

Table N-3-18 Estimation of Cash Flow of Model Farmer
(Model: 9. Alternative)

Year	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
Initial Fund	0	725	5,169	12,507	14,038	16,647	20,335	25,101	36,371	48,159	59,947
Farm Credit (Long)	1,674	866	41	0	0	0	0	0	0	0	0
Farm Credit (Short)	3,903	3,800	181	0	0	0	0	0	0	0	0
Sub-total (A)	5,577	4,666	222	0	0	0	0	0	0	0	0
Required Fund (Stage I)											
Production Cost	5,577	4,793	4,793	4,793	4,793	4,793	4,793	4,793	4,793	4,793	4,793
Living Expenses	598	598	598	598	598	598	598	598	598	598	598
Sub-total (B)	6,175	5,391	5,391	5,391	5,391	5,391	5,391	5,391	5,391	5,391	5,391
Farm Income	7,532	8,351	9,190	9,190	9,190	9,190	9,190	9,190	9,190	9,190	9,190
Sub-total (C)	7,532	8,351	9,190	9,190	9,190	9,190	9,190	9,190	9,190	9,190	9,190
Interest (Short)	488	475	23	0	0	0	0	0	0	0	0
Repayment (short)	3,903	3,800	181	0	0	0	0	0	0	0	0
Sub-total (D)	4,391	4,275	204	0	0	0	0	0	0	0	0
Balance Carried Forward	2,543	4,076	8,986	16,306	17,837	20,446	24,134	28,900	40,170	51,958	63,746
Farm Credit (Short)	1,995	462	0	0	0	0	0	0	0	0	0
Sub-total (E)	1,995	462	0	0	0	0	0	0	0	0	0
Required Fund (Stage II)											
Production Cost	3,940	3,940	3,940	3,940	3,940	3,940	3,940	3,940	3,940	3,940	3,940
Living Expenses	598	598	598	598	598	598	598	598	598	598	598
Sub-total (F)	4,538	4,538	4,538	4,538	4,538	4,538	4,538	4,538	4,538	4,538	4,538
Farm Income	10,303	11,494	12,832	12,832	12,832	12,832	12,832	12,832	12,832	12,832	12,832
Sub-total (G)	10,303	11,494	12,832	12,832	12,832	12,832	12,832	12,832	12,832	12,832	12,832
Term-end Fund											
Amortization (I)	3,906	3,906	3,906	9,331	8,355	7,378	6,402				
Amortization (II)	1,030	511	511	926	824	722	620	518			
O/M Charge	305	305	305	305	305	305	305	305	305	305	305
Interest (Short)	249	58	0	0	0	0	0	0	0	0	0
Repayment (Short)	1,995	462	0	0	0	0	0	0	0	0	0
Interest (Long)	419	217	10	0	0	0	0	0	0	0	0
Repayment (Long)	1,674	866	41	0	0	0	0	0	0	0	0
Sub-total (H)	9,578	6,325	4,773	10,562	9,484	8,405	7,327	823	305	305	305
Balance Carried Forward	725	5,169	12,507	14,038	16,647	20,335	25,101	36,371	48,159	59,947	71,735

(Unit: Col.\$1,000)

Table N-4-1 Annual Disbursement Schedule of The Project Cost

Description	Year							Total
	1st	2nd	3rd	4th	5th	6th	7th	
Detailed Design	F/C	227,144	170,710					397,854
	L/C	139,764	105,040					244,804
	Total	366,908	275,750					642,658
Land Acquisition	F/C		205,216					205,216
	L/C		205,216					205,216
	Total		410,432					410,432
Administration	F/C		8,188	16,375	16,375	16,375	16,375	63,518
	L/C		8,188	16,375	16,375	16,375	16,375	63,518
	Total		16,376	32,750	32,750	32,750	32,750	127,036
Headwork	F/C		647,836	647,836				1,295,672
	L/C		235,995	235,994				471,989
	Total		883,831	883,830				1,767,661
Irrigation Canal	F/C		1,413,935	1,413,935	1,413,935	1,413,934		5,655,739
	L/C		1,401,649	1,401,649	1,401,649	1,401,650		5,606,597
	Total		2,815,584	2,815,584	2,815,584	2,815,584		11,262,336
Drainage Canal	F/C		31,530	31,530				63,060
	L/C		18,364	18,364				36,728
	Total		49,894	49,894				99,807
Road (O/M Road)	F/C		45,357	45,357		45,357		136,071
	L/C		24,423	24,423	24,423	24,422		97,691
	Total		69,780	69,780	69,780	69,779		279,118
Road (Trocha 4)	F/C		109,578	109,578	109,578	109,579		438,313
	L/C		123,567	123,567	123,567	123,566		494,267
	Total		233,145	233,145	233,145	233,145		932,580
Land Consolidation	F/C		318,980	318,980	318,980	318,980	159,489	1,435,409
	L/C		171,758	171,758	171,758	171,758	85,881	772,913
	Total		490,738	490,738	490,738	490,738	245,370	2,208,322
Revetment	F/C		47,932	47,932	47,932	47,932		191,728
	L/C		115,276	115,276	115,276	115,276		461,104
	Total		163,208	163,208	163,208	163,208		652,832
O/M Equipment	F/C						694,356	694,356
	L/C							
	Total						694,356	694,356
Supervision	F/C		211,685	211,685	210,294	210,294	211,685	844,043
	L/C		63,090	63,090	62,676	62,676	63,090	252,012
	Total		274,775	274,775	272,970	272,970	274,775	1,096,055
Sub-total	F/C	227,144	170,710	2,778,911	2,825,511	2,194,128	2,099,524	11,261,328
	L/C	139,764	318,444	2,055,221	2,170,082	2,031,000	1,800,861	8,650,873
	Total	366,908	489,154	4,834,132	4,995,593	4,225,128	3,900,385	19,912,202
Physical Contingency	F/C		8,536	305,668	402,797	308,090	293,752	1,318,833
	L/C		38,444	300,337	317,607	296,745	262,183	1,295,667
	Total		46,980	606,005	720,404	604,835	555,935	2,614,499
Total	F/C	238,501	179,246	3,174,579	3,228,308	2,502,219	2,393,236	12,745,757
	L/C	146,732	354,888	2,355,538	2,437,889	2,327,745	2,063,044	9,385,540
	Total	385,233	534,134	5,530,117	5,715,964	4,829,964	4,456,280	22,131,297
%	F/C	1.9%	1.4%	24.9%	25.3%	19.6%	18.8%	8.1%
	L/C	1.5%	3.6%	23.6%	25.2%	20.9%	19.7%	4.2%
	Total	1.7%	2.4%	24.4%	25.3%	21.3%	19.7%	5.2%

