

**Table G-PE-MH-6-1-9 PRODUCTION COST MAHASARAKAM AREA  
Mango**

Present		Physical Inputs		Unit Prices			Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base		
Seed	Planted	kg/ha	25	Baht/kg	40	Economic	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433		311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358		222	164.5	102.3
	16-16-8	kg / rai	35	Baht/50kg	343		247	240.4	172.7
	16-20-0	kg / rai	0	Baht/50kg	344		247	0.0	0.0
			liter/ rai	0	Baht/liter	150		143	0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	0		0	0	0
		liter/ rai	0.56	Baht/liter	450		428	252	239.4
		liter/ rai	0	Baht/liter	200		190	0	0
Tractor		days	5	Baht/rai	100		84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100		87	0	0
Hired labor		mandays	0	Baht/manday	100		92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12		10.8	100.8	90.72
<b>Total Production Cost</b>								<b>882.7</b>	<b>719.3</b>

Future without		Physical Inputs		Unit Prices			Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base		
Seed	Planted	kg/ha	25	Baht/kg	40	Economic	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433		311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358		222	164.5	102.3
	16-16-8	kg / rai	35	Baht/50kg	343		247	240.4	172.7
	16-20-0	kg / rai	0	Baht/50kg	344		247	0.0	0.0
			liter/ rai	0	Baht/liter	150		143	0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	0		0	0	0
		liter/ rai	0.56	Baht/liter	450		428	252	239.4
		liter/ rai	0	Baht/liter	200		190	0	0
Tractor		days	5	Baht/rai	100		84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100		87	0	0
Hired labor		mandays	0	Baht/manday	100		92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12		10.8	100.8	90.72
<b>Total Production Cost</b>								<b>882.7</b>	<b>719.3</b>

Future with		Physical Inputs		Unit Prices			Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base		
Seed	Planted	kg/ha	25	Baht/kg	40	Economic	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	333		210	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	256		185	117.9	84.9
	16-16-8	kg / rai	35	Baht/50kg	266		181	186.1	126.7
	16-20-0	kg / rai	0	Baht/50kg	261		177	0.0	0.0
			liter/ rai	0	Baht/liter	150		143	0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	0		0	0	0
		liter/ rai	0.56	Baht/liter	450		428	252	239.4
		liter/ rai	0	Baht/liter	200		190	0	0
Tractor		days	5	Baht/rai	100		84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100		87	0	0
Hired labor		mandays	0	Baht/manday	100		92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12		10.8	100.8	90.72
<b>Total Production Cost</b>								<b>781.8</b>	<b>655.9</b>

Note: Price of fertilizer is based on the price calculated from the international price.

**Mango**

Economic price

Present	Future without	Future with
719.3	719.3	655.9

**Table G-PE-MH-6-1-10 PRODUCTION COST MAHASARAKAM AREA  
Eucalyptus**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Trees	Planted	kg/ha	400	Baht/kg	1.5	1.4	120	114
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.2	68.3
	15-15-15	kg / rai	0	Baht/50kg	358	222	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	343	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	344	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							777.2	691.9

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.4	120.0	114.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.2	68.3
	15-15-15	kg / rai	0	Baht/50kg	358	222	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	343	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	344	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							777.2	691.9

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.5	120.0	120.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	333	210	73.3	46.1
	15-15-15	kg / rai	0	Baht/50kg	256	185	0.00	0.00
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							755.3	675.7

Note: Price of fertilizer is based on the price calculated from the international price.

**Eucalyptus**

Economic price

Present	Future without	Future with
691.9	691.9	675.7

**Table G-PE-MH-6-1-11 PRODUCTION COST MAHASARAKAM AREA  
Payaya**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Stem	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	222	143.0	89.0
	16-16-8	kg / rai	0	Baht/50kg	343	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	344	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate) Fungicides	liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1,600	1,472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,383.0	2,127.4

Future without		Physical inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	222	143.0	89.0
	16-16-8	kg / rai	0	Baht/50kg	343	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	344	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate) Fungicides	liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134.4
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1600	1472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,383.0	2,127.4

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	333	210	0.00	0.00
	15-15-15	kg / rai	20	Baht/50kg	256	185	102.49	73.83
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate) Fungicides	liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1,600	1,472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,342.5	2,112.2

Note: Price of fertilizer is based on the price calculated from the international price.

**Payaya**

Present	Future without	Future with
2127.4	2127.4	2112.2

**TABLE G-PE-MH-7-1 MAHASARAKAM AREA  
LABOR REQUIREMENT**

<b>Total</b>		(000' mandays/rai)													
Present	14,220	57	54	39	81	70	2	2	2	2	0	1	49	75	431
Future without	14,220	57	54	39	81	70	2	2	2	2	0	1	49	75	431
Future with	9,980	72	59	52	84	89	2	2	2	2	1	1	53	69	486

<b>Total</b>		(million mandays)														
Present		0.06	0.05	0.04	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.43
Future without		0.06	0.05	0.04	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.43
Future with		0.07	0.06	0.05	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.49

<b>Market wage rat (Baht/day)</b>																
Future without		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Future with		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

<b>Economic cost of Daily Farm Labor (US\$/day)</b>																
Future without		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Future with		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90

<b>Economic cost of Farm Labor (million Baht)</b>		total													
Future without		5.14	4.88	3.52	7.25	6.26	0.18	0.14	0.18	0.00	0.12	0.12	4.39	6.76	38.8
Future with		6.51	5.33	4.71	7.60	8.04	0.15	0.19	0.15	0.05	0.10	0.10	4.75	6.20	43.8

<b>Incremental cost of Farm Labor (million Baht)</b>		total												
W/-W/O		1.36	0.45	1.19	0.35	1.78	-0.03	0.05	-0.03	0.05	-0.02	0.37	-0.56	4.94

Conversion factor for labor 0.9

NOTE: Conversion factor for labor was assumed to be 0.9.  
Wage is 100 baht/ day.

# MAHASARAKAM AREA

TABLE G-PE-MH-8-1-1 Net Value of Production at full development

Future without		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
Crops	Rice glutinous	5,352	260	3,379	878.6	318.4	560.2	2,998
	Rice non-glutinous	1,338	260	3,755	976.3	318.4	657.8	880
	Cassava	4,824	1,800	803	1,444.6	611.2	833.3	4,020
	Sugarcane	1,500	7,200	442	3,181.8	2,374.7	807.0	1,211
	Soybean	0	216	5,511	1,190.3	746.1	444.2	0
	Groundnuts	0	230	3,573	821.7	952.8	-131.0	0
	Chilli d-1)	53	230	35,000	8,050.0	3,942.8	4,107.2	653
	Stringbean d-2)	53	700	9,000	6,300.0	1,859.8	4,440.2	706
	Mango a)	825	579	10,000	5,791.7	719.3	5,072.4	4,185
	Eucalyptus b)	0	3,000	746	2,238.3	691.9	1,546.3	0
	Papaya	275	3,000	5,955	17,863.5	2,127.4	15,736.1	4,327
	Grassland c)	380	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	0	-	-	-	-	-	-
<b>Total</b>	<b>14,600</b>							<b>18,980</b>
Livestock	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		6100	0.4	4,842.8	1,937.1	1,608.5	328.6	200
	Chicken e)	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		24,400	1.5	43	64	22	41	2,019
Fishery	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		28	178	30	5,340	2,307	3,033	85
<b>Total</b>								<b>21,284</b>

Future with		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
Crops	Rice glutinous	4,337	300	3,005	901.5	316.3	585.2	2,538
	Rice non-glutinous	1,084	300	3,339	1,001.7	298.2	703.5	763
	Cassava	1,130	2,500	803	2,006.3	761.3	1,245.1	1,407
	Sugarcane	1,520	7,200	428	3,081.2	2,354.3	726.9	1,105
	Soybean	0	216	4,830	1,043.3	710.0	333.3	0
	Groundnuts	0	230	3,092	711.1	916.6	-205.5	0
	Chilli d-1)	405	230	35,000	8,050.0	3,878.5	4,171.5	5,068
	Stringbean d-2)	404	700	9,000	6,300.0	1,786.6	4,513.4	5,470
	Mango a)	825	579	10,000	5,791.7	655.9	5,135.8	4,237
	Eucalyptus b)	0	3,000	746	2,238.3	675.7	1,562.5	0
	Papaya	275	3,000	6,259	18,777.3	2,112.2	16,665.1	4,583
	Grassland c)	3,080	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	1,540	-	-	-	-	-	-
<b>Total</b>	<b>14,600</b>							<b>25,171</b>
Livestock	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		4,075	0.4	5,077.3	2,030.9	1,608.5	422.4	1,721.2
	Chicken	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		66,750	1.5	43	64	22	41	5,522
Fishery	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		154	178	30	5,340	2,307	3,033	467
<b>Total</b>								<b>32,881</b>

Note

- Average yield and production cost for 12 years after planting.
- Average yield and production cost for 5 years.
- The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1), d-2) Vegetables are planted three times on same fields for one year.
- Chicken is rotated two times for one year.

**Total net value of production**

**Without**  
21,284

**With**  
32,881

**Net incremental value of production at full development**

**11,597**

# MAHASARAKAM AREA

TABLE G-PE-MH-8-1-2 Net Value of Production at full development  
The case Excluded Chicken and Cow

## Future without

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	5,352	260	3,379	878.6	318.4	560.2	2,998
	Rice non-glutinous	1,338	260	3,755	976.3	318.4	657.8	880
	Cassava	4,824	1,800	803	1,444.6	611.2	833.3	4,020
	Sugarcane	1,500	7,200	442	3,181.8	2374.7	807.0	1,211
	Soybean	0	216	5,511	1,190.3	746.1	444.2	0
	Groundnuts	0	230	3,573	821.7	952.8	-131.0	0
	Chilli d-1)	53	230	35,000	8,050.0	3942.8	4,107.2	653
	Stringbean d-2)	53	700	9,000	6,300.0	1859.8	4,440.2	706
	Mango a)	825	579	10,000	5,791.7	719.3	5,072.4	4,185
	Eucalyptus b)	0	3,000	746	2,238.3	691.9	1,546.3	0
	Papaya	275	3,000	5,955	17,863.5	2127.4	15,736.1	4,327
	Grassland c)	380	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard etc	0	-	-	-	-	-	-
<b>Total</b>		<b>14,600</b>						<b>18,980</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		28	178	30	5,340	2,307	3,033	85
<b>Total</b>								<b>19,065</b>

## Future with

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	4,337	300	3,005	901.5	316.3	585.2	2,538
	Rice non-glutinous	1,084	300	3,339	1,001.7	298.2	703.5	763
	Cassava	1,130	2,500	803	2,006.3	761.3	1,245.1	1,407
	Sugarcane	1,520	7,200	428	3,081.2	2354.3	726.9	1,105
	Soybean	0	216	4,830	1,043.3	710.0	333.3	0
	Groundnuts	0	230	3,092	711.1	916.6	-205.5	0
	Chilli d-1)	405	230	35,000	8,050.0	3878.5	4,171.5	5,068
	Stringbean d-2)	404	700	9,000	6,300.0	1786.6	4,513.4	5,470
	Mango a)	825	579	10,000	5,791.7	655.9	5,135.8	4,237
	Eucalyptus b)	0	3,000	746	2,238.3	675.7	1,562.5	0
	Papaya	275	3,000	6,259	18,777.3	2112.2	16,665.1	4,583
	Grassland c)	3,080	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard etc	1,540	-	-	-	-	-	-
<b>Total</b>		<b>14,600</b>						<b>25,171</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		154	178	30	5,340	2,307	3,033	467
<b>Total</b>								<b>25,638</b>

Note

- Average yield and production cost for 12 years after planting.
- Average yield and production cost for 5 years.
- The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1),d-2) Vegetables are planted three times on same fields for one year.
- Chicken is rotetaed two times for one year.

**Total net value of production**

**Without**  
**19,065**

**With**  
**25,638**

**Net incremental value of production at full development**

**6,573**

**Table G-PE-MH-9-1-1 Benefit Cost Ratio**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000' Baht) 12% discounted
	Investment	O&M			Benefit	Benefit	
1	2,351.1			-2,351.1	0.0	2,099.2	0.893
2	2,351.1			-2,351.1	0.0	1,874.3	0.797
3	18,148.4			-18,148.4	0.0	12,917.7	0.712
4	18,148.4			-18,148.4	0.0	11,533.6	0.636
5		1,517.4	11,597.1	10,079.7	6,580.5	861.0	0.567
6		1,517.4	11,597.1	10,079.7	5,875.5	768.8	0.507
7		1,517.4	11,597.1	10,079.7	5,245.9	686.4	0.452
8		1,517.4	11,597.1	10,079.7	4,683.9	612.8	0.404
9		1,517.4	11,597.1	10,079.7	4,182.0	547.2	0.361
10		1,517.4	11,597.1	10,079.7	3,734.0	488.6	0.322
11		1,517.4	11,597.1	10,079.7	3,333.9	436.2	0.287
12		1,517.4	11,597.1	10,079.7	2,976.7	389.5	0.257
13		1,517.4	11,597.1	10,079.7	2,657.8	347.7	0.229
14		1,517.4	11,597.1	10,079.7	2,373.0	310.5	0.205
15		1,517.4	11,597.1	10,079.7	2,118.7	277.2	0.183
16		1,517.4	11,597.1	10,079.7	1,891.7	247.5	0.163
17		1,517.4	11,597.1	10,079.7	1,689.1	221.0	0.146
18		1,517.4	11,597.1	10,079.7	1,508.1	197.3	0.130
19		1,517.4	11,597.1	10,079.7	1,346.5	176.2	0.116
20		1,517.4	11,597.1	10,079.7	1,202.2	157.3	0.104
21		1,517.4	11,597.1	10,079.7	1,073.4	140.4	0.093
22		1,517.4	11,597.1	10,079.7	958.4	125.4	0.083
23		1,517.4	11,597.1	10,079.7	855.7	112.0	0.074
24		1,517.4	11,597.1	10,079.7	764.0	100.0	0.066
25		1,517.4	11,597.1	10,079.7	682.2	89.3	0.059
26		1,517.4	11,597.1	10,079.7	609.1	79.7	0.053
27		1,517.4	11,597.1	10,079.7	543.8	71.2	0.047
28		1,517.4	11,597.1	10,079.7	485.6	63.5	0.042
29		1,517.4	11,597.1	10,079.7	433.5	56.7	0.037
30		1,517.4	11,597.1	10,079.7	387.1	50.6	0.033
					58,192	36,039	
<b>Internal Rate of Return</b>							<b>20.98%</b>
<b>B/C RATIO</b>							<b>1.615</b>

**Table G-PE-MH-9-1-2 Benefit Cost Ratio and IRR**

**The case Excluded Chicken and Cow**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000 Baht)
	Investment	O&M			Benefit	Cost	12% discounted
1	2,351.1			-2,351.1	0.0	2,099.2	0.893
2	2,351.1			-2,351.1	0.0	1,874.3	0.797
3	18,148.4			-18,148.4	0.0	12,917.7	0.712
4	18,148.4			-18,148.4	0.0	11,533.6	0.636
5		1,517.4	6,572.8	5,055.5	3,729.6	861.0	0.567
6		1,517.4	6,572.8	5,055.5	3,330.0	768.8	0.507
7		1,517.4	6,572.8	5,055.5	2,973.2	686.4	0.452
8		1,517.4	6,572.8	5,055.5	2,654.7	612.8	0.404
9		1,517.4	6,572.8	5,055.5	2,370.2	547.2	0.361
10		1,517.4	6,572.8	5,055.5	2,116.3	488.6	0.322
11		1,517.4	6,572.8	5,055.5	1,889.5	436.2	0.287
12		1,517.4	6,572.8	5,055.5	1,687.1	389.5	0.257
13		1,517.4	6,572.8	5,055.5	1,506.3	347.7	0.229
14		1,517.4	6,572.8	5,055.5	1,344.9	310.5	0.205
15		1,517.4	6,572.8	5,055.5	1,200.8	277.2	0.183
16		1,517.4	6,572.8	5,055.5	1,072.2	247.5	0.163
17		1,517.4	6,572.8	5,055.5	957.3	221.0	0.146
18		1,517.4	6,572.8	5,055.5	854.7	197.3	0.130
19		1,517.4	6,572.8	5,055.5	763.2	176.2	0.116
20		1,517.4	6,572.8	5,055.5	681.4	157.3	0.104
21		1,517.4	6,572.8	5,055.5	608.4	140.4	0.093
22		1,517.4	6,572.8	5,055.5	543.2	125.4	0.083
23		1,517.4	6,572.8	5,055.5	485.0	112.0	0.074
24		1,517.4	6,572.8	5,055.5	433.0	100.0	0.066
25		1,517.4	6,572.8	5,055.5	386.6	89.3	0.059
26		1,517.4	6,572.8	5,055.5	345.2	79.7	0.053
27		1,517.4	6,572.8	5,055.5	308.2	71.2	0.047
28		1,517.4	6,572.8	5,055.5	275.2	63.5	0.042
29		1,517.4	6,572.8	5,055.5	245.7	56.7	0.037
30		1,517.4	6,572.8	5,055.5	219.4	50.6	0.033
					32,981	36,039	
<b>Internal Rate of Return</b>							<b>10.58%</b>
<b>B/C RATIO</b>							<b>0.915</b>

**NAHASARAKAM AREA**

**Table G-PE-MH-10-1 Annual Maintenance Cost**

(000' Bsh)

Item	F/G	L/G	Total	Tax excluded			Economic cost			Total
				F/G	L/G	Total	F/G	L/G	Total	
Farm Pond	203	87	290	119	51	170	130	45	174	
Farm Road	1,349	493	1,842	951	348	1,299	1,037	306	1,343	
									1,517	

**Table G-PE-MH-10-2 Construction Cost**

	F/G	L/G	Total
Civil Works Farm Pond	12,863	5,513	18,376
Farm Road	19,273	7,042	26,315
Sub total	32,136	12,555	44,691
Design	0	6,701	6,701
Administration	3,214	1,255	4,469
Physical Contingencies	3,535	2,051	5,586
Sub total	38,885	22,562	61,447

