Cost Of Production

NATIONAL AGRICULTURAL RESEARCH AND EXTENSION INSTITUTE
AGRICULTURE ROAD, MON REPOS, EAST COAST DEMERARA, GUYANA

CONTACT: 592-220-2249 / 529-220-2841 | WWW: NAREI.ORG.GY | SOCIAL: NAREIGY @FACEBOOK AND INSTAGRAM

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PREFACE

Agriculture continues to be the backbone of Guyana's economy and this sector will continue in this realm despite the emerging oil and gas sectors. The Fruit and Vegetable sector has significant potential for further growth and development. These types of farming activities must be recognized as business ventures. In every business enterprise, profitability is of paramount importance.

Farmers in Guyana are not fully aware of the costs incurred in their production systems. As a consequence, they cannot determine their profitability. This Manual serves as a guide to assist farmers in this regard, based on current input prices and selling prices.

Additionally, this Manual provides information for entrepreneurs who are interested in agriculture ventures by providing information that could be incorporated into their business plans.

I trust that all farmers would find the information in this Manual to be very beneficial to them.

Oudho Homenauth,
NAREI

TABLE OF CONTENTS

COCONUT AND CASH CROPS

Establishing Cassava
Production Cost/Hectare

Region	4
Soil type	Sandy
Terrain	Flat
Crop and variety	Cassava
Time to maturity	9 months
Planting distance (l * w)	1.5m x 1m

Irrigation	Manual
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	6,000 m^2
Expected yield	19,000 kg
Reaping period	one crop
Marketable yield	90%

	Assumptions/Details	Unit	No of Units	Cost/Unit	Year 1
LAND PREPARATTION					
Land Clearing		Man days	0	$0	
Ploughing and chipping		Man days	0	$0	
PLANTING					
Preparing planting material	Labour	Man days	2	$6,000	$12,000
Labour to plant cassava (including making mounds)	8 days	Man days	8	6,000	48,000
Planting material		Bundle	24	2,000	48,000
WEED CONTROL					
Weed Control (brush cut and apply chemicals	Apply weedicide	Man days	10	6,000	60,000
Herbicide - chemical		Litres	5	2,000	10,000
FERTILIZER					
Fertilizer		Bags	7	7,500	52,500
Labour		Man days	4	6,000	24,000
Disease Control					

Labour to apply chemicals		Man days	4	6,000	24,000
Fungicide		Litres	3	2,000	6,000
Pesticide		Litres	3	2,500	7,500
HARVESTING					
Labour	Harvest manually	Man days	10	6,000	60,000
Transportation	2 trips per cycle	Trips	2	7,500	15,000
				Subtotal of labour and material	**$367,000**
Contingencies	10% of labour and material				$36,700
Supervision	10% of labour and material				$36,700
				Cost of production	**$440,400**

Revenue

Assume 80% marketable yield

Farm gate price = $70/kg

Item	Assumptions	No of units	Price/Unit	Total
Revenue	Total yield = 19,000 kg	17100	$70	$ 1,197,000
			Total Revenue	**$ 1,197,000**
Expenditure				$440,400
Gross Margin				$756,600
			Gross Margin for 6,000m^2	**$ 453,960**

Establishing Coconuts (DWARF) - Using Seedlings
Production Cost/Hectare

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Coconuts - Dwarf
Time to maturity	3 - 4 yrs
Productive Life	40 - 50 yrs
Planting Distance (l * w)	7m x 7m (24ft x 24ft)
Plant Population	200

Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	100%
Expected yield	10 bunches/tree and 20 nuts/bunch
Cost of Tools and equipment	30000 amortized over 5 years
Land Rental/Taxes per hectare	$15,000
Marketable Yield	90%

					Cost of Production			
	Assumptions/details	**Unit**	**No of Units**	**Cost/ Unit**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
LAND PREPARATTION								
Land Clearing	Excavator with minimum of 8 hours	hours	8	$9,250	$74,000			
Ploughing and chipping		hours	8	$8,500	$68,000			
PLANTING								
Dig holes	Planting 200 coconuts	day labour	3	$6,000	$18,000			
Planting material	Planting distance = 7m x 7m	seedlings	200	$500	$100,000			
WEED CONTROL								

Bushing	2 men for 3 days and 3 times per year; reduced by 2/3 due to intercropping	day labour	3	$6,000	$18,000	$18,000	$18,000	$18,000
Apply herbicide	2 man, twice per year; reduced by 50%	day labour	2	$6,000	$12,000	$12,000	$12,000	$12,000
Apply herbicide	Glyphosate - 6 litres/coverage and spraying twice per year; reduced by 50%	Litre	6	$1,500	$9,000	$9,000	$9,000	$9,000
FERTILIZER								
Fertilizer	8 lbs of 12:12:17:2/plant	Bags	16	$9,500	$0	$152,000	$152,000	$152,000
Labour to fertilize	6 labourers to fertilize 200 plants	day labour	6	$6,000	$0	$36,000	$36,000	$36,000
HARVESTING								
Labour	10 bunches/tree @ 20 nuts/tree	climber/picker	40000	10	$0	$0	$200,000	$400,000
Transportation	3 time/year		3	14,000	$42,000	$42,000	$42,000	$42,000
				Subtotal of labour and material	$341,000	**$227,000**	**$427,000**	**$669,000**
Contingencies	10% of labour and material				$34,100	$22,700	$42,700	$66,900
supervision	10% of labour and material				$34,100	$22,700	$42,700	$66,900
Cost of tools discounted for 5 years		$30,000 to start up			$6,000	$6,000	$6,000	$6,000
Cost of Land		Hectare	1	15,000	$15,000	$15,000	$15,000	$15,000
				Cost of production	**$341,000**	**$293,400**	**$533,400**	**$823,800**

Revenue:	**Assume $40/dry nuts and $70/water nuts**	**Unit**	**No of Units**	**Price/ unit**	**Total Revenue Year 1**	**Total Revenue Year 2**	**Total Revenue Year 3**	**Total Revenue Year 4**
Dry nuts	Assuming 80% marketable	dry nuts	36,000	40	0	0	$720,000	**$ 1,440,000**
Water nuts	Assuming 80% marketable	water nuts	36,000	70	0	0	$1,260,000	**$ 2,520,000**
Expenditure					$341,000	$293,400	$533,400	**$ 823,800**

Gross Profit per Hectare								Gross Profit
Dry nuts					($341,000)	($293,400)	$186,600	$616,200
Water nuts					($341,000)	($293,400)	$726,600	$1,696,200
Accumulated Losses/Gain								
Dry nuts					($341,000)	($634,400)	($447,800)	**$168,400**
Water nuts					($341,000)	($634,400)	**$92,200**	

NOTE

Assuming all things stable, producer will recover cost of investment (including accumulated losses) in year 4 from producing dry coconuts only and in year 3 from water coconuts only

Establishing Coconuts (DWARF- Suriname Brown) - Using Seedlings
Production Cost/Hectare

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Coconuts - Dwarf (Surinam Brown)
Time to maturity	2 - 3 years
Length of reaping	30 - 40 yrs
Planting distance (l * w)	7m x 7m (24ft x 24ft)
Plant population	200

Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	100%
Expected yield	100 - 120 nuts/tree/yr
Cost of Tools and Equipment	$30,000 amortized over 5 years
Land Rental/Taxes per hectare	$15,000
Marketable Yield	90%

					Cost of Production		
	Assumptions/details	**Unit**	**No of Units**	**Cost/unit**	**Year 1**	**Year 2**	**Year 3**
LAND PREPARATTION							
Land Clearing	Excavator with minimum of 8 hours	hours	8	$9,250	$74,000		
Ploughing and chipping		hours	8	$8,500	$68,000		
PLANTING							
Dig holes	Planting 200 coconuts	day labour	3	$6,000	$18,000		
Planting material	Planting distance = 7m x 7m	seedlings	200	$750	$150,000		
WEED CONTROL							
Bushing	2 men for 3 days and 3 times per year; reduced by 2/3 due to intercropping	day labour	3	$6,000	$18,000	$18,000	$18,000
Apply herbicide	2 men, twice per year; reduced by 50%	day labour	2	$6,000	$12,000	$12,000	$12,000

