

(5)

\*\*\* PRESENT WORTH OF COST \*\*\*

(UNIT: THOUSAND BAHT)

YEAR	C-STREAM	11.00 *	12.00 *	13.00 *	14.00 *	15.00 *	16.00 *	17.00 *	18.00 *	19.00 *	20.00 *
1	3134.	2823.	2798.	2773.	2749.	2725.	2702.	2679.	2656.	2634.	2612.
2	15412.	12509.	12286.	12070.	11859.	11654.	11454.	11259.	11069.	10883.	10703.
3	143244.	104739.	101958.	99276.	96686.	94185.	91770.	89438.	87183.	85003.	82896.
4	103921.	68456.	66044.	63737.	61530.	59417.	57395.	55458.	53601.	51822.	50116.
5	129688.	76964.	73589.	70390.	67356.	64478.	61744.	59152.	56688.	54346.	52119.
6	104788.	56024.	53089.	50332.	47740.	45303.	43009.	40851.	38817.	36900.	35093.
7	85134.	41006.	38510.	36187.	34023.	32005.	30123.	28364.	26726.	25193.	23759.
8	11562.	5017.	4670.	4349.	4053.	3780.	3527.	3293.	3076.	2875.	2689.
9	11562.	4520.	4169.	3849.	3555.	3287.	3040.	2814.	2607.	2416.	2241.
10	11562.	4072.	3723.	3406.	3119.	2858.	2621.	2405.	2209.	2030.	1867.
11	11562.	3668.	3324.	3014.	2736.	2485.	2259.	2056.	1872.	1706.	1556.
12	11562.	3305.	2968.	2657.	2400.	2161.	1948.	1757.	1587.	1434.	1297.
13	11562.	2977.	2650.	2361.	2105.	1879.	1679.	1502.	1345.	1205.	1081.
14	11562.	2682.	2366.	2089.	1847.	1634.	1448.	1284.	1139.	1012.	901.
15	11562.	2417.	2112.	1849.	1620.	1421.	1248.	1097.	966.	851.	750.
16	11562.	2177.	1886.	1636.	1421.	1236.	1076.	938.	818.	715.	625.
17	19662.	3335.	2864.	2462.	2120.	1827.	1577.	1363.	1179.	1022.	886.
18	11562.	1767.	1504.	1281.	1093.	934.	799.	685.	588.	505.	434.
19	11562.	1592.	1362.	1134.	959.	812.	689.	585.	498.	424.	362.
20	11562.	1434.	1199.	1003.	841.	706.	594.	500.	422.	357.	302.
21	11562.	1292.	1070.	886.	738.	614.	512.	428.	358.	300.	251.
22	11562.	1164.	956.	786.	647.	534.	442.	366.	303.	252.	209.
23	11562.	1049.	853.	695.	568.	465.	381.	312.	257.	212.	175.
24	26562.	2170.	1750.	1414.	1144.	928.	754.	613.	500.	408.	334.
25	11562.	851.	680.	545.	437.	351.	283.	228.	184.	149.	126.
26	11562.	767.	607.	482.	383.	305.	244.	195.	156.	126.	101.
27	19662.	1175.	922.	725.	572.	452.	357.	284.	225.	179.	143.
28	11562.	622.	484.	377.	295.	231.	181.	143.	112.	89.	70.
29	11562.	561.	432.	334.	259.	201.	156.	122.	95.	75.	58.
30	11562.	505.	386.	296.	227.	175.	135.	104.	81.	63.	49.
31	11562.	455.	345.	262.	199.	152.	116.	89.	68.	53.	41.
32	11562.	410.	308.	231.	175.	132.	100.	76.	58.	44.	34.
33	11562.	369.	275.	205.	153.	115.	86.	65.	49.	37.	28.
34	11562.	333.	245.	181.	134.	100.	74.	56.	42.	31.	23.
35	11562.	300.	219.	160.	118.	87.	64.	47.	35.	26.	20.
36	11562.	270.	196.	142.	103.	75.	55.	41.	30.	22.	16.
37	19662.	414.	297.	214.	154.	112.	81.	59.	43.	32.	23.
38	11562.	219.	156.	111.	80.	57.	41.	30.	21.	16.	11.
39	11562.	197.	139.	98.	70.	50.	35.	25.	18.	13.	9.
40	11562.	178.	124.	87.	61.	43.	31.	22.	15.	11.	8.
41	11562.	160.	111.	77.	54.	38.	26.	19.	13.	9.	7.
42	11562.	144.	99.	68.	47.	33.	23.	16.	11.	8.	5.
43	11562.	130.	88.	60.	41.	28.	20.	14.	9.	7.	5.
44	26562.	269.	181.	123.	83.	57.	39.	27.	18.	13.	9.
45	11562.	106.	71.	47.	32.	21.	15.	10.	7.	5.	3.
46	11562.	95.	63.	42.	28.	19.	13.	8.	6.	4.	3.
47	19662.	146.	96.	63.	42.	28.	18.	12.	8.	6.	4.
48	11562.	77.	50.	33.	21.	14.	9.	6.	4.	3.	2.
49	11562.	70.	45.	29.	19.	12.	8.	5.	3.	2.	2.
50	11562.	63.	40.	26.	17.	11.	7.	5.	3.	2.	1.
TOTAL	1144887.	416043.	394335.	374665.	354711.	340224.	325008.	310904.	297779.	285525.	274053.

(4)

\*\*\*\*\* CALCULATION OF INTERNAL RATE OF RETURN \*\*\*\*\*

(UNIT: THOUSAND BAHT)

DISCOUNT RATE	+++++ PRESENT WORTH BENEFIT	+++++ COST	B/C RATIO
11.00 %	525698.	416043.	1.26
12.00 %	456801.	394335.	1.16
13.00 %	399578.	374665.	1.07
14.00 %	351610.	356711.	0.99
15.00 %	311072.	340224.	0.91
16.00 %	276554.	325008.	0.85
17.00 %	246962.	310904.	0.79
18.00 %	221428.	297779.	0.74
19.00 %	199272.	285525.	0.70
20.00 %	179946.	274053.	0.66

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INTERNAL RATE OF RETURN ----- 13.8 %

Fig.A.6.4-6 Sensitivity Analysis Case-6  
 \*\*\* PLOT OF PW OF BENEFIT AND COST \*\*\*  
 Y AXIS : PRESENT WORTH VALUE  
 X AXIS : DISCOUNT RATE (%)  
 I.R.R. (\*) ----- 13.8 %