Table N-4-2 Estimation of EIRR

(Unit: Col. \$1,000)

Year	Construc. Cost	Replacement Cost	O/M Cost	Incremental Prod. Cost	Project Costs	Incremental Benefit	Project Return
1	431,483				431,483		-431,483
2	598,230				598,230		-598,230
3	6,193,753				6,193,753		-6,193,753
4	6,401,917				6,401,917		-6,401,917
5	5,409,560		36,960	512,424	5,958,944	849,617	-5,109,327
6	4,991,101		6,720	1,614,926	6,612,747	3,232,660	-3,380,087
7	1,322,129		6,720	2,822,426	4,151,275	6,487,979	2,336,704
8			148,996	2,822,426	2,971,422	7,767,103	4,795,681
9			148,996	2,822,426	2,971,422	8,412,407	5,440,985
10			148,996	2,822,426	2,971,422	8,424,786	5,453,364
11			145,636	2,822,426	2,968,062	8,433,285	5,465,223
12			145,636	2,822,426	2,968,062	8,433,285	5,465,223
13			290,860	2,822,426	3,113,286	8,433,285	5,319,999
14			290,860	2,822,426	3,113,286	8,433,285	5,319,999
15		816,563	290,860	2,822,426	3,929,848	8,433,285	4,503,437
16			290,860	2,822,426	3,113,286	8,433,285	5,319,999
17			290,860	2,822,426	3,113,286	8,433,285	5,319,999
18			290,860	2,822,426	3,113,286	8,433,285	5,319,999
19			290,860	2,822,426	3,113,286	8,433,285	5,319,999
20			290,860	2,822,426	3,113,286	8,433,285	5,319,999
21			290,860	2,822,426	3,113,286	8,433,285	5,319,999
22			290,860	2,822,426	3,113,286	8,433,285	5,319,999
23		816,563	290,860	2,822,426	3,929,848	8,433,285	4,503,437
24			290,860	2,822,426	3,113,286	8,433,285	5,319,999
25			290,860	2,822,426	3,113,286	8,433,285	5,319,999
26			290,860	2,822,426	3,113,286	8,433,285	5,319,999
27			290,860	2,822,426	3,113,286	8,433,285	5,319,999
28			290,860	2,822,426	3,113,286	8,433,285	5,319,999
29			290,860	2,822,426	3,113,286	8,433,285	5,319,999
30			290,860	2,822,426	3,113,286	8,433,285	5,319,999
31		816,563	290,860	2,822,426	3,929,848	8,433,285	4,503,437
32		953,695	290,860	2,822,426	4,066,980	8,433,285	4,366,305
33		219,778	290,860	2,822,426	3,333,063	8,433,285	5,100,222
34		219,778	290,860	2,822,426	3,333,063	8,433,285	5,100,222
35		219,778	290,860	2,822,426	3,333,063	8,433,285	5,100,222
36		219,778	290,860	2,822,426	3,333,063	8,433,285	5,100,222
37			290,860	2,822,426	3,113,286	8,433,285	5,319,999
38			290,860	2,822,426	3,113,286	8,433,285	5,319,999
39		816,563	290,860	2,822,426	3,929,848	8,433,285	4,503,437
40			290,860	2,822,426	3,113,286	8,433,285	5,319,999
41			290,860	2,822,426	3,113,286	8,433,285	5,319,999
42			290,860	2,822,426	3,113,286	8,433,285	5,319,999
43			290,860	2,822,426	3,113,286	8,433,285	5,319,999
44			290,860	2,822,426	3,113,286	8,433,285	5,319,999
45			290,860	2,822,426	3,113,286	8,433,285	5,319,999
46			290,860	2,822,426	3,113,286	8,433,285	5,319,999
47		816,563	290,860	2,822,426	3,929,848	8,433,285	4,503,437
48			290,860	2,822,426	3,113,286	8,433,285	5,319,999
49			290,860	2,822,426	3,113,286	8,433,285	5,319,999
50			290,860	2,822,426	3,113,286	8,433,285	5,319,999
51			290,860	2,822,426	3,113,286	8,433,285	5,319,999
52			290,860	2,822,426	3,113,286	8,433,285	5,319,999
	25,348,173	5,915,619	12,423,040	131,958,946	175,645,778	389,372,522	213,726,744

Internal Rate of Return (IRR) = 16.2%

Table N-4-3 Estimation B/C and NPV

(Unit: Col. \$1,000)