Apply herbicide	Glyphosate - 6 litres/coverage and spraying twice per year; reduced by 50%	Litre	6	$1,500	$9,000	$9,000	$9,000
FERTILIZER							
Fertilizer	8 lbs of 12:12:17:2/plant	Bags	16	$9,500	$152,000	$152,000	$152,000
Labour to fertilize	6 labourers to fertilize 200 plants	day labour	6	$6,000	$36,000	$36,000	$36,000
HARVESTING							
Labour	10 bunches/tree @ 20 nuts/tree	climber/picker	40000	10	$0	$12,000	$400,000
Transportation	$14,000/load		3	14000	$0	$0	$42,000
				Subtotal of labour and material	**$537,000**	**$239,000**	**$669,000**
Contingencies	10% of labour and material				$53,700	$23,900	$66,900
supervision	10% of labour and material				$53,700	$23,900	$66,900
Cost of tools discounted for 5 years	$30000 for initial purchase				$6,000	$6,000	$6,000
Cost of Land	$15,000/ha	hectare	1	$15,000	$15,000	$15,000	$15,000
				Cost of Production	**$665,400**	**$307,800**	**$823,800**

Revenue:	**Assume $40/dry nuts and $60/water nuts**	**Unit**	**No of Units**	**Price/ Unit**	**Total Revenue Year 1**	**Total Revenue Year 2**	**Total Revenue Year 3**
Dry nuts	Assuming 80% marketable	dry nuts	36000	40	0	$432,000	$1,440,000
Water nuts	Assuming 80% marketable	water nuts	36000	70	0	$756,000	$2,520,000
Expenditure					$665,400	$307,800	$823,800
Gross Profit per Hectare					**Gross Profit**	**Gross Profit**	**Gross Profit**
Dry nuts					($665,400)	$124,200	$616,200
Water nuts					($665,400)	$448,200	$1,696,200

Accumulated Losses/Gain							
Dry nuts					($665,400)	($541,200)	**$75,000**
Water nuts					($665,400)	($217,200)	**$1,479,000**

NOTE

Assuming all things stable, producer will recover cost of investment (including accumulated losses) in year 2 whether s/he produces dry or water coconuts only.

Establishing Coconuts (Tall) - Using Seedlings
Production Cost/Hectare

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Coconuts - Tall
Time to maturity	5 - 6 years
Productive Life	50 - 65 yrs
Planting distance (l * w)	9m x 9m (30ft x 30ft)
Plant population	123 - square formation

Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	100%
Expected yield	10 bunches/tree and 20 nuts/bunch
Cost of Tools and equipment	$30,000 amortized over 5 years
Land Rental/Taxes per hectare	$15,000
Marketable Yield	90%

					Cost of Production					
	Assumptions/details	**Unit**	**No of Units**	**Cost/ unit**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
LAND PREPARATTION										
Land Clearing	Excavator with minimum of 8 hours	hours	8	$9,250	$74,000					
Ploughing and chipping		hours	8	$8,500	$68,000					

PLANTING										
Dig holes	Planting 123 coconuts	day labour	2	$6,000	$12,000	0	0	0	0	
Planting material	Planting distance = 9m x 9m	seedlings	123	$300	$36,900	0	0	0	0	
REPLACEMENT										
Replacing dead seedlings	After the 1st year.	seedlings	20	$300		$6,000				
Labour to replace dead seedlings	Planting 20counts=9m x 9m	Labour	1	$6,000		$6,000				
WEED CONTROL										
Weeding	2 men for 3 days and 3 times per year; reduced by 2/3 due to intercropping	day labour	6	$3,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
Apply herbicide	1 man, twice per year; reduced by 50%	day labour	2	$6,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
Apply herbicide	Glyphosate - 6 litres/coverage and spraying twice per year; reduced by 50%	Litre	6	$1,500	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000
FERTILIZER										
Fertilizer	8 lbs of 12:12:17:2/plant	Bags	10	$9,500	$0	$95,000	$95,000	$95,000	$95,000	$95,000
Labour to fertilize	4 labourers to fertilize 123 plants	day labour	4	$6,000	$0	$24,000	$24,000	$24,000	$24,000	$24,000
PEST AND DISEASES MANAGEMENT										
Pesticides	chemicals	bottles	2	$9,500	$0	$19,000	$19,000	$19,000	$19,000	$19,000
labour to apply pesticide	2 persons once per year	day labour	2	$6,000	$0	$12,000	$12,000	$12,000	$12,000	$12,000
HARVESTING										
Labour	10 bunches/tree @ 20 nuts/tree	climber/ picker	24600	10	$0	$0	$0	$0	123,000	$246,000
Transportation			2	14000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000

				Subtotal of labour and material	**$257,900**	**$195,000**	**$189,000**	**$189,000**	**$281,000**	**$435,000**
Contingencies	10% of labour and material				$25,790	$19,500	$18,900	$18,900	$28,100	$43,500
Supervision	10% of labour and material				$25,790	$19,500	$18,900	$18,900	$28,100	$43,500

Cost of tools discounted for 5 years	$30,000 for tools and equipment	startup cost	$30000/ 5		$6,000	$6,000	$6,000	$6,000	$6,000	$0
Cost of Land		Hectare	1	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
				Cost of production	**$330,480**	**$255,000**	**$247,800**	**$247,800**	**$358,200**	**$537,000**

Revenue: Assume $40/dry nut and $70/ water nut		**Units**	**No of units**	**Cost/ unit**	**Total Revenue Year 1**	**Total Revenue Year 2**	**Total Revenue Year 3**	**Total Revenue Year 4**	**Total Revenue Year 5**	**Total Revenue Year 6**	**Total Revenue Year 7**	**Total Revenue Year 8**	**Total Revenue Year 9**
Dry nuts	Assuming 80% marketable	dry nuts	22140	40	0	0	0	0	$442,800	**$885,600**	**$885,600**	**$885,600**	**$885,600**
Water nuts	Assuming 80% marketable	water nuts	22140	70	0	0	0	0	$774,900	**$1,549,800**	**$1,549,800**	**$1,549,800**	**$1549,800**
Expenditures					**$330,480**	**$255,000**	**$247,800**	**$247,800**	**$358,200**	**$537,000**	**$537,000**	**$537,000**	**$537,000**
Gross Profit per Hectare													
Dry nuts					($330,480)	($255,000)	($247,800)	($247,800)	$84,600	$348,600	**$250,200**	**$250,200**	**$250,200**
Water nuts					($330,480)	($255,000)	($247,800)	($247,800)	$416,700	$1,012,800			
Accumulated Losses/Gain													
Dry nuts					($330,480)	($585,480)	($833,280)	($1,081,080)	($996,480)	($647,880)	($397,680)	($147,480)	**$102,720**
Water nuts					($330,480)	($585,480)	($833,280)	($1,081,080)	($664,380)	**$348,420**			

NOTE

Assuming all things stable, producer will recover cost of investment (including accumulated losses) in year 9 from producing dry coconuts only and in year 6 from water coconuts only

Cost of Production - Hot Pepper (Miwiri Red)

Region	4
Soil type	Sandy
Terrain	Flat
Crop and variety	Hot Pepper - Miwiri Red
Time to maturity	6 - 8 wks
Planting distance (l * w)	.75m x .75m

Plant population	17,700
Irrigation	Manual
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	6,000 m^2
Expected yield	17,700 kg
Marketable yield	80%