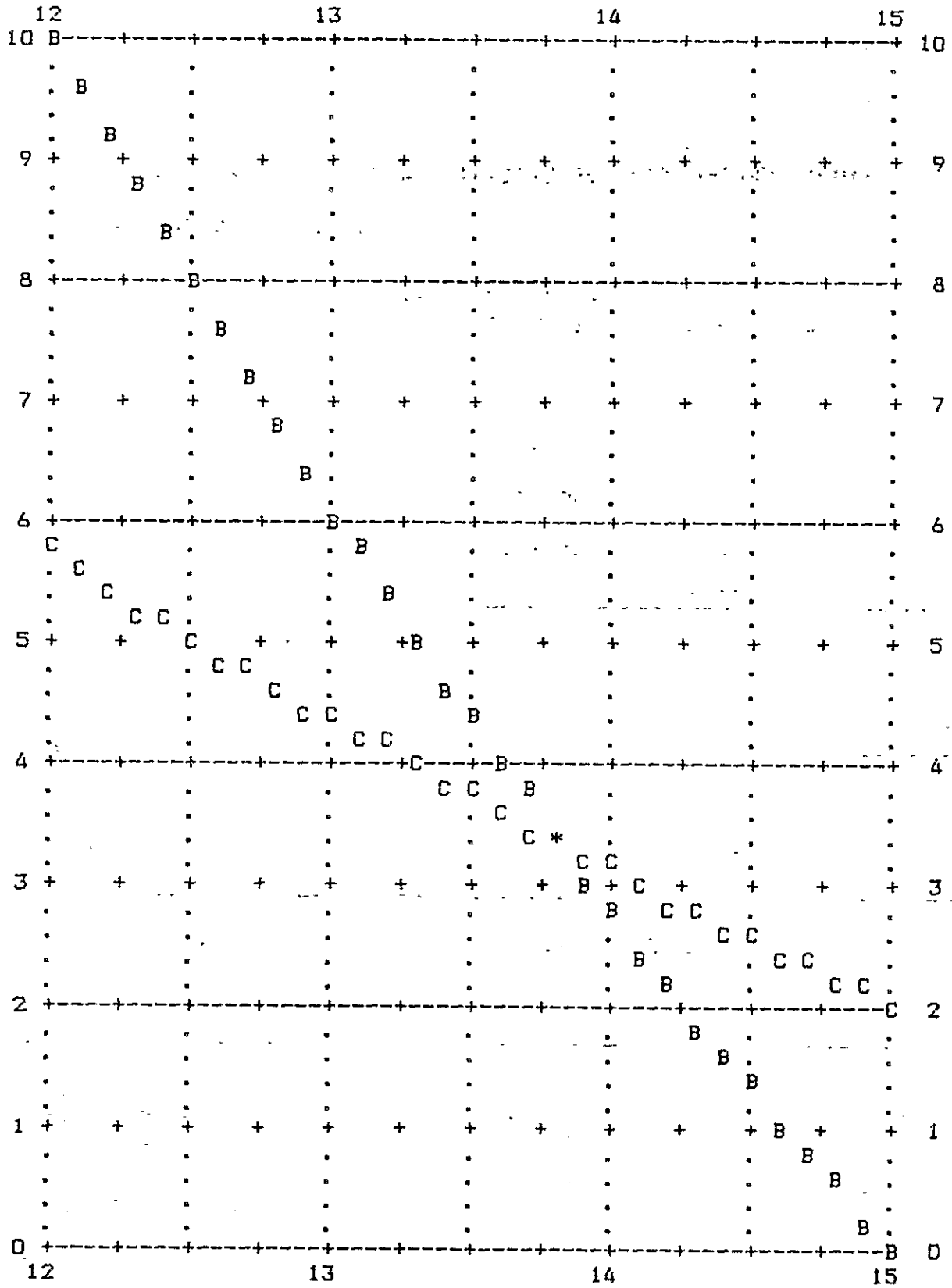


Table A.6.4-7 Disbursement Schedule of the Project (Including on-farm development)

(Unit: \$ 1,000)

Description	FY1982		FY1983		FY1984		FY1985		FY1986		FY1987		FY1988		TOTAL		
	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	
1. Survey Design	-	2,500	-	3,000	-	3,000	-	1,000	-	600	-	500	-	400	-	11,000	11,000
2. Civil Works	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1 Pumping Station	-	-	-	6,856	13,143	3,826	7,334	-	-	-	-	-	-	-	10,682	20,477	31,159
2.2 Irrigation Canal	-	-	-	14,058	20,766	18,842	27,833	29,087	42,964	23,629	34,902	15,249	22,524	100,865	146,989	249,854	496,843
2.3 Irri. Structures	-	-	-	1,601	7,243	2,438	9,795	3,734	15,005	3,034	12,191	1,958	7,867	12,965	52,101	65,066	117,167
2.4 Drainage Canal	-	-	-	-	-	2,351	1,062	11,760	5,309	7,056	3,185	5,317	2,400	26,484	11,956	38,440	50,396
2.5 Drain. Structures	-	-	-	-	-	-	537	673	2,682	403	1,610	134	537	1,344	5,366	6,710	12,076
2.6 On-farm Development	-	-	-	-	-	15,354	35,826	16,313	38,062	22,316	52,069	9,738	22,722	63,720	148,680	212,400	361,080
2.7 Transmission Line	-	-	-	-	-	-	3,620	-	-	-	-	-	-	-	3,620	3,620	7,240
Sub-total	-	-	-	22,715	41,152	42,945	86,007	61,567	104,022	56,438	103,957	32,396	56,050	216,060	391,189	607,249	998,498
3. Procurement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1 Pump Plants	-	-	-	52,465	-	-	5,000	-	-	-	-	-	-	-	52,465	5,000	57,465
3.2 Gates	-	-	-	-	-	-	-	-	-	1,020	-	-	280	1,020	280	1,300	2,600
3.3 Project Equipment	-	-	-	21,760	2,240	-	-	-	-	-	-	-	-	21,760	2,240	24,000	48,000
3.4 O.M. Equipment	-	-	-	-	-	-	-	-	-	-	-	8,100	900	8,100	900	9,000	18,000
Sub-total	-	-	-	74,225	2,240	-	5,000	-	-	-	1,020	-	8,100	1,180	83,545	8,420	91,965
4. Land Acquisition	-	-	-	1,560	-	3,110	5,360	-	4,670	-	2,600	-	-	-	17,300	17,300	34,600
5. Project Facilities	-	1,000	-	4,000	-	-	-	-	-	-	-	-	-	-	5,000	5,000	10,000
6. Supporting Services	-	-	-	400	-	400	400	-	400	-	400	-	-	400	2,400	2,400	4,800
7. Administration	-	350	-	896	-	14,984	14,071	-	17,126	-	16,492	-	-	9,858	73,777	73,777	147,554
8. Consulting Services	-	3,850	7,000	1,300	7,000	6,960	2,040	5,000	1,400	2,400	2,100	3,400	1,200	31,760	9,340	41,100	82,200
Total (1 - 8)	-	4,235	7,000	11,156	103,940	66,186	49,905	113,878	66,567	128,218	59,858	126,049	43,896	69,088	331,165	518,426	849,591
9. Physical Contingency	-	385	700	1,116	10,394	6,619	4,991	11,388	6,657	12,822	5,986	12,605	4,390	6,909	33,118	51,844	84,962
Total (1 - 9)	-	4,235	7,700	12,272	114,334	72,805	54,896	125,266	73,224	141,040	65,844	138,654	48,286	75,997	364,283	570,270	934,553
10. Price Escalation	-	356	1,201	2,148	26,640	19,949	17,182	47,726	28,997	70,097	31,737	86,243	27,571	57,682	133,328	284,201	417,529
Grand Total (1 - 10)	-	4,591	8,901	14,420	140,974	92,754	72,078	172,992	102,221	211,137	97,581	224,897	75,857	133,679	497,612	854,470	1,352,082

Table A.6.4-8 Economic Initial Cost (Including on-farm development )

(Unit: # 1,000)