Year	Project Costs	Incremental Benefit	Project Return	N.P.V(Dis. Rate = 12%)	
				P. Cost	I. Benefit
1	431,483		-431,483	385,253	0
2	598,230		-598,230	476,905	0
3	6,193,753		-6,193,753	4,408,591	0
4	6,401,917		-6,401,917	4,068,534	0
5	5,958,944	849,617	-5,109,327	3,381,265	482,096
6	6,612,747	3,232,660	-3,380,087	3,350,223	1,637,766
7	4,151,275	6,487,979	2,336,704	1,877,826	2,934,832
8	2,971,422	7,767,103	4,795,681	1,200,107	3,137,003
9	2,971,422	8,412,407	5,440,985	1,071,525	3,033,598
10	2,971,422	8,424,786	5,453,364	956,718	2,712,556
11	2,968,062	8,433,285	5,465,223	853,247	2,424,368
12	2,968,062	8,433,285	5,465,223	761,828	2,164,614
13	3,113,286	8,433,285	5,319,999	713,485	1,932,691
14	3,113,286	8,433,285	5,319,999	637,040	1,725,617
15	3,929,848	8,433,285	4,503,437	717,969	1,540,730
16	3,113,286	8,433,285	5,319,999	507,844	1,375,651
17	3,113,286	8,433,285	5,319,999	453,432	1,228,260
18	3,113,286	8,433,285	5,319,999	404,850	1,096,661
19	3,113,286	8,433,285	5,319,999	361,474	979,162
20	3,113,286	8,433,285	5,319,999	322,744	874,251
21	3,113,286	8,433,285	5,319,999	288,164	780,582
22	3,113,286	8,433,285	5,319,999	257,290	696,948
23	3,929,848	8,433,285	4,503,437	289,975	622,275
24	3,113,286	8,433,285	5,319,999	205,110	555,603
25	3,113,286	8,433,285	5,319,999	183,134	496,074
26	3,113,286	8,433,285	5,319,999	163,512	442,923
27	3,113,286	8,433,285	5,319,999	145,993	395,467
28	3,113,286	8,433,285	5,319,999	130,351	353,095
29	3,113,286	8,433,285	5,319,999	116,385	315,264
30	3,113,286	8,433,285	5,319,999	103,915	281,486
31	3,929,848	8,433,285	4,503,437	117,116	251,326
32	4,066,980	8,433,285	4,366,305	108,217	224,399
33	3,333,063	8,433,285	5,100,222	79,186	200,356
34	3,333,063	8,433,285	5,100,222	70,702	178,889
35	3,333,063	8,433,285	5,100,222	63,127	159,722
36	3,333,063	8,433,285	5,100,222	56,363	142,609
37	3,113,286	8,433,285	5,319,999	47,006	127,330
38	3,113,286	8,433,285	5,319,999	41,970	113,687
39	3,929,848	8,433,285	4,503,437	47,301	101,507
40	3,113,286	8,433,285	5,319,999	33,458	90,631
41	3,113,286	8,433,285	5,319,999	29,873	80,920
42	3,113,286	8,433,285	5,319,999	26,672	72,250
43	3,113,286	8,433,285	5,319,999	23,815	64,509
44	3,113,286	8,433,285	5,319,999	21,263	57,598
45	3,113,286	8,433,285	5,319,999	18,985	51,426
46	3,113,286	8,433,285	5,319,999	16,951	45,916
47	3,929,848	8,433,285	4,503,437	19,104	40,997
48	3,113,286	8,433,285	5,319,999	13,513	36,604
49	3,113,286	8,433,285	5,319,999	12,065	32,682
50	3,113,286	8,433,285	5,319,999	10,773	29,181
51	3,113,286	8,433,285	5,319,999	9,618	26,054
52	3,113,286	8,433,285	5,319,999	8,588	23,263
	175,645,778	389,372,522	213,726,744	29,670,355	36,371,429

B/C (Discount Rate 12%) = 1.23

ANNEX O : OTHERS

ANNEX 0 : OTHERS

TABLE OF CONTENTS

	PAGE
0.1 ECONOMIC EVALUATION FOR FOUR ALTERNATIVE LAND USE PLAN	0 - 1
0.2 ECONOMIC EVALUATION FOR THREE ALTERNATIVE PROBABLE YEAR	0 - 1

LIST OF TABLES

	PAGE
0-1-1 Increased Production Value (Land Use I-1)	0 - 3
0-1-2 Increased Production Cost (Land Use I-1)	0 - 3
0-1-3 Production Cost Cost and Value with Project Upper Zone (Land Use I-1)	0 - 3
0-1-4 Production Cost Cost and Value with Project Middle Zone (Land Use I-1)	0 - 4
0-1-5 Production Cost Cost and Value with Project Lower Zone (Land Use I-1)	0 - 4
0-1-6 Estimation of IRR (Land Use I-1)	0 - 5
0-1-7 Estimation of IRR (Land Use I-2)	0 - 6
0-1-8 Increased Production Value (Land Use II-1)	0 - 7
0-1-9 Increased Production Cost (Land Use II-1)	0 - 7
0-1-10 Production Cost Cost and Value with Project Upper Zone (Land Use II-1)	0 - 7
0-1-11 Production Cost Cost and Value with Project Middle Zone (Land Use II-1)	0 - 8
0-1-12 Production Cost Cost and Value with Project Lower Zone (Land Use II-1)	0 - 8
0-1-13 Estimation of IRR (Land Use II-1)	0 - 9
0-1-14 Increased Production Value (Land Use II-2)	0 - 10
0-1-15 Increased Production Cost (Land Use II-2)	0 - 10
0-1-16 Production Cost Cost and Value with Project Upper Zone (Land Use II-2)	0 - 10