**Economic Cost**

Tax excluded	F/G	L/G	Total	CF	CF	F/G	L/G	Total
Civil Works Farm Pond	7,529	3,227	10,755	1.09	0.88	8,206	2,840	11,046
Farm Road	13,593	4,967	18,560	1.09	0.88	14,817	4,371	19,187
Sub total	21,122	8,193	29,315			23,023	7,210	30,233
Design	0	4,356	4,356	1.09	0.92	0	4,007	4,007
Administration	2,089	816	2,905	1.09	0.92	2,277	750	3,028
Physical Contingencies	2,298	1,333	3,631	1.09	0.92	2,505	1,226	3,731
Sub total			40,207			27,805	13,194	40,999

**Table G-PE-MH-10-3 Construction cost disbursement schedule**

	1999		2000		2001		2002		
	F/G	L/G	F/G	L/G	F/G	L/G	F/G	L/G	
Civil Works Farm Pond	0	0	0	0	6,432	2,757	6,432	2,757	18,376
Farm Road	0	0	0	0	9,637	3,521	9,637	3,521	26,315
Sub total	0	0	0	0	16,068	6,278	16,068	6,278	44,691
Design	0	3,350	0	3,350	0	0	0	0	6,700
Administration	0	251	0	251	1,607	377	1,607	377	4,470
Physical Contingencies	187	109	187	109	1,580	917	1,580	917	5,586
Sub total	187	3,710	187	3,710	19,255	7,572	19,255	7,572	61,447

Tax excluded	F/G	L/G	F/G	L/G	F/G	L/G	F/G	L/G	Sub total
Civil Works Farm Pond	0	0	0	0	3,764	1,613	3,764	1,613	10,755
Farm Road	0	0	0	0	6,797	2,483	6,797	2,483	18,560
Sub total	0	0	0	0	10,561	4,097	10,561	4,097	29,315
Design	0	2,178	0	2,178	0	0	0	0	4,355
Administration	0	163	0	163	1,045	245	1,045	245	2,906
Physical Contingencies	122	71	122	71	1,027	596	1,027	596	3,631
Sub total	122	2,412	122	2,412	23,194	9,035	23,194	9,035	40,207

**Economic Construction cost**

	1999		2000		2001		2002		Total
	F/G	L/G	F/G	L/G	F/G	L/G	F/G	L/G	
Civil Works Farm Pond	0	0	0	0	4,103	1,420	4,103	1,420	11,046
Farm Road	0	0	0	0	7,408	2,185	7,408	2,185	19,187
Sub total	0	0	0	0	11,511	3,605	11,511	3,605	30,233
Design	0	2,003	0	2,003	0	0	0	0	4,007
Administration	0	150	0	150	1,139	225	1,139	225	3,028
Physical Contingencies	132	65	132	65	1,119	548	1,119	548	3,731
Total	132	2,219	132	2,219	13,769	4,379	13,769	4,379	40,999
Annual total cost		2,351		2,351		18,148		18,148	

**Table G-PE-MK-4-1 MUKUDAHAN AREA  
Crop Budget (Financial base)**

<b>Rice glutinous</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.25	0.25	0.30
Farmgate Price	(Baht/ton)	2,832	2,507	2,507
Gross Value of production	(Baht/rai)	708.1	626.7	752.0
Production costs	(Baht/rai)	318.6	318.6	316.4
Net value of production	(Baht/rai)	389.5	308.1	435.6
Labor requirement	(mandays/rai)	7.6	7.6	7.8

<b>Rice non glutinous</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.25	0.25	0.30
Farmgate Price	(Baht/ton)	3,147	2,785	2,785
Gross Value of production	(Baht/rai)	786.7	696.3	835.6
Production costs	(Baht/rai)	318.6	318.6	298.3
Net value of production	(Baht/rai)	468.2	377.7	537.3
Labor requirement	(mandays/rai)	7.6	7.6	7.8

<b>Cassava</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	1.80	1.80	2.50
Farmgate Price	(Baht/ton)	749.5	749.5	749.5
Gross Value of production	(Baht/rai)	1349.1	1349.1	1873.8
Production costs	(Baht/rai)	611.5	611.5	761.6
Net value of production	(Baht/rai)	737.7	737.7	1112.2
Labor requirement	(mandays/rai)	7.5	7.5	7.5

<b>Sugarcane</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	7.20	7.20	7.20
Farmgate Price	(Baht/ton)	414.1	414.1	400.5
Gross Value of production	(Baht/rai)	2,981.6	2,981.6	2,883.9
Production costs	(Baht/rai)	2,562.9	2,562.9	2,542.4
Net value of production	(Baht/rai)	418.7	418.7	341.5
Labor requirement	(mandays/rai)	18	18	18

<b>Soybean</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.22	0.22	0.22
Farmgate Price	(Baht/ton)	9,869.6	9,869.6	8,658.2
Gross Value of production	(Baht/rai)	2,131.8	2,131.8	1,870.2
Production costs	(Baht/rai)	746.4	746.4	710.2
Net value of production	(Baht/rai)	1,385.5	1,385.5	1,160.0
Labor requirement	(mandays/rai)	0	0	0

<b>Groundnuts</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.23	0.23	0.23
Farmgate Price	(Baht/ton)	6,419.4	6,419.4	5,563.3
Gross Value of production	(Baht/rai)	1,476.5	1,476.5	1,279.6
Production costs	(Baht/rai)	953.0	953.0	916.8
Net value of production	(Baht/rai)	523.4	523.4	362.7
Labor requirement	(mandays/rai)	28	28	28

**Table G-PE-MK-4-2 MUKUDAHAN AREA  
Crop Budget (Financial base)**

<b>Chilli</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.2	0.2	0.2
Farmgate Price	(Baht/ton)	35,000.0	35,000.0	35,000.0
Gross Value of production	(Baht/rai)	8,050.0	8,050.0	8,050.0
Production costs	(Baht/rai)	3,943.5	3,943.5	3,879.1
Net value of production	(Baht/rai)	4,106.5	4,106.5	4,170.9
Labor requirement	(mandays/rai)	10	10	10

<b>Stringbean</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.7	0.7	0.7
Farmgate Price	(Baht/ton)	9000.0	9000.0	9000.0
Gross Value of production	(Baht/rai)	6300.0	6300.0	6300.0
Production costs	(Baht/rai)	1860.5	1860.5	1787.2
Net value of production	(Baht/rai)	4439.5	4439.5	4512.8
Labor requirement	(mandays/rai)	12	12	12

<b>Payaya</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	3.0	3.0	3.0
Farmgate Price	(Baht/ton)	4,252.1	4,252.1	4,252.1
Gross Value of production	(Baht/rai)	12,756.4	12,756.4	12,756.4
Production costs	(Baht/rai)	2,127.5	2,127.5	2,112.4
Net value of production	(Baht/rai)	10,628.9	10,628.9	10,644.0
Labor requirement	(mandays/rai)	29	29	29

**Table G-PE-MK-5-1 MUKUDAHAN AREA**  
**Present and Future Farmgate Price of Farm Products and Inputs**

Crops/Inputs	Unit	Without		With	
		Financial	Economic	Financial	Economic
Rice glutinous	Baht/ton	2,832.2	3,364.5	2,506.7	2,990.2
Rice non-glutinous	Baht/ton	3,146.9	3,738.4	2,785.3	3,322.5
Cassava	Baht/ton	749.5	792.8	749.5	792.8
Sugarcane	Baht/ton	414.1	436.7	400.5	422.8
Soybean	Baht/ton	9,869.6	5,491.8	8,658.2	4,813.6
Groundnuts	Baht/ton	6,419.4	3,560.4	5,563.3	3,081.1
Chilli	Baht/ton	35,000	35,000	35,000	35,000
Stringbean	Baht/ton	9,000	9,000	9,000	9,000
Mango for domestic	Baht/ton	10,000.0	10,000.0	10,000.0	10,000.0
Mango for export	Baht/ton	17,663.5	18,748.4	17,663.5	18,748.4
Eucalyptus	Baht/ton	470.7	741.7	470.7	741.7
Papaya	Baht/ton	4,252.1	5,939.9	4,252.1	5,799.3
Cow	Baht/ton	1,480.1	4,834.1	1,563.3	5,068.6
Chicken	Baht/kg	34.6	42.5	34.6	42.5
Chicken (Native)	Baht/kg	40.0	40.0	40.0	40.0
Tilapia	Baht/kg	30.0	30.0	30.0	30.0
46-0-0	Baht/50kg	433	311	334	210
15-15-15	Baht/50kg	358	223	257	185
16-16-8	Baht/50kg	344	247	266	181
16-20-0	Baht/50kg	345	247	261	177

**Table G-PE-MK-5-2-1 MUKUDAHAN AREA**

Rice Non-Glutinous	1996		2005	
	Financial	Economic k)	Financial	Economic
Export price f.o.b. at Bangkok port (\$US/ton)				
Export price f.o.b. at Bangkok port (Baht/ton)	7,417.5	7,417.5	6,670.0	6,670.0
Export Tariff (10%)	741.8	0.0	667.0	0.0
Average Price of mixed grade rice (Baht/ton) a)	6,542.2	7,269.2	5,882.9	6,536.6
Port Handling and charges b)	327.1	300.9	294.1	270.6
Trader's Margin c)	98.1	90.3	89.2	81.2
Wholesale Price at Bangkok	6,117.0	6,877.9	5,500.5	6,184.8
Trader's Margin d)	91.8	84.4	82.5	75.9
Rice Price at rice milling factory	6,025.2	6,793.5	5,418.0	6,108.9
Paddy Price at rice milling factory e)	3,976.7	4,483.7	3,575.9	4,031.9
Milling cost f)	100	92.0	100	92.0
Transport cost to Milling Factory g)	260.0	226.2	260.0	226.2
Trader's Margin h)	198.8	182.9	178.8	164.5
Local market price	3,417.8	3,982.6	3,037.1	3,549.2
Local trader's margin i)	170.9	157.2	151.9	139.7
Transport cost to local market j)	100.0	87.0	100.0	87.0
Farmgate price	3,146.9	3,738.4	2,785.3	3,322.5

- a) Adjusted to the quality of rice price of 100%, 5%, 10%, 25%  
b) 5% of Average Price of mixed grade rice.  
c) 1.5 % of export rice.  
d) 1.5 % of export rice.  
e) Milling recovery rate 66%.  
f) Milling cost 100 Baht/ton  
g) Kohn Kean to Bangkok milling factory, about 400 km  
h) 5% of paddy price at rice milling factory  
i) 5% of local market price  
j) Priority area to Muang of Kohn Kean, 60 km  
k) Standard conversion factor is 0.92.

Cassava (Tapioca pellets)	1996		2005	
	Financial	Economic	Financial	Economic
Import Price c.i.f. at Rotterdam port (\$US/ton)				
Ocean freight and insurance a)				
Export price f.o.b. at Bangkok port (\$US/ton)				
Export price f.o.b. at Bangkok port (Baht/ton)	2,345.0	2,345.0	2,345.0	2,345.0
Tariff (0%)	0.0	0.0	0.0	0.0
Value Add Tax	0.0	0.0	0.0	0.0
Port Handling and charges b)	117.3	107.9	117.3	107.9
Port gate price	2,227.8	2,237.1	2,227.8	2,237.1
Transport cost to Port near Bangkok c)	267.3	232.6	267.3	232.6
Trader's Margin d)	111.4	102.5	111.4	102.5
Processed cost e)	150	138.0	150	138.0
Local cassava pellets factory price	1,699.0	1,764.1	1,699.0	1,764.1
Cassava equivalent price (50%) e)	849.5	882.0	849.5	882.0
Local trader's margin	44.0	40.5	44.0	40.5
Local Transport cost	56.0	48.7	56.0	48.7
Farmgate price	749.5	792.8	749.5	792.8

- a) Freight rate 14\$/ton  
b) 5 % of f.o.b. price.  
c) 10 % of port gate price.  
d) 5 % of port gate price.  
e) 1 kg of cassava pellets is equivalent to 2 kg of cassava roots.

Sugarcane	1996		2005	
	Financial	Economic a)	Financial	Economic
Export price f.o.b. at Bangkok port (\$US/ton)				
Export price f.o.b. at Bangkok port (Baht/ton)	5,770.0	5,770.0	5,622.5	5,622.5
Tariff (0%)	0.0	0.0	0.0	0.0
Value Add Tax	0.0	0.0	0.0	0.0
Port Handling and charges b)	288.5	265.4	281.1	258.6
Port gate price	5,481.5	5,504.6	5,341.4	5,363.9
Transport cost to Port near Bangkok c)	383.7	333.8	373.9	325.3
Trader's Margin d)	274.1	252.1	267.1	245.7
Processed cost e)	150	138.0	150	138.0
Local sugar factory price	4,673.7	4,780.6	4,550.4	4,654.9
Sugarcane equivalent price (11%) e)	514.1	525.9	500.5	512.0
Local trader's margin	44.0	40.5	44.0	40.5
Local Transport cost	56.0	48.7	56.0	48.7
Farmgate price	414.1	436.7	400.5	422.8

- a) Standard conversion factor is 0.92.  
b) 5 % of f.o.b. price.  
c) 5 % of port gate price.  
d) 5 % of port gate price.  
e) 1 kg of cassava pellets is equivalent to 2 kg of cassava roots.

**Table G-PE-MK-5-2-2 MUKUDAHAN AREA**

Soybean	1996		2005	
	Financial	Economic	Financial	Economic
Export Price f.o.b. at Rotterdam port (\$US/ton)				
Ocean freight and insurance a)				
Import price c.i.f. at Bangkok port (\$US/ton)				
Import price c.i.f. at Bangkok port (Baht/ton)				
Import Tariff (60%)	5,822.5	5,822.5	5,115.0	5,115.0
Value Add Tax (10%)	931.6	0.0	818.4	0.0
Port Handling and charges b)	291.1	267.8	255.8	235.3
Port gate price	10,538.7	6,090.3	9,258.2	5,350.3
Transport cost to Port near Bangkok c)	284.5	247.6	250.0	217.5
Trader's Margin d)	284.5	261.8	250.0	230.0
Local market price	9,969.6	5,581.0	8,758.2	4,902.8
Local trader's margin	44.0	40.5	44.0	40.5
Local Transport cost	56.0	48.7	56.0	48.7
Farmgate price	9,869.6	5,491.8	8,658.2	4,813.6

a) Freight rate \$24/ton and insurance \$10.

b) 5 % of f.o.b. price.

c) 2.5 % of port gate price.

d) 2.5 % of port gate price.

Groundnuts	1996		2005	
	Financial	Economic	Financial	Economic
Export Price f.o.b. at Rotterdam port (\$US/ton)				
Ocean freight and insurance a)				
Import price c.i.f. at Bangkok port (\$US/ton)				
Import price c.i.f. at Bangkok port (Baht/ton)				
Import Tariff (60%)	3,807.5	3,807.5	3,307.5	3,307.5
Value Add Tax (10%)	2,284.5	0.0	1,984.5	0.0
Port Handling and charges b)	609.2	0.0	529.2	0.0
Port gate price	190.4	175.1	165.4	152.1
Transport cost to Port near Bangkok c)	6,891.6	3,982.6	5,986.6	3,459.6
Trader's Margin d)	186.1	161.9	161.6	140.6
Local market price	186.1	171.2	161.6	148.7
Local trader's margin	6,519.4	3,649.6	5,663.3	3,170.3
Local Transport cost	44.0	40.5	44.0	40.5
Farmgate price	56.0	48.7	56.0	48.7
Farmgate price	6,419.4	3,560.4	5,563.3	3,081.1

a) Freight rate \$24/ton and insurance \$10.

b) 5 % of f.o.b. price.

c) 2.5 % of port gate price.

d) 2.5 % of port gate price.

Mango (Khleo Sawual)	1996		2005	
	Financial	Economic	Financial	Economic
Import Price c.i.f. at Tokyo port (\$US/ton)				
Ocean freight and insurance a)				
Export price f.o.b. at Bangkok port (\$US/ton)				
Export price f.o.b. at Bangkok port (Baht/ton) b)				
Export Tax (0%)	34,000.0	34,000.0	34,000.0	34,000.0
Value Add Tax (10%)	0.0	0.0	0.0	0.0
Port Handling and charges c)	3,400.0	3,400.0	3,400.0	3,400.0
Transport cost to Port	1,700.0	1,584.0	1,700.0	1,564.0
Office Expenditure	146.0	127.0	146.0	127.0
Certificate License	850.0	782.0	850.0	782.0
Packing	200	168.0	200	168.0
Labour for grading	1400	1,288.0	1400	1,288.0
Wholesale Price at Bangkok market	1200	1,104.0	1200	1,104.0
Transport cost to Bangkok	25,104.0	25,567.0	25,104.0	25,567.0
Trader's Margin d)	386.0	335.8	386.0	335.8
Value Add Tax (10%)	3,765.6	3,464.4	3,765.6	3,464.4
Local market price	2,510.4	2,556.7	2,510.4	2,556.7
Local trader's margin e)	20,952.4	21,766.8	20,952.4	21,766.8
Local Transport cost	3,142.9	2,891.4	3,142.9	2,891.4
Farmgate price (Baht/ton)	146.0	127.0	146.0	127.0
Farmgate price	17,663.5	18,748.4	17,663.5	18,748.4

a) Freight rate 2400\$/20ton by Reefer.

b) Exchange rate 1 US dollar = 25 baht.

c) 5 % of f.o.b. price.

d) 15 % of Wholesale Price.

e) 15 % of Wholesale Price.

**Table G-PE-MK-5-2-3 MUKUDAHAN AREA**

Acacla(Eucalyptus, Wood chip)	1996		2005		
	Financial	Economic	Financial	Economic	
Import Price c.i.f. at Yokohama port (\$US/ton)					121
Ocean freight and insurance a)					400
Export price f.o.b. at Bangkok port (\$US/ton)					81.0
Export price f.o.b. at Bangkok port (Baht/ton)	2,025.0	2,025.0	2,025.0	2,025.0	
Tariff (40%)	810.0	0.0	810.0	0.0	
Value Add Tax (0%)	0.0	0.0	0.0	0.0	
Port Handling and charges b)	101.3	93.2	101.3	93.2	
Port gate price	1,113.8	1,931.9	1,113.8	1,931.9	
Transport cost to Port near Bangkok	92.8	80.7	92.8	80.7	
Trader's Margin c)	55.7	51.2	55.7	51.2	
Processed cost	150	138.0	150	138.0	
Local cassava pellets factory price	815.3	1,661.9	815.3	1,661.9	
Woodchip equivalent price (70%) d)	570.7	830.9	570.7	830.9	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	470.7	741.7	470.7	741.7	

a) Freight rate 35\$/ton

b) 5 % of f.o.b. price.

c) 5 % of port gate price.

d) 1 ton of wood is equivalent to 0.7 tong of wood chip.