Description	FY1982		FY1983		FY1984		FY1985		FY1986		FY1987		FY1988		TOTAL		
	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	
1. Survey Design	1,850	-	2,220	-	2,220	-	740	-	444	-	370	-	296	-	8,140	8,140	
2. Civil Works																	
2.1 Pumping Station	-	-	-	-	6,856	9,725	3,826	5,428	-	-	-	-	-	-	10,682	15,153	25,835
2.2 Irrigation Canal	-	-	-	-	14,058	15,367	18,842	20,596	29,087	31,792	23,629	25,828	15,249	16,668	100,865	110,251	211,116
2.3 Irri. Structures	-	-	-	-	1,801	5,360	2,438	7,248	3,734	11,104	3,034	9,021	1,958	5,822	12,965	38,555	51,520
2.4 Drainage Canal	-	-	-	-	-	-	2,351	786	11,760	3,929	7,056	2,357	5,317	1,776	26,484	8,848	35,332
2.5 Drai. Structures	-	-	-	-	-	-	134	397	673	1,985	403	1,191	134	397	1,344	3,970	5,314
2.6 On-farm Development	-	-	-	-	-	-	15,354	26,511	16,313	28,166	22,316	38,531	9,738	16,814	63,720	110,022	173,742
2.7 Transmission Line	-	-	-	-	-	-	-	2,679	-	-	-	-	-	-	-	2,679	2,679
Sub-total	-	-	22,715	30,452	42,945	63,645	61,567	76,976	56,438	76,928	32,396	41,477	216,060	289,478	505,538	505,538	
3. Procurement																	
3.1 Pump Plants	-	-	-	-	52,465	-	3,700	-	-	-	-	-	-	-	52,465	3,700	56,165
3.2 Gates	-	-	-	-	-	-	-	-	1,020	-	-	-	207	-	1,020	207	1,227
3.3 Project Equipment	-	-	-	-	21,760	1,658	-	-	-	-	-	-	-	-	21,760	1,658	23,418
3.4 O.M. Equipment	-	-	-	-	-	-	-	-	-	-	-	-	8,100	666	8,100	666	8,766
Sub-total	-	-	74,225	1,658	-	3,700	-	-	1,020	-	-	-	8,100	873	83,345	6,231	89,576
4. Land Acquisition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Project Facilities	740	-	2,960	-	-	-	-	-	-	-	-	-	-	-	-	3,700	3,700
6. Supporting Services	-	-	260	-	260	-	260	-	260	-	260	-	260	-	-	1,560	1,560
7. Administration	259	-	544	-	13,153	-	11,129	-	13,925	-	13,502	-	8,340	-	60,852	60,852	60,852
8. Consulting Services	-	-	7,000	1,027	7,000	1,027	6,960	1,612	5,000	1,106	2,400	1,659	3,400	948	31,760	7,379	39,139
Total (1 - 8)	2,849	7,000	7,011	103,940	48,770	49,905	81,086	66,567	92,711	59,858	92,719	43,896	52,194	331,165	377,340	708,505	
9. Physical Contingency	-	285	700	701	10,394	4,877	4,991	8,109	6,657	9,271	5,986	9,272	4,390	5,219	35,118	37,734	70,852
Total (1 - 9)	3,134	7,700	7,712	114,334	53,647	54,896	89,195	73,224	101,982	65,844	101,991	48,286	57,413	364,283	415,074	779,357	
10. Price Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total (1 - 10)	3,134	7,700	7,712	114,334	53,647	54,896	89,195	73,224	101,982	65,844	101,991	48,286	57,413	364,283	415,074	779,357	

Table A.6.4-9 Incremental Agricultural Production  
 - Including on-farm development -

(Unit: 1,000 tons)

<u>Crops</u>	<u>Without</u>	<u>With</u>	<u>Increment</u>
Wet S. LV (T.P.)	17.1	23.3	6.2
" HYV (T.P -Rain-fed)	4.3	-	Δ 4.3
" " (T.P -Irrigated)	5.6	28.7	23.1
" LV (B.C.)	1.6	-	Δ 1.6
Dry S. HYV (T.P.)	2.4	12.3	9.9
<u>Sub-total</u>	<u>31.0</u>	<u>64.3</u>	<u>33.3</u>
Wet S. Maize	0.9	1.2	0.3
Groundnuts	1.0	0.13	0.03
<u>Total</u>	<u>32.0</u>	<u>65.63</u>	<u>33.63</u>

Table A.6.4-10 Net Production Value  
 (Including on-farm development)  
 (Unit: ø1,000)

<u>Crops</u>	<u>Without</u>	<u>With</u>	<u>Increment</u>
Wet Season			
Paddy	124,674	237,813	113,139
Maize	1,679	2,212	533
Groundnuts	131	170	39
<u>Sub-total</u>	<u>126,484</u>	<u>240,195</u>	<u>113,711</u>
Dry Season			
Paddy	11,910	59,444	47,534
<u>Total</u>	<u>138,394</u>	<u>299,639</u>	<u>161,245</u>

Table A.6.4-11 Incremental Net Production Value (Economic at 1981 Constant Prices)  
 - Including on-farm development -

Without Project	L.V.	Wet Season			Dry Season			
		II.Y.V. (Rainfed)	II.Y.V. (Irrigated)	Broadcast	Maize	Groundnuts	Paddy	Total (₹1,000)
Yield (ton/ha)	2.0	2.6	2.8	1.7	2.1	2.0	3.5	-
Unit Price (₹/ton)	6,800	6,800	6,800	6,800	3,995	4,545	6,800	-
G.P.V. (₹/ha)	13,600	17,680	19,040	11,560	8,390	9,090	23,800	-
P.C. (₹/ha)	5,284	5,332	5,714	4,728	4,295	6,480	6,186	-
N.P.V. (₹/ha)	8,316	12,348	13,326	6,832	4,095	2,610	17,514	-
Cropped Area (ha)	8,550	1,660	2,000	940	410	50	680	-
Total N.P.V. (₹1,000)	71,102	20,498	26,652	6,422	1,679	131	11,910	138,394
With Project	3.4	-	4.2	-	2.7	2.6	4.4	-
Yield (ton/ha)	6,800	-	6,800	-	3,995	4,545	6,800	-
Unit Price (₹/ton)	23,120	-	28,560	-	10,787	11,817	29,920	-
G.P.V. (₹/ha)	8,355	-	8,577	-	5,643	8,409	8,690	-
P.C. (₹/ha)	14,785	-	19,983	-	5,144	3,408	21,230	-
N.P.V. (₹/ha)	6,840	-	6,840	-	430	50	2,800	-
Cropped Area (ha)	101,129	-	136,684	-	2,212	170	59,444	299,639
Total N.P.V. (₹1,000)	30,027	-20,498	110,032	-6,422	533	39	47,534	161,245
Incremental N.P.V.								

Table A.6.4-12 Summary of Economic Production Cost  
 - Including on-farm development -  
 (Unit: P/ha)

<u>Crop</u>	<u>Seed</u>	<u>Fertilizers</u>	<u>Agr. Chemicals</u>	<u>Labor</u>	<u>Agr. Machine</u>	<u>Animal</u>	<u>Pump</u>	<u>Others</u>	<u>Total</u>
<u>Without Project</u>									
<u>Wet Season</u>									
Paddy (T.P.)									
LV	406	809	53	2,093	1,502	267	-	154	5,284
HV (Rainfed)	432	990	53	2,129	1,317	256	-	155	5,532
HV (Irrigated)	432	990	53	2,129	1,317	256	371	166	5,714
Paddy (B.C.)	522	770	2	953	1,117	1,226	-	138	4,728
Maize	130	26	1,162	1,536	907	409	-	125	4,295
Groundnuts	1,728	26	-	3,391	350	796	-	189	6,480
<u>Dry Season</u>									
Paddy	432	1,210	53	2,126	1,317	256	612	180	6,186
<u>With Project</u>									
<u>Wet Season</u>									
Paddy									
LV	319	1,353	777	2,985	2,651	-	-	250	8,335
HV	360	1,518	809	2,982	2,651	-	-	257	8,577
Maize	72	1,320	1,549	1,242	1,296	-	-	164	5,643
Groundnuts	1,584	1,038	1,162	3,084	1,296	-	-	245	8,409
<u>Dry Season</u>									
Paddy	360	1,648	792	2,979	2,651	-	-	260	8,690



Table A.6.4-13 Crop Production Cost (Economic)

- Including on-farm development -

Season: Wet

Crop: Paddy (L.V.- T.P.)

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	5.8	70	406	55	319
<u>Fertilizers</u>						
Ammophos	kg	6.6	74	488	151	997
Ammonium Sulfate	kg	4.4	73	321	81	356
Potassium Chloride	kg	8.3	-	-	-	-
Sub-total	-	-	-	809	-	1,353
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	3	53	31	546
Saturn	kg	15.4	-	-	15	231
Asodrin	kg	193.6	-	-	-	-
Sub-total	-	-	-	53	-	777
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	87.2	2,093	99.5	2,985
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	28.3	1,347	37.4	1,780
Harrowing	hour	159.1	-	-	-	-
Ridging	hour	165.8	-	-	-	-
Fertilizing	hour	6.7	-	-	4.2	28
Duster	hour	5.7	-	-	9.6	55
Trailer	hour	60.8	-	-	6.0	365
Thresher	hour	47.0	3.3	155	9.0	423
Sub-total	-	-	-	1,502	-	2,651
<u>Draft Animal</u>	day	54.5	4.9	267	-	-
<u>Pump</u>						
Wet	ha	371.0	-	-	-	-
Dry	ha	612.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	L.S.	-	-	154	-	250
<u>Total</u>	-	-	-	<u>5,284</u>	-	<u>8,335</u>

Note: <sup>1/</sup> Without/With

Table A.6.4-14 Crop Production Cost (Economic)  
- Including on-farm development -

Season: Wet

Crop: Paddy (H.Y.V. - T.P.)