	Assumptions/details	Unit	No of Units	Cost/unit	Year 1
LAND PREPARATTION					
Land Clearing			0	$0	
Ploughing and chipping			0	$0	
PLANTING					
Transplanting	Labour	Man days	6	$4,000	$24,000
Planting material	Seedlings(100/tray)	tray	180	$900	$162,000
WEED CONTROL					
Weed Control	Apply weedicide	Man days	6	$ 4,000	$ 24,000
Herbicide - chemical		bottle	8	$ 2,000	$ 16,000
IRRIGATION		Man days	10	$ 2,000	$ 20,000
FERTILIZER					
Fertilizer		Bags	10	$ 9,500	$ 95,000
Labour	labour to fertilize peppers	Man days	4	$ 6,000	$ 24,000
Disease Control					
Labour to apply chemicals		Man days	5	$ 4,000	20000

Fungicide		bottles	6	$ 1,000	$ 6,000
Insecticide		bottles	10	1500	15000
HARVESTING					
Labour		Man days	12	6000	72000
Transportation	$7,500/load		2	7500	15000
				Subtotal of labour and material	**$ 493,000**
Contingencies	10% of labour and material				49,300
supervision	10% of labour and material				49,300
				Cost of production	**591,600**

Revenue

Assume 80% marketable yield

Farm gate price = $250/kg

Item	Assumptions	No of units	Price/Unit	Total
Revenue	Total yield = 7,750 kg	6200	$250	$ 1,550,000
			Total Revenue	**$ 1,550,000**
Expenditure				591,600.0
Gross Margin				$958,400
			Gross Margin for 6,000m^2	**$ 575,040**

Cost of Production – Pineapples (Montserrat)

Region	4
Soil type	Sandy
Terrain	Flat
Crop and variety	Pineapples - Montserrat
Time to maturity	18 - 24 months
Planting distance (l * w)	1.5m x 0.6m = 0.9m^2
Plant population	11,000 plants/ha

Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	6,000 m^2
Expected yield	1.5 - 3.0 kg/fruit
Reaping period	Once/planting
Marketable yield	90%

					COST OF PRODUCTION
	Assumptions/details	**Unit**	**No of Units**	**Cost/unit**	**18 Months**
Land Preparation	**Already done**				
Planting					
Dig holes	2 persons to plant 11,000 pine plants	Man days	4	$6,000	$24,000
Planting material	1.5m x 0.6m = 0.9m^2	pine plants	11000	$10	$110,000
REPLACEMENT					
Dead pine plants	1.5m x 0.6m = 0.9m^2	pine plants	100	$10	$1,000
Dig holes	1 person to plant 100pine plants	Man days	1	$6,000	$6,000
Fertilizer	Urea (2 bags) and (4 bags) phosphate of ammonia (6 bags/acre = 12 bags/ha)	Bags	12	$8,500	$102,000

Labour to apply fertilizer	2 persons, 3 times	Man days	6	$6,000	$36,000
WEEDING					
Weeding	Weedicide- 5 applications per season	Chemicals	10	$5,000	$50,000
Apply herbicide	5 times over planting season, 2 persons	Man days	10	$6,000	$60,000
PEST CONTROL					
Pest control	2 applications/season	Chemicals	2	$5,000	10,000
Labour to apply pesticide	2 persons, twice per season	Man days	4	$6,000	24,000
Harvesting					
Transportation	2 trips	Trips	2	$7,500	$15,000.00
Labour	2 persons for 5 days	Man days	10	$6,000	60,000
				Subtotal of labour and material	**498,000**
Contingencies	10% of labour and material				$49,800
Supervision	10% of labour and material				$49,800
Knives, etc					$5,000
				Cost of Production	**$602,600**

Gross Profit

	Assumptions	Unit	No of units	Price/Unit	Totals
Revenue	11,000 with marketable yield of 90% = 9,900 plants	pineapples	9,900	150	$ 1,485,000
Expenses over 2 years					$602,600
Gross Profit/ha					$ 882,400
				Gross Profit for .6ha	**$ 529,440**

Cost of Production – Plantains

Region	4
Soil type	Sandy
Terrain	Flat
Crop and variety	Plantains
Time to maturity	9 months
Planting distance (l * w)	2.4m x 2.4m

Plant population	1,700 plants/ha
Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	6,000 m^2
Expected yield	18 kg/bunch
Marketable yield	80%

	Assumptions/details	Unit	No of Units	Cost/Unit	Year 1
LAND PREPARATTION					
Land Clearing			0	$0	
Ploughing and Chipping			8	$0	
PLANTING					
Digging Holes	1,700 holes	Man days	3	$6,000	$18,000
Planting Material	Planting 1700 plantains	suckers	1700	$200	$340,000
REPLACEMENT					
Replace Dead Suckers	100 Suckers	Suckers	100	$200	$20,000
Labour to Replace Dead Suckers	1 person to plant 100suckers	Man days	1	$6,000	$6,000
WEED CONTROL					
Weed Control	Apply weedicide	Man days	3	$ 6,000	$ 18,000
Apply Herbicide	1 man, twice per year; reduced by 50%	Man days	6	$ 6,000	$ 36,000

Apply herbicide	Glyphosate - 6 litres/coverage and spraying twice per year; reduced by 50%	Litre	6	$1,500	$ 9,000
FERTILIZER					
Fertilizer	17 bags Urea + 9 bags TSP + 9 Bags MoP	Bags	35	$ 9,500	$ 332,500
Labour to fertilize	4 labourers to fertilize 1,700 plants	Man days	6	$ 6,000	$ 36,000
PEST CONTROL					
Labour to apply chemicals		Man days	4	$ 6,000	$ 24,000
Fungicide			10	$ 1,000	$ 10,000
Insecticide			10	$ 1,500	$ 15,000
HARVESTING					
Labour	4 days	Man days	4	$ 6,000	$ 24,000
Transportation	2 trips	Trips	2	$ 7,500	$15,000
				Subtotal of labour and material	**$903,500**
Contingencies	10% of labour and material				$90,350
supervision	10% of labour and material				$9,035
				Cost of Production	**$1,002,885**

FRUITS

Cost of Production/ha – Avocado

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Avocado
Time to maturity	3 - 5 years
Productive life of plant	40 years
Planting distance (L * W) m	6m * 7m

Plant population per hectare	240
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (fruits/tree/year)	80
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										

	Labour										
	Land Clearing	N/A									
	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *240 plants = 360 kg. Ie 7 bags	Bag	7		$300	$2,100				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	10		$550	$5,500				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$45,600				
Planting	Seedlings - grafted	10,000 sq m/ (6m * 7m)		240		$350	$84,000				
	Labour to plant/transplant	3 persons for 1	Man day	3		$6,000	$18,000				
	Replacement seedlings	assume 10% loss therefore need to replace 24 seedlings		24		$350	$8,400				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$116,400				

Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	2		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide			2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	2 persons each time as above		2	2	$ 6,000	$24,000	**$24,000**	$12,000	$ 12,000	$ 12,000
							$67,200	**$67,200**	**$40,800**	**$40,800**	**$40,800**
Fertilizer	Urea	2 bags - split application		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	1		$3,520	$3,520	$3,520	$3,520	$3,520	$3,520
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$15,520	**$15,520**	**$15,520**	**$15,520**	**$15,520**
Other Costs	Harvesting	Assume 5 days in year 3 and 10 days in year 4 onwards	Man day	2	varied	$6,000	0	$30,000	$120,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
								$22,500	**$37,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$640,220**	**$268,220**	**$331,820**	**$331,820**	**$331,820**
	Contingency	10% of labour and material	Per annum				$64,022	$26,822	$33,182	$33,182	$33,182

