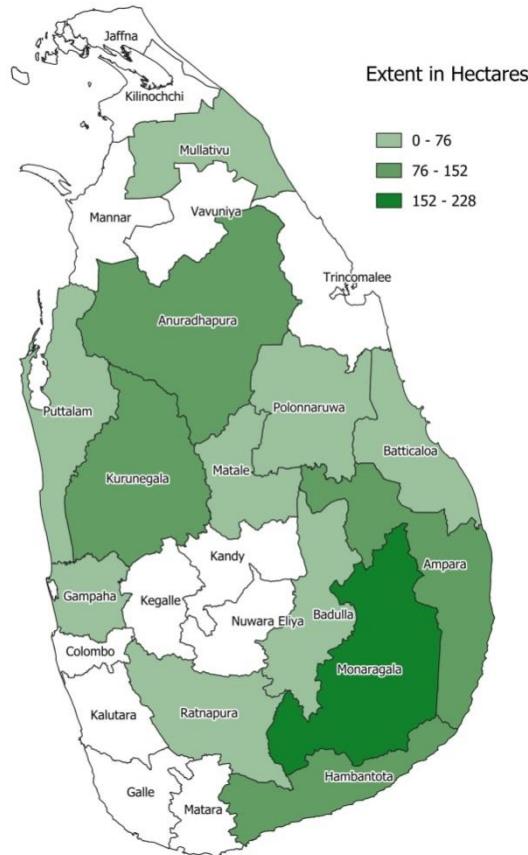
Related Information

Discount Rate	0.15	♦ Planting materials -Rooted stem cuttings
Wage Rate (Rs./day)	2,500	
Average Yield (kg/ha)	13,400	
Average Price (Rs./kg)	500	

MELON

(*Cucumis mello*)

Cultivated Areas of Watermelon



Jan	Feb	Mar	Apr	May	Jun
●	●	●	●	●	●
Jul	Aug	Sep	Oct	Nov	Dec
●	●	●	●	●	●
●	Season	●	Available	○	Not available

Uses: Watermelon serves various purposes beyond being a refreshing fruit, finding its way into diverse culinary creations. Whether enjoyed fresh, juiced for beverages, or added to salads and salsas, its sweet and hydrating qualities make it a versatile ingredient. It can be utilized in frozen treats, cocktails, and even skincare routines.



Ecological requirements:

Temperature	: above 20 °C
Rainfall	: 1200-1900mm
pH range	: 5.5-7.0
Soil	: well drained sandy soil with organic matter

Suitable Districts: Monaragala, Ampara, Anuradhapura, Hambanthota, Kurunegala, Puttalam

Varieties:

Thilini, Rocky 475, Rocky 375, Kinari, Hirock, Sugar Baby, Rambo

Yield: 54mt/ha

Planting season: avoid heavy rainy period

Nutritive values: (100 g edible portion)

Moisture	95.8g	Iron	7.9mg
Energy	16kcal	Thiamine	20mcg
Protein	0.2g	Niacin	0.1mg
Fat	0.2g	Phosphorus	12mg
Carbohydrates	3.3g	Calcium	11mg

Crop - Watermelon (Hybrid)

District - Monaragala

Operation	Crop Establishment and Maintenance Cost				
	Input	Power	Labour	Total	
		Cost Qty./ha	Cost Rs./ha	Mds	Cost (Rs./ha)
Fencing				100	250,000
Poles	140	224,000			224,000
Barbed wire (kg)	250	210,000			210,000
Nails (kg)	10	9,000			9,000
Land preparation (4WT)		37,500			37,500
Adding organic matter (kg)	10,000	160,000	10	25,000	185,000
Digging holes, and seeding (kg)*	1.00	95,000	20	50,000	145,000
Fertilizer application					
NPK (kg)**	270	64,125	15	37,500	101,625
Weeding and earthing up			20	50,000	50,000
Pest and disease control		24,931	10	25,000	49,931
Crop protection from peacock			30	75,000	75,000
Irrigation	980,000	25,630	17	42,500	1,048,130
Harvesting			20	50,000	50,000
Land rent (per season)				50,000	50,000
Total Cost (Rs.)	1,767,056	63,130	655,000	2,485,186	
Gross Income (Rs./ha)					4,000,000
Salvage value of fence and irrigation system					1,591,338
Yield (kg/ha)					50,000
Total Labour (Mds)			242		

Benefit Cost ratio	1.61	* Spacing 1.0m x 1.0m	Life span	
Related Information		**NPK application	Agro well	20 years
Wage Rate (Rs./day)	2,500	Urea 101kg	Water pump (Diesel)	10 years
Average Yield (kg/ha)	50,000	TSP 84kg		
Average Price (Rs./kg)	80	MOP 84kg		

♦ Planting materials -Seeds