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	7.2	60	432	50	360
<u>Fertilizers</u>						
Ammophos	kg	6.6	90	594	144	950
Ammonium Sulfate	kg	4.4	90	396	129	568
Potassium Chloride	kg	8.3	-	-	-	-
Sub-total	-	-	-	990	-	1,518
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	3	53	32	563
Saturn	kg	15.4	-	-	16	246
Asodrin	kg	193.6	-	-	-	-
Sub-total	-	-	-	53	-	809
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	88.7	2,129	99.4	2,982
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	24.3	1,157	37.4	1,780
Harrowing	hour	159.1	-	-	-	-
Ridging	hour	165.8	-	-	-	-
Fertilizing	hour	6.7	-	-	4.2	28
Duster	hour	5.7	-	-	9.6	55
Trailer	hour	60.8	-	-	6.0	365
Thresher	hour	47.0	3.4	160	9.0	423
Sub-total	-	-	-	1,317	-	2,651
<u>Draft Animal</u>	day	54.5	4.7	256	-	-
<u>Pump</u>						
Wet	ha	371.0	1	371	-	-
Dry	ha	612.0	-	-	-	-
Sub-total	-	-	-	371	-	-
<u>Miscellaneous</u>	L.S.	-	-	166	-	257
<u>Total</u>	-	-	-	5,714 (5,332)	-	8,577

Note: <sup>1/</sup> Without/With

Table A.6.4-15

## Crop Production Cost (Economic)

- Including on-farm development -

Season: Wet

Crop: Paddy (Broadcasting)

(Unit: per ha)

Item	Unit	Price (B)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	5.8	90	522	-	-
<u>Fertilizers</u>						
Ammophos	kg	6.6	70	462	-	-
Ammonium Sulfate	kg	4.4	70	308	-	-
Potassium Chloride	kg	8.3	-	-	-	-
Sub-total	-	-	-	770	-	-
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	0.1	2	-	-
Saturn	kg	15.4	-	-	-	-
Asodrin	kg	193.6	-	-	-	-
Sub-total	-	-	-	2	-	-
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	59.7	953	-	-
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	20.2	962	-	-
Harrowing	hour	159.1	-	-	-	-
Ridging	hour	165.8	-	-	-	-
Fertilizing	hour	6.7	-	-	-	-
Duster	hour	5.7	-	-	-	-
Trailer	hour	60.8	-	-	-	-
Thresher	hour	47.0	3.3	155	-	-
Sub-total	-	-	-	1,117	-	-
<u>Draft Animal</u>	day	54.5	22.5	1,226	-	-
<u>Pump</u>						
Wet	ha	371.0	-	-	-	-
Dry	ha	612.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	L.S.	-	-	138	-	-
<u>Total</u>	-	-	-	<u>4,728</u>	-	-

Note: <sup>1/</sup> Without/With

Table A.6.4-16 Crop Production Cost (Economic)  
- Including on-farm development -

Season: Wet

Crop: Maize

(Unit: per ha)

Item	Unit	Price (B)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	7.2	18	130	10	72
<u>Fertilizers</u>						
Ammophos	kg	6.6	4	26	200	1,320
Ammonium Sulfate	kg	4.4	-	-	-	-
Potassium Chloride	kg	8.3	-	-	-	-
Sub-total	-	-	-	26	-	1,320
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	-	-	-	-
Saturn	kg	15.4	-	-	-	-
Asodrin	kg	193.6	6	1,162	8	1,549
Sub-total	-	-	-	1,162	-	1,549
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	64.0	1,536	41.4	1,242
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	-	-	-	-
Harrowing	hour	159.1	5.7	907	3.6	573
Ridging	hour	165.3	-	-	2.0	332
Fertilizing	hour	6.7	-	-	2.1	14
Duster	hour	5.7	-	-	2.1	12
Trailer	hour	60.8	-	-	6.0	365
Thresher	hour	47.0	-	-	-	-
Sub-total	-	-	-	907	-	1,296
<u>Draft Animal</u>	day	54.5	7.5	409	-	-
<u>Pump</u>						
Wet	ha	371.0	-	-	-	-
Dry	ha	612.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	L.S.	-	-	125	-	164
<u>Total</u>	-	-	-	<u>4,295</u>	-	<u>5,643</u>

Note: <sup>1/</sup> Without/With

Table A.6.4-17

## Crop Production Cost (Economic)

- Including on-farm development -

Season: Wet

Crop: Groundnuts

(Unit: per ha)

Item	Unit	Price (P)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	14.4	120	1,728	110	1,584
<u>Fertilizers</u>						
Amphos	kg	6.6	4	26	-	-
Ammonium Sulfate	kg	4.4	-	-	-	-
Potassium Chloride	kg	8.3	-	-	125	1,038
Sub-total	-	-	-	26	-	1,038
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	-	-	-	-
Saturn	kg	15.4	-	-	-	-
Asodrin	kg	193.6	-	-	6	1,162
Sub-total	-	-	-	-	-	1,162
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	141.3	3,391	102.8	3,084
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	-	-	-	-
Harrowing	hour	159.1	2.2	350	3.6	573
Ridging	hour	165.8	-	-	2.0	332
Fertilizing	hour	6.7	-	-	2.1	14
Duster	hour	5.7	-	-	2.1	12
Trailer	hour	60.8	-	-	6.0	365
Thresher	hour	47.0	-	-	-	-
Sub-total	-	-	-	350	-	1,296
<u>Draft Animal</u>	day	54.5	14.6	796	-	-
<u>Pump</u>						
Wet	ha	371.0	-	-	-	-
Dry	ha	612.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	L.S.	-	-	189	-	245
<u>Total</u>	-	-	-	<u>6,480</u>	-	<u>8,409</u>

Note: 1/ Without/With

Table A.6.4-18

## Crop Production Cost (Economic)

- Including on-farm development -

Season: Dry

Crop: Paddy (H.Y.V. - T.P.)

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	7.2	60	432	50	360
<u>Fertilizers</u>						
Amphos	kg	6.6	110	726	155	1,023
Ammonium Sulfate	kg	4.4	110	484	142	625
Potassium Chloride	kg	8.3	-	-	-	-
Sub-total	-	-	-	1,210	-	1,648
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	17.6	3	53	31	546
Saturn	kg	15.4	-	-	16	246
Asodrin	kg	193.6	-	-	-	-
Sub-total	-	-	-	53	-	792
<u>Labor</u>	man-day	24/30 <sup>1/</sup>	88.6	2,126	99.3	2,979
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	47.6	24.3	1,157	37.4	1,780
Harrowing	hour	159.1	-	-	-	-
Ridging	hour	165.8	-	-	-	-
Fertilizing	hour	6.7	-	-	4.2	28
Duster	hour	5.7	-	-	9.6	55
Trailer	hour	60.8	-	-	6.0	365
Thresher	hour	47.0	3.4	160	9.0	423
Sub-total	-	-	-	1,317	-	2,651
<u>Draft Animal</u>	day	54.5	4.7	256	-	-
<u>Pump</u>						
Wet	ha	371.0	-	-	-	-
Dry	ha	612.0	1	612	-	-
Sub-total	-	-	-	612	-	-
<u>Miscellaneous</u>	L.S.	-	-	180	-	260
<u>Total</u>	-	-	-	<u>6,186</u>	-	<u>8,690</u>

Note: <sup>1/</sup> Without/With

Table A.6.4-19 \*\*\* PRESENT WORTH OF BENEFIT \*\*\*

(UNIT: THOUTHAND BAHT)