0-1-17	Production Cost Cost and Value with Project	
	Middle Zone (Land Use II-2)	0 - 11
0-1-18	Production Cost Cost and Value with Project	
	Lower Zone (Land Use II-2)	0 - 11
0-1-19	Estimation of IRR (Land Use II-2)	0 - 12
0-2-1	Increased Production Value (Probability of 1/2)	0 - 13
0-2-2	Increased Production Cost (Probability of 1/2)	0 - 13
0-2-3	Production Cost Cost and Value with Project	
	Upper Zone (Probability of 1/2)	0 - 13
0-2-4	Production Cost Cost and Value with Project	
	Middle Zone (Probability of 1/2)	0 - 14
0-2-5	Production Cost Cost and Value with Project	
	Lower Zone (Probability of 1/2)	0 - 14
0-2-6	Estimation of IRR (Probability of 1/2)	0 - 15
0-2-7	Increased Production Value (Probability of 1/5)	0 - 16
0-2-8	Increased Production Cost (Probability of 1/5)	0 - 16
0-2-9	Production Cost Cost and Value with Project	
	Upper Zone (Probability of 1/5)	0 - 16
0-2-10	Production Cost Cost and Value with Project	
	Middle Zone (Probability of 1/5)	0 - 17
0-2-11	Production Cost Cost and Value with Project	
	Lower Zone (Probability of 1/5)	0 - 17
0-2-12	Estimation of IRR (Probability of 1/5)	0 - 18
0-2-13	Increased Production Value (Probability of 1/10) ...	0 - 19
0-2-14	Increased Production Cost (Probability of 1/10)	0 - 19
0-2-15	Production Cost Cost and Value with Project	
	Upper Zone (Probability of 1/10)	0 - 19
0-2-16	Production Cost Cost and Value with Project	
	Middle Zone (Probability of 1/10)	0 - 20
0-2-17	Production Cost Cost and Value with Project	
	Lower Zone (Probability of 1/5)	0 - 20
0-2-18	Estimation of IRR (Probability of 1/10)	0 - 21

ANNEX : OTHERS

0.1 Economic Evaluation for Four Alternative Land Use Plans

Economic evaluation for four alternative land use plans will be carried out based on following assumptions;

- Construction cost

Annual disbursement schedule of construction cost which is estimated in ANNEX I will be assumed as 20 % of the construction cost.

- O/M Cost

Annual operation and maintenance cost will be assumed as 2 % of the total construction cost.

- Production Cost and Value

Production cost and value are estimated on the basis of the four land use plans.

0.2 Economic Evaluation for Three Alternative Probable Years

Economic evaluation for three alternative probable years of land use plan I-2 will be carried out based on following assumptions;

- Construction cost

Annual disbursement schedule of construction cost which is estimated in ANNEX I will be assumed as 20 % of the construction cost.

- O/M Cost

Annual operation and maintenance cost will be assumed as 2 % of total construction cost.

- Production Cost and Value

Production cost and value are estimated on the basis of the irrigated or non-irrigated area which is estimated for each probable year in ANNEX I.

T A B L E S

Table 0-1-1 Increased Production Value (Land Use I-1)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	4,020,618	1,805,093
Middle	3,816,151	8,211,162	4,395,011
Lower	3,402,059	7,889,714	4,487,655
Total	9,433,735	20,121,494	10,687,759

Table 0-1-2 Increased Production Cost (Land Use I-1)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Cost
Upper	958,727	1,531,777	573,050
Middle	2,192,488	3,373,761	1,181,273
Lower	1,902,242	3,240,162	1,337,920
Total	5,053,457	8,145,700	3,092,243

Table 0-1-3 Production Cost Cost and Value with Project
Upper Zone (Land Use I-1)

Upper Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	5,430	181,740	986,848	440,000	2,389,200	1,402,352
Upland rice						
Maize	500	89,310	44,655	130,000	65,000	20,345
Maize (Non irr)	130	89310	11610	104000	11714	104
Soybean	250	138,100	34,525	230,670	57,668	23,143
Sorghum	75	113,880	8,541	189,000	14,175	5,634
Other crops	55	178,430	9,814	315,000	17,325	7,511
Plantain	960	147,680	141,773	500,000	480,000	338,227
Plantain (Non irr)	60	147680	8861	300000	18000	9139
Cacao	260	148,830	38,696	274,680	71,417	32,721
Papaya	410	207,970	85,268	880,000	360,800	275,532
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,600	15,310	39,806		0	-39,806
Cattle	2,600	10,140	26,364	70,200	182,520	156,156
Total			1,531,777		4,020,618	2,488,841

Table O-1-4 Production Cost Cost and Value with Project
Middle Zone (Land Use I-1)

Middle Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	16,600	181,740	3,016,884	440,000	7,304,000	4,287,116
Upland rice						
Maize	475	89,310	42,422	130,000	61,750	19,328
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	150	138,100	20,715	230,670	34,601	13,886
Sorghum	100	113,880	11,388	189,000	18,900	7,512
Other crops	60	178,430	10,706	315,000	18,900	8,194
Plantain	590	147,680	87,131	500,000	295,000	207,869
Cacao	380	148,830	56,555	274,680	104,378	47,823
Papaya						
Oil palm	320	252,760	38,547	870,200	131,904	93,357
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,395	15,310	51,977		0	-51,977
Cattle	3,395	10,140	34,425	70,200	238,329	203,904
Total			3,373,761		8,211,162	4,837,401

Table O-1-5 Production Cost Cost and Value with Project
Lower Zone (Land Use I-1)

Lower Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	15,950	181,740	2,898,753	440,000	7,018,000	4,119,247
Upland rice						
Maize	300	89,310	26,793	130,000	39,000	12,207
Maize (Non irr)	100	89,310	8,931	104,000	10,400	1,469
Soybean	100	138,100	13,810	230,670	23,067	9,257
Sorghum	100	113,880	11,388	163,800	16,380	4,992
Other crops	100	178,430	17,843	315,000	31,500	13,657
Other crops (Non)	20	178,430	3,569	210,000	4,200	631
Plantain	760	147,680	112,237	500,000	380,000	267,763
Cacao	230	148,830	34,231	274,680	63,176	28,946
Papaya						
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,205	15,310	64,379		0	-64,379
Cattle	4,205	10,140	42,639	70,200	295,191	252,552
Total			3,240,162		7,889,714	4,649,552