Papaya	1996		2005		
	Financial	Economic	Financial	Economic	
Import Price c.i.f. at Tokyo port (\$US/ton)					600
Ocean freight and insurance a)					140.0
Export price f.o.b. at Bangkok port (\$US/ton)					460
Export price f.o.b. at Bangkok port (Baht/ton) b)	11,500.0	11,500.0	11,500.0	11,500.0	
Export Tax (0%)	0.0	0.0	0.0	0.0	
Value Add Tax (10%)	1,150.0	0.0	1,150.0	0.0	
Port Handling and charges c)	575.0	529.0	575.0	529.0	
Transport cost to Port	146.0	127.0	146.0	127.0	
Office Expenditure	287.5	264.5	287.5	264.5	
Certificate License	200	168.0	200	168.0	
Packing	1400	1,288.0	1400	1,288.0	
Labour for grading	1200	1,104.0	1200	1,104.0	
Wholesale Price at Bangkok market	6,541.5	8,019.5	6,541.5	8,019.5	
Transport cost to Bangkok	386.0	335.8	386.0	335.8	
Trader's Margin d)	981.2	902.7	981.2	981.2	
Value Add Tax (10%)	654.2	801.9	654.2	801.9	
Local market price	5,174.3	6,780.9	5,174.3	6,702.4	
Local trader's margin e)	776.1	714.0	776.1	776.1	
Local Transport cost	146.0	127.0	146.0	127.0	
Farmgate price (Baht/ton)	4,252.1	5,939.9	4,252.1	5,799.3	

a) Freight rate 2400\$/20ton by Reefer.

b) Exchange rate 1 US dollar = 25 baht.

c) 5 % of f.o.b. price.

d) 15 % of Wholesale Price.

e) 15 % of Wholesale Price.

**Table G-PE-MK-5-2-4 MUKUDAHAN AREA**

Cow	1996		2005		
	Financial	Economic	Financial	Economic	
Export Price f.o.b. at US port (\$US/ton)				156.3	166.3
Ocean freight and insurance a)				63.0	63.0
Import price c.i.f. at Bangkok port (\$US/ton)				219.3	229.3
Import price c.i.f. at Bangkok port (Baht/ton)	5,482.5	5,482.5	5,732.5	5,732.5	
Import Tariff (60%)	3,289.5	0.0	3,439.5	0.0	
Value Add Tax (10%)	0.0	0.0	0.0	0.0	
Port Handling and charges b)	274.1	252.2	286.6	263.7	
Port gate price	1,918.9	5,230.3	2,006.4	5,468.8	
Transport cost to Port near Bangkok	92.8	80.7	92.8	80.7	
Trader's Margin c)	95.9	88.3	100.3	92.3	
Processed cost	150	138.0	150	138.0	
Local meat factory price	1,580.1	4,923.3	1,663.3	5,157.8	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	1,480.1	4,834.1	1,563.3	5,068.6	

a) Freight rate \$53/ton and insurance \$10/ton.

b) 5 % of f.o.b. price.

c) 5 % of port gate price.

Chicken	1996		2005		
	Financial	Economic	Financial	Economic	
Export Price f.o.b. at Bangkok port (\$US/ton)					2484.0
Export price c.i.f. at Bangkok port (Baht/ton)					2484.0
Export Tax (0%)	62,100.0	62,100.0	62,100.0	62,100.0	
Value Add Tax (10%)	0.0	0.0	0.0	0.0	
Port Handling and charges a)	6,210.0	5,713.2	6,210.0	5,713.2	
Office Expenditure b)	1,552.5	1,428.3	1,552.5	1,428.3	
Certificate License	200	168.0	200	168.0	
Packing	1400	1,288.0	1400	1,288.0	
Port gate price	49,680.0	56,386.8	49,680.0	56,386.8	
Transport cost to Port near Bangkok	180.0	156.6	180.0	156.6	
Trader's Margin c)	2,980.8	2,742.3	2,980.8	2,742.3	
Processed cost d)	9,936.0	9,141.1	9,936.0	9,141.1	
Local meat factory price	36,583.2	44,346.7	36,583.2	44,346.7	
Local trader's margin e)	1,829.2	1,682.8	1,829.2	1,682.8	
Local Transport cost	200.0	174.0	200.0	174.0	
Farmgate price (Baht/ton)	34,554.0	42,489.9	34,554.0	42,489.9	
Farmgate price (Baht/kg)	34.6	42.5	34.6	42.5	

a) 10 % of f.o.b. price.

b) 2.5 % of f.o.b. price.

c) 5 % of port gate price.

d) 20 % of port gate price.

e) 5 % of factory gate price.

**Table G-PE-MK-5-2-5 MUKUDAHAN AREA**

Urea (46-0-0)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					179.9
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					219.9
Import price c.i.f. at Bangkok port (Baht/ton)					167.8
Import Tariff (30%)	5,497.5	5,497.5	4,195.0	4,195.0	
Value Add Tax (10%)	1,649.3	0.0	1,258.5	0.0	
Port Handling and charges b)	714.7	0.0	545.4	0.0	
Port gate price	137.4	126.4	104.9	0.0	
Trader's margin c)	7,998.9	5,623.9	6,103.7	4,195.0	
Transport cost to Local market	399.9	367.9	305.2	0.0	
Local market price	220.0	191.4	220.0	0.0	
Local Transport cost to Farm	8,618.8	6,183.3	6,628.9	4,195.0	
Trader's margin	44	38.3	44	0.0	
Farmgate price (Baht/ton)	56	51.5	56	0.0	
Farmgate price (Baht/kg)	8,662.8	6,221.6	6,672.9	4,195.0	
	433	311	334	210	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

Potassium Chloride (0-0-60)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					102.4
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					142.4
Import price c.i.f. at Bangkok port (Baht/ton)					127.5
Import Tariff (30%)	3,560.0	3,560.0	3,187.5	3,187.5	
Value Add Tax (10%)	1,068.0	0.0	956.3	0.0	
Port Handling and charges b)	462.8	0.0	414.4	0.0	
Port gate price	89.0	81.9	79.7	73.3	
Trader's margin c)	5,179.8	3,641.9	4,637.8	3,260.8	
Transport cost to Local market	259.0	238.3	231.9	213.3	
Local market price	220.0	191.4	220.0	191.4	
Local Transport cost to Farm	5,658.8	4,071.6	5,089.7	3,665.6	
Trader's margin	44	38.3	44	38.3	
Farmgate price (Baht/ton)	56	51.5	56	51.5	
Farmgate price (Baht/kg)	5,702.8	4,109.8	5,133.7	3,703.8	
	285	205	257	185	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

TSP (0-46-0)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					186.7
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					226.7
Import price c.i.f. at Bangkok port (Baht/ton)					167.8
Import Tariff (30%)	5,667.5	5,667.5	4,195.0	4,195.0	
Value Add Tax (10%)	1,700.3	0.0	1,258.5	0.0	
Port Handling and charges b)	736.8	0.0	545.4	0.0	
Port gate price	141.7	130.4	104.9	96.5	
Trader's margin c)	8,246.2	5,797.9	6,103.7	4,291.5	
Transport cost to Local market	412.3	379.3	305.2	280.8	
Local market price	220.0	191.4	220.0	191.4	
Local Transport cost to Farm	8,878.5	6,368.6	6,628.9	4,763.7	
Trader's margin	44	38.3	44	38.3	
Farmgate price (Baht/ton)	56	51.5	56	51.5	
Farmgate price (Baht/kg)	8,922.5	6,406.9	6,672.9	4,801.9	
	446	320	334	240	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

**Table G-PE-MK-6-1-1 PRODUCTION COST MUKUDAN AREA  
Rice Glutinous**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	0	Baht/50kg	257	185	0.00	0.00
	16-16-8	kg / rai	25	Baht/50kg	266	181	133.16	90.58
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0.00	0.00
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.35	Baht/ton	100	87	35	30.45
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							380.16	316.43

Note: Price of fertilizer is based on the price calculated from the international price.

**Rice Glutinous**

Economic price

Present	Future without	Future with
318.57	318.57	316.43

**Table G-PE-MK-6-1-2 PRODUCTION COST MUKUDAHAN AREA**  
Rice non glutinous

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
		kg / rai	0	Baht/50kg	358	223	0.0	0.0
		kg / rai	20	Baht/50kg	344	247	137.5	98.8
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0.02	Baht/liter	450	428	9	8.55
		liter/ rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
		kg / rai	0	Baht/50kg	358	223	0.0	0.0
		kg / rai	20	Baht/50kg	344	247	137.5	98.8
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0.02	Baht/liter	450	428	9	8.55
		liter/ rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
		kg / rai	0	Baht/50kg	257	185	0.00	0.00
		kg / rai	20	Baht/50kg	266	181	106.53	72.46
		kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.00	0.00
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0.02	Baht/liter	450	428	9	8.55
		liter/ rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.35	Baht/ton	100	87	35	30.45
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							353.5	298.3

Note: Price of fertilizer is based on the price calculated from the international price.

**Rice non glutinous**

Economic price

Present	Future without	Future with
318.6	318.6	298.3

**Table G-PE-MK-6-1-3 PRODUCTION COST MUKUDAHAN AREA**  
**Cassava**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Stem	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	1.7	Baht/ton	100	87	170	147.9
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		liter	0	Baht/liter	0	0	0	0
Total Production Cost							754.8	611.5

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	1.7	Baht/ton	100	87	170	147.9
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							754.8	611.5

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	20	Baht/50kg	334	210	133.5	83.9
	15-15-15	kg / rai	40	Baht/50kg	257	185	205.3	148.0
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	2.5	Baht/ton	100	87	250	217.5
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							943.8	761.6

Note: Price of fertilizer is based on the price calculated from the international price.

**Cassava**

Economic price

Present	Future without	Future with
611.5	611.5	761.6

**Table G-PE-MK-6-1-4 PRODUCTION COST MUKUDAHAN AREA Sugarcane**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Stem	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	358	223	193.3	120.3
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	1	Baht/rai	200	168	200	168	
Transport (Truck)	ton	7.2	Baht/ton	180	156.6	1,296	1,128	
Hired labor	mandays	11	Baht/manday	100	92	1,100	1,012	
Fuel&Others	Liter	12.5	Baht/liter	12	10.8	150	135	
Total Production Cost							2,939.3	2,562.9

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	358	223	193.3	120.3
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	1	Baht/rai	200	168	200	168	
Transport (Truck)	ton	7.2	Baht/ton	180	156.6	1,296	1,127.52	
Hired labor	mandays	11	Baht/manday	100	92	1,100	1,012	
Fuel&Others	Liter	12.5	Baht/liter	12	10.8	150	135	
Total Production Cost							2,939.3	2,562.9

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	334	210	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	257	185	138.6	99.9
	16-16-8	kg/rai	0	Baht/50kg	266	181	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	261	177	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	1	Baht/rai	200	168	200	168	
Transport (Truck)	ton	7.2	Baht/ton	180	156.6	1,296	1,127.52	
Hired labor	mandays	11	Baht/manday	100	92	1,100	1,012	
Fuel&Others	Liter	12.5	Baht/liter	12	10.8	150	135	
Total Production Cost							2,884.6	2,542.4

Note: Price of fertilizer is based on the price calculated from the international price.

**Sugarcane**

Economic price

Present	Future without	Future with
2562.85	2562.85	2542.41

**Table G-PE-MK-6-1-5 PRODUCTION COST MUKUDAHAN AREA  
Soybean**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							886.0	746.4

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							885.96	746.39

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	20	Baht/50kg	257	185	102.67	73.99
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	15	Baht/50kg	261	177	78.33	53.20
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							820.38	710.20

Note: Price of fertilizer is based on the price calculated from the international price.

**Soybean**

Economic price

Present	Future without	Future with
746.39	746.39	710.20

**Table G-PE-MK-6-1-6 PRODUCTION COST MUKUDAHAN AREA  
Groundnuts**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	200	190	0	0
	Fungicides	liter/rai	0	Baht/liter	180	151.2	180	151.2
Tractor		days	1	Baht/rai	100	87	20	17.4
Transport (Truck)		ton	0.2	Baht/ton	100	92	200	184
Hired labor		mandays	2	Baht/manday	0	0	0	0
Fuel&Others		Liter	0	Baht/liter			1106.6	953.0
Total Production Cost								

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	200	190	0	0
	Fungicides	liter/rai	0	Baht/liter	180	151.2	180	151.2
Tractor		days	1	Baht/rai	100	87	20	17.4
Transport (Truck)		ton	0.2	Baht/ton	100	92	200	184
Hired labor		mandays	2	Baht/manday	0	0	0	0
Fuel&Others		Liter	0	Baht/liter			1,106.6	953.0
Total Production Cost								

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg/rai	20	Baht/50kg	257	185	102.67	73.99
	16-16-8	kg/rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg/rai	15	Baht/50kg	261	177	78.33	53.20
Chemical	Herbicides (Gramaxzone)	liter/rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
	Insecticides (Karate)	liter/rai	0	Baht/liter	200	190	0	0
	Fungicides	liter/rai	0	Baht/liter	180	151.2	180	151.2
Tractor		days	1	Baht/rai	100	87	20	17.4
Transport (Truck)		ton	0.2	Baht/ton	100	92	200	184
Hired labor		mandays	2	Baht/manday	0	0	0	0
Fuel&Others		Liter	0	Baht/liter			1,041.1	916.8
Total Production Cost								

Note: Price of fertilizer is based on the price calculated from the international price.

**Groundnuts**

**Economic price**

Present	Future without	Future with
953.03	953.03	916.84

**Table G-PE-MK-6-1-7 PRODUCTION COST MUKUDAHAN AREA  
Chilli**

Present		Physical Inputs		Unit Prices		Total Value					
		Unit	Quantity	Unit	Price		Financial	Economic	Financial	Economic	
Seed	Planted	kg/ha	1.25	Baht/kg	400	380	500	475			
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0			
		15-15-15	kg / rai	85	Baht/50kg	358	223	608.6	378.8		
			kg / rai	0	Baht/50kg	344	247	0.0	0.0		
		16-16-8	kg / rai	0	Baht/50kg	345	247	0.0	0.0		
			kg / rai	0	Baht/50kg	345	247	0.0	0.0		
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25			
		liter/ rai	0	Baht/liter	0	0	0	0			
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525			
		liter/ rai	0	Baht/liter	200	190	0	0			
	Fungicides	liter/ rai	0	Baht/liter	160	134.4	160	134.4			
		days	1	Baht/rai	50	43.5	50	43.5			
Tractor		ton	1	Baht/ton	100	92	2200	2024			
Transport (Truck)		mandays	22	Baht/manday	12	10.8	0	0			
Hired labor		Liter	0	Baht/liter			4,453.1	3,943.5			
Fuel&Others											
Total Production Cost											

Future without		Physical Inputs		Unit Prices		Total Value					
		Unit	Quantity	Unit	Price		Financial	Economic	Financial	Economic	
Seed	Planted	kg/ha	1.3	Baht/kg	400	380	500	475			
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0			
		15-15-15	kg / rai	85	Baht/50kg	358	223	608.6	378.8		
			kg / rai	0	Baht/50kg	344	247	0.0	0.0		
		16-16-8	kg / rai	0	Baht/50kg	345	247	0.0	0.0		
			kg / rai	0	Baht/50kg	345	247	0.0	0.0		
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25			
		liter/ rai	0	Baht/liter	0	0	0	0			
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525			
		liter/ rai	0	Baht/liter	200	190	0	0			
	Fungicides	liter/ rai	0	Baht/liter	160	134.4	160	134.4			
		days	1	Baht/rai	50	43.5	50	43.5			
Tractor		ton	1	Baht/ton	100	92	2200	2024			
Transport (Truck)		mandays	22	Baht/manday	12	10.8	0	0			
Hired labor		Liter	0	Baht/liter			4,453.1	3,943.5			
Fuel&Others											
Total Production Cost											

Future with		Physical Inputs		Unit Prices		Total Value					
		Unit	Quantity	Unit	Price		Financial	Economic	Financial	Economic	
Seed	Planted	kg/ha	1.25	Baht/kg	400	380	500	475			
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00			
		15-15-15	kg / rai	85	Baht/50kg	257	185	436.34	314.46		
			kg / rai	0	Baht/50kg	266	181	0.00	0.00		
		16-16-8	kg / rai	0	Baht/50kg	261	177	0.00	0.00		
			kg / rai	0	Baht/50kg	261	177	0.00	0.00		
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25			
		liter/ rai	0	Baht/liter	0	0	0	0			
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525			
		liter/ rai	0	Baht/liter	200	190	0	0			
	Fungicides	liter/ rai	0	Baht/liter	160	134.4	160	134.4			
		days	1	Baht/rai	50	43.5	50	43.5			
Tractor		ton	1	Baht/ton	100	92	2200	2024			
Transport (Truck)		mandays	22	Baht/manday	12	10.8	0	0			
Hired labor		Liter	0	Baht/liter			4,280.8	3,879.1			
Fuel&Others											
Total Production Cost											

Note: Price of fertilizer is based on the price calculated from the international price.

**Chilli**

Present	Economic price	
	Future without	Future with
3943.5	3943.5	3879.1

**Table G-PE-MK-6-1-8 PRODUCTION COST MUKUDAHAN AREA  
Stringbean**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	70	Baht/50kg	358	223	501.2	312.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,196.3	1,860.5

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	70	Baht/50kg	358	223	501.2	312.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,196.3	1,860.5

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	334	210	66.73	41.95
	15-15-15	kg / rai	70	Baht/50kg	257	185	359.34	258.97
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,034.6	1,787.2

Note: Price of fertilizer is based on the price calculated from the international price.

**Stringbean**

Economic price

Present	Future without	Future with
1,860.5	1,860.5	1,787.2

**Table G-PE-MK-6-1-9 PRODUCTION COST MUKUDAHAN AREA  
Mango**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Calculated average value base		
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358	223	164.7	102.5
	16-16-8	kg / rai	35	Baht/50kg	344	247	240.7	172.9
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
	Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	5	Baht/rai	100	84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100	87	0	0
Hired labor		mandays	0	Baht/manday	100	92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12	10.8	100.8	90.72
Total Production Cost							883.2	719.7

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Calculated average value base		
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358	223	164.7	102.5
	16-16-8	kg / rai	35	Baht/50kg	344	247	240.7	172.9
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
	Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	5	Baht/rai	100	84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100	87	0	0
Hired labor		mandays	0	Baht/manday	100	92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12	10.8	100.8	90.72
Total Production Cost							883.2	719.7

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Calculated average value base		
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	257	185	118.1	85.1
	16-16-8	kg / rai	35	Baht/50kg	266	181	186.4	126.8
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.0	0.0
	Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	5	Baht/rai	100	84	41.7	35.0
Transport (Truck)		ton	0	Baht/ton	100	87	0	0
Hired labor		mandays	0	Baht/manday	100	92	0	0
Fuel&Others		Liter	8.4	Baht/liter	12	10.8	100.8	90.72
Total Production Cost							782.3	656.2

Note: Price of fertilizer is based on the price calculated from the international price.