YEAR	B. STREAM	11.00 X	12.00 X	13.00 X	14.00 X	15.00 X	16.00 X	17.00 X	18.00 X	19.00 X	20.00 X
1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
2	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
4	11240.	7404.	7143.	6896.	6655.	6427.	6208.	5998.	5797.	5605.	5421.
5	23175.	13753.	13150.	12579.	12036.	11522.	11034.	10570.	10130.	9711.	9314.
6	42416.	22677.	21489.	20373.	19324.	18338.	17409.	16535.	15712.	14937.	14205.
7	68681.	32985.	30977.	29109.	27368.	25745.	24231.	22818.	21498.	20265.	19112.
8	94889.	43171.	40182.	37424.	34877.	32523.	30347.	28333.	26468.	24740.	23138.
9	127851.	49980.	46104.	42560.	39315.	36343.	33619.	31120.	28825.	26717.	24778.
10	148200.	52194.	47716.	43658.	39976.	36633.	33595.	30831.	28316.	26024.	23935.
11	158773.	50376.	45644.	41395.	37569.	34127.	31027.	28232.	25709.	23429.	21369.
12	161245.	46091.	41388.	37201.	33468.	30138.	27164.	24505.	22126.	19995.	18085.
13	161245.	41523.	36953.	32921.	29358.	26207.	23417.	20945.	18751.	16803.	15071.
14	161245.	37408.	32994.	29133.	25753.	22789.	20187.	17901.	15891.	14120.	12559.
15	161245.	33701.	29459.	25782.	22590.	19816.	17403.	15300.	13467.	11865.	10466.
16	161245.	30361.	26303.	22816.	19816.	17231.	15002.	13077.	11412.	9971.	8721.
17	161245.	27352.	23484.	20191.	17382.	14984.	12933.	11177.	9672.	8379.	7268.
18	161245.	24642.	20968.	17868.	15248.	13029.	11149.	9553.	8196.	7041.	6057.
19	161245.	22200.	18722.	15813.	13375.	11330.	9611.	8165.	6946.	5917.	5047.
20	161245.	20000.	16716.	13993.	11733.	9852.	8286.	6979.	5886.	4972.	4206.
21	161245.	18018.	14925.	12384.	10292.	8567.	7143.	5965.	4988.	4178.	3505.
22	161245.	16232.	13226.	10959.	9028.	7430.	6158.	5098.	4228.	3511.	2921.
23	161245.	14624.	11898.	9698.	7919.	6478.	5308.	4357.	3583.	2951.	2434.
24	161245.	13175.	10623.	8582.	6947.	5633.	4576.	3724.	3036.	2479.	2028.
25	161245.	11849.	9485.	7595.	6094.	4898.	3945.	3183.	2573.	2084.	1690.
26	161245.	10693.	8469.	6721.	5345.	4259.	3401.	2721.	2181.	1751.	1409.
27	161245.	9633.	7561.	5948.	4689.	3704.	2932.	2325.	1848.	1471.	1174.
28	161245.	8679.	6751.	5266.	4113.	3221.	2527.	1987.	1566.	1236.	978.
29	161245.	7844.	6028.	4658.	3608.	2801.	2179.	1699.	1327.	1039.	815.
30	161245.	7044.	5382.	4122.	3165.	2435.	1878.	1452.	1125.	873.	679.
31	161245.	6346.	4805.	3648.	2776.	2118.	1619.	1241.	953.	734.	566.
32	161245.	5717.	4291.	3228.	2435.	1841.	1396.	1061.	808.	617.	472.
33	161245.	5150.	3831.	2857.	2136.	1601.	1203.	906.	685.	518.	393.
34	161245.	4640.	3420.	2528.	1874.	1392.	1037.	775.	580.	435.	328.
35	161245.	4180.	3054.	2237.	1644.	1211.	894.	662.	492.	366.	273.
36	161245.	3766.	2727.	1980.	1442.	1053.	771.	566.	417.	307.	227.
37	161245.	3393.	2435.	1752.	1265.	916.	665.	484.	353.	258.	190.
38	161245.	3056.	2174.	1551.	1109.	796.	573.	413.	299.	217.	158.
39	161245.	2754.	1941.	1372.	973.	692.	494.	353.	254.	182.	132.
40	161245.	2481.	1733.	1214.	854.	602.	428.	302.	215.	153.	110.
41	161245.	2235.	1547.	1075.	749.	523.	367.	258.	182.	129.	91.
42	161245.	2013.	1381.	951.	657.	455.	316.	221.	154.	108.	76.
43	161245.	1814.	1233.	842.	576.	396.	273.	189.	131.	91.	63.
44	161245.	1636.	1101.	745.	505.	344.	235.	161.	111.	76.	53.
45	161245.	1472.	983.	659.	443.	299.	203.	138.	94.	64.	44.
46	161245.	1326.	878.	583.	389.	260.	175.	118.	80.	54.	37.
47	161245.	1195.	784.	516.	341.	226.	151.	101.	67.	45.	31.
48	161245.	1076.	700.	457.	299.	197.	130.	86.	57.	38.	26.
49	161245.	970.	625.	404.	263.	171.	112.	74.	48.	32.	21.
50	161245.	874.	558.	358.	230.	149.	97.	63.	41.	27.	18.
TOTAL	6968180.	729694.	634040.	554596.	486001.	431722.	383802.	342721.	307275.	274518.	249640.

Table A.6.4-20

\*\*\* PRESENT WORTH OF COST \*\*\*

YEAR	C. STREAM	(UNIT: THOUTHAND BAHT)									
		11.00 *	12.00 *	13.00 *	14.00 *	15.00 *	16.00 *	17.00 *	18.00 *	19.00 *	20.00 *
1	3134.	2823.	2798.	2773.	2749.	2725.	2702.	2679.	2656.	2634.	2612.
2	15412.	12509.	12070.	11859.	11658.	11458.	11259.	11069.	10883.	10703.	
3	167981.	122826.	116420.	113383.	110450.	107618.	104883.	102239.	99683.	97211.	
4	150705.	99274.	92430.	89230.	86166.	83233.	80424.	77732.	75152.	72678.	
5	183508.	104127.	99601.	95309.	91236.	87371.	83700.	80213.	76899.	73748.	
6	178414.	93388.	85696.	81283.	77133.	73229.	69553.	66090.	62827.	59751.	
7	117261.	56480.	53043.	49843.	46862.	44083.	41490.	39071.	36811.	34700.	
8	11562.	5017.	4670.	4349.	4053.	3780.	3527.	3293.	3076.	2875.	
9	11562.	4520.	4169.	3849.	3555.	3287.	3040.	2814.	2607.	2416.	
10	11562.	4072.	3723.	3406.	3119.	2858.	2621.	2405.	2209.	2030.	
11	11562.	3688.	3324.	3014.	2736.	2485.	2259.	2056.	1872.	1706.	
12	11562.	3305.	2968.	2667.	2400.	2161.	1948.	1757.	1587.	1434.	
13	11562.	2977.	2650.	2361.	2105.	1879.	1679.	1502.	1345.	1205.	
14	11562.	2682.	2366.	2089.	1847.	1634.	1448.	1284.	1139.	1012.	
15	11562.	2417.	2112.	1849.	1620.	1421.	1248.	1097.	966.	851.	
16	11562.	2177.	1886.	1636.	1421.	1236.	1076.	938.	818.	715.	
17	19662.	3335.	2864.	2462.	2120.	1827.	1577.	1363.	1178.	1022.	
18	11562.	1767.	1504.	1281.	1093.	934.	799.	685.	588.	505.	
19	11562.	1592.	1342.	1134.	959.	812.	689.	585.	498.	424.	
20	11562.	1434.	1199.	1003.	841.	706.	594.	500.	422.	357.	
21	11562.	1292.	1070.	888.	738.	614.	512.	428.	358.	300.	
22	11562.	1164.	956.	786.	647.	534.	442.	366.	302.	251.	
23	11562.	1049.	853.	695.	568.	465.	381.	312.	257.	209.	
24	26562.	2170.	1750.	1414.	1144.	926.	754.	613.	500.	408.	
25	11562.	851.	680.	545.	437.	351.	283.	228.	184.	149.	
26	11562.	767.	607.	482.	383.	305.	244.	195.	156.	121.	
27	19662.	1175.	922.	725.	572.	452.	357.	284.	225.	175.	
28	11562.	622.	484.	377.	295.	231.	181.	143.	112.	89.	
29	11562.	561.	432.	334.	259.	201.	156.	122.	95.	75.	
30	11562.	505.	386.	296.	227.	175.	135.	104.	81.	63.	
31	11562.	455.	345.	262.	199.	152.	116.	89.	68.	53.	
32	11562.	410.	308.	231.	175.	132.	100.	76.	58.	44.	
33	11562.	369.	275.	205.	153.	115.	86.	65.	49.	37.	
34	11562.	333.	245.	181.	134.	100.	74.	56.	42.	31.	
35	11562.	300.	219.	160.	118.	87.	64.	47.	35.	26.	
36	11562.	270.	196.	142.	103.	75.	55.	41.	30.	22.	
37	19662.	414.	297.	214.	154.	112.	81.	59.	43.	32.	
38	11562.	219.	156.	111.	80.	57.	41.	30.	21.	16.	
39	11562.	197.	139.	98.	70.	50.	35.	25.	18.	13.	
40	11562.	178.	124.	87.	61.	43.	31.	22.	15.	11.	
41	11562.	160.	111.	77.	54.	38.	26.	19.	13.	9.	
42	11562.	144.	99.	68.	47.	33.	23.	16.	11.	8.	
43	11562.	130.	88.	60.	41.	28.	20.	14.	9.	7.	
44	26562.	269.	181.	123.	83.	57.	39.	27.	18.	13.	
45	11562.	106.	71.	47.	32.	21.	15.	10.	7.	5.	
46	11562.	95.	63.	42.	28.	19.	13.	8.	6.	4.	
47	19662.	146.	96.	63.	42.	28.	18.	12.	8.	6.	
48	11562.	77.	50.	33.	21.	14.	9.	6.	4.	3.	
49	11562.	70.	45.	29.	19.	12.	8.	5.	3.	2.	
50	11562.	63.	40.	26.	17.	11.	7.	5.	3.	2.	
TOTAL	1375981.	551726.	524048.	498734.	475442.	453905.	433906.	415271.	397850.	381521.	366182.