Table O-1-6 Estimation of IRR (Land Use I-1)

(Unit: Col. \$1,000)

Year	Const. Cost	O/M Cost	Prod. Cost	Total	nc. Benefit	Project Return
1	3,634,043			3,634,043		-3,634,043
2	3,634,043			3,634,043		-3,634,043
3	3,634,043			3,634,043		-3,634,043
4	3,634,043			3,634,043		-3,634,043
5	3,634,043			3,634,043		-3,634,043
6		363,404	3,092,243	3,455,647	10,687,759	7,232,112
7		363,404	3,092,243	3,455,647	10,687,759	7,232,112
8		363,404	3,092,243	3,455,647	10,687,759	7,232,112
9		363,404	3,092,243	3,455,647	10,687,759	7,232,112
10		363,404	3,092,243	3,455,647	10,687,759	7,232,112
11		363,404	3,092,243	3,455,647	10,687,759	7,232,112
12		363,404	3,092,243	3,455,647	10,687,759	7,232,112
13		363,404	3,092,243	3,455,647	10,687,759	7,232,112
14		363,404	3,092,243	3,455,647	10,687,759	7,232,112
15		363,404	3,092,243	3,455,647	10,687,759	7,232,112
16		363,404	3,092,243	3,455,647	10,687,759	7,232,112
17		363,404	3,092,243	3,455,647	10,687,759	7,232,112
18		363,404	3,092,243	3,455,647	10,687,759	7,232,112
19		363,404	3,092,243	3,455,647	10,687,759	7,232,112
20		363,404	3,092,243	3,455,647	10,687,759	7,232,112
21		363,404	3,092,243	3,455,647	10,687,759	7,232,112
22		363,404	3,092,243	3,455,647	10,687,759	7,232,112
23		363,404	3,092,243	3,455,647	10,687,759	7,232,112
24		363,404	3,092,243	3,455,647	10,687,759	7,232,112
25		363,404	3,092,243	3,455,647	10,687,759	7,232,112
26		363,404	3,092,243	3,455,647	10,687,759	7,232,112
27		363,404	3,092,243	3,455,647	10,687,759	7,232,112
28		363,404	3,092,243	3,455,647	10,687,759	7,232,112
29		363,404	3,092,243	3,455,647	10,687,759	7,232,112
30		363,404	3,092,243	3,455,647	10,687,759	7,232,112
31		363,404	3,092,243	3,455,647	10,687,759	7,232,112
32		363,404	3,092,243	3,455,647	10,687,759	7,232,112
33		363,404	3,092,243	3,455,647	10,687,759	7,232,112
34		363,404	3,092,243	3,455,647	10,687,759	7,232,112
35		363,404	3,092,243	3,455,647	10,687,759	7,232,112
36		363,404	3,092,243	3,455,647	10,687,759	7,232,112
37		363,404	3,092,243	3,455,647	10,687,759	7,232,112
38		363,404	3,092,243	3,455,647	10,687,759	7,232,112
39		363,404	3,092,243	3,455,647	10,687,759	7,232,112
40		363,404	3,092,243	3,455,647	10,687,759	7,232,112
41		363,404	3,092,243	3,455,647	10,687,759	7,232,112
42		363,404	3,092,243	3,455,647	10,687,759	7,232,112
43		363,404	3,092,243	3,455,647	10,687,759	7,232,112
44		363,404	3,092,243	3,455,647	10,687,759	7,232,112
45		363,404	3,092,243	3,455,647	10,687,759	7,232,112
46		363,404	3,092,243	3,455,647	10,687,759	7,232,112
47		363,404	3,092,243	3,455,647	10,687,759	7,232,112
48		363,404	3,092,243	3,455,647	10,687,759	7,232,112
49		363,404	3,092,243	3,455,647	10,687,759	7,232,112
50		363,404	3,092,243	3,455,647	10,687,759	7,232,112
	18,170,213	16,353,192	139,150,935	173,674,340	480,949,155	307,274,815

Estimated IRR = 24.5%

Table O-1-7 Estimation of IRR (Land Use I-2)

(Unit: Col. \$1,000)

Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	2,702,923			2,702,923		-2,702,923
2	2,702,923			2,702,923		-2,702,923
3	2,702,923			2,702,923		-2,702,923
4	2,702,923			2,702,923		-2,702,923
5	2,702,923			2,702,923		-2,702,923
6		333,469	2,949,547	3,283,016	9,981,690	6,698,674
7		333,469	2,949,547	3,283,016	9,981,690	6,698,674
8		333,469	2,949,547	3,283,016	9,981,690	6,698,674
9		333,469	2,949,547	3,283,016	9,981,690	6,698,674
10		333,469	2,949,547	3,283,016	9,981,690	6,698,674
11		333,469	2,949,547	3,283,016	9,981,690	6,698,674
12		333,469	2,949,547	3,283,016	9,981,690	6,698,674
13		333,469	2,949,547	3,283,016	9,981,690	6,698,674
14		333,469	2,949,547	3,283,016	9,981,690	6,698,674
15		333,469	2,949,547	3,283,016	9,981,690	6,698,674
16		333,469	2,949,547	3,283,016	9,981,690	6,698,674
17		333,469	2,949,547	3,283,016	9,981,690	6,698,674
18		333,469	2,949,547	3,283,016	9,981,690	6,698,674
19		333,469	2,949,547	3,283,016	9,981,690	6,698,674
20		333,469	2,949,547	3,283,016	9,981,690	6,698,674
21		333,469	2,949,547	3,283,016	9,981,690	6,698,674
22		333,469	2,949,547	3,283,016	9,981,690	6,698,674
23		333,469	2,949,547	3,283,016	9,981,690	6,698,674
24		333,469	2,949,547	3,283,016	9,981,690	6,698,674
25		333,469	2,949,547	3,283,016	9,981,690	6,698,674
26		333,469	2,949,547	3,283,016	9,981,690	6,698,674
27		333,469	2,949,547	3,283,016	9,981,690	6,698,674
28		333,469	2,949,547	3,283,016	9,981,690	6,698,674
29		333,469	2,949,547	3,283,016	9,981,690	6,698,674
30		333,469	2,949,547	3,283,016	9,981,690	6,698,674
31		333,469	2,949,547	3,283,016	9,981,690	6,698,674
32		333,469	2,949,547	3,283,016	9,981,690	6,698,674
33		333,469	2,949,547	3,283,016	9,981,690	6,698,674
34		333,469	2,949,547	3,283,016	9,981,690	6,698,674
35		333,469	2,949,547	3,283,016	9,981,690	6,698,674
36		333,469	2,949,547	3,283,016	9,981,690	6,698,674
37		333,469	2,949,547	3,283,016	9,981,690	6,698,674
38		333,469	2,949,547	3,283,016	9,981,690	6,698,674
39		333,469	2,949,547	3,283,016	9,981,690	6,698,674
40		333,469	2,949,547	3,283,016	9,981,690	6,698,674
41		333,469	2,949,547	3,283,016	9,981,690	6,698,674
42		333,469	2,949,547	3,283,016	9,981,690	6,698,674
43		333,469	2,949,547	3,283,016	9,981,690	6,698,674
44		333,469	2,949,547	3,283,016	9,981,690	6,698,674
45		333,469	2,949,547	3,283,016	9,981,690	6,698,674
46		333,469	2,949,547	3,283,016	9,981,690	6,698,674
47		333,469	2,949,547	3,283,016	9,981,690	6,698,674
48		333,469	2,949,547	3,283,016	9,981,690	6,698,674
49		333,469	2,949,547	3,283,016	9,981,690	6,698,674
50		333,469	2,949,547	3,283,016	9,981,690	6,698,674
	16,673,469	15,006,122	132,729,615	161,250,350	449,176,050	287,925,700

Estimated IRR = 28.3%

Table O-1-8 Increased Production Value (Land Use II-1)

Zone	(Unit: Col. \$1,000)		
	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	3,781,713	1,566,188
Middle	3,816,151	7,349,504	3,533,353
Lower	3,402,059	7,062,201	3,660,142
Total	9,433,735	18,193,418	8,759,683

Table O-1-9 Increased Production Cost (Land Use II-1)

Zone	(Unit: Col. \$1,000)		
	Without Project	With Project	Increased Production Cost
Upper	958,727	1,462,340	503,613
Middle	2,192,488	3,134,886	942,398
Lower	1,902,242	2,979,672	1,077,430
Total	5,053,457	7,576,898	2,523,441

Table O-1-10 Production Cost Cost and Value with Project
Upper Zone (Land Use II-1)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	3,720	181,740	676,073	440,000	1,636,800	960,727
Upland rice						
Maize	1,340	89,310	119,675	130,000	174,200	54,525
Maize (Non irr)	130	89310	11610	104000	11714	104
Soybean	700	138,100	96,670	230,670	161,469	64,799
Sorghum	300	113,880	34,164	189,000	56,700	22,536
Other crops	220	178,430	39,255	315,000	69,300	30,045
Plantain	1,060	147,680	156,541	500,000	530,000	373,459
Plantain (Non irr)	60	147680	8861	300000	18000	9139
Cacao	260	148,830	38,696	274,680	71,417	32,721
Papaya	610	207,970	126,862	880,000	536,800	409,938
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,315	15,310	35,443		0	-35,443
Cattle	2,315	10,140	23,474	70,200	162,513	139,039
Total			1,462,340		3,781,713	2,319,373

Table O-1-11 Production Cost Cost and Value with Project
Middle Zone (Land Use II-1)

Middle Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	13,320	181,740	2,420,777	440,000	5,860,800	3,440,023
Upland rice						
Maize	2,085	89,310	186,211	130,000	271,050	84,839
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	1,100	138,100	151,910	230,670	253,737	101,827
Sorghum	500	113,880	56,940	189,000	94,500	37,560
Other crops	220	178,430	39,255	315,000	69,300	30,045
Plantain	640	147,680	94,515	500,000	320,000	225,485
Cacao	380	148,830	56,555	274,680	104,378	47,823
Papaya						
Oil palm	320	252,760	38,547	870,200	131,904	93,357
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,425	15,310	52,437		0	-52,437
Cattle	3,425	10,140	34,730	70,200	240,435	205,706
Total			3,134,886		7,349,504	4,214,618

Table O-1-12 Production Cost Cost and Value with Project
Lower Zone (Land Use II-1)

Lower Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	13,100	181,740	2,380,794	440,000	5,764,000	3,383,206
Upland rice						
Maize	1,540	89,310	137,537	130,000	200,200	62,663
Maize (Non irr)	100	89,310	8,931	104,000	10,400	1,469
Soybean	750	138,100	103,575	230,670	173,003	69,428
Sorghum	300	113,880	34,164	189,000	56,700	22,536
Sorghum(Non irr)	100	113,880	11,388	163,800	16,380	
Other crops	150	178,430	26,765	315,000	47,250	20,486
Other crops (Non)	20	178,430	3,569	210,000	4,200	631
Plantain	810	147,680	119,621	500,000	405,000	285,379
Cacao	230	148,830	34,231	274,680	63,176	28,946
Papaya						
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,460	15,310	68,283		0	-68,283
Cattle	4,460	10,140	45,224	70,200	313,092	267,868
Total			2,979,672		7,062,201	4,077,537

Table O-1-13 Estimation of IRR (Land Use II-1)

(Unit: Col. \$1,000)

Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	3,123,449			3,123,449		-3,123,449
2	3,123,449			3,123,449		-3,123,449
3	3,123,449			3,123,449		-3,123,449
4	3,123,449			3,123,449		-3,123,449
5	3,123,449			3,123,449		-3,123,449
6		312,345	2,523,441	2,835,786	8,759,683	5,923,897
7		312,345	2,523,441	2,835,786	8,759,683	5,923,897
8		312,345	2,523,441	2,835,786	8,759,683	5,923,897
9		312,345	2,523,441	2,835,786	8,759,683	5,923,897
10		312,345	2,523,441	2,835,786	8,759,683	5,923,897
11		312,345	2,523,441	2,835,786	8,759,683	5,923,897
12		312,345	2,523,441	2,835,786	8,759,683	5,923,897
13		312,345	2,523,441	2,835,786	8,759,683	5,923,897
14		312,345	2,523,441	2,835,786	8,759,683	5,923,897
15		312,345	2,523,441	2,835,786	8,759,683	5,923,897
16		312,345	2,523,441	2,835,786	8,759,683	5,923,897
17		312,345	2,523,441	2,835,786	8,759,683	5,923,897
18		312,345	2,523,441	2,835,786	8,759,683	5,923,897
19		312,345	2,523,441	2,835,786	8,759,683	5,923,897
20		312,345	2,523,441	2,835,786	8,759,683	5,923,897
21		312,345	2,523,441	2,835,786	8,759,683	5,923,897
22		312,345	2,523,441	2,835,786	8,759,683	5,923,897
23		312,345	2,523,441	2,835,786	8,759,683	5,923,897
24		312,345	2,523,441	2,835,786	8,759,683	5,923,897
25		312,345	2,523,441	2,835,786	8,759,683	5,923,897
26		312,345	2,523,441	2,835,786	8,759,683	5,923,897
27		312,345	2,523,441	2,835,786	8,759,683	5,923,897
28		312,345	2,523,441	2,835,786	8,759,683	5,923,897
29		312,345	2,523,441	2,835,786	8,759,683	5,923,897
30		312,345	2,523,441	2,835,786	8,759,683	5,923,897
31		312,345	2,523,441	2,835,786	8,759,683	5,923,897
32		312,345	2,523,441	2,835,786	8,759,683	5,923,897
33		312,345	2,523,441	2,835,786	8,759,683	5,923,897
34		312,345	2,523,441	2,835,786	8,759,683	5,923,897
35		312,345	2,523,441	2,835,786	8,759,683	5,923,897
36		312,345	2,523,441	2,835,786	8,759,683	5,923,897
37		312,345	2,523,441	2,835,786	8,759,683	5,923,897
38		312,345	2,523,441	2,835,786	8,759,683	5,923,897
39		312,345	2,523,441	2,835,786	8,759,683	5,923,897
40		312,345	2,523,441	2,835,786	8,759,683	5,923,897
41		312,345	2,523,441	2,835,786	8,759,683	5,923,897
42		312,345	2,523,441	2,835,786	8,759,683	5,923,897
43		312,345	2,523,441	2,835,786	8,759,683	5,923,897
44		312,345	2,523,441	2,835,786	8,759,683	5,923,897
45		312,345	2,523,441	2,835,786	8,759,683	5,923,897
46		312,345	2,523,441	2,835,786	8,759,683	5,923,897
47		312,345	2,523,441	2,835,786	8,759,683	5,923,897
48		312,345	2,523,441	2,835,786	8,759,683	5,923,897
49		312,345	2,523,441	2,835,786	8,759,683	5,923,897
50		312,345	2,523,441	2,835,786	8,759,683	5,923,897
	15,617,244	14,055,520	113,554,845	143,227,609	394,185,735	250,958,126

Estimated IRR = 23.7%

Table O-1-14 Increased Production Value (Land Use II-2)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	3,453,614	1,238,089
Middle	3,816,151	6,801,622	2,985,471
Lower	3,402,059	6,733,144	3,331,085
Total	9,433,735	16,988,380	7,554,645

Table O-1-15 Increased Production Cost (Land Use II-2)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Cost
Upper	958,727	1,374,333	415,606
Middle	2,192,488	3,002,827	810,339
Lower	1,902,242	2,899,803	997,561
Total	5,053,457	7,276,963	2,223,506

Table O-1-16 Production Cost Cost and Value with Project
Upper Zone (Land Use II-2)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	2,450	181,740	445,263	440,000	1,078,000	632,737
Upland rice						
Maize	1,710	89,310	152,720	130,000	222,300	69,580
Maize (Non irr)	130	89310	11610	104000	11714	104
Soybean	1,000	138,100	138,100	230,670	230,670	92,570
Sorghum	900	113,880	102,492	189,000	170,100	67,608
Other crops	220	178,430	39,255	315,000	69,300	30,045
Plantain	1,060	147,680	156,541	500,000	530,000	373,459
Plantain (Non irr)	60	147680	8861	300000	18000	9139
Cacao	260	148,830	38,696	274,680	71,417	32,721
Papaya	610	207,970	126,862	880,000	536,800	409,938
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,315	15,310	35,443		0	-35,443
Cattle	2,315	10,140	23,474	70,200	162,513	139,039
Total			1,374,333		3,453,614	2,079,281

Table 0-1-17 Production Cost Cost and Value with Project
Middle Zone (Land Use II-2)

Middle Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	10,950	181,740	1,990,053	440,000	4,818,000	2,827,947
Upland rice						
Maize	2,235	89,310	199,608	130,000	290,550	90,942
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	2,440	138,100	336,964	230,670	562,835	225,871
Sorghum	1,380	113,880	157,154	189,000	260,820	103,666
Other crops	220	178,430	39,255	315,000	69,300	30,045
Plantain	640	147,680	94,515	500,000	320,000	225,485
Cacao	380	148,830	56,555	274,680	104,378	47,823
Papaya						
Oil palm	320	252,760	38,547	870,200	131,904	93,357
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,425	15,310	52,437		0	-52,437
Cattle	3,425	10,140	34,730	70,200	240,435	205,706
Total			3,002,827		6,801,622	3,798,795