**Mango**

Economic price

Present	Future without	Future with
719.7	719.7	656.2

**Table G-PE-MK-6-1-10 PRODUCTION COST MUKUDAHAN AREA  
Eucalyptus**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Trees	Planted	kg/ha	400	Baht/kg	1.5	1.4	120	114
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.3	68.4
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							777.3	692.0

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.4	120.0	114.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.3	68.4
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							777.3	692.0

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.5	120.0	120.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	334	210	73.4	46.1
	15-15-15	kg / rai	0	Baht/50kg	257	185	0.00	0.00
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	150	130.5	120	104.4
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							755.4	675.7

Note: Price of fertilizer is based on the price calculated from the international **Eucalyptus**

Economic price		
Present	Future without	Future with
692.0	692.0	675.7

**Table G-PE-MK-6-1-11 PRODUCTION COST MUKUDAHAN AREA  
Payaya**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Stem	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
		kg / rai	20	Baht/50kg	358	223	143.2	89.1
		kg / rai	0	Baht/50kg	344	247	0.0	0.0
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1,600	1,472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,383.2	2,127.5

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
		kg / rai	20	Baht/50kg	358	223	143.2	89.1
		kg / rai	0	Baht/50kg	344	247	0.0	0.0
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
		kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134.4
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1,600	1,472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,383.2	2,127.5

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	400	Baht/kg	0.45	0.43	180	171
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
		kg / rai	20	Baht/50kg	257	185	102.67	73.99
		kg / rai	0	Baht/50kg	266	181	0.00	0.00
		kg / rai	0	Baht/50kg	261	177	0.00	0.00
		kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
		liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134
Transport (Truck)		ton	3	Baht/ton	100	87	300	261
Hired labor		mandays	16	Baht/manday	100	92	1,600	1,472
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,342.7	2,112.4

Note: Price of fertilizer is based on the price calculated from the international price.

**Payaya**

Present	Future without	Future with
2127.5	2127.5	2112.4



# MUKUDAHAN

TABLE G-PE-MK-8-1-1 Net Value of Production at full development

## Future without

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	2,560	250	3,365	841.1	318.6	522.6	1,338
	Rice non-glutinous	640	250	3,738	934.6	318.6	616.0	394
	Cassava	3,862	1,800	793	1,427.1	611.5	815.7	3,150
	Sugarcane	767	1,200	437	3,144.0	2,562.9	581.1	446
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Groundnuts	0	230	3,560	818.9	953.0	-134.1	0
	Chilli d-1)	0	230	35,000	8,050.0	3,943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1,860.5	4,439.5	0
	Mango a)	571	579	10,000	5,791.7	719.7	5,072.0	2,896
	Eucalyptus b)	0	3,000	742	2,225.2	692.0	1,533.2	0
	Papaya	200	3,000	5,940	17,819.6	2,127.5	15,692.1	3,138
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard etc)	0	-	-	-	-	-	-
<b>Total</b>		<b>8,600</b>						<b>11,362</b>
<b>Livestock</b>	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		330.0	0.4	4,834.1	1,933.6	1,608.5	325.1	107
	Chicken e)	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		13,200	1.5	42	64	22	41	1,092
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		18	178	30	5,340	2,307	3,033	55
<b>Total</b>								<b>12,616</b>

## Future with

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	2,432	300	2,990	897.1	316.4	580.6	1,412
	Rice non-glutinous	608	300	3,322	996.7	298.3	698.4	425
	Cassava	2,595	2,500	793	1,982.1	761.6	1,220.5	3,167
	Sugarcane	760	1,200	423	3,044.4	2,542.4	502.0	382
	Soybean	61	216	4,814	1,039.7	710.2	329.5	20
	Groundnuts	61	230	3,081	708.7	916.8	-208.2	-13
	Chilli d-1)	83	230	35,000	8,050.0	3,879.1	4,170.9	1,039
	Stringbean d-2)	82	700	9,000	6,300.0	1,787.2	4,512.8	1,110
	Mango a)	723	579	10,000	5,791.7	656.2	5,135.5	3,713
	Eucalyptus b)	416	3,000	742	2,225.2	675.7	1,549.5	645
	Papaya	241	3,000	5,799	17,397.8	2,112.4	15,285.4	3,684
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard etc)	660	-	-	-	-	-	-
<b>Total</b>		<b>8,722</b>						<b>15,583</b>
<b>Livestock</b>	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		330	0.4	5,068.6	2,027.4	1,608.5	418.9	138.2
	Chicken	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		39,600	1.5	42	64	22	41	3,275
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		66	178	30	5,340	2,307	3,033	200
<b>Total</b>								<b>19,196</b>

Note

a) Average yield and production cost for 12 years after planting.

b) Average yield and production cost for 5 years.

c) The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.

d-1),d-2) Vegetables are planted three times on same fields for one year.

e) Chicken is rotated two times for one year.

**Total net value of production**

**Without  
12,616**

**With  
19,196**

**Net incremental value of production at full development**

**6,580**

# MUKUDAHAN

**TABLE G-PE-MK-8-1-2 Net Value of Production at full development**  
The Case Excluded chicken and Cow

## Future without

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	2,560	250	3,365	841.1	318.6	522.6	1,338
	Rice non-glutinous	640	250	3,738	934.6	318.6	616.0	394
	Cassava	3,862	1,800	793	1,427.1	611.5	815.7	3,150
	Sugarcane	767	7,200	437	3,144.0	2,562.9	581.1	446
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Groundnuts	0	230	3,560	818.9	953.0	-134.1	0
	Chilli d-1)	0	230	35,000	8,050.0	3,943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1,860.5	4,439.5	0
	Mango a)	571	579	10,000	5,791.7	719.7	5,072.0	2,896
	Eucalyptus b)	0	3,000	742	2,225.2	692.0	1,533.2	0
	Papaya	200	3,000	5,940	17,819.6	2,127.5	15,692.1	3,138
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
Unplanted or farmyard etc	0	-	-	-	-	-	-	
<b>Total</b>		<b>8,600</b>						<b>11,362</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		18	178	30	5,340	2,307	3,033	55
<b>Total</b>								<b>11,417</b>

## Future with

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	2,432	300	2,990	897.1	316.4	580.6	1,412
	Rice non-glutinous	608	300	3,322	996.7	298.3	698.4	425
	Cassava	2,595	2,500	793	1,982.1	761.6	1,220.5	3,167
	Sugarcane	760	7,200	423	3,044.4	2,542.4	502.0	382
	Soybean	61	216	4,814	1,039.7	710.2	329.5	20
	Groundnuts	61	230	3,081	708.7	916.8	-208.2	-13
	Chilli d-1)	83	230	35,000	8,050.0	3,879.1	4,170.9	1,039
	Stringbean d-2)	82	700	9,000	6,300.0	1,787.2	4,512.8	1,110
	Mango a)	723	579	10,000	5,791.7	656.2	5,135.5	3,713
	Eucalyptus b)	416	3,000	742	2,225.2	675.7	1,549.5	645
	Papaya	241	3,000	5,799	17,397.8	2,112.4	15,285.4	3,684
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
Unplanted or farmyard etc	660	-	-	-	-	-	-	
<b>Total</b>		<b>8,722</b>						<b>15,583</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		66	178	30	5,340	2,307	3,033	200
<b>Total</b>								<b>15,783</b>

**Note**

- Average yield and production cost for 12 years after planting.
- Average yield and production cost for 5 years.
- The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1),d-2) Vegetables are planted three times on same fields for one year.
- Chicken is rotated two times for one year.

**Total net value of production**

**Without 11,417      With 15,783**

**Net incremental value of production at full development**

**4,366**

**Table G-PE-MK-9-1-1 Benefit Cost Ratio and IRR**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000'Baht)
	Investment	O&M			Benefit	Cost	12% discounted
1	1,434.5			-1,434.5	0.0	1,280.8	0.893
2	1,434.5			-1,434.5	0.0	1,143.6	0.797
3	11,777.3			-11,777.3	0.0	8,382.9	0.712
4	11,777.3			-11,777.3	0.0	7,484.7	0.636
5		1,025.8	6,580.1	5,554.4	3,733.8	582.0	0.567
6		1,025.8	6,580.1	5,554.4	3,333.7	519.7	0.507
7		1,025.8	6,580.1	5,554.4	2,976.5	464.0	0.452
8		1,025.8	6,580.1	5,554.4	2,657.6	414.3	0.404
9		1,025.8	6,580.1	5,554.4	2,372.9	369.9	0.361
10		1,025.8	6,580.1	5,554.4	2,118.6	330.3	0.322
11		1,025.8	6,580.1	5,554.4	1,891.6	294.9	0.287
12		1,025.8	6,580.1	5,554.4	1,689.0	263.3	0.257
13		1,025.8	6,580.1	5,554.4	1,508.0	235.1	0.229
14		1,025.8	6,580.1	5,554.4	1,346.4	209.9	0.205
15		1,025.8	6,580.1	5,554.4	1,202.2	187.4	0.183
16		1,025.8	6,580.1	5,554.4	1,073.4	167.3	0.163
17		1,025.8	6,580.1	5,554.4	958.4	149.4	0.146
18		1,025.8	6,580.1	5,554.4	855.7	133.4	0.130
19		1,025.8	6,580.1	5,554.4	764.0	119.1	0.116
20		1,025.8	6,580.1	5,554.4	682.1	106.3	0.104
21		1,025.8	6,580.1	5,554.4	609.1	94.9	0.093
22		1,025.8	6,580.1	5,554.4	543.8	84.8	0.083
23		1,025.8	6,580.1	5,554.4	485.5	75.7	0.074
24		1,025.8	6,580.1	5,554.4	433.5	67.6	0.066
25		1,025.8	6,580.1	5,554.4	387.1	60.3	0.059
26		1,025.8	6,580.1	5,554.4	345.6	53.9	0.053
27		1,025.8	6,580.1	5,554.4	308.6	48.1	0.047
28		1,025.8	6,580.1	5,554.4	275.5	42.9	0.042
29		1,025.8	6,580.1	5,554.4	246.0	38.3	0.037
30		1,025.8	6,580.1	5,554.4	219.6	34.2	0.033
					33,018	23,439	
<b>Internal Rate of Return</b>							<b>18.23%</b>
<b>B/C RATIO</b>							<b>1.409</b>

**Table G-PE-MK-9-1-2 Benefit Cost Ratio and IRR**  
**The Case Excluded chicken and Cow**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000' Baht) 12% discounted
	Investment	O&M			Benefit	Benefit	
1	1,434.5			-1,434.5	0.0	1,280.8	0.893
2	1,434.5			-1,434.5	0.0	1,143.6	0.797
3	11,777.3			-11,777.3	0.0	8,382.9	0.712
4	11,777.3			-11,777.3	0.0	7,484.7	0.636
5		1,025.8	4,366.2	3,340.4	2,477.5	582.0	0.567
6		1,025.8	4,366.2	3,340.4	2,212.0	519.7	0.507
7		1,025.8	4,366.2	3,340.4	1,975.0	464.0	0.452
8		1,025.8	4,366.2	3,340.4	1,763.4	414.3	0.404
9		1,025.8	4,366.2	3,340.4	1,574.5	369.9	0.361
10		1,025.8	4,366.2	3,340.4	1,405.8	330.3	0.322
11		1,025.8	4,366.2	3,340.4	1,255.2	294.9	0.287
12		1,025.8	4,366.2	3,340.4	1,120.7	263.3	0.257
13		1,025.8	4,366.2	3,340.4	1,000.6	235.1	0.229
14		1,025.8	4,366.2	3,340.4	893.4	209.9	0.205
15		1,025.8	4,366.2	3,340.4	797.7	187.4	0.183
16		1,025.8	4,366.2	3,340.4	712.2	167.3	0.163
17		1,025.8	4,366.2	3,340.4	635.9	149.4	0.146
18		1,025.8	4,366.2	3,340.4	567.8	133.4	0.130
19		1,025.8	4,366.2	3,340.4	506.9	119.1	0.116
20		1,025.8	4,366.2	3,340.4	452.6	106.3	0.104
21		1,025.8	4,366.2	3,340.4	404.1	94.9	0.093
22		1,025.8	4,366.2	3,340.4	360.8	84.8	0.083
23		1,025.8	4,366.2	3,340.4	322.2	75.7	0.074
24		1,025.8	4,366.2	3,340.4	287.7	67.6	0.066
25		1,025.8	4,366.2	3,340.4	256.8	60.3	0.059
26		1,025.8	4,366.2	3,340.4	229.3	53.9	0.053
27		1,025.8	4,366.2	3,340.4	204.7	48.1	0.047
28		1,025.8	4,366.2	3,340.4	182.8	42.9	0.042
29		1,025.8	4,366.2	3,340.4	163.2	38.3	0.037
30		1,025.8	4,366.2	3,340.4	145.7	34.2	0.033
					21,909	23,439	
<b>Internal Rate of Return</b>							<b>10.90%</b>
<b>B/C RATIO</b>							<b>0.935</b>

**MUKUDAHAN AREA**

**Table G-PE-MK-10-1 Annual Maintenance Cost**

(000' Baht)

	Tax excluded			Economic cost			Total	
	F/C	L/C	Total	F/C	L/C	Total		
Farm Pond	87	37	124	51	22	73	75	
Farm Road	920	393	1,313	649	277	926	951	
<b>Total</b>								<b>1,026</b>

**Table G-PE-MK-10-2 Construction Cost**

	F/C	L/C	Total
Civil Works Farm Pond	7,088	3,038	10,126
Farm Road	13,139	5,621	18,760
Sub total	20,227	8,659	28,886
Design	0	4,027	4,027
Administration	2,023	866	2,889
Physical Contingencies	2,225	1,355	3,580
Sub total	24,475	14,907	39,382

**Economic Cost**

Tax excluded			F/C	L/C	Total	CF	CF	F/C	L/C	Total
Civil Works Farm Pond			4,149	1,778	5,927	1.09	0.88	4,522	1,565	6,087
Farm Road			9,267	3,964	13,231	1.09	0.88	10,101	3,489	13,590
Sub total			13,416	5,743	19,158			14,623	5,054	19,676
Design			0	2,618	2,618	1.09	0.92	0	2,408	2,408
Administration			1,315	563	1,878	1.09	0.92	1,433	518	1,951
Physical Contingencies			1,446	881	2,327	1.09	0.92	1,576	810	2,387
Sub total					25,981			17,633	8,790	26,422

**Table G-PE-MK-10-3 Construction cost disbursement schedule**

	1999		2000		2001		2002		Total
	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	
Civil Works Farm Pond	0	0	0	0	3,544	1,519	3,544	1,519	10,126
Farm Road	0	0	0	0	6,570	2,811	6,570	2,811	18,760
Sub total	0	0	0	0	10,114	4,330	10,114	4,330	28,886
Design	0	2,014	0	2,014	0	0	0	0	4,028
Administration	0	173	0	173	1,011	260	1,011	260	2,888
Physical Contingencies	118	72	118	72	995	606	995	606	3,582
Sub total	118	2,259	118	2,259	12,120	5,196	12,120	5,196	39,384

Tax excluded			F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	Total
Civil Works Farm Pond			0	0	0	0	2,074	889	2,074	889	5,927
Farm Road			0	0	0	0	4,633	1,982	4,633	1,982	13,231
Sub total			0	0	0	0	6,708	2,871	6,708	2,871	19,158
Design			0	1,309	0	1,309	0	0	0	0	2,618
Administration			0	112	0	112	657	169	657	169	1,877
Physical Contingencies			77	47	77	47	647	394	647	394	2,328
Sub total			77	1,468	77	1,468	14,719	6,306	14,719	6,306	25,982

**Economic Construction cost**

	1999		2000		2001		2002		Total
	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	
Civil Works Farm Pond	0	0	0	0	2,261	782	2,261	782	6,087
Farm Road	0	0	0	0	5,050	1,744	5,050	1,744	13,590
Sub total	0	0	0	0	7,311	2,527	7,311	2,527	19,676
Design	0	1,204	0	1,204	0	0	0	0	2,408
Administration	0	103	0	103	716	155	716	155	1,950
Physical Contingencies	84	43	84	43	705	362	705	362	2,388
Sub total	84	1,351	84	1,351	8,733	3,045	8,733	3,045	26,424
Annual total cost		1,434		1,434		11,777		11,777	

**Table G-PE-SN-4-1 SAKOHN NAKON AREA  
Crop Budget (Financial base)**

<b>Rice glutinous</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.35	0.35	0.40
Farmgate Price	(Baht/ton)	2,832	2,507	2,507
Gross Value of production	(Baht/rai)	991.3	877.4	1,002.7
Production costs	(Baht/rai)	318.6	318.6	316.4
Net value of production	(Baht/rai)	672.7	558.8	686.3
Labor requirement	(mandays/rai)	7.6	7.6	7.8

<b>Rice non glutinous</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.35	0.35	0.40
Farmgate Price	(Baht/ton)	3,147	2,785	2,785
Gross Value of production	(Baht/rai)	1,101.4	974.8	1,114.1
Production costs	(Baht/rai)	318.6	318.6	298.3
Net value of production	(Baht/rai)	782.9	656.3	815.8
Labor requirement	(mandays/rai)	7.6	7.6	7.8

<b>Cassava</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	1.80	1.80	2.50
Farmgate Price	(Baht/ton)	749.5	749.5	749.5
Gross Value of production	(Baht/rai)	1349.1	1349.1	1873.8
Production costs	(Baht/rai)	611.5	611.5	761.6
Net value of production	(Baht/rai)	737.7	737.7	1112.2
Labor requirement	(mandays/rai)	7.5	7.5	7.5