Table A.6.4-21

## \*\*\*\*\* CALCULATION OF INTERNAL RATE OF RETURN \*\*\*\*\*

(UNIT: THOUTHAND BAHT)

DISCOUNT RATE	+++++ PRESENT WORTH BENEFIT	+++++ COST	B/C RATIO
11.00 %	729694.	551726.	1.32
12.00 %	634040.	524048.	1.21
13.00 %	554596.	498734.	1.11
14.00 %	488001.	475442.	1.03
15.00 %	431722.	453905.	0.95
16.00 %	383802.	433906.	0.88
17.00 %	342721.	415271.	0.83
18.00 %	307275.	397850.	0.77
19.00 %	276518.	381521.	0.72
20.00 %	249690.	366182.	0.68

---

 INTERNAL RATE OF RETURN ----- 14.3 %

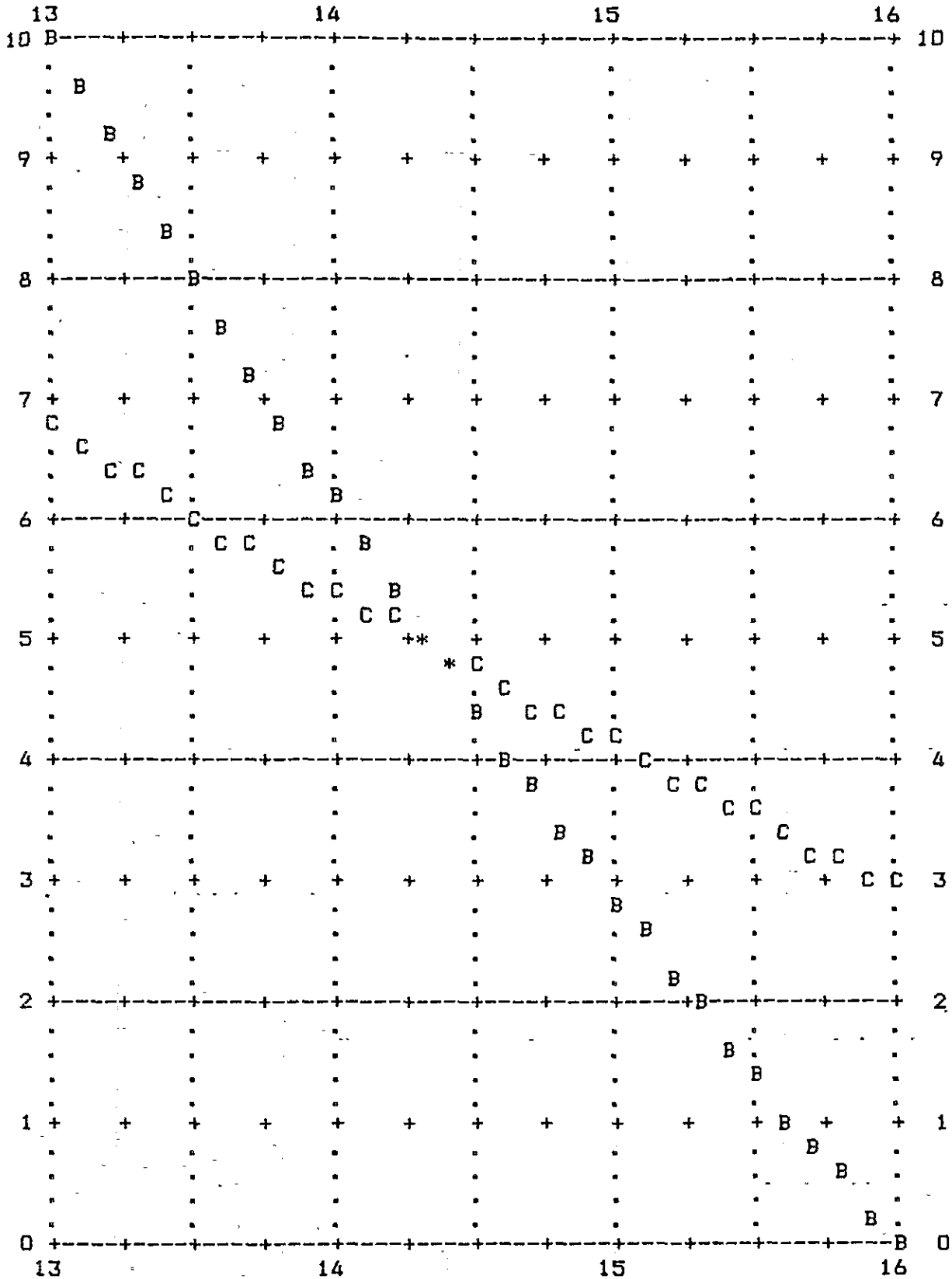
Fig. A.6.4-7

\*\*\* PLOT OF PW OF BENEFIT AND COST \*\*\*

Y AXIS : PRESENT WORTH VALUE

X AXIS : DISCOUNT RATE (%)

I.R.R. (\*) ----- 14.3 %





## 6.5. Farm Budget Analysis



## 6.5. Farm Budget Analysis

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Table A.6.5-1 Crop Production Cost (Financial)

Season: Wet

Crop: Paddy (L.V. - T.P.)