	Supervision	10% of labour and material	Per annum				$64,022	$26,822	$33,182	$33,182	$33,182
						Total Cost - Material and Labour		**$768,264**	**$321,864**	**$398,184**	**$398,184**	**$398,184**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	0	20	60	80
Number of fruits/ha	240	0	0	4800	14400	19200
Average Marketable Yield	70%	0	0	3360	10080	13440
Revenue: $120/fruit	**$120**	**0**	**$0**	**$403,200**	**$1,209,600**	**$1,612,800**
Cost of Production		$768,264	$321,864	$398,184	$398,184	$398,184
Gross Profit		**($768,264)**	**($321,864)**	**$5,016**	**$811,416**	**$1,214,616**

Cost of Production/ha – Cherry (West Indian)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Cherry (West Indian)
Time to maturity	2 - 3 years
Productive life of plant	15 years
Planting distance(L * W)m	4.5m x 4.5m

Plant population per hectare	500
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (kg/year)	25000
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No.of Applications	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										

	Other (specify)										
	Labour										
	Land Clearing	N/A									
	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *500 plants = 750 kg. Ie 15 bags	Bag	15		$300	$4,500				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	15 - 20 100g packets used	Packet - 100g	18		$550	$9,900				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$52,400				
Planting	Seedlings - grafted	10,000 sq m/ (4.5m * 4.5m)		500		$200	$100,000				
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000				
	Replacement seedlings	assume 20% loss therefore need to replace 100 seedlings		100		$200	$20,000				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$150,000				

Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	1		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide			2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	2 persons each time as above		2	2	$ 6,000	$24,000	**$24,000**	$12,000	$ 12,000	$ 12,000
							$67,200	**$67,200**	**$40,800**	**$40,800**	**$40,800**
Fertilizer	Urea	2 bags - split application		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$19,040	**$19,040**	**$19,040**	**$19,040**	**$19,040**
Other Costs	Harvesting	Assume 5 days in year 2 and 10 days in year 3 onwards	Man day	2	varied	$6,000	0	$30,000	$120,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
							$22,500	**$37,500**	**$127,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$684,140**	**$271,740**	**$335,340**	**$335,340**	**$335,340**
	Contingency	10% of labour and material	Per annum				$68,414	$27,174	$33,534	$33,534	$33,534
	Supervision	10% of labour and material	Per annum				$68,414	$27,174	$33,534	$33,534	$33,534
	Total Cost - Material and Labour						**$820,968**	**$326,088**	**$402,408**	**$402,408**	**$402,408**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Average yield/ha/yr		0.00	5000	15000	30000	30000
Average Marketable Yield	70%	0	3500	10500	21000	21000
Revenue: $66/kg	**$66**	**0**	**$231,000**	**$693,000**	**$1,386,000**	**$1,386,000**
Cost of Production		$820,968	$326,088	$402,408	$402,408	$402,408
Gross Profit		**($820,968)**	**($95,088)**	**$290,592**	**$983,592**	**$983,592**

Cost of Production/ha – Guava

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Guava
Time to maturity	18 - 24 months
Productive life of plant	12 - 15 years

Planting distance (L * W)m	4.5m * 4.5m
Plant population per hectare	500
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (kg/ha/year)	65,000 kg
Cost of Tools and Equipment	
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Applications	Cost/ unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										

	Labour										
	Land Clearing	N/A									
	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *500 plants = 750 kg. Ie 15 bags	Bag	15		$300	$4,500				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	18		$550	$9,900				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$52,400				
Planting	Seedlings - grafted	10,000 sq m/ (4.5m * 4.5m)		500		$200	$100,000				
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000				
	Replacement seedlings	Assume 10% loss therefore need to replace 50 seedlings		50		$200	$10,000				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				

							$140,000				
Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	2		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide	2 persons each time as above		2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	twice/year		2	2	$ 6,000	$24,000	$24,000	$24,000	$ 24,000	$ 24,000
							$67,200	**$67,200**	**$52,800**	**$52,800**	**$52,800**
Fertilizer	Urea	2 Bags		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Pronto (contact insecticide)		Bottle - L	2		$4,000	$8,000	$8,000	$8,000	$8,000	$8,000
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$27,040	**$27,040**	**$27,040**	**$27,040**	**$27,040**
Other Costs	Labour to pick and sort	Assume 5 days in year 3 and 10 days in year 4 onwards	Man day	2	varied	$6,000	0	$12,000	$60,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500

							$22,500	**$19,500**	**$67,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$682,140**	**$261,740**	**$295,340**	**$355,340**	**$355,340**
	Contingency	10% of labour and material	Per annum				$68,214	$26,174	$29,534	$35,534	$35,534
	Supervision	10% of labour and material	Per annum				$68,214	$26,174	$29,534	$35,534	$35,534
Total Cost - Material and Labour							**$818,568**	**$314,088**	**$354,408**	**$426,408**	**$426,408**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	5,000	50,000	65,000	65,000
Average Marketable Yield	70%	0	3,500	35,000	45,500	45,500
Revenue: $30/kg	**$30**	**0**	**$105,000**	**$1,050,000**	**$1,365,000**	**$1,365,000**
Cost of Production		$818,568	$314,088	$354,408	$426,408	$426,408
Gross Profit		**($818,568)**	**($209,088)**	**$695,592**	**$938,592**	**$938,592**

Cost of Production/ha – Orange

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Oranges
Time to maturity	4 - 5 years
Productive life of plant	20 years

Planting distance (L * W)m	5m * 5m
Plant population per hectare	400
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (lemons/tree)	200
Cost of Tools and Equipment	
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										
	Labour										
	Land Clearing	N/A									
	Levelling	N/A									

	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *400 plants = 600 kg. Ie 12 bags	Bag	12		$350	$4,200				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	14		$550	$7,700				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$49,900				
Planting	Seedlings - grafted	10,000 sq m/ (5m * 5m)		400		$350	$140,000				
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000				
	Replacement seedlings	Assume 20% loss therefore need to replace 80 seedlings		80		$350	$28,000				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$198,000				

Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	2		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide	2 persons each time as above		2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	twice/year		2	2	$ 6,000	$24,000	$24,000	$24,000	$ 24,000	$ 24,000
							$67,200	**$67,200**	**$52,800**	**$52,800**	**$52,800**
Fertilizer	Urea	2 Bags		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		10		$ 9,500	$95,000	$95,000	$95,000	$95,000	$95,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$129,000	**$129,000**	**$129,000**	**$129,000**	**$129,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Pronto (contact insecticide)		Bottle - L	2		$4,000	$8,000	$8,000	$8,000	$8,000	$8,000
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$27,040	**$27,040**	**$27,040**	**$27,040**	**$27,040**
Other Costs	Labour to pick and sort	Assume 5 days in year 3 and 10 days in year 4 onwards	Man day	2	varied	$6,000	0	$12,000	$60,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
							$22,500	**$19,500**	**$67,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$718,640**	**$242,740**	**$276,340**	**$336,340**	**$336,340**

	Contingency	10% of labour and material	Per annum				$71,864	$24,274	$27,634	$33,634	$33,634
	Supervision	10% of labour and material	Per annum				$71,864	$24,274	$27,634	$33,634	$33,634
Total Cost - Material and Labour							**$862,368**	**$291,288**	**$331,608**	**$403,608**	**$403,608**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	10	60	150	200
Number of fruits/ha	400	0	4,000	24000	60000	80000
Average Marketable Yield	70%	0	2800	16800	42000	56000
Revenue: $30 per orange	**$30**	**0**	**$84,000**	**$504,000**	**$1,260,000**	**$1,680,000**
Cost of Production		$862,368	$291,288	$331,608	$403,608	$403,608
Gross Profit		**($862,368)**	**($207,288)**	**$172,392**	**$856,392**	**$1,276,392**

Cost of Production/ha – Passion Fruit (Yellow)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Passion Fruit (Yellow)
Time to maturity	15 - 18 months
Productive life of plant	6 years
Planting distance(L * W)m	3m * 3m

Plant population per hectare	1100
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (fruits/tree)	250
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Land Preparation	**Mechanical**											
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000					$37,000
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000					$68,000
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000					$30,000
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000					$90,000
	Make mounds/dig holes											
	Other (specify)											