<b>Sugarcane</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	7.20	7.20	7.20
Farmgate Price	(Baht/ton)	414.1	414.1	400.5
Gross Value of production	(Baht/rai)	2,981.6	2,981.6	2,883.9
Production costs	(Baht/rai)	2,562.9	2,562.9	2,542.4
Net value of production	(Baht/rai)	418.7	418.7	341.5
Labor requirement	(mandays/rai)	18	18	18

<b>Soybean</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.22	0.22	0.22
Farmgate Price	(Baht/ton)	9,869.6	9,869.6	8,658.2
Gross Value of production	(Baht/rai)	2,131.8	2,131.8	1,870.2
Production costs	(Baht/rai)	746.4	746.4	710.2
Net value of production	(Baht/rai)	1,385.5	1,385.5	1,160.0
Labor requirement	(mandays/rai)	0	0	0

<b>Groundnuts</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.23	0.23	0.23
Farmgate Price	(Baht/ton)	6,419.4	6,419.4	5,563.3
Gross Value of production	(Baht/rai)	1,476.5	1,476.5	1,279.6
Production costs	(Baht/rai)	953.0	953.0	916.8
Net value of production	(Baht/rai)	523.4	523.4	362.7
Labor requirement	(mandays/rai)	28	28	28

**Table G-PE-SN-4-2 SAKOHN NAKON AREA  
Crop Budget (Financial base)**

<b>Chilli</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.2	0.2	0.2
Farmgate Price	(Baht/ton)	35,000.0	35,000.0	35,000.0
Gross Value of production	(Baht/rai)	8,050.0	8,050.0	8,050.0
Production costs	(Baht/rai)	3,943.5	3,943.5	3,879.1
Net value of production	(Baht/rai)	4,106.5	4,106.5	4,170.9
Labor requirement	(mandays/rai)	10	10	10

<b>Stringbean</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	0.7	0.7	0.7
Farmgate Price	(Baht/ton)	9000.0	9000.0	9000.0
Gross Value of production	(Baht/rai)	6300.0	6300.0	6300.0
Production costs	(Baht/rai)	1860.5	1860.5	1787.2
Net value of production	(Baht/rai)	4439.5	4439.5	4512.8
Labor requirement	(mandays/rai)	12	12	12

<b>Payaya</b>				
Crop Budget		Present	Future w/o Project	Future w/ Project
Yield	(ton/rai)	3.0	3.0	3.0
Farmgate Price	(Baht/ton)	4,252.1	4,252.1	4,252.1
Gross Value of production	(Baht/rai)	12,756.4	12,756.4	12,756.4
Production costs	(Baht/rai)	2,127.5	2,127.5	2,112.4
Net value of production	(Baht/rai)	10,628.9	10,628.9	10,644.0
Labor requirement	(mandays/rai)	29	29	29

**Table G-PE-SN-5-1 SAKOHN NAKON AREA**  
**Present and Future Farmgate Price of Farm Products and Inputs**

Crops/Inputs	Unit	Without		With	
		Financial	Economic	Financial	Economic
Rice glutinous	Baht/ton	2,832.2	3,364.5	2,506.7	2,990.2
Rice non-glutinous	Baht/ton	3,146.9	3,738.4	2,785.3	3,322.5
Cassava	Baht/ton	749.5	792.8	749.5	792.8
Sugarcane	Baht/ton	414.1	436.7	400.5	422.8
Soybean	Baht/ton	9,869.6	5,491.8	8,658.2	4,813.6
Groundnuts	Baht/ton	6,419.4	3,560.4	5,563.3	3,081.1
Chilli	Baht/ton	35,000	35,000	35,000	35,000
Stringbean	Baht/ton	9,000	9,000	9,000	9,000
Mango for domestic	Baht/ton	10,000.0	10,000.0	10,000.0	10,000.0
Mango for export	Baht/ton	17,663.5	18,748.4	17,663.5	18,748.4
Eucalyptus	Baht/ton	470.7	741.7	470.7	741.7
Papaya	Baht/ton	4,252.1	5,939.9	4,252.1	5,799.3
Cow	Baht/ton	1,480.1	4,834.1	1,563.3	5,068.6
Chicken	Baht/kg	34.6	42.5	34.6	42.5
Chicken (Native)	Baht/kg	40.0	40.0	40.0	40.0
Tilapia	Baht/kg	30.0	30.0	30.0	30.0
46-0-0	Baht/50kg	433	311	334	210
15-15-15	Baht/50kg	358	223	257	185
16-16-8	Baht/50kg	344	247	266	181
16-20-0	Baht/50kg	345	247	261	177

**Table G-PE-SN-5-2-1 SAKOHN NAKON AREA**

Rice Non-Glutinous	1996		2005		
	Financial	Economic k)	Financial	Economic	
Export price f.o.b. at Bangkok port (\$US/ton)					296.7
Export price f.o.b. at Bangkok port (Baht/ton)	7,417.5	7,417.5	6,670.0	6,670.0	266.8
Export Tariff (10%)	741.8	0.0	667.0	0.0	
Average Price of mixed grade rice (Baht/ton) a)	6,542.2	7,269.2	5,882.9	6,536.6	
Port Handling and charges b)	327.1	300.9	294.1	270.6	
Trader's Margin c)	98.1	90.3	88.2	81.2	
Wholesale Price at Bangkok	6,117.0	6,877.9	5,500.5	6,184.8	
Trader's Margin d)	91.8	84.4	82.5	75.9	
Rice Price at rice milling factory	6,025.2	6,793.5	5,418.0	6,108.9	
Paddy Price at rice milling factory e)	3,976.7	4,483.7	3,575.9	4,031.9	
Milling cost f)	100	92.0	100	92.0	
Transport cost to Milling Factory g)	260.0	226.2	260.0	226.2	
Trader's Margin h)	198.8	182.9	178.8	164.5	
Local market price	3,417.8	3,982.6	3,037.1	3,549.2	
Local trader's margin i)	170.9	157.2	151.9	139.7	
Transport cost to local market j)	100.0	87.0	100.0	87.0	
Farmgate price	3,146.9	3,738.4	2,785.3	3,322.5	

a) Adjusted to the quality of rice price of 100%, 5%, 10%, 25%.

b) 5% of Average Price of mixed grade rice.

c) 1.5 % of export rice.

d) 1.5 % of export rice.

e) Milling recovery rate 66%.

f) Milling cost 100 Baht/ton

g) Kohn Kean to Bangkok milling factory, about 400 km

h) 5% of paddy price at rice milling factory

i) 5% of local market price

j) Priority area to Muang of Kohn Kean, 60 km

k) Standard conversion factor is 0.92.

Cassava (Tapioca pellets)	1996		2005		
	Financial	Economic	Financial	Economic	
Import Price c.i.f. at Rotterdam port (\$US/ton)					107.8
Ocean freight and insurance a)					14.0
Export price f.o.b. at Bangkok port (\$US/ton)					93.8
Export price f.o.b. at Bangkok port (Baht/ton)	2,345.0	2,345.0	2,345.0	2,345.0	
Tariff (0%)	0.0	0.0	0.0	0.0	
Value Add Tax	0.0	0.0	0.0	0.0	
Port Handling and charges b)	117.3	107.9	117.3	107.9	
Port gate price	2,227.8	2,237.1	2,227.8	2,237.1	
Transport cost to Port near Bangkok c)	267.3	232.6	267.3	232.6	
Trader's Margin d)	111.4	102.5	111.4	102.5	
Processed cost e)	150	138.0	150	138.0	
Local cassava pellets factory price	1,699.0	1,764.1	1,699.0	1,764.1	
Cassava equivalent price (50%) e)	849.5	882.0	849.5	882.0	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	749.5	792.8	749.5	792.8	

a) Freight rate 14\$/ton

b) 5 % of f.o.b. price.

c) 10 % of port gate price.

d) 5 % of port gate price.

e) 1 kg of cassava pellets is equivalent to 2 kg of cassava roots.

Sugarcane	1996		2005		
	Financial	Economic a)	Financial	Economic	
Export price f.o.b. at Bangkok port (\$US/ton)					230.8
Export price f.o.b. at Bangkok port (Baht/ton)	5,770.0	5,770.0	5,622.5	5,622.5	224.9
Tariff (0%)	0.0	0.0	0.0	0.0	
Value Add Tax	0.0	0.0	0.0	0.0	
Port Handling and charges b)	288.5	265.4	281.1	258.6	
Port gate price	5,481.5	5,504.6	5,341.4	5,363.9	
Transport cost to Port near Bangkok c)	383.7	333.8	373.9	325.3	
Trader's Margin d)	274.1	252.1	267.1	245.7	
Processed cost e)	150	138.0	150	138.0	
Local sugar factory price	4,673.7	4,780.6	4,550.4	4,654.9	
Sugarcane equivalent price (11%) e)	514.1	525.9	500.5	512.0	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	414.1	436.7	400.5	422.8	

a) Standard conversion factor is 0.92.

b) 5 % of f.o.b. price.

c) 5 % of port gate price.

d) 5 % of port gate price.

e) 1 kg of cassava pellets is equivalent to 2 kg of cassava roots.

**Table G-PE-SN-5-2-2 SAKOHN NAKON AREA**

Soybean	1996		2005	
	Financial	Economic	Financial	Economic
Export Price f.o.b. at Rotterdam port (\$US/ton)				
Ocean freight and insurance a)				
Import price c.i.f. at Bangkok port (\$US/ton)				
Import price c.i.f. at Bangkok port (Baht/ton)				
Import Tariff (60%)	5,822.5	5,822.5	5,115.0	5,115.0
Value Add Tax (10%)	3,493.5	0.0	3,069.0	0.0
Port Handling and charges b)	931.6	0.0	818.4	0.0
Port gate price	291.1	267.8	255.8	235.3
Transport cost to Port near Bangkok c)	10,538.7	6,090.3	9,258.2	5,350.3
Trader's Margin d)	284.5	247.6	250.0	217.5
Local market price	284.5	261.8	250.0	230.0
Local trader's margin	9,969.6	5,581.0	8,758.2	4,902.8
Local Transport cost	44.0	40.5	44.0	40.5
Farmgate price	56.0	48.7	56.0	48.7
	9,869.6	5,491.8	8,658.2	4,813.6

a) Freight rate \$24/ton and insurance \$10.

b) 5 % of f.o.b. price.

c) 2.5 % of port gate price.

d) 2.5 % of port gate price.

Groundnuts	1996		2005	
	Financial	Economic	Financial	Economic
Export Price f.o.b. at Rotterdam port (\$US/ton)				
Ocean freight and insurance a)				
Import price c.i.f. at Bangkok port (\$US/ton)				
Import price c.i.f. at Bangkok port (Baht/ton)				
Import Tariff (60%)	3,807.5	3,807.5	3,307.5	3,307.5
Value Add Tax (10%)	2,284.5	0.0	1,984.5	0.0
Port Handling and charges b)	609.2	0.0	529.2	0.0
Port gate price	190.4	175.1	165.4	152.1
Transport cost to Port near Bangkok c)	6,891.6	3,982.6	5,986.6	3,459.6
Trader's Margin d)	186.1	161.9	161.6	140.6
Local market price	186.1	171.2	161.6	148.7
Local trader's margin	6,519.4	3,649.6	5,663.3	3,170.3
Local Transport cost	44.0	40.5	44.0	40.5
Farmgate price	56.0	48.7	56.0	48.7
	6,419.4	3,560.4	5,563.3	3,081.1

a) Freight rate \$24/ton and insurance \$10.

b) 5 % of f.o.b. price.

c) 2.5 % of port gate price.

d) 2.5 % of port gate price.

Mango (Khleo Sawuai)	1996		2005	
	Financial	Economic	Financial	Economic
Import Price c.i.f. at Tokyo port (\$US/ton)				
Ocean freight and insurance a)				
Export price f.o.b. at Bangkok port (\$US/ton)				
Export price f.o.b. at Bangkok port (Baht/ton) b)				
Export Tax (0%)	34,000.0	34,000.0	34,000.0	34,000.0
Value Add Tax (10%)	0.0	0.0	0.0	0.0
Port Handling and charges c)	3,400.0	3,400.0	3,400.0	3,400.0
Transport cost to Port	1,700.0	1,564.0	1,700.0	1,564.0
Office Expenditure	146.0	127.0	146.0	127.0
Certificate License	850.0	782.0	850.0	782.0
Packing	200	168.0	200	168.0
Labour for grading	1400	1,288.0	1400	1,288.0
Wholesale Price at Bangkok market	1200	1,104.0	1200	1,104.0
Transport cost to Bangkok	25,104.0	25,567.0	25,104.0	25,567.0
Trader's Margin d)	386.0	335.8	386.0	335.8
Value Add Tax (10%)	3,765.6	3,464.4	3,765.6	3,464.4
Local market price	2,510.4	2,556.7	2,510.4	2,556.7
Local trader's margin e)	20,952.4	21,766.8	20,952.4	21,766.8
Local Transport cost	3,142.9	2,891.4	3,142.9	2,891.4
Farmgate price (Baht/ton)	146.0	127.0	146.0	127.0
	17,663.5	18,748.4	17,663.5	18,748.4

a) Freight rate 2400\$/20ton by Reefer.

b) Exchange rate 1 US dollar = 25 baht.

c) 5 % of f.o.b. price.

d) 15 % of Wholesale Price.

e) 15 % of Wholesale Price.

**Table G-PE-SN-5-2-3 SAKOHN NAKON AREA**

Acacia(Eucalyptus, Wood chip)	1996		2005		
	Financial	Economic	Financial	Economic	
Import Price c.i.f. at Yokohama port (\$US/ton)					121
Ocean freight and insurance a)					40.0
Export price f.o.b. at Bangkok port (\$US/ton)					81.0
Export price f.o.b. at Bangkok port (Baht/ton)	2,025.0	2,025.0	2,025.0	2,025.0	
Tariff (40%)	810.0	0.0	810.0	0.0	
Value Add Tax (0%)	0.0	0.0	0.0	0.0	
Port Handling and charges b)	101.3	93.2	101.3	93.2	
Port gate price	1,113.8	1,931.9	1,113.8	1,931.9	
Transport cost to Port near Bangkok	92.8	80.7	92.8	80.7	
Trader's Margin c)	55.7	51.2	55.7	51.2	
Processed cost	150	138.0	150	138.0	
Local cassava pellets factory price	815.3	1,661.9	815.3	1,661.9	
Woodchip equivalent price (70%) d)	570.7	830.9	570.7	830.9	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	470.7	741.7	470.7	741.7	

a) Freight rate 35\$/ton

b) 5 % of f.o.b. price.

c) 5 % of port gate price.

d) 1 ton of wood is equivalent to 0.7 tong of wood chip.

Papaya	1996		2005		
	Financial	Economic	Financial	Economic	
Import Price c.i.f. at Tokyo port (\$US/ton)					600
Ocean freight and insurance a)					140.0
Export price f.o.b. at Bangkok port (\$US/ton)					460
Export price f.o.b. at Bangkok port (Baht/ton) b)	11,500.0	11,500.0	11,500.0	11,500.0	
Export Tax (0%)	0.0	0.0	0.0	0.0	
Value Add Tax (10%)	1,150.0	0.0	1,150.0	0.0	
Port Handling and charges c)	575.0	529.0	575.0	529.0	
Transport cost to Port	146.0	127.0	146.0	127.0	
Office Expenditure	287.5	264.5	287.5	264.5	
Certificate License	200	168.0	200	168.0	
Packing	1400	1,288.0	1400	1,288.0	
Labour for grading	1200	1,104.0	1200	1,104.0	
Wholesale Price at Bangkok market	6,541.5	8,019.5	6,541.5	8,019.5	
Transport cost to Bangkok	386.0	335.8	386.0	335.8	
Trader's Margin d)	981.2	902.7	981.2	981.2	
Value Add Tax (10%)	654.2	801.9	654.2	801.9	
Local market price	5,174.3	6,780.9	5,174.3	6,702.4	
Local trader's margin e)	776.1	714.0	776.1	776.1	
Local Transport cost	146.0	127.0	146.0	127.0	
Farmgate price (Baht/ton)	4,252.1	5,939.9	4,252.1	5,799.3	

a) Freight rate 2400\$/20ton by Reefer.

b) Exchange rate 1 US dollar = 25 baht.

c) 5 % of f.o.b. price.

d) 15 % of Wholesale Price.

e) 15 % of Wholesale Price.

**Table G-PE-SN-5-2-4 SAKOHN NAKON AREA**

Cow	1996		2005		
	Financial	Economic	Financial	Economic	
Export Price f.o.b. at US port (\$US/ton)					166.3
Ocean freight and insurance a)					63.0
Import price c.i.f. at Bangkok port (\$US/ton)					219.3
Import price c.i.f. at Bangkok port (Baht/ton)	5,482.5	5,482.5	5,732.5	5,732.5	
Import Tariff (60%)	3,289.5	0.0	3,439.5	0.0	
Value Add Tax (10%)	0.0	0.0	0.0	0.0	
Port Handling and charges b)	274.1	252.2	286.6	263.7	
Port gate price	1,918.9	5,230.3	2,006.4	5,468.8	
Transport cost to Port near Bangkok	92.8	80.7	92.8	80.7	
Trader's Margin c)	95.9	88.3	100.3	92.3	
Processed cost	150	138.0	150	138.0	
Local meat factory price	1,580.1	4,923.3	1,663.3	5,157.8	
Local trader's margin	44.0	40.5	44.0	40.5	
Local Transport cost	56.0	48.7	56.0	48.7	
Farmgate price	1,480.1	4,834.1	1,563.3	5,068.6	

a) Freight rate \$53/ton and insurance \$10/ton.

b) 5 % of f.o.b. price.

c) 5 % of port gate price.

Chicken	1996		2005		
	Financial	Economic	Financial	Economic	
Export Price f.o.b. at Bangkok port (\$US/ton)					2484.0
Export price c.i.f. at Bangkok port (Baht/ton)	62,100.0	62,100.0	62,100.0	62,100.0	
Export Tax (0%)	0.0	0.0	0.0	0.0	
Value Add Tax (10%)	6,210.0	0.0	6,210.0	0.0	
Port Handling and charges a)	6,210.0	5,713.2	6,210.0	5,713.2	
Office Expenditure b)	1,552.5	1,428.3	1,552.5	1,428.3	
Certificate License	200	168.0	200	168.0	
Packing	1400	1,288.0	1400	1,288.0	
Port gate price	49,680.0	56,386.8	49,680.0	56,386.8	
Transport cost to Port near Bangkok	180.0	156.6	180.0	156.6	
Trader's Margin c)	2,980.8	2,742.3	2,980.8	2,742.3	
Processed cost d)	9,936.0	9,141.1	9,936.0	9,141.1	
Local meat factory price	36,583.2	44,346.7	36,583.2	44,346.7	
Local trader's margin e)	1,829.2	1,682.8	1,829.2	1,682.8	
Local Transport cost	200.0	174.0	200.0	174.0	
Farmgate price (Baht/ton)	34,554.0	42,489.9	34,554.0	42,489.9	
Farmgate price (Baht/kg)	34.6	42.5	34.6	42.5	

a) 10 % of f.o.b. price.

b) 2.5 % of f.o.b. price.

c) 5 % of port gate price.

d) 20 % of port gate price.

e) 5 % of factory gate price.