(Unit: per ha)

Item	Unit	Price (¥)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	4.8	70	336	55	264
<u>Fertilizers</u>						
Amphos	kg	7.2	74	533	147	1,058
Ammonium Sulfate	kg	4.8	73	350	79	379
Potassium Chloride	kg	9.0	-	-	-	-
Sub-total	-	-	-	883	-	1,437
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	3	60	30	600
Saturn	kg	17.5	-	-	15	263
Asodrin	kg	220.0	-	-	-	-
Sub-total	-	-	-	60	-	863
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	54.1	28.3	1,531	37.4	2,023
Harrowing	hour	180.8	-	-	-	-
Ridging	hour	188.4	-	-	-	-
Fertilizing	hour	7.6	-	-	4.2	32
Duster	hour	6.5	-	-	9.6	62
Trailer	hour	69.1	-	-	6.0	415
Thresher	hour	53.4	3.3	176	9.0	481
Sub-total	-	-	-	1,707	-	3,013
<u>Draft Animal</u>	day	54.0	4.9	265	-	-
<u>Pump</u>						
Wet	ha	436.0	-	-	-	-
Dry	ha	720.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	-	-	-	98	-	167
<u>Total</u>	-	-	-	<u>3,349</u>	-	<u>5,744</u>



Table A.6.5-2. Crop Production Cost (Financial)

Season: Wet

Crop: Paddy (H.Y.V. - T.P.)

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	6.0	60	360	50	300
<u>Fertilizers</u>						
Ammophos	kg	7.2	90	648	137	986
Ammonium Sulfate	kg	4.8	90	432	123	590
Potassium Chloride	kg	9.0	-	-	-	-
Sub-total	-	-	-	1,080	-	1,576
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	3	60	30	600
Saturn	kg	17.5	-	-	15	263
Asodrin	kg	220.0	-	-	-	-
Sub-total	-	-	-	60	-	863
<u>Agr. Machineries</u>						
Two wheel Tractor	hour	54.1	24.3	1,315	37.4	2,023
Harrowing	hour	180.8	-	-	-	-
Ridging	hour	188.4	-	-	-	-
Fertilizing	hour	7.6	-	-	4.2	32
Duster	hour	6.5	-	-	9.6	62
Trailer	hour	69.1	-	-	6.0	415
Thresher	hour	53.4	3.4	182	9.0	481
Sub-total	-	-	-	1,497	-	3,013
<u>Draft Animal</u>	day	54.0	4.7	254	-	-
<u>Pump</u>						
Wet	ha	436.0	1	436	-	-
Dry	ha	720.0	-	-	-	-
Sub-total	-	-	-	436	-	-
<u>Miscellaneous</u>	-	-	-	111	-	173
<u>Total</u>	-	-	-	<u>3,798</u>	-	<u>5,925</u>

Table A.6.5-3 Crop Production Cost (Financial)

Season: Wet

Crop: Paddy (Broadcasting)

(Unit: per ha)

Item	Unit	Price (Ø)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	4.8	90	432	-	-
<u>Fertilizers</u>						
Ammophos	kg	7.2	70	504	-	-
Ammonium Sulfate	kg	4.8	70	336	-	-
Potassium Chloride	kg	9.0	-	-	-	-
Sub-total	-	-	-	840	-	-
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	0.1	2	-	-
Saturn	kg	17.5	-	-	-	-
Asodrin	kg	220.0	-	-	-	-
Sub-total	-	-	-	2	-	-
<u>Agr. Machinerics</u>						
Two Wheel Tractor	hour	54.1	20.2	1,093	-	-
Harrowing	hour	180.8	-	-	-	-
Ridging	hour	188.4	-	-	-	-
Fertilizing	hour	7.6	-	-	-	-
Duster	hour	6.5	-	-	-	-
Trailer	hour	69.1	-	-	-	-
Thresher	hour	53.4	3.3	176	-	-
Sub-total	-	-	-	1,269	-	-
<u>Draft Animal</u>	day	54.0	22.5	1,215	-	-
<u>Pump</u>						
Wet	ha	436.0	-	-	-	-
Dry	ha	720.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	-	-	-	115	-	-
<u>Total</u>	-	-	-	<u>3,871</u>	-	-

Table A.6.5-4 Crop Production Cost (Financial)

Season: Wet

Crop: Maize

(Unit: per ha)

Item	Unit	Price (P)	Without project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	6.0	18	108	10	60
<u>Fertilizers</u>						
Amphos	kg	7.2	4	29	200	1,440
Ammonium Sulfate	kg	4.8	-	-	-	-
Potassium Chloride	kg	9.0	-	-	-	-
Sub-total	-	-	-	29	-	1,440
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	-	-	-	-
Saturn	kg	17.5	-	-	-	-
Asodrin	kg	220.0	6	1,320	8	1,760
Sub-total	-	-	-	1,320	-	1,760
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	54.1	-	-	-	-
Harrowing	hour	180.8	5.7	1,031	3.6	651
Ridging	hour	188.4	-	-	2.0	377
Fertilizing	hour	7.6	-	-	2.1	16
Duster	hour	6.5	-	-	2.1	14
Trailer	hour	69.1	-	-	6.0	415
Thresher	hour	53.4	-	-	-	-
Sub-total	-	-	-	1,031	-	1,473
<u>Draft Animal</u>	day	54.0	7.5	405	-	-
<u>Pump</u>						
Wet	ha	436.0	-	-	-	-
Dry	ha	720.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	-	-	-	87	-	142
<u>Total</u>	-	-	-	<u>2,980</u>	-	<u>4,875</u>

Table A.6.5-5 Crop Production Cost (Financial)

Season: Wet

Crop: Groundnuts

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	12.0	120	1,440	110	1,320
<u>Fertilizers</u>						
Ammophos	kg	7.2	4	29	-	-
Ammonium Sulfate	kg	4.8	-	-	-	-
Potassium Chloride	kg	9.0	-	-	125	1,125
Sub-total	-	-	-	29	-	1,125
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	-	-	-	-
Saturn	kg	17.5	-	-	-	-
Asodrin	kg	220.0	-	-	6	1,320
Sub-total	-	-	-	-	-	1,320
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	54.1	-	-	-	-
Harrowing	hour	180.8	2.2	398	3.6	651
Ridging	hour	188.4	-	-	2.0	377
Fertilizing	hour	7.6	-	-	2.1	16
Duster	hour	6.5	-	-	2.1	14
Trailer	hour	69.1	-	-	6.0	415
Thresher	hour	53.4	-	-	-	-
Sub-total	-	-	-	398	-	1,475
<u>Draft Animal</u>	day	54.0	14.6	788	-	-
<u>Pump</u>						
Wet	ha	436.0	-	-	-	-
Dry	ha	720.0	-	-	-	-
Sub-total	-	-	-	-	-	-
<u>Miscellaneous</u>	-	-	-	80	-	157
<u>Total</u>	-	-	-	<u>2,735</u>	-	<u>5,395</u>

Table A.6.5-6 Crop Production Cost (Financial)

Season: Dry

Crop: Paddy (H.Y.V. - T.P.)

(Unit: per ha)

Item	Unit	Price (₱)	Without Project		With Project	
			Quantity	Cost	Quantity	Cost
<u>Seed</u>	kg	6.0	60	360	50	300
<u>Fertilizers</u>						
Ammophos	kg	7.2	110	792	148	1,066
Ammonium Sulfate	kg	4.8	110	528	135	648
Potassium Chloride	kg	9.0	-	-	-	-
Sub-total	-	-	-	1,320	-	1,714
<u>Agr. Chemicals</u>						
Padan Mipcin	kg	20.0	3	60	30	600
Saturn	kg	17.5	-	-	15	263
Asodrin	kg	220.0	-	-	-	-
Sub-total	-	-	-	60	-	863
<u>Agr. Machineries</u>						
Two Wheel Tractor	hour	54.1	24.3	1,315	37.4	2,023
Harrowing	hour	180.8	-	-	-	-
Ridging	hour	188.4	-	-	-	-
Fertilizing	hour	7.6	-	-	4.2	32
Duster	hour	6.5	-	-	9.6	62
Trailer	hour	69.1	-	-	6.0	415
Thresher	hour	53.4	3.4	182	9.0	481
Sub-total	-	-	-	1,497	-	3,013
<u>Draft Animal</u>	day	54.0	4.7	254	-	-
<u>Pump</u>						
Wet	ha	436.0	-	-	-	-
Dry	ha	720.0	1	720	-	-
Sub-total	-	-	-	720	-	-
<u>Miscellaneous</u>	-	-	-	126	-	177
<u>Total</u>	-	-	-	<u>4,337</u>	-	<u>6,067</u>