	Labour											
	Land Clearing	N/A										$0
	Levelling	N/A										$0
	Make drains	N/A										$0
	Plough/rotovate	N/A										
	Make mounds/dig holes	N/A										$0
	Other (specify)											$0
							$225,000					
Preplanting	Organic manure (compost) for holes	Assume 15 bags/acre	Bag	15		$300	$4,500					$4,500
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000					$14,000
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	15		$550	$8,250					$8,250
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000					$24,000
							$50,750					
Planting	Seedlings - grafted	10,000 sq m/ (3m * 3m)		1100		$75	$82,500					$82,500
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000					$24,000
	Replacement seedlings	assume 10% loss therefore need to replace 110 seedlings		110		$75	$8,250					$8,250

	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000					$6,000
							$120,750					
Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	1		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800	$28,800
	Labour to apply weedicide			2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000	$144,000
	Weed manually	2 persons each time as above		2	2	$ 6,000	$24,000	**$24,000**	$12,000	$ 12,000	$ 12,000	$84,000
							$67,200	**$67,200**	**$40,800**	**$40,800**	**$40,800**	
Fertilizer	Urea	2 bags - split application		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000	$50,000
	12:12:17:2	Fertilizer 50 kg bag		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000	$570,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000	$120,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**	
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040	$35,200
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000	$60,000
							$19,040	**$19,040**	**$19,040**	**$19,040**	**$19,040**	
	Harvesting	Assume 250 passion fruit/vine	Man day	2	varied	$6,000	0	$30,000	$120,000	$120,000	$120,000	$390,000

Other Costs	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500	$52,500
							$22,500	**$37,500**	**$127,500**	**$127,500**	**$127,500**	**$442,500**
	Sub-total variable cost						**$653,240**	**$271,740**	**$335,340**	**$335,340**	**$335,340**	**$1,931,000**
	Contingency	10% of labour and material	Per annum				$65,324	$27,174	$33,534	$33,534	$33,534	$193,100
	Supervision	10% of labour and material	Per annum				$65,324	$27,174	$33,534	$33,534	$33,534	$193,100
Total Cost - Material and Labour							**$783,888**	**$326,088**	**$402,408**	**$402,408**	**$402,408**	**$2,317,200**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	150	200	250	250
Number of fruits/ha	1100	0	165,000	220000	275000	275000
Average Marketable Yield	70%	0	115500	154000	192500	192500
Revenue: $10/fruit	**$10**	**0**	**$1,155,000**	**$1,540,000**	**$1,925,000**	**$1,925,000**
Cost of Production		$783,888	$326,088	$402,408	$402,408	$402,408
Gross Profit		**($783,888)**	**$828,912**	**$1,137,592**	**$1,522,592**	**$1,522,592**

Cost of Production/ha – Rough Lemon

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Rough Lemon
Time to maturity	2 - 3 years
Productive life of plant	20 years
Planting distance(L * W)m	6m * 6m

Plant population per hectare	270
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (lemons/tree)	100
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	95%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										
	Labour										

	Land Clearing	N/A									
	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *270 plants = 405 kg. Ie 8 bags	Bag	8		$300	$2,400				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	9		$550	$4,950				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$45,350				
Planting	Seedlings - grafted	10,000 sq m/(6m * 6m)		270		$350	$94,500				
	Labour to plant/transplant	1 person to plant seedlings	Man day	3		$6,000	$18,000				
	Replacement seedlings	assume 20% loss therefore need to replace 54 seedlings		54		$350	$18,900				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$137,400				

Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	1		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide	2 persons each time as above		2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	twice/year		2	2	$ 6,000	$24,000	$24,000	$24,000	$ 24,000	$ 24,000
							$67,200	**$67,200**	**$52,800**	**$52,800**	**$52,800**
Fertilizer	Urea	1 Bag		1		$ 5,000	$5,000	$5,000	$5,000	$5,000	$5,000
	12:12:17:2	1 kg/plant		6		$ 9,500	$57,000	$57,000	$57,000	$57,000	$57,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$86,000	**$86,000**	**$86,000**	**$86,000**	**$86,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Pronto (contact insecticide)		Bottle - L	2		$4,000	$8,000	$8,000	$8,000	$8,000	$8,000
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$27,040	**$27,040**	**$27,040**	**$27,040**	**$27,040**
Other Costs	Labour to pick and sort	Assume 5 days in year 3 and 10 days in year 4 onwards	Man day	2	varied	$6,000	0	$0	$60,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
							$22,500	**$7,500**	**$67,500**	**$127,500**	**$127,500**

Sub-total variable cost						**$610,490**	**$187,740**	**$233,340**	**$293,340**	**$293,340**
Contingency	10% of labour and material	Per annum				$61,049	$18,774	$23,334	$29,334	$29,334
Supervision	10% of labour and material	Per annum				$61,049	$18,774	$23,334	$29,334	$29,334
Total Cost - Material and Labour						**$732,588**	**$225,288**	**$280,008**	**$352,008**	**$352,008**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	10	50	100	100
Number of fruits/ha	270	0	2,700	13500	27000	27000
Average Marketable Yield	95%	0	2565	12825	25650	25650
Revenue: $40/fruit	**$40**	**0**	**$102,600**	**$513,000**	**$1,026,000**	**$1,026,000**
Cost of Production		$732,588	$225,288	$280,008	$352,008	$352,008
Gross Profit		**($732,588)**	**($122,688)**	**$232,992**	**$673,992**	**$673,992**

Cost of Production/ha – Soursop

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Soursop
Time to maturity	2 - 3 years
Productive life of plant	15 years
Planting distance (L * W)m	4.5m x 4.5m

Plant population per hectare	500
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield	15 fruits/tree
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	70%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										
	Labour										

	Land Clearing	N/A									
	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *500 plants = 750 kg. Ie 15 bags	Bag	15		$300	$4,500				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	15 - 20 100g packets used	Packet - 100g	18		$550	$9,900				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$52,400				
Planting	Seedlings - grafted	10,000 sq m/ (4.5m * 4.5m)		500		$200	$100,000				
	Labour to plant/transplant	2 persons for 2 days	Man day	3		$6,000	$18,000				
	Replacement seedlings	assume 20% loss therefore need to replace 100 seedlings		100		$200	$20,000				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$144,000				

Weed Control	Glyphosate	2L per application. Apply every 4 months for the first 2 years; twice per year as of year 3.	Bottle - 1 L	1		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800
	Labour to apply weedicide			2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	2 persons each time as above		2	2	$ 6,000	$24,000	**$24,000**	$12,000	$ 12,000	$ 12,000
							$67,200	**$67,200**	**$40,800**	**$40,800**	**$40,800**
Fertilizer	Urea	2 bags - split application		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$19,040	**$19,040**	**$19,040**	**$19,040**	**$19,040**
Other Costs	Harvesting	Assume 5 days in year 2 and 10 days in year 3 onwards	Man day	2	varied	$6,000	0	$30,000	$120,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
							$22,500	**$37,500**	**$127,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$678,140**	**$271,740**	**$335,340**	**$335,340**	**$335,340**

	Contingency	10% of labour and material	Per annum				$67,814	$27,174	$33,534	$33,534	$33,534
	Supervision	10% of labour and material	Per annum				$67,814	$27,174	$33,534	$33,534	$33,534
Total Cost - Material and Labour							**$813,768**	**$326,088**	**$402,408**	**$402,408**	**$402,408**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0.00	6	12	15	15
Number of fruits/ha	500	0	3,000	6000	7500	7500
Average fruit weight/ha Assuming each fruit weighs 1.5 kg	1.5	0	4,500	9000	11250	11250
Average Marketable Yield	70%	0	3150	6300	7875	7875
Revenue: $220/kg	**$220**	**0**	**$693,000**	**$1,386,000**	**$1,732,500**	**$1,732,500**
Cost of Production		$813,768	$326,088	$402,408	$402,408	$402,408
Gross Profit		**($813,768)**	**$366,912**	**$983,592**	**$1,330,092**	**$1,330,092**