**Table G-PE-SN-5-2-5 SAKOHN NAKON AREA**

Urea (46-0-0)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					179.9
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					219.9
Import price c.i.f. at Bangkok port (Baht/ton)	5,497.5	5,497.5	4,195.0	4,195.0	
Import Tariff (30%)	1,649.3	0.0	1,258.5	0.0	
Value Add Tax (10%)	714.7	0.0	545.4	0.0	
Port Handling and charges b)	137.4	126.4	104.9	0.0	
Port gate price	7,998.9	5,623.9	6,103.7	4,195.0	
Trader's margin c)	399.9	357.9	305.2	0.0	
Transport cost to Local market	220.0	191.4	220.0	0.0	
Local market price	8,618.8	6,183.3	6,628.9	4,195.0	
Local Transport cost to Farm	44	38.3	44	0.0	
Trader's margin	56	51.5	56	0.0	
Farmgate price (Baht/ton)	8,662.8	6,221.6	6,672.9	4,195.0	
Farmgate price (Baht/kg)	433	311	334	210	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

Potassium Chloride (0-0-60)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					102.4
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					142.4
Import price c.i.f. at Bangkok port (Baht/ton)	3,560.0	3,560.0	3,187.5	3,187.5	
Import Tariff (30%)	1,068.0	0.0	956.3	0.0	
Value Add Tax (10%)	462.8	0.0	414.4	0.0	
Port Handling and charges b)	89.0	81.9	79.7	73.3	
Port gate price	5,179.8	3,641.9	4,637.8	3,260.8	
Trader's margin c)	259.0	238.3	231.9	213.3	
Transport cost to Local market	220.0	191.4	220.0	191.4	
Local market price	5,658.8	4,071.6	5,089.7	3,665.6	
Local Transport cost to Farm	44	38.3	44	38.3	
Trader's margin	56	51.5	56	51.5	
Farmgate price (Baht/ton)	5,702.8	4,109.8	5,133.7	3,703.8	
Farmgate price (Baht/kg)	285	205	257	185	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

TSP (0-46-0)	1996		2005		
	Financial	Economic	Financial	Economic	
Export price f.o.b. at Yokohama ports (\$US/ton)					186.7
Ocean freight and insurance a)					40
Import price c.i.f. at Bangkok port (\$US/ton)					226.7
Import price c.i.f. at Bangkok port (Baht/ton)	5,667.5	5,667.5	4,195.0	4,195.0	
Import Tariff (30%)	1,700.3	0.0	1,258.5	0.0	
Value Add Tax (10%)	736.8	0.0	545.4	0.0	
Port Handling and charges b)	141.7	130.4	104.9	96.5	
Port gate price	8,246.2	5,797.9	6,103.7	4,291.5	
Trader's margin c)	412.3	379.3	305.2	280.8	
Transport cost to Local market	220.0	191.4	220.0	191.4	
Local market price	8,878.5	6,368.6	6,628.9	4,763.7	
Local Transport cost to Farm	44	38.3	44	38.3	
Trader's margin	56	51.5	56	51.5	
Farmgate price (Baht/ton)	8,922.5	6,406.9	6,672.9	4,801.9	
Farmgate price (Baht/kg)	446	320	334	240	

a) Freight \$35/ton.

b) Port handling, storage charges is 2.5% of c.i.f price.

c) 5 % of port gate price.

**Table G-PE-SN-6-1-1 PRODUCTION COST SAKOHN NAKON AREA  
Rice Glutinous**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg/rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0.02	Baht/liter	450	428	9	8.55
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg/rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0.02	Baht/liter	450	428	9	8.55
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.5	318.6

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price	Financial	Economic	
Seed	Planted	kg/ha	5	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg/rai	0	Baht/50kg	257	185	0.00	0.00
	16-16-8	kg/rai	25	Baht/50kg	266	181	133.16	90.58
	16-20-0	kg/rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0.00	0.00
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0.02	Baht/liter	450	428	9	8.55
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.35	Baht/ton	100	87	35	30.45
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							380.16	316.43

Note: Price of fertilizer is based on the price calculated from the international price.

**Rice Glutinous**

Economic price		
Present	Future without	Future with
318.57	318.57	316.43

**Table G-PE-SN-6-1-2 PRODUCTION COST SAKOHN NAKON AREA**  
**Rice non glutinous**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	3	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.54	318.57

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	10	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	20	Baht/50kg	344	247	137.5	98.8
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.28	Baht/ton	100	87	28	24.36
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							377.54	318.57

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	0	Baht/50kg	257	185	0.00	0.00
	16-16-8	kg / rai	20	Baht/50kg	266	181	106.53	72.46
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0.00	0.00
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.02	Baht/liter	450	428	9	8.55
	Fungicides	liter/rai	0.015	Baht/liter	200	190	3	2.85
Tractor		days	0	Baht/rai	180	151.2	0	0
Transport (Truck)		ton	0.35	Baht/ton	100	87	35	30.45
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							353.53	298.31

Note: Price of fertilizer is based on the price calculated from the international price.

**Rice non glutinous**

Economic price		
Present	Future without	Future with
318.57	318.57	298.31

**Table G-PE-SN-6-1-3 PRODUCTION COST SAKOHN NAKON AREA**

**Cassava**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Stem	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	1.7	Baht/ton	100	87	170	147.9
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							754.83	611.45

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	1.7	Baht/ton	100	87	170	147.9
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							754.83	611.45

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1,600	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg / rai	20	Baht/50kg	334	210	133.5	83.9
	15-15-15	kg / rai	40	Baht/50kg	257	185	205.3	148.0
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
		liter/ rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	2.5	Baht/ton	100	87	250	217.5
Hired labor		mandays	2.5	Baht/manday	70	64.4	175	161
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							943.8	761.6

Note: Price of fertilizer is based on the price calculated from the international price.

**Cassava**

Economic price

Present	Future without	Future with
611.45	611.45	761.58

**Table G-PE-SN-6-1-4 PRODUCTION COST SAKOHN NAKON AREA**  
Sugarcane

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Stem	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	358	223	193.3	120.3
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	7.2	Baht/ton	180	156.6	1,296	1,128
Hired labor		mandays	11	Baht/manday	100	92	1,100	1,012
Fuel&Others		Liter	12.5	Baht/liter	12	10.8	150	135
Total Production Cost							2,939.3	2,562.9

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	358	223	193.3	120.3
	16-16-8	kg/rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	7.2	Baht/ton	180	156.6	1,296	1,127.52
Hired labor		mandays	11	Baht/manday	100	92	1,100	1,012
Fuel&Others		Liter	12.5	Baht/liter	12	10.8	150	135
Total Production Cost							2,939.3	2,562.9

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	5,000	Baht/kg	0	0	0	0
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	334	210	0.0	0.0
	15-15-15	kg/rai	27	Baht/50kg	257	185	138.6	99.9
	16-16-8	kg/rai	0	Baht/50kg	266	181	0.0	0.0
	16-20-0	kg/rai	0	Baht/50kg	261	177	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
		liter/rai	0	Baht/liter	450	428	0	0
Tractor	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	7.2	Baht/ton	180	156.6	1,296	1,127.52
Hired labor		mandays	11	Baht/manday	100	92	1,100	1,012
Fuel&Others		Liter	12.5	Baht/liter	12	10.8	150	135
Total Production Cost							2,884.6	2,542.4

Note: Price of fertilizer is based on the price calculated from the international price.

**Sugarcane**

**Economic price**

Present	Future without	Future with
2562.85	2562.85	2542.41

**Table G-PE-SN-6-1-5 PRODUCTION COST SAKOHN NAKON AREA  
Soybean**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							886.0	746.4

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							885.96	746.39

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	15	Baht/kg	17	16	255	242.25
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	20	Baht/50kg	257	185	102.67	73.99
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	15	Baht/50kg	261	177	78.33	53.20
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0.1875	Baht/liter	450	428	84.4	80.2
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	1	Baht/manday	100	92	100	92
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							820.38	710.20

Note: Price of fertilizer is based on the price calculated from the international price.

**Soybean**

Economic price

Present	Future without	Future with
746.39	746.39	710.20

**Table G-PE-SN-6-1-6 PRODUCTION COST SAKOHN NAKON AREA  
Groundnuts**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							1106.6	953.0

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	20	Baht/50kg	358	223	143.2	89.1
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	15	Baht/50kg	345	247	103.4	74.2
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	2	Baht/manday	100	92	200	184
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							1,106.6	953.0

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	30	Baht/kg	14	13	420	399
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	20	Baht/50kg	257	185	102.67	73.99
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	15	Baht/50kg	261	177	78.33	53.20
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.267	Baht/liter	150	143	40.05	38.0475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	180	151.2	180	151.2
Transport (Truck)		ton	0.2	Baht/ton	100	87	20	17.4
Hired labor		mandays	2	Baht/manday	100	92	200	164
Fuel&Others		Liter	0	Baht/liter	0	0	0	0
Total Production Cost							1,041.1	916.8

Note: Price of fertilizer is based on the price calculated from the international price.

**Groundnuts**

Economic price

Present	Future without	Future with
953.03	953.03	916.84

**Table G-PE-SN-6-1-7 PRODUCTION COST SAKOHN NAKON AREA**  
**ChIII**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.25	Baht/kg	400	380	500	475
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	85	Baht/50kg	358	223	608.6	378.8
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134.4
Transport (Truck)		ton	1	Baht/ton	50	43.5	50	43.5
Hired labor		mandays	22	Baht/manday	100	92	2200	2024
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							4,453.1	3,943.5

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.3	Baht/kg	400	360	500	475
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	85	Baht/50kg	358	223	608.6	378.8
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134.4
Transport (Truck)		ton	1	Baht/ton	50	43.5	50	43.5
Hired labor		mandays	22	Baht/manday	100	92	2200	2024
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							4,453.1	3,943.5

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.25	Baht/kg	400	380	500	475
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.00	0.00
	15-15-15	kg / rai	85	Baht/50kg	257	185	436.34	314.46
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	2.9	Baht/liter	150	143	435	413.25
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	1.11	Baht/liter	450	428	499.5	474.525
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	1	Baht/rai	160	134.4	160	134.4
Transport (Truck)		ton	1	Baht/ton	50	43.5	50	43.5
Hired labor		mandays	22	Baht/manday	100	92	2200	2024
Fuel&Others		Liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							4,280.8	3,879.1

Note: Price of fertilizer is based on the price calculated from the international price.

ChIII

Economic price		
Present	Future without	Future with
3943.5	3943.5	3879.1

**Table G-PE-SN-G-1-8 PRODUCTION COST SAKOHN NAKON AREA  
Stringbean**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	70	Baht/50kg	358	223	501.2	312.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,196.3	1,860.5

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	433	311	86.6	62.2
	15-15-15	kg / rai	70	Baht/50kg	358	223	501.2	312.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,196.3	1,860.5

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	1.87	Baht/kg	400	380	748	710.6
Fertilizer	46-0-0	kg / rai	10	Baht/50kg	334	210	66.73	41.95
	15-15-15	kg / rai	70	Baht/50kg	257	185	359.34	258.97
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0.67	Baht/liter	150	143	100.5	95.475
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
		Fungicides	liter/ rai	0	Baht/liter	200	190	0
Tractor		days	1	Baht/rai	200	168	200	168
Transport (Truck)		ton	0.6	Baht/ton	100	87	60	52.2
Hired labor		mandays	5	Baht/manday	100	92	500	460
Fuel&Others		liter	0	Baht/liter	12	10.8	0	0
Total Production Cost							2,034.6	1,787.2

Note: Price of fertilizer is based on the price calculated from the international price.

**Stringbean**

Economic price

Present	Future without	Future with
1,860.5	1,860.5	1,787.2

**Table G-PE-SN-6-1-9 PRODUCTION COST SAKOHN NAKON AREA  
Mango**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base	
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358	223	164.7	102.5
	16-16-8	kg / rai	35	Baht/50kg	344	247	240.7	172.9
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	5	Baht/rai	100	84	41.7	35.0	
Transport (Truck)	ton	0	Baht/ton	100	87	0	0	
Hired labor	mandays	0	Baht/manday	100	92	0	0	
Fuel&Others	Liter	8.4	Baht/liter	12	10.8	100.8	90.72	
Total Production Cost							883.2	719.7

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base	
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	433	311	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	358	223	164.7	102.5
	16-16-8	kg / rai	35	Baht/50kg	344	247	240.7	172.9
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	5	Baht/rai	100	84	41.7	35.0	
Transport (Truck)	ton	0	Baht/ton	100	87	0	0	
Hired labor	mandays	0	Baht/manday	100	92	0	0	
Fuel&Others	Liter	8.4	Baht/liter	12	10.8	100.8	90.72	
Total Production Cost							883.2	719.7

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Calculated average value base	
					Financial	Economic	Financial	Economic
Seed	Planted	kg/ha	25	Baht/kg	40	38	83.3	79.2
Fertilizer	46-0-0	kg / rai	0	Baht/50kg	334	210	0.0	0.0
	15-15-15	kg / rai	23	Baht/50kg	257	185	118.1	85.1
	16-16-8	kg / rai	35	Baht/50kg	266	181	186.4	126.8
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	150	143	0	0
		liter/rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/rai	0.56	Baht/liter	450	428	252	239.4
	Fungicides	liter/rai	0	Baht/liter	200	190	0	0
Tractor	days	5	Baht/rai	100	84	41.7	35.0	
Transport (Truck)	ton	0	Baht/ton	100	87	0	0	
Hired labor	mandays	0	Baht/manday	100	92	0	0	
Fuel&Others	Liter	8.4	Baht/liter	12	10.8	100.8	90.72	
Total Production Cost							782.3	656.2

Note: Price of fertilizer is based on the price calculated from the international price.

**Mango**

Economic price

Present	Future without	Future with
719.7	719.7	656.2

**Table G-PE-SN-6-1-10 PRODUCTION COST SAKOHN NAKON AREA  
Eucalyptus**

Present		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Trees	Planted	kg/ha	400	Baht/kg	1.5	1.4	120	114
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.3	68.4
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	100	87	80	69.6
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							737.3	657.2

Future without		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.4	120.0	114.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	433	311	95.3	68.4
	15-15-15	kg / rai	0	Baht/50kg	358	223	0.0	0.0
	16-16-8	kg / rai	0	Baht/50kg	344	247	0.0	0.0
	16-20-0	kg / rai	0	Baht/50kg	345	247	0.0	0.0
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0	0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	100	87	80	69.6
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							737.3	657.2

Future with		Physical Inputs		Unit Prices		Total Value		
		Unit	Quantity	Unit	Price		Financial	Economic
Seed	Planted	kg/ha	400	Baht/kg	1.5	1.5	120.0	120.0
Fertilizer	46-0-0	kg / rai	11	Baht/50kg	334	210	73.4	46.1
	15-15-15	kg / rai	0	Baht/50kg	257	185	0.00	0.00
	16-16-8	kg / rai	0	Baht/50kg	266	181	0.00	0.00
	16-20-0	kg / rai	0	Baht/50kg	261	177	0.00	0.00
Chemical	Herbicides (Gramaxzone)	liter/ rai	0	Baht/liter	150	143	0.0	0.0
		liter/ rai	0	Baht/liter	0	0	0	0
	Insecticides (Karate)	liter/ rai	0	Baht/liter	450	428	0	0
	Fungicides	liter/ rai	0	Baht/liter	200	190	0	0
Tractor		days	0	Baht/rai	100	84	0	0
Transport (Truck)		ton	0.8	Baht/ton	100	87	80	69.6
Hired labor		mandays	3.7	Baht/manday	100	92	370	340.4
Fuel&Others		Liter	6	Baht/liter	12	10.8	72	64.8
Total Production Cost							715.4	640.9

Note: Price of fertilizer is based on the price calculated from the international price.

**Eucalyptus**

Economic price

Present	Future without	Future with
657.2	657.2	640.9

**Table G-PE-SN-6-1-11 PRODUCTION COST SAKOHN NAKON AREA  
Payaya**

Present		Physical Inputs		Unit Prices		Total Value			
		Unit	Quantity	Unit	Price		Financial	Economic	Financial
Stem	Planted	kg/ha	400	Baht/kg	Financial	Economic	Financial	Economic	
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	0.45	0.43	180	171	
	15-15-15	kg/rai	20	Baht/50kg	433	311	0.0	0.0	
	16-16-8	kg/rai	0	Baht/50kg	358	223	143.2	89.1	
	16-20-0	kg/rai	0	Baht/50kg	344	247	0.0	0.0	
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	345	247	0.0	0.0	
	Insecticides (Karate)	liter/rai	0	Baht/liter	150	143	0	0	
	Fungicides	liter/rai	0	Baht/liter	0	0	0	0	
Tractor		days	1	Baht/rai	450	428	0	0	
Transport (Truck)		ton	3	Baht/ton	200	190	0	0	
Hired labor		mandays	16	Baht/manday	160	134.4	160	134	
Fuel&Others		Liter	0	Baht/liter	100	87	300	261	
Total Production Cost					100	92	1,600	1,472	
					12	10.8	0	0	
							2,383.2	2,127.5	

Future without		Physical Inputs		Unit Prices		Total Value			
		Unit	Quantity	Unit	Price		Financial	Economic	Financial
Seed	Planted	kg/ha	400	Baht/kg	Financial	Economic	Financial	Economic	
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	0.45	0.43	180	171	
	15-15-15	kg/rai	20	Baht/50kg	433	311	0.0	0.0	
	16-16-8	kg/rai	0	Baht/50kg	358	223	143.2	89.1	
	16-20-0	kg/rai	0	Baht/50kg	344	247	0.0	0.0	
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	345	247	0.0	0.0	
	Insecticides (Karate)	liter/rai	0	Baht/liter	150	143	0	0	
	Fungicides	liter/rai	0	Baht/liter	0	0	0	0	
Tractor		days	1	Baht/rai	450	428	0	0	
Transport (Truck)		ton	3	Baht/ton	200	190	0	0	
Hired labor		mandays	16	Baht/manday	160	134.4	160	134.4	
Fuel&Others		Liter	0	Baht/liter	100	87	300	261	
Total Production Cost					100	92	1,600	1,472	
					12	10.8	0	0	
							2,383.2	2,127.5	

Future with		Physical Inputs		Unit Prices		Total Value			
		Unit	Quantity	Unit	Price		Financial	Economic	Financial
Seed	Planted	kg/ha	400	Baht/kg	Financial	Economic	Financial	Economic	
Fertilizer	46-0-0	kg/rai	0	Baht/50kg	0.45	0.43	180	171	
	15-15-15	kg/rai	20	Baht/50kg	334	210	0.00	0.00	
	16-16-8	kg/rai	0	Baht/50kg	257	185	102.67	73.99	
	16-20-0	kg/rai	0	Baht/50kg	266	181	0.00	0.00	
Chemical	Herbicides (Gramaxzone)	liter/rai	0	Baht/liter	261	177	0.00	0.00	
	Insecticides (Karate)	liter/rai	0	Baht/liter	150	143	0.0	0.0	
	Fungicides	liter/rai	0	Baht/liter	0	0	0	0	
Tractor		days	1	Baht/rai	450	428	0	0	
Transport (Truck)		ton	3	Baht/ton	200	190	0	0	
Hired labor		mandays	16	Baht/manday	160	134.4	160	134	
Fuel&Others		Liter	0	Baht/liter	100	87	300	261	
Total Production Cost					100	92	1,600	1,472	
					12	10.8	0	0	
							2,342.7	2,112.4	

Note: Price of fertilizer is based on the price calculated from the international price.