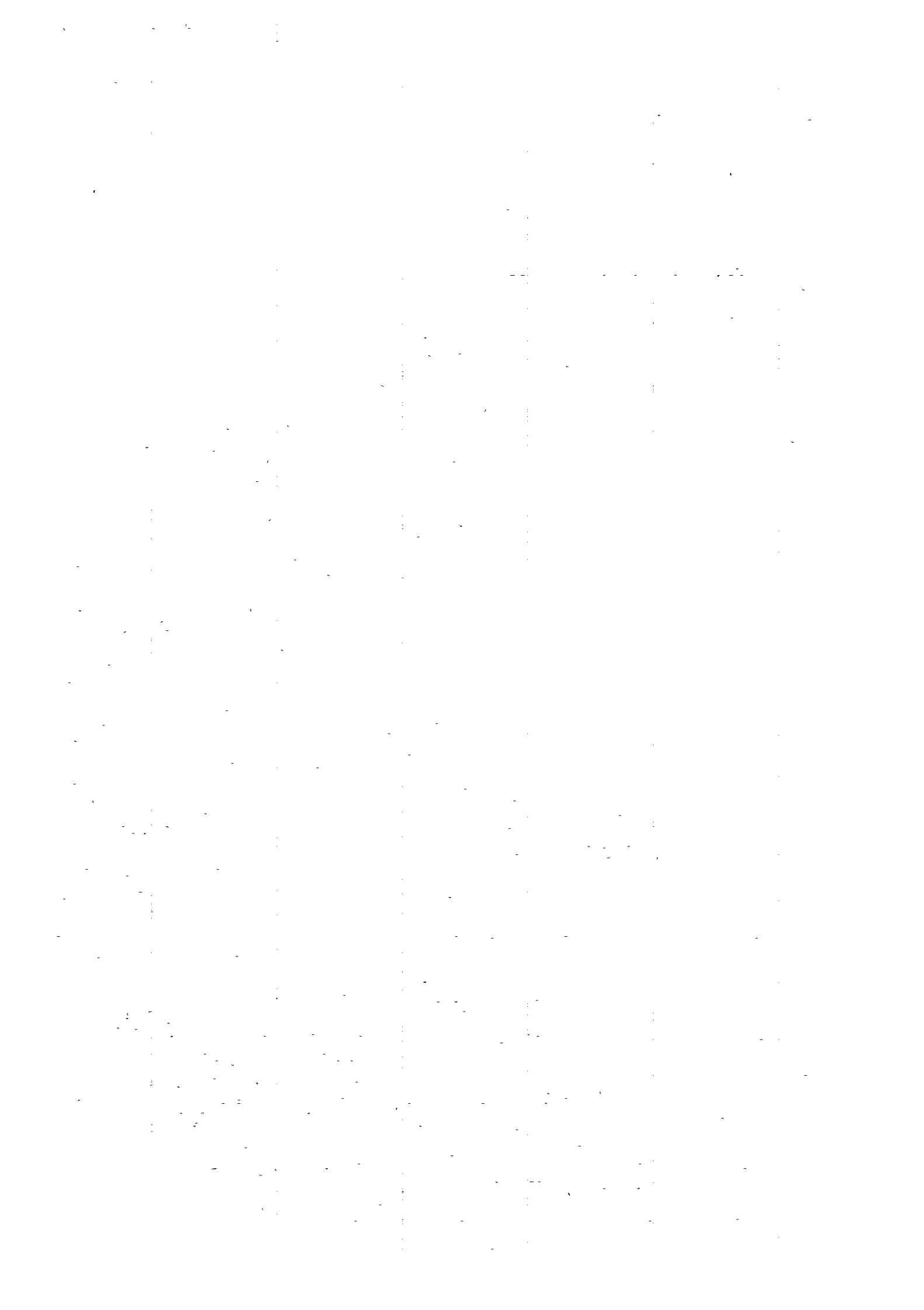
Table A.6.5-7. Monthly Labor Requirement of Representative Farm

(Unit: Man-day)

Crop	Area (ha)	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>Jun.</u>	<u>Jul.</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Total</u>
<u>Without Project</u>														
<u>Wet Season</u>														
Paddy (T.P.)														
L.V.	2.34	-	-	-	-	-	1.4	32.5	66.2	7.0	4.7	1.2	91.0	204.0
H.Y.V.	1.01	-	-	-	-	-	2.5	13.3	26.3	10.4	1.8	35.2	-	89.5
Paddy (B.C.)	0.26	-	-	-	0.5	0.2	0.3	1.8	0.3	7.2	-	-	-	10.5
Maize	0.12	-	-	-	-	2.8	0.8	0.8	2.2	1.1	-	-	-	7.7
<u>Dry Season</u>														
Paddy	0.19	3.0	4.5	1.7	6.1	-	-	-	-	-	-	-	0.6	15.9
<u>Total</u>	-	<u>3.0</u>	<u>4.5</u>	<u>1.7</u>	<u>6.6</u>	<u>3.0</u>	<u>5.0</u>	<u>48.4</u>	<u>95.0</u>	<u>25.7</u>	<u>6.5</u>	<u>36.4</u>	<u>91.6</u>	<u>527.4</u>
<u>With Project</u>														
<u>Wet Season</u>														
Paddy														
L.V.	1.88	-	-	-	-	-	1.5	32.9	60.7	10.2	7.0	1.5	73.3	187.1
H.Y.V.	1.88	-	-	-	-	-	5.6	29.0	57.3	22.6	3.8	68.6	-	186.9
Maize	0.14	-	-	-	-	1.1	0.2	0.6	2.5	1.3	-	-	-	5.7
<u>Dry Season</u>														
Paddy	0.77	13.6	20.6	4.0	28.1	-	-	-	-	-	-	-	2.3	68.6
<u>Total</u>	-	<u>13.6</u>	<u>20.6</u>	<u>4.0</u>	<u>28.1</u>	<u>1.1</u>	<u>7.3</u>	<u>62.5</u>	<u>120.5</u>	<u>34.1</u>	<u>10.8</u>	<u>70.1</u>	<u>75.6</u>	<u>448.3</u>

Table A.6.5-8. Net Farm Income of Representative Farm

Item	Unit	Without Project				Dry Season		Total
		LV (T.P.)	IIV (Rainfed)	IIV (Irrigated)	LV (B.C.)	Paddy	Maize	
Cropped Area	ha	2.54	0.46	0.55	0.26	0.19	-	-
Yield	ton/ha	2.0	2.6	2.8	1.7	3.5	-	-
Production	ton	4.68	1.20	1.54	0.44	0.67	-	-
Financial Price	₹/ton	4,870	4,870	4,870	4,870	4,870	-	-
G.P.V.	₹	22,792	5,844	7,500	2,145	3,263	-	42,832
Cash Production Cost	₹	7,837	1,541	2,089	1,006	824	-	13,655
Hired Labor	₹	-	-	-	-	-	-	3,810
Net Farm Income	₹	-	-	-	-	-	-	25,367
<u>With Project</u>								
Cropped Area	ha	1.88	-	1.88	-	0.77	-	-
Yield	ton/ha	3.3	-	4.0	-	4.2	-	-
Production	ton	6.20	-	7.52	-	3.23	-	-
Financial Price	₹/ton	4,870	-	4,870	-	4,870	-	-
G.P.V.	₹	30,194	-	36,622	-	15,730	-	83,815
Cash Production Cost	₹	10,799	-	11,139	-	4,672	-	27,293
Hired Labor	₹	-	-	-	-	-	-	5,663
Net Farm Income	₹	-	-	-	-	-	-	50,859





JICA