Table 0-1-18 Production Cost Cost and Value with Project
Lower Zone (Land Use II-2)

Lower Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	11,670	181,740	2,120,906	440,000	5,134,800	3,013,894
Upland rice						
Maize	1,490	89,310	133,072	130,000	193,700	60,628
Maize (Non irr)	220	89,310	19,648	104,000	22,880	3,232
Soybean	1,530	138,100	211,293	230,670	352,925	141,632
Sorghum	980	113,880	111,602	189,000	185,220	73,618
Sorghum (Non irr)	0	113,880	0	163,800	0	0
Other crops	170	178,430	30,333	315,000	53,550	23,217
Other crops (Non)	0	178,430	0	210,000	0	0
Plantain	810	147,680	119,621	500,000	405,000	285,379
Cacao	230	148,830	34,231	274,680	63,176	28,946
Papaya						
Oil palm						
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,460	15,310	68,283		0	-68,283
Cattle	4,460	10,140	45,224	70,200	313,092	267,868
Total			2,899,803		6,733,144	3,833,340

Table O-1-19 Estimation of IRR (Land Use II-2)

(Unit: Col. \$1,000)

Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	2,770,972			2,770,972		-2,770,972
2	2,770,972			2,770,972		-2,770,972
3	2,770,972			2,770,972		-2,770,972
4	2,770,972			2,770,972		-2,770,972
5	2,770,972			2,770,972		-2,770,972
6		277,097	2,223,506	2,500,603	7,554,645	5,054,042
7		277,097	2,223,506	2,500,603	7,554,645	5,054,042
8		277,097	2,223,506	2,500,603	7,554,645	5,054,042
9		277,097	2,223,506	2,500,603	7,554,645	5,054,042
10		277,097	2,223,506	2,500,603	7,554,645	5,054,042
11		277,097	2,223,506	2,500,603	7,554,645	5,054,042
12		277,097	2,223,506	2,500,603	7,554,645	5,054,042
13		277,097	2,223,506	2,500,603	7,554,645	5,054,042
14		277,097	2,223,506	2,500,603	7,554,645	5,054,042
15		277,097	2,223,506	2,500,603	7,554,645	5,054,042
16		277,097	2,223,506	2,500,603	7,554,645	5,054,042
17		277,097	2,223,506	2,500,603	7,554,645	5,054,042
18		277,097	2,223,506	2,500,603	7,554,645	5,054,042
19		277,097	2,223,506	2,500,603	7,554,645	5,054,042
20		277,097	2,223,506	2,500,603	7,554,645	5,054,042
21		277,097	2,223,506	2,500,603	7,554,645	5,054,042
22		277,097	2,223,506	2,500,603	7,554,645	5,054,042
23		277,097	2,223,506	2,500,603	7,554,645	5,054,042
24		277,097	2,223,506	2,500,603	7,554,645	5,054,042
25		277,097	2,223,506	2,500,603	7,554,645	5,054,042
26		277,097	2,223,506	2,500,603	7,554,645	5,054,042
27		277,097	2,223,506	2,500,603	7,554,645	5,054,042
28		277,097	2,223,506	2,500,603	7,554,645	5,054,042
29		277,097	2,223,506	2,500,603	7,554,645	5,054,042
30		277,097	2,223,506	2,500,603	7,554,645	5,054,042
31		277,097	2,223,506	2,500,603	7,554,645	5,054,042
32		277,097	2,223,506	2,500,603	7,554,645	5,054,042
33		277,097	2,223,506	2,500,603	7,554,645	5,054,042
34		277,097	2,223,506	2,500,603	7,554,645	5,054,042
35		277,097	2,223,506	2,500,603	7,554,645	5,054,042
36		277,097	2,223,506	2,500,603	7,554,645	5,054,042
37		277,097	2,223,506	2,500,603	7,554,645	5,054,042
38		277,097	2,223,506	2,500,603	7,554,645	5,054,042
39		277,097	2,223,506	2,500,603	7,554,645	5,054,042
40		277,097	2,223,506	2,500,603	7,554,645	5,054,042
41		277,097	2,223,506	2,500,603	7,554,645	5,054,042
42		277,097	2,223,506	2,500,603	7,554,645	5,054,042
43		277,097	2,223,506	2,500,603	7,554,645	5,054,042
44		277,097	2,223,506	2,500,603	7,554,645	5,054,042
45		277,097	2,223,506	2,500,603	7,554,645	5,054,042
46		277,097	2,223,506	2,500,603	7,554,645	5,054,042
47		277,097	2,223,506	2,500,603	7,554,645	5,054,042
48		277,097	2,223,506	2,500,603	7,554,645	5,054,042
49		277,097	2,223,506	2,500,603	7,554,645	5,054,042
50		277,097	2,223,506	2,500,603	7,554,645	5,054,042
	13,854,861	12,469,375	100,057,770	126,382,006	339,959,025	213,577,019

Estimated IRR = 23.1%

Table O-2-1 Increased Production Value (Probability of 1/2)

Zone	(Unit: Col. \$1,000)		
	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	3,820,285	1,604,760
Middle	3,816,151	7,972,665	4,156,514
Lower	3,402,059	7,547,004	4,144,945
Total	9,433,735	19,339,954	9,906,219

Table O-2-2 Increased Production Cost (Probability of 1/2)

Zone	(Unit: Col. \$1,000)		
	Without Project	With Project	Increased Production Cost
Upper	958