**Payaya**

Present	Future without	Future with
2127.5	2127.5	2112.4



# SAKOHN NAKON

TABLE G-PE-SN-8-1-1 Net Value of Production at full development

## Future without

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	10,280	350	3,365	1,177.6	318.6	859.0	8,831
	Rice non-glutinous	2,570	350	3,738	1,308.4	318.6	989.9	2,544
	Cassava	6,398	1,800	793	1,427.1	611.5	815.7	5,219
	Sugarcane	2,990	7,200	437	3,144.0	2562.9	581.1	1,738
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Groundnuts	0	230	3,560	818.9	953.0	-134.1	0
	Chilli d-1)	0	230	35,000	8,050.0	3943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1860.5	4,439.5	0
	Mango a)	2,112	579	10,000	5,791.7	719.7	5,072.0	10,712
	Eucalyptus b)	0	3,000	742	2,225.2	657.2	1,568.0	0
	Papaya	750	3,000	5,940	17,819.6	2127.5	15,692.1	11,769
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
Unplanted or farmyard etc	0	-	-	-	-	-	-	
<b>Total</b>		25,100						40,812
<b>Livestock</b>	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		1,255.0	0.4	4,834.1	1,933.6	1,608.5	325.1	408
	Chicken e)	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		50,200	1.5	42	64	22	41	4,151
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		6	178	30	5,340	2,307	3,033	18
<b>Total</b>								45,389

## Future with

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	9,880	400	2,990	1,196.1	316.4	879.7	8,691
	Rice non-glutinous	2,470	400	3,322	1,329.0	298.3	1,030.7	2,546
	Cassava	3,664	2,500	793	1,982.1	761.6	1,220.5	4,472
	Sugarcane	2,110	7,200	423	3,044.4	2542.4	502.0	1,059
	Soybean	151	216	4,814	1,039.7	710.2	329.5	50
	Groundnuts	150	230	3,081	708.7	916.8	-208.2	-31
	Chilli d-1)	295	230	35,000	8,050.0	3879.1	4,170.9	3,691
	Stringbean d-2)	295	700	9,000	6,300.0	1787.2	4,512.8	3,994
	Mango a)	2,730	579	10,000	5,791.7	656.2	5,135.5	14,020
	Eucalyptus b)	1,156	3,000	742	2,225.2	640.9	1,584.3	1,831
	Papaya	910	3,000	5,799	17,397.8	2112.4	15,285.4	13,910
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
Unplanted or farmyard etc	1,610	-	-	-	-	-	-	
<b>Total</b>		25,421						54,233
<b>Livestock</b>	Cow	(No. of head)	(ton/head)	(Baht/ton)	(Baht/head)	(Baht/head)	(Baht/head)	
		1,255	0.4	5,068.6	2,027.4	1,608.5	418.9	525.7
	Chicken	(No. of head)	(kg/head)	(Baht/kg)	(Baht/head)	(Baht/head)	(Baht/head)	
		144,600	1.5	42	64	22	41	11,957
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		236	178	30	5,340	2,307	3,033	716
<b>Total</b>								67,431

Note

a) Average yield and production cost for 12 years after planting.

b) Average yield and production cost for 5 years.

c) The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.

d-1),d-2) Vegetables are planted three times on same fields for one year.

e) Chicken is rotated two times for one year.

**Total net value of production**

**Without  
45,389**

**With  
67,431**

**Net Incremental value of production at full development**

**22,042**

# SAKOHN NAKON

**TABLE G-PE-SN-8-1-2 Net Value of Production at full development**  
The Case Excluded Chicken and Cow

## Future without

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	10,280	350	3,365	1,177.6	318.6	859.0	8,831
	Rice non-glutinous	2,570	350	3,738	1,308.4	318.6	989.9	2,544
	Cassava	6,398	1,800	793	1,427.1	611.5	815.7	5,219
	Sugarcane	2,990	7,200	437	3,144.0	2562.9	581.1	1,738
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Groundnuts	0	230	3,560	818.9	953.0	-134.1	0
	Chilli d-1)	0	230	35,000	8,050.0	3943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1860.5	4,439.5	0
	Mango a)	2,112	579	10,000	5,791.7	719.7	5,072.0	10,712
	Eucalyptus b)	0	3,000	742	2,225.2	657.2	1,568.0	0
	Papaya	750	3,000	5,940	17,819.6	2127.5	15,692.1	11,769
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et)	0	-	-	-	-	-	-
<b>Total</b>		<b>25,100</b>						<b>40,812</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		6	178	30	5,340	2,307	3,033	18
<b>Total</b>								<b>40,830</b>

## Future with

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	9,880	400	2,990	1,196.1	316.4	879.7	8,691
	Rice non-glutinous	2,470	400	3,322	1,329.0	298.3	1,030.7	2,546
	Cassava	3,664	2,500	793	1,982.1	761.6	1,220.5	4,472
	Sugarcane	2,110	7,200	423	3,044.4	2542.4	502.0	1,059
	Soybean	151	216	4,814	1,039.7	710.2	329.5	50
	Groundnuts	150	230	3,081	708.7	916.8	-208.2	-31
	Chilli d-1)	295	230	35,000	8,050.0	3879.1	4,170.9	3,691
	Stringbean d-2)	295	700	9,000	6,300.0	1787.2	4,512.8	3,994
	Mango a)	2,730	579	10,000	5,791.7	656.2	5,135.5	14,020
	Eucalyptus b)	1,156	3,000	742	2,225.2	640.9	1,584.3	1,831
	Papaya	910	3,000	5,799	17,397.8	2112.4	15,285.4	13,910
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et)	1,610	-	-	-	-	-	-
<b>Total</b>		<b>25,421</b>						<b>54,233</b>
<b>Fishery</b>	Tilapia	(rai)	(kg/rai)	(Baht/kg)	(Baht/rai)	(Baht/rai)	(Baht/rai)	
		236	178	30	5,340	2,307	3,033	716
<b>Total</b>								<b>54,948</b>

### Note

- Average yield and production cost for 12 years after planting.
- Average yield and production cost for 5 years.
- The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1),d-2) Vegetables are planted three times on same fields for one year.
- Chicken is rotetaed two times for one year.

**Total net value of production**

**Without 40,830**      **With 54,948**

**Net incremental value of production at full development**

**14,118**

**TABLE G-PE-SN-9-1-1 BENEFIT COST RATIO**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000' Baht) 12% discounted
	Investment	O&M			Benefit	Benefit	
1	4,967.8			-4,967.8	0.0	4,435.5	0.893
2	4,967.8			-4,967.8	0.0	3,960.3	0.797
3	35,763.1			-35,763.1	0.0	25,455.5	0.712
4	35,763.1			-35,763.1	0.0	22,728.1	0.636
5		3,387.7	22,041.9	18,654.2	12,507.2	1,922.3	0.567
6		3,387.7	22,041.9	18,654.2	11,167.1	1,716.3	0.507
7		3,387.7	22,041.9	18,654.2	9,970.7	1,532.4	0.452
8		3,387.7	22,041.9	18,654.2	8,902.4	1,368.3	0.404
9		3,387.7	22,041.9	18,654.2	7,948.5	1,221.7	0.361
10		3,387.7	22,041.9	18,654.2	7,096.9	1,090.8	0.322
11		3,387.7	22,041.9	18,654.2	6,336.5	973.9	0.287
12		3,387.7	22,041.9	18,654.2	5,657.6	869.5	0.257
13		3,387.7	22,041.9	18,654.2	5,051.4	776.4	0.229
14		3,387.7	22,041.9	18,654.2	4,510.2	693.2	0.205
15		3,387.7	22,041.9	18,654.2	4,027.0	618.9	0.183
16		3,387.7	22,041.9	18,654.2	3,595.5	552.6	0.163
17		3,387.7	22,041.9	18,654.2	3,210.3	493.4	0.146
18		3,387.7	22,041.9	18,654.2	2,866.3	440.5	0.130
19		3,387.7	22,041.9	18,654.2	2,559.2	393.3	0.116
20		3,387.7	22,041.9	18,654.2	2,285.0	351.2	0.104
21		3,387.7	22,041.9	18,654.2	2,040.2	313.6	0.093
22		3,387.7	22,041.9	18,654.2	1,821.6	280.0	0.083
23		3,387.7	22,041.9	18,654.2	1,626.4	250.0	0.074
24		3,387.7	22,041.9	18,654.2	1,452.2	223.2	0.066
25		3,387.7	22,041.9	18,654.2	1,296.6	199.3	0.059
26		3,387.7	22,041.9	18,654.2	1,157.7	177.9	0.053
27		3,387.7	22,041.9	18,654.2	1,033.6	158.9	0.047
28		3,387.7	22,041.9	18,654.2	922.9	141.8	0.042
29		3,387.7	22,041.9	18,654.2	824.0	126.6	0.037
30		3,387.7	22,041.9	18,654.2	735.7	113.1	0.033
					110,603	73,579	
<b>Internal Rate of Return</b>							<b>19.62%</b>
<b>B/C RATIO</b>							<b>1.503</b>

**TABLE G-PE-SN-9-1-2 BENEFIT COST RATIO**

**The Case Excluded Chicken and Cow**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000'Baht)
	Investment	O&M			Benefit	Cost	12% discounted
1	4,967.8			-4,967.8	0.0	4,435.5	0.893
2	4,967.8			-4,967.8	0.0	3,960.3	0.797
3	35,763.1			-35,763.1	0.0	25,455.5	0.712
4	35,763.1			-35,763.1	0.0	22,728.1	0.636
5		3,387.7	14,118.3	10,730.6	8,011.1	1,922.3	0.567
6		3,387.7	14,118.3	10,730.6	7,152.8	1,716.3	0.507
7		3,387.7	14,118.3	10,730.6	6,386.4	1,532.4	0.452
8		3,387.7	14,118.3	10,730.6	5,702.2	1,368.3	0.404
9		3,387.7	14,118.3	10,730.6	5,091.2	1,221.7	0.361
10		3,387.7	14,118.3	10,730.6	4,545.7	1,090.8	0.322
11		3,387.7	14,118.3	10,730.6	4,058.7	973.9	0.287
12		3,387.7	14,118.3	10,730.6	3,623.8	869.5	0.257
13		3,387.7	14,118.3	10,730.6	3,235.6	776.4	0.229
14		3,387.7	14,118.3	10,730.6	2,888.9	693.2	0.205
15		3,387.7	14,118.3	10,730.6	2,579.4	618.9	0.183
16		3,387.7	14,118.3	10,730.6	2,303.0	552.6	0.163
17		3,387.7	14,118.3	10,730.6	2,056.3	493.4	0.146
18		3,387.7	14,118.3	10,730.6	1,835.9	440.5	0.130
19		3,387.7	14,118.3	10,730.6	1,639.2	393.3	0.116
20		3,387.7	14,118.3	10,730.6	1,463.6	351.2	0.104
21		3,387.7	14,118.3	10,730.6	1,306.8	313.6	0.093
22		3,387.7	14,118.3	10,730.6	1,166.8	280.0	0.083
23		3,387.7	14,118.3	10,730.6	1,041.8	250.0	0.074
24		3,387.7	14,118.3	10,730.6	930.1	223.2	0.066
25		3,387.7	14,118.3	10,730.6	830.5	199.3	0.059
26		3,387.7	14,118.3	10,730.6	741.5	177.9	0.053
27		3,387.7	14,118.3	10,730.6	662.1	158.9	0.047
28		3,387.7	14,118.3	10,730.6	591.1	141.8	0.042
29		3,387.7	14,118.3	10,730.6	527.8	126.6	0.037
30		3,387.7	14,118.3	10,730.6	471.2	113.1	0.033
					70,843	73,579	
<b>Internal Rate of Return</b>							<b>11.37%</b>
<b>B/C RATIO</b>							<b>0.963</b>

**SAKOHN NAKON AREA**

**TABLE G-PE-SN-10-1 Annual Maintenance Cost**

(000' Baht)

	Tax excluded			Economic cost			Total
	F/C	L/C	Total	F/C	L/C	Total	
Farm Pond	199	106	305	116	62	179	182
Farm Road	3,125	1,295	4,420	2,204	913	3,117	3,206
<b>Total</b>							<b>3,388</b>

**TABLE G-PE-SN-10-2 Construction Cost**

	F/C	L/C	Total
Civil Works Farm Pond	15,093	8,499	23,592
Farm Road	44,643	18,506	63,149
Sub total	59,736	27,005	86,741
Design	0	14,245	14,245
Administration	5,974	2,700	8,674
Physical Contingencies	6,571	4,395	10,966
Sub total	72,281	48,345	120,626

**Economic Cost**

	F/C	L/C	Total	CF	CF	F/C	L/C	Total
Civil Works Farm Pond	8,834	4,974	13,808	1.09	0.88	9,629	4,378	14,007
Farm Road	31,487	13,052	44,539	1.09	0.88	34,321	11,486	45,807
Sub total	40,321	18,027	58,347			43,949	15,864	59,813
Design	0	9,259	9,259	1.09	0.92	0	8,519	8,519
Administration	3,883	1,755	5,638	1.09	0.92	4,233	1,615	5,847
Physical Contingencies	4,271	2,857	7,128	1.09	0.92	4,656	2,628	7,284
Sub total			80,373			52,838	28,625	81,462

**TABLE G-PE-SN-10-3 Construction cost**

	1999		2000		2001		2002		Total
	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	
Civil Works Farm Pond	0	0	0	0	7,547	4,250	7,547	4,250	23,592
Farm Road	0	0	0	0	22,322	9,253	22,322	9,253	63,149
Sub total	0	0	0	0	29,868	13,503	29,868	13,503	86,741
Design	0	7,122	0	7,122	0	0	0	0	14,244
Administration	0	540	0	540	2,987	810	2,987	810	8,674
Physical Contingencies	348	233	348	233	2,937	1,965	2,937	1,965	10,966
Sub total	348	7,895	348	7,895	35,792	16,278	35,792	16,278	120,625

	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	Total
Civil Works Farm Pond	0	0	0	0	4,417	2,487	4,417	2,487	13,808
Farm Road	0	0	0	0	15,743	6,526	15,743	6,526	44,539
Sub total	0	0	0	0	20,160	9,013	20,160	9,013	58,347
Design	0	4,629	0	4,629	0	0	0	0	9,259
Administration	0	351	0	351	1,942	527	1,942	527	5,638
Physical Contingencies	226	151	226	151	1,909	1,277	1,909	1,277	7,128
Sub total	226	5,132	226	5,132	44,171	19,830	44,171	19,830	80,372

**Economic Construction cost**

	1999		2000		2001		2002		Total
	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	
Civil Works Farm Pond	0	0	0	0	4,814	2,189	4,814	2,189	14,007
Farm Road	0	0	0	0	17,160	5,743	17,160	5,743	45,807
Sub total	0	0	0	0	21,975	7,932	21,975	7,932	59,813
Design	0	4,259	0	4,259	0	0	0	0	8,518
Administration	0	323	0	323	2,116	484	2,116	484	5,847
Physical Contingencies	247	139	247	139	2,081	1,175	2,081	1,175	7,284
Total	247	4,721	247	4,721	26,172	9,591	26,172	9,591	81,462
Annual total cost		4,968		4,968		35,763		35,763	

# KOHN KEAN Dredging Project(per 500m Dredging)

## Table G-PE-DD-1 Farmland Use

### Current Farmland Use

	KK Dredge	(rai)
Study Area	63	
Service area %	100	
Service area	63	
Rice glutinous	63	
Maize	0	
Cassava	0	
Watermelon	0	
Soybean	0	
Groundnuts	0	
Chilli	0	
Stringbean	0	
Mango	0	
Rubber(Eucalyptus)	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>63</b>	

### Future without Farmland Use

	Kohn Kean	(rai)
Study Area	63	
Service area %	100	
Service area	63	
Rice glutinous	63	
Maize	0	
Cassava	0	
Watermelon	0	
Soybean	0	
Groundnuts	0	
Chilli	0	
Stringbean	0	
Mango	0	
Rubber(Eucalyptus)	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>63</b>	

### Future with Farmland Use

	Kohn Kean	(rai)
Study Area	63	
Service area %	100	
Service area	63	
Rice glutinous	40	
Maize	0	
Cassava	0	
Watermelon	13	
Soybean	0	
Groundnuts	0	
Chilli	10	
Stringbean	13	
Mango	0	
Rubber(Eucalyptus)	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>76</b>	

Note Total area includes the area of soybean and groundnuts which is being to be planted after harvesting rice.