Cost of Production/ha – Tangerine (Budded)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Tangerine - Budded
Time to maturity	2 - 3 years
Productive life of plant	20 years
Planting distance(L * W)m	4.5m * 4.5m

Plant population per hectare	500
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (fruits/ha/year)	100
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	80%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Land Preparation	**Mechanical**										
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$9,250	$37,000				
	Levelling	Excavator with minimum of 8 hours	hours	8		$8,500	$68,000				
	Make drains	Tractor and implement	Job work	1		$30,000	$30,000				
	Plough/rotovate	Tractor and implement	Job work	1		$90,000	$90,000				
	Make mounds/dig holes										
	Other (specify)										
	Labour										
	Land Clearing	N/A									

	Levelling	N/A									
	Make drains	N/A									
	Plough/rotovate	N/A									
	Make mounds/dig holes	N/A									
	Other (specify)										
							$225,000				
Preplanting	Organic manure (compost) for holes	Assume 1.5 kg/plant *500 plants = 750 kg. Ie 15 bags	Bag	15		$300	$4,500				
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000				
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	18		$550	$9,900				
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000				
							$52,400				
Planting	Seedlings - grafted	10,000 sq m/ (4.5m * 4.5m)		500		$350	$175,000				
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000				
	Replacement seedlings	Assume 10% loss therefore need to replace 50 seedlings		50		$350	$17,500				
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000				
							$222,500				
Weed	Glyphosate	2L per application. Apply every 4 months for the first 2 years;	Bottle - 1 L	2		$ 1,200	$7,200	$7,200	$4,800	$4,800	$4,800

		twice per year as of year 3.									
	Labour to apply weedicide	2 persons each time as above		2		$ 6,000	$36,000	$36,000	$24,000	$24,000	$24,000
	Weed manually	twice/year		2	2	$ 6,000	$24,000	$24,000	$24,000	$ 24,000	$ 24,000
							$67,200	**$67,200**	**$52,800**	**$52,800**	**$52,800**
Fertilizer	Urea	2 Bags		2		$ 5,000	$10,000	$10,000	$10,000	$10,000	$10,000
	12:12:17:2	1 kg/plant		12		$ 9,500	$114,000	$114,000	$114,000	$114,000	$114,000
	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000	$24,000	$24,000	$24,000	$24,000
							$148,000	**$148,000**	**$148,000**	**$148,000**	**$148,000**
Pest Control	Triogophorus	Once per year as preventative measure and then as required	Bottle - L	2		$3,520	$7,040	$7,040	$7,040	$7,040	$7,040
	Pronto (contact insecticide)		Bottle - L	2		$4,000	$8,000	$8,000	$8,000	$8,000	$8,000
	Labour to apply product	2 persons	Man day	2		$6,000	$12,000	$12,000	$12,000	$12,000	$12,000
							$27,040	**$27,040**	**$27,040**	**$27,040**	**$27,040**
Other Costs	Labour to pick and sort	Assume 5 days in year 3 and 10 days in year 4 onwards	Man day	2	varied	$6,000	0	$12,000	$60,000	$120,000	$120,000
	Transportation (carry supplies to farm)	Assume 3 trips in year 1 and 1 trip in other years	Per trip	1		$7,500	$22,500	$7,500	$7,500	$7,500	$7,500
							$22,500	**$19,500**	**$67,500**	**$127,500**	**$127,500**
	Sub-total variable cost						**$764,640**	**$261,740**	**$295,340**	**$355,340**	**$355,340**

	Contingency	10% of labour and material	Per annum				$76,464	$26,174	$29,534	$35,534	$35,534
	Supervision	10% of labour and material	Per annum				$76,464	$26,174	$29,534	$35,534	$35,534
						Total Cost - Material and Labour	**$917,568**	**$314,088**	**$354,408**	**$426,408**	**$426,408**

Assumptions	Calculations	Year 1	Year 2	Year 3	Year 4	Year 5
Yield /fruit/tree/year		0	0	60	100	100
Number of fruits/ha	500	0	0	30,000	50,000	50,000
Average Marketable Yield	80%	0	0	24,000	40,000	40,000
Revenue: $30/kg	**$30**	**0**	**$0**	**$720,000**	**$1,200,000**	**$1,200,000**
Cost of Production		$917,568	$314,088	$354,408	$426,408	$426,408
Gross Profit		**($917,568)**	**($314,088)**	**$365,592**	**$773,592**	**$773,592**

VEGETABLES

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Cost of Production/ha – Bora (Yard Long)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Bora - Yard Long
Time to maturity	6 weeks
Productive life of plant	5-6 weeks

Planting distance (L * W)m	0.6m x 0.9m (using 3 seeds/hole)
Plant population per hectare	18500 holes (55,000 plants)
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (kg/ha/year)	15 tons/ha (10 pods/vine)
Cost of Tools and Equipment	
Marketable Yield	95%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Total Cost
Land Preparation	**Mechanical**						
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$0	$0
	Levelling	Excavator with minimum of 8 hours	hours	8		$0	$0
	Make drains	Tractor and implement	Job work	1		$0	$0
	Plough/rotovate	Tractor and implement	Job work	1		$0	$0
	Make mounds/dig holes						
	Other (specify)						
	Labour						
	Land Clearing	N/A					

	Levelling	N/A					
	Make drains	N/A					
	Plough/rotovate	N/A					
	Make mounds/dig holes	N/A					
	Other (specify)						
							$0
Preplanting	Organic manure (compost) for holes	Assume 15 bags	Bag	15		$300	$4,500
	Lime	Assume 4 bags/ha	Bag	4		$2,800	$11,200
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	18		$550	$9,900
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000
							$49,600
Planting	Seeds	25 kg seeds (approx 398400 using 3 seeds/hole)	Kg	25		$352	$8,800
	Labour to plant/transplant	4 persons	Man day	4		$6,000	$24,000
							$32,800
Weed Control	Glyphosate - contact herbicide	2 applications per crop	Bottle - 1 L	2	2	$1,200	$4,800
	Labour to apply weedicide	2 persons each time as above		2	2	$6,000	$24,000
	Weed manually	2 persons, twice/crop		2	2	$6,000	$24,000
							$52,800
Fertilizer	Urea	2 Bags		2		$5,000	$10,000
	Fertilizer	12:12:17:2 and incorporate inoculum		7		$9,500	$66,500
	Inocolum	Applied to seed at time of planting					

	Labour to apply fertilizer	2 person for 2 days	Man day	2	2	$6,000	$24,000
		Add vine and tree mix	L	1		1400	1400
							$101,900
Pest Control	Rizolex	Fungicide	Bottle - 500ml	2		$1,760	$3,520
	Leaf Guard	For leaf miners - 100-gram packs (3 packs)	Packs	3		$2,000	$6,000
	Labour to apply products	2 persons	Man day	2		$6,000	$12,000
	Abamectin	Insecticide	Bottle - L	1		2500	$2,500
							$24,020
Other Costs	Purchase stakes for vines	18,500 stakes@$10/stake		18500		$10	$185,000
	Labour to wrap plants around vines	1 person for 3 days		3		6000	$18,000
	Labour to pick and sort	Assume 2.5 vines/hole = 18,500 *2.5 = 46,250 plants Assume 10 pods/vine; total pods = 462,500	Pod	462500		$0.25	$115,625
	Labour to sort and tie pods into bundles	2 persons week for 5 weeks	Man days	2	5	6000	$60,000
	Transportation (carry supplies to farm)	Assume 2 trips/crop cycle	Per trip	2		$7,500	$15,000
							$393,625
					Sub-total variable cost		**$654,745**
	Contingency	10% of labour and material	Per annum				$65,475