# KOHN KEAN Dredging Project

TABLE G-PE-DD-2 Net Value of Production at full development (Per 500m Dredging)

Future without		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(Baht)
Crops	Rice glutinous	63	300	3,394	1,018.3	318.3	700.0	44,099
	Rice non-glutinous	0	300	3,771	1,131.4	318.3	813.1	0
	Cassava	0	1,800	812	1,462.0	611.0	851.0	0
	Watermelon	0	3,200	3,300	10,560.0	2710.0	7,850.0	0
	Soybean	0	216	5,530	1,194.4	745.9	448.5	0
	Groundnuts	0	230	3,585	824.6	952.5	-127.9	0
	Chilli d-1)	0	230	35,000	8,050.0	3942.2	4,107.8	0
	Stringbean d-2)	0	700	9,000	6,300.0	1859.2	4,440.8	0
	Mango a)	0	579	10,000	5,791.7	718.8	5,072.8	0
	Eucalyptus b)	0	3,000	750	2,251.3	657.0	1,594.3	0
	Papaya	0	3,000	5,969	17,907.4	2127.2	15,780.2	0
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	0	-	-	-	-	-	-
<b>Total</b>		<b>63</b>						<b>44,099</b>
<b>Total</b>								<b>44,099</b>

Future with		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(Baht)
Crops	Rice glutinous	40	500	3,020	1,509.9	316.2	1,193.7	47,749
	Rice non-glutinous	0	350	3,355	1,174.4	298.1	876.3	0
	Cassava	0	2,500	812	2,030.5	761.0	1,269.6	0
	Watermelon	13	3,200	3,300	10,560.0	2710.0	7,850.0	102,050
	Soybean	0	216	4,847	1,046.9	709.8	337.1	0
	Groundnuts	0	230	3,103	713.6	916.4	-202.8	0
	Chilli d-1)	10	230	35,000	8,050.0	3877.8	4,172.2	125,166
	Stringbean d-2)	13	700	9,000	6,300.0	1786.1	4,513.9	176,042
	Mango a)	0	579	10,000	5,791.7	655.5	5,136.1	0
	Eucalyptus b)	0	3,000	750	2,251.3	640.9	1,610.4	0
	Papaya	0	3,000	5,828	17,484.2	2112.1	15,372.1	0
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	0	-	-	-	-	-	-
<b>Total</b>		<b>76</b>						<b>451,007</b>
<b>Total</b>								<b>451,007</b>

Note

- a) Average yield and production cost for 12 years after planting.
- b) Average yield and production cost for 5 years.
- c) The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1),d-2) Vegetables are planted three times on same fields for one year.
- e) Chicken is rotetaed two times for one year.

**Total net value of production**

**Without  
44,099**

**With  
451,007**

**Net incremental value of production at full development**

**406,908**

**TABLE G-PE-DD-3 BENEFIT COST RATIO and IRR**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000' Baht)
	Investment	O&M			Benefit	Cost	12% discounted
1	2,215,065			-2,215,065	0	1,977,736	0.893
2		23,610	406,908	383,298	324,385	18,822	0.797
3		23,610	406,908	383,298	289,629	16,805	0.712
4		23,610	406,908	383,298	258,598	15,005	0.636
5		23,610	406,908	383,298	230,891	13,397	0.567
6		23,610	406,908	383,298	206,152	11,962	0.507
7		23,610	406,908	383,298	184,065	10,680	0.452
8		23,610	406,908	383,298	164,343	9,536	0.404
9		23,610	406,908	383,298	146,735	8,514	0.361
10		23,610	406,908	383,298	131,014	7,602	0.322
11		23,610	406,908	383,298	116,976	6,787	0.287
12		23,610	406,908	383,298	104,443	6,060	0.257
13		23,610	406,908	383,298	93,253	5,411	0.229
14		23,610	406,908	383,298	83,262	4,831	0.205
15		23,610	406,908	383,298	74,341	4,313	0.183
16		23,610	406,908	383,298	66,376	3,851	0.163
17		23,610	406,908	383,298	59,264	3,439	0.146
18		23,610	406,908	383,298	52,914	3,070	0.130
19		23,610	406,908	383,298	47,245	2,741	0.116
20		23,610	406,908	383,298	42,183	2,448	0.104
21		23,610	406,908	383,298	37,663	2,185	0.093
22		23,610	406,908	383,298	33,628	1,951	0.083
23		23,610	406,908	383,298	30,025	1,742	0.074
24		23,610	406,908	383,298	26,808	1,555	0.066
25		23,610	406,908	383,298	23,936	1,389	0.059
26		23,610	406,908	383,298	21,371	1,240	0.053
27		23,610	406,908	383,298	19,081	1,107	0.047
28		23,610	406,908	383,298	17,037	989	0.042
29		23,610	406,908	383,298	15,212	883	0.037
30		23,610.2	406,908	383,298	13,582	788	0.033
					2,914,411	2,146,840	
<b>Internal Rate of Return</b>							<b>17.13%</b>
<b>B/C RATIO</b>							<b>1.358</b>

# Huai Bang Sai Irrigation Project

**Table G-PE-HB-1 Farmland Use Huai Bang Sai Irrigation Project  
Current Farmland Use**

	Huai Bang Sai Irrigation	(rai)
Study Area	1,476	
Service area %	100	
Service area	1,476	
Rice glutinous	270	
Rice non-glutinous	69	
Cassava	1,137	
Watermelon	0	
Soybean	0	
Babycorn	0	
Chilli	0	
Stringbean	0	
Mango	0	
Eucalyptus	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>1,476</b>	

## Future without Farmland Use

	Huai Bang Sai Irrigation	(rai)
Study Area	1,476	
Service area %	100	
Service area	1,476	
Rice glutinous	270	
Rice non-glutinous	69	
Cassava	1,137	
Watermelon	0	
Soybean	0	
Babycorn	0	
Chilli	0	
Stringbean	0	
Mango	0	
Eucalyptus	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>1,476</b>	

## Future with Farmland Use

	Huai Bang Sai Irrigation	(rai)
Study Area	1,476	
Service area %	100	
Service area	1,476	
Rice glutinous	263	
Rice non-glutinous	70	
Cassava	0	
Watermelon	108	
Soybean	571	
Babycorn	108	
Chilli	72	
Stringbean	463	
Mango	100	
Eucalyptus	434	
Papaya	45	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	0	
<b>Total</b>	<b>2,234</b>	

Note Total area includes the area of soybean and groundnuts which is being to be planted after harvesting rice.

# Huai Bang Sai Irrigation Project

TABLE G-PE-HB-2 Net Value of Production at full development

Future without		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
Crops	Rice glutinous	270	250	3,365	841.1	318.6	522.6	141
	Rice non-glutinous	69	250	3,738	934.6	318.6	616.0	43
	Cassava	1,137	1,800	793	1,427.1	611.5	815.7	927
	Watermelon	0	3,200	3,300	10,560.0	2710.0	7,850.0	0
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Babycorn	0	1,800	2,500	4,500.0	2650.0	1,850.0	0
	Chilli d-1)	0	230	35,000	8,050.0	3943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1860.5	4,439.5	0
	Mango a)	0	579	10,000	5,791.7	719.7	5,072.0	0
	Eucalyptus b)	0	3,000	742	2,225.2	692.0	1,533.2	0
	Papaya	0	3,000	5,940	17,819.6	2127.5	15,692.1	0
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	0	-	-	-	-	-	-
<b>Total</b>		<b>1,476</b>						<b>1,111</b>
<b>Total</b>								<b>1,111</b>

Future with		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
Crops	Rice glutinous	263	350	2,990	1,046.6	316.4	730.1	192
	Rice non-glutinous	70	350	3,322	1,162.9	298.3	864.6	61
	Cassava	0	2,500	793	1,982.1	761.6	1,220.5	0
	Watermelon	108	3,200	3,300	10,560.0	2710.0	7,850.0	848
	Soybean	571	216	4,814	1,039.7	710.2	329.5	188
	Babycorn	108	2,000	2,500	5,000.0	2650.0	2,350.0	254
	Chilli d-1)	72	230	35,000	8,050.0	3879.1	4,170.9	901
	Stringbean d-2)	463	700	9,000	6,300.0	1787.2	4,512.8	2,089
	Mango a)	100	579	10,000	5,791.7	656.2	5,135.5	514
	Eucalyptus b)	434	3,000	742	2,225.2	675.7	1,549.5	672
	Papaya	45	4,000	5,799	23,197.1	2112.4	21,084.7	949
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	0	-	-	-	-	-	-
<b>Total</b>		<b>2,234</b>						<b>6,667</b>
<b>Total</b>								<b>6,667</b>

Note

- Average yield and production cost for 12 years after planting.
- Average yield and production cost for 5 years.
- The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.
- d-1),d-2) Vegetables are planted three times on same fields for one year.
- Chicken is rotated two times for one year.

**Total net value of production**

**Without 1,111**

**With 6,667**

**Net incremental value of production at full development**

**5,556**

**TABLE G-PE-HB-3 BENEFIT COST RATIO and IRR**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000 Baht) 12% discounted
	Investment	O&M			Benefit	Cost	
1	1,625			-1,624.8	0.0	1,450.7	0.893
2	1,625			-1,624.8	0.0	1,295.3	0.797
3	14,834			-14,834.0	0.0	10,558.6	0.712
4	14,834			-14,834.0	0.0	9,427.3	0.636
5		421.8	5,556.5	5,134.7	3,152.9	239.3	0.567
6		421.8	5,556.5	5,134.7	2,815.1	213.7	0.507
7		421.8	5,556.5	5,134.7	2,513.5	190.8	0.452
8		421.8	5,556.5	5,134.7	2,244.2	170.3	0.404
9		421.8	5,556.5	5,134.7	2,003.7	152.1	0.361
10		421.8	5,556.5	5,134.7	1,789.0	135.8	0.322
11		421.8	5,556.5	5,134.7	1,597.4	121.2	0.287
12		421.8	5,556.5	5,134.7	1,426.2	108.3	0.257
13		421.8	5,556.5	5,134.7	1,273.4	96.7	0.229
14		421.8	5,556.5	5,134.7	1,137.0	86.3	0.205
15		421.8	5,556.5	5,134.7	1,015.1	77.1	0.183
16		421.8	5,556.5	5,134.7	906.4	68.8	0.163
17		421.8	5,556.5	5,134.7	809.3	61.4	0.146
18		421.8	5,556.5	5,134.7	722.6	54.8	0.130
19		421.8	5,556.5	5,134.7	645.1	49.0	0.116
20		421.8	5,556.5	5,134.7	576.0	43.7	0.104
21		421.8	5,556.5	5,134.7	514.3	39.0	0.093
22		421.8	5,556.5	5,134.7	459.2	34.9	0.083
23		421.8	5,556.5	5,134.7	410.0	31.1	0.074
24		421.8	5,556.5	5,134.7	366.1	27.8	0.066
25		421.8	5,556.5	5,134.7	326.9	24.8	0.059
26		421.8	5,556.5	5,134.7	291.8	22.2	0.053
27		421.8	5,556.5	5,134.7	260.6	19.8	0.047
28		421.8	5,556.5	5,134.7	232.6	17.7	0.042
29		421.8	5,556.5	5,134.7	207.7	15.8	0.037
30		421.8	5,556.5	5,134.7	185.5	14.1	0.033
					27,882	24,848	
<b>Internal Rate of Return</b>							<b>13.68%</b>
<b>B/C RATIO</b>							<b>1.122</b>

# Huai Lak Irrigation Project

**Table G-PE-HL-1 Farmland Use Huai Lak Irrigation Project  
Current Farmland Use**

	Huai Lak Reservoir	(rai)
Study Area	1,456	
Service area %	100	
Service area	1,456	
Rice glutinous	640	
Rice non-glutinous	160	
Cassava	630	
Watermelon	0	
Soybean	0	
Babycorn	0	
Chilli	0	
Stringbean	0	
Mango	0	
Eucalyptus	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	26	
<b>Total</b>	<b>1,456</b>	

## Future without Farmland Use

	Huai Lak Reservoir	(rai)
Study Area	1,456	
Service area %	100	
Service area	1,456	
Rice glutinous	640	
Rice non-glutinous	160	
Cassava	630	
Watermelon	0	
Soybean	0	
Babycorn	0	
Chilli	0	
Stringbean	0	
Mango	0	
Eucalyptus	0	
Papaya	0	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	26	
<b>Total</b>	<b>1,456</b>	

## Future with Farmland Use

	Huai Lak Reservoir	(rai)
Study Area	1,456	
Service area %	100	
Service area	1,456	
Rice glutinous	627	
Rice non-glutinous	157	
Cassava	386	
Watermelon	215	
Soybean	354	
Babycorn	215	
Chilli	15	
Stringbean	15	
Mango	180	
Eucalyptus	0	
Papaya	50	
Grassland	0	
Fallow	0	
Unplanted or farmyard etc.	26	
<b>Total</b>	<b>2,240</b>	

Note Total area includes the area of soybean, watermelon, and babycorn which is being to be planted after harvesting

# Huai Lak Irrigation Project

TABLE G-PE-HL-2 Net Value of Production at full development

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	640	250	3,365	841.1	318.6	522.6	334
	Rice non-glutinous	160	250	3,738	934.6	318.6	616.0	99
	Cassava	630	1,800	793	1,427.1	611.5	815.7	514
	Watermelon	0	3,200	3,300	10,560.0	2,710.0	7,850.0	0
	Soybean	0	216	5,492	1,186.2	746.4	439.8	0
	Groundnuts	0	1,800	2,500	4,500.0	2,650.0	1,850.0	0
	Chilli d-1)	0	230	35,000	8,050.0	3,943.5	4,106.5	0
	Stringbean d-2)	0	700	9,000	6,300.0	1,860.5	4,439.5	0
	Mango a)	0	579	10,000	5,791.7	719.7	5,072.0	0
	Eucalyptus b)	0	3,000	742	2,225.2	692.0	1,533.2	0
	Papaya	0	4,000	5,940	23,759.5	2,127.5	21,631.9	0
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	26	-	-	-	-	-	-
<b>Total</b>		<b>1,456</b>						<b>947</b>
<b>Total</b>								<b>947</b>

		Area	Yield	Farmgate Price	Gross value of Production	Production Cost	Net Value of Production	Net Value of Production in project area
		(rai)	(kg/rai)	(Baht/ton)	(Baht/rai)	(Baht/rai)	(Baht/rai)	(000 Baht)
<b>Crops</b>	Rice glutinous	627	350	2,990	1,046.6	316.4	730.1	458
	Rice non-glutinous	157	350	3,322	1,162.9	298.3	864.6	136
	Cassava	386	2,500	793	1,982.1	761.6	1,220.5	471
	Watermelon	215	3,200	3,300	10,560.0	2,710.0	7,850.0	1,688
	Soybean	354	216	4,814	1,039.7	710.2	329.5	117
	Babycorn	215	2,000	2,500	5,000.0	2,650.0	2,350.0	505
	Chilli d-1)	15	230	35,000	8,050.0	3,879.1	4,170.9	188
	Stringbean d-2)	15	700	9,000	6,300.0	1,787.2	4,512.8	203
	Mango a)	180	579	10,000	5,791.7	656.2	5,135.5	924
	Eucalyptus b)	0	3,000	742	2,225.2	675.7	1,549.5	0
	Papaya	50	4,000	5,799	23,197.1	2,112.4	21,084.7	1,054
	Grassland c)	0	-	-	-	-	-	-
	Fallow	0	-	-	-	-	-	-
	Unplanted or farmyard et	26	-	-	-	-	-	-
<b>Total</b>		<b>2,240</b>						<b>5,744</b>
<b>Total</b>								<b>5,744</b>

Note

a) Average yield and production cost for 12 years after planting.

b) Average yield and production cost for 5 years.

c) The increase of grassland area in KK and MH is reflected on the cost reduction of feed of cows.

d-1),d-2) Vegetables are planted three times on same fields for one year.

e) Chicken is rotated two times for one year.

**Total net value of production**

**Without  
947**

**With  
5,744**

**Net incremental value of production at full development**

**4,797**

**TABLE G-PE-HL-3 BENEFIT COST RATIO and IRR**

Year	Project Cost		Benefit	Incremental Benefit (Cash Flow)	Discounted Value		(000'Baht) 12% discounted
	Investment	O&M			Benefit	Cost	
1	7,581			-7,581.3	0.0	6,769.0	0.893
2	7,581			-7,581.3	0.0	6,043.7	0.797
3	67,280			-67,279.7	0.0	47,888.3	0.712
4	67,280			-67,279.7	0.0	42,757.4	0.636
5		262.0	4,796.8	4,534.9	2,721.9	148.6	0.567
6		262.0	4,796.8	4,534.9	2,430.2	132.7	0.507
7		262.0	4,796.8	4,534.9	2,169.8	118.5	0.452
8		262.0	4,796.8	4,534.9	1,937.4	105.8	0.404
9		262.0	4,796.8	4,534.9	1,729.8	94.5	0.361
10		262.0	4,796.8	4,534.9	1,544.5	84.3	0.322
11		262.0	4,796.8	4,534.9	1,379.0	75.3	0.287
12		262.0	4,796.8	4,534.9	1,231.2	67.2	0.257
13		262.0	4,796.8	4,534.9	1,099.3	60.0	0.229
14		262.0	4,796.8	4,534.9	981.5	53.6	0.205
15		262.0	4,796.8	4,534.9	876.4	47.9	0.183
16		262.0	4,796.8	4,534.9	782.5	42.7	0.163
17		262.0	4,796.8	4,534.9	698.6	38.2	0.146
18		262.0	4,796.8	4,534.9	623.8	34.1	0.130
19		262.0	4,796.8	4,534.9	556.9	30.4	0.116
20		262.0	4,796.8	4,534.9	497.3	27.2	0.104
21		262.0	4,796.8	4,534.9	444.0	24.2	0.093
22		262.0	4,796.8	4,534.9	396.4	21.6	0.083
23		262.0	4,796.8	4,534.9	353.9	19.3	0.074
24		262.0	4,796.8	4,534.9	316.0	17.3	0.066
25		262.0	4,796.8	4,534.9	282.2	15.4	0.059
26		262.0	4,796.8	4,534.9	251.9	13.8	0.053
27		262.0	4,796.8	4,534.9	224.9	12.3	0.047
28		262.0	4,796.8	4,534.9	200.8	11.0	0.042
29		262.0	4,796.8	4,534.9	179.3	9.8	0.037
30		262.0	4,796.8	4,534.9	160.1	8.7	0.033
					24,070	104,773	
<b>Internal Rate of Return</b>							<b>#DIV/0!</b>
<b>B/C RATIO</b>							<b>0.230</b>