	Supervision	10% of labour and material	Per annum				$65,475
Total Cost - Material and Labour							**$785,694**

Assumptions	**Calculations**	**Total**
10 pods/vine	462500	439375
Average Marketable Yield	95%	417406
Assume 80 - 100 pods/bundle and $300/bundle	**$300.00**	**$1,391,354**
Cost of Production		$785,694
Gross Profit		**$605,660**

Cost of Production/ha – Cucumber (Quest)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Cucumber - Quest
Time to maturity	2.5 - 3 months
Productive life of plant	1 month (after maturity)
Planting distance(L * W)m	1.2m * 1.2m

Plant population per hectare	6,900
Irrigation (rainfed, drip, manual, etc)	Rain fed and sprinkler
Expected yield (cucumbers/crop)	103,500
Cost of Tools and Equipment	
Land Rental/Taxes per hectare	$15,000
Marketable Yield	85%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Appli-cations	Cost/ Unit	Total Cost
Land Preparation	**Mechanical**						
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours		1	$0	$0
	Levelling	Excavator with minimum of 8 hours	hours			$0	$0
	Make drains	Tractor and implement	Job work			$0	$0
	Plough/rotovate	Tractor and implement	Job work			$0	$0
	Make mounds/dig holes						
	Labour						
	Land Clearing	2 labourers to apply weedicide	Man days			0	$0
	Levelling						
	Make drains	3 labourers	Man days			0	$0

	Make mounds/dig holes						
	Other (specify)						
							$0
Preplanting	Fertilize holes	Fertilize holes using 6:25:25	Bag	6		$6,000	$36,000
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000
	Ryzolex (soil borne fungicide)	15 - 20 100g packets used	Packet - 100g	18		$550	$9,900
	Labour to fertilize holes	3 persons	Man day	3		$6,000	$18,000
							$77,900
Planting	Seeds	4 tins - 100g	Tin	4		$3,800	$15,200
	Labour to plant/transplant	4 persons	Man day	4		$6,000	$24,000
	Labour to replace lost seedlings	1 person to replace seedlings	Man day	1		$6,000	$6,000
							$45,200
Weed Control	Gramoxone	6 litres of contact weedicide once/crop	Bottle - 1 L	6		$1,500	$9,000
	Labour to apply weedicide	2 persons, twice per crop cycle	Man days	2	2	$6,000	$24,000
	Weed manually	2 persons, once per crop cycle	Man Days	2		$6,000	$12,000
							$45,000
Fertilizer	Fertilizer	4 bags of 15:15:15	Bags	4		$6,000	$24,000
	Urea	2 bags	Bags	2		$9,500	$19,000
	Labour to apply fertilizer	4 persons once/crop cycle	Man day	4	1	$6,000	$24,000

	Vine and tree mix	500 mil	Bottle - 0.5 L	0.5		1400	700
							$67,700
Pest Control	Systemic insecticide	Caprid	Bottle - 1 L	4		$5,200	$20,800
	Fungicide	Carbendazim	Bottle - 1 L	2		$3,000	$6,000
	Labour to apply pest control	1 person /2 times during the crop cycle	Man Day	2		6000	$12,000
							$38,800
Other Costs	Harvesting	4 labourers, 8 times/crop		2	8	6000	$96,000
	Transportation (carry supplies to farm)	Assume 2 trips per crop cycle	Per trip	2		$7,500	$15,000
							$111,000
					Sub-total variable cost		**$385,600**
	Contingency	10% of labour and material	Per annum				$38,560
	Supervision	10% of labour and material	Per annum				$38,560
					Total Cost - Material and Labour		**$462,720**

Assumptions	Calculations	Total
Average yield/ha/yr	103,500	103,500
Average Marketable Yield	85%	87,975
Revenue: $10/cucumber	**$10**	**$879,750**
Cost of Production		$462,720
Gross Profit /ha		**$417,030**

Cost of Production/ha – Ochro (Creole)

Region	4
Soil type	Clay
Terrain	Flat
Crop and variety	Ochro - Creole
Time to maturity	3 months
Productive life of plant	3 months
Planting distance(L * W)m	1m * 1m

Plant population per hectare	10,000
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield (kg/crop)	11363
Cost of Tools and Equipment	$150,000
Land Rental/Taxes per hectare	$15,000
Marketable Yield	85%

		Assumptions (frequency, rate, etc)	Unit	No of Units	Number of Applications	Cost/unit	Total Cost
Land Preparation	**Mechanical**						
	Land Clearing	Excavator with minimum of 8 hours - including levelling and making drains	hours	4	1	$0	$0
	Levelling	Excavator with minimum of 8 hours	hours	8		$0	$0
	Make drains	Tractor and implement	Job work	1		$0	$0
	Plough/rotovate	Tractor and implement	Job work	1		$0	$0
	Make mounds/dig holes						
	Labour						

	Land Clearing	N/A					
	Levelling	N/A					
	Make drains	N/A					
	Plough/rotovate	N/A					
	Make mounds/dig holes	N/A					
	Other (specify)						
							$0
Preplanting	Apply fertilizer	5 bags of 6:25:25	Bag	5		$6,000	$30,000
	Lime	200lbs/acre = 500 lbs/ha =228 kg/ha 227 kg = 5 bags @ 50 kg each	Bag	5		$2,800	$14,000
	Ryzolex (soil borne fungicide)	100g packets used	Packet - 100g	10		$550	$5,500
	Labour for preplanting activities	Manual	Man day	3		$6,000	$18,000
							$67,500
Planting	Seeds	9 kg of seeds	Kg	9		$1,100	$9,900
	Labour to plant/transplant		Man day	2		$6,000	$12,000
	Labour to replace lost plants	1 person to replace seedlings	Man day	1		$6,000	$6,000
							$27,900
Weed Control	Glyphosate - systemic	2 L per application	Bottle - 1 L	2		$ 1,200	
	Grammazone - contact	3 applications	Bottle - 1 L	3		$ 1,300	$3,900
	Labour to apply weedicide	3 times per crop season		3		$ 6,000	$18,000

	Weed manually	2 persons twice/crop cycle		2	2	$ 6,000	$24,000
							$45,900
Fertilizer	Urea	2 bags - split application		2		$ 5,500	$11,000
	Fertillizer	4 bags 15:15:15		4		$ 6,000	$24,000
	Labour to apply fertilizer	2 persons, twice per crop	Man day	2	2	$6,000	$24,000
							$59,000
Pest Control	Systemic insecticide	Caprid	Bottle - L	5		$5,200	$26,000
	Fungicide	Fastac	Bottle - L	3		$1,800	$5,400
	Labour to apply chemicals	2 persons at 3 times for the crop	Man Day	2	3	6,000	$36,000
							$67,400
Other Costs	Harvesting	2 persons to reap crop over 10 days	Man day	2	10	$6,000	$120,000
	Transportation (carry supplies to farm)	Assume 2 trips per crop cycle	Per trip	2		$7,500	$15,000
							$135,000
					Sub-total variable cost		**$343,700**
	Contingency	10% of labour and material	Per annum				$34,370
	Supervision	10% of labour and material	Per annum				$34,370
					Total Cost - Material and Labour		**$412,440**

Assumptions	Calculations	Month 1	Month 2	Month 3 onwards
Yield/crop (kg)	11,300	0.00	0	$11,300
Average Marketable Yield (kg)	85%	0	0	$9,605
Revenue: $Price/Kg	**$80**	**0**	**$0**	**$768,400**
Cost of Production				$412,440
Gross Profit				**$355,960**

Cost of Production/ha – Pumpkin

Region	4
Soil type	Sandy
Terrain	Flat
Crop	Pumpkin
Length of reaping	2 crops
Planting distance	1.9m * 3.1 m

Plant population	1851
Irrigation	Rain fed
Size (ha) - for calculation purposes	1 ha
Approximate plantable area	.6 ha
Expected marketable yield - kg	80% first crop and 70% second crop

Item/Activity	Assumptions/details	Unit	No of Units	Cost/ Unit	Total Cost
Make mounds and plant seeds	2 men for 2 days	Man days	4	$6,000	$24,000
Planting material	Spacing = 1.9m x 3.1m = 5.4m^2	Seeds (1851 = 1lbs or .5kg)	1	$4,000	$4,000
Weeding	2 men for 3 times per year	Man days	6	$6,000	$36,000
Apply herbicide	2 man, twice per year	Man days	4	$6,000	$24,000
Apply herbicide	Glyphosate - 6 litres/coverage and spraying twice per crop	Litre	12	$1,500	$18,000
Fertilizing	24g of 15:15:15:2/plt	Bag	1	$7,500	$7,500
Apply fertilizer	(2 men to fertilize 1851 plants) and once/crop	Man days	4	$6,000	$24,000
Apply fungicide	Fungicide + bactericide + sticker	Agro chemicals	1	$14,000	$14,000
Labour to apply fungicide	2 men, twice per crop (and 2 crops)	Man days	8	$6,000	$48,000

Labour for harvesting	2 persons for 10	Man days	20	$6,000	$120,000
				Subtotal of labour and material	**$319,500**
Contingencies	10% of labour and material				$31,950
supervision	10% of labour and material				$31,950
				Cost of production	**$383,400**

Revenue

Assume 10lbs (4.5kg)/pumpkin

Assume 80% marketable yield for first crop and 70% yield 2nd crop

Farm gate price = $15/lb = $33/kg

Item	Assumptions	Unit	No of units	Price/Unit	Total
Revenue - 1st crop	Assume 80% marketable yield and 4.5 kg per pumpkin	KG	6664	$33	$ 989,545
Revenue - 2nd crop	Assume 70% of marketable yield	KG	5831	$33	$ 865,852
				Total Revenue	**$ 1,855,396**
				Cost of production	$383,400
				Gross Profit	**$ 1,471,996**

Cost of Production/ha – Sweet Pepper (Local Sweet)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Sweet Pepper - Local Sweet
Time to maturity	8 weeks
Productive life of plant	2 - 3 months

Planting distance(L * W)m	0.9m * 0.6m
Plant population per hectare	18,519
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield - Kg	27778
Cost of Tools and Equipment	
Marketable Yield	90%

		Assumptions (frequency, rate, etc)	Unit	No of Units	Number of Applications	Cost/unit	Total Cost
Land Preparation	**Mechanical**						
	Plough/rotovate	Tractor and implement	Job work	0		$0	$0
	Make mounds/dig holes						
	Other (specify)						
	Labour						
	Land Clearing	N/A					
	Levelling	N/A					
	Make drains	N/A					
	Plough/rotovate	N/A					
	Make mounds/dig holes	N/A					

	Other (specify)						
							$0
Preplanting	Add limestone to soil	Assume 4 bags	Bags	4	2800		$11,200
	Add organic matter to soil	Organic matter	Bag	12		$350	$4,200
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000
							$39,400
Planting	Seedlings	?? Trays	Tray				$0
	Labour to transplant seedlings		Man day	3		$6,000	$18,000
							$18,000
Weed Control	Weedicide	Gramoxone	Bottle - 1 L	1		$ 1,200	$1,200
	Labour to apply weedicide	2 persons	Man day	2		$ 6,000	$12,000
							$13,200
Fertilizer	Fertilizer	12:12:12:17:2 (applied 2 bag/per application for 2 applications	Bags	4		$ 9,500	$38,000
	Fertilizer	Urea	Bags	2		$ 5,000	$10,000
	Labour to apply fertilizer						
							$48,000
Pest Control	Abamectin		Bottle - L	1		$3,520	$3,520
	Caprid		Bottle - L	1		$5,200	$5,200
	Labour to apply pest control chemicals	2 persons for 2 days	Man day	2	2	$6,000	$24,000

							$32,720
Other Costs	Labour to harvest sweet peppers	Assume 2 persons for 12 days	Man day	2	12	$6,000	$144,000
	Transportation (carry supplies to farm)	Assume 2 trips in a crop cycle	Per trip	2		$7,500	$15,000
							$159,000
	Sub-total variable cost						**$310,320**
	Contingency	10% of labour and material	Per annum				$31,032
	Supervision	10% of labour and material	Per annum				$31,032
Total Cost - Material and Labour							**$372,384**

Assumptions	Calculations	Total
Avg yield/ha	27,778	27,778
Avg marketable yield	90%	25,000
Revenue: $132 per kg	**$132**	**3,300,000**
Cost of Production		372,384
Gross Profit		**2,927,616**

Cost of Production/ha – Sweet Potatoes (Amjad)

Region	4
Soil type	Sandy loam
Terrain	Flat
Crop and variety	Sweet Potatoes - Amjad
Time to maturity	3 months
Productive life of plant	2 months

Planting distance(L * W)m	0.3m * 0.9m
Plant population per hectare	37037
Irrigation (rainfed, drip, manual, etc)	Rain fed
Expected yield	50 tons/ha
Cost of Tools and Equipment	
Marketable Yield	90%

		Assumptions (frequency, rate, etc)	Unit	No of Units	No. of Applications	Cost/ Unit	Total Cost
Land Preparation	**Mechanical**						
	Plough/rotovate	Tractor and implement	Job work	0		$0	$0
	Make mounds/dig holes						
	Other (specify)						
	Labour						
	Land Clearing	N/A					
	Levelling	N/A					
	Make drains	N/A					
	Plough/rotovate	N/A					
	Make mounds/dig holes	N/A					
	Other (specify)						
							$0
	Add limestone to soil	Assume 4 bags	Bags	4	2800		$11,200

Preplanting	Add organic matter to soil	Organic matter	Bag	12		$350	$4,200
	Pre-treat slips	Vydate-L and carbendazim - half litre of each	Bottle - L	1		$5,000	$5,000
	Incorporate all into soil	15:15:15	Bag	3		$6,000	$18,000
	Labour for preplanting activities	Manual	Man day	4		$6,000	$24,000
							$62,400
Planting	Potato Slips	Slips to cover 1 hectare		10000		$1	$10,000
	Labour to plant/transplant	2 persons for 2 days	Man day	4		$6,000	$24,000
							$34,000
Weed Control	Glyphosate	At time of planting	Bottle - 1 L	1		$1,200	$1,200
	Labour to apply weedicide	2 persons	Man day	2		$6,000	$12,000
	Manual weeding	2 persons	Man day	2		$6,000	$12,000
							$25,200
Fertilizer	Only at time of planting						
							$0
Pest Control	Super Triazophos -insecticide	Once per crop as preventative measure and then as required	Bottle - L	1		$3,520	$3,520
	Traps	Sweet potato lures - provided by NAREI		0		$0	$0

	Labour to apply product and set traps	2 persons for 2 days	Man day	3	2	$6,000	$36,000
							$39,520
Other Costs	Labour to harvest potatoes	Assume 2 persons for 5 days	Man day	2	5	$6,000	$60,000
	Transportation (carry supplies to farm)	Assume 2 trips in a crop cycle	Per trip	2		$7,500	$15,000
							$75,000
	Sub-total variable cost						**$236,120**
	Contingency	10% of labour and material	Per annum				$23,612
	Supervision	10% of labour and material	Per annum				$23,612
Total Cost - Material and Labour							**$283,344**

Assumptions	Calculations	Total
Number of slips/ha	37,037	37037
0.68 - 0.9 kg/slip	0.68	25185
Average Marketable Yield	90%	22667
Revenue: $66 per kg	**$66**	**$1,495,999**
Cost of Production		$283,344
Gross Profit		**$1,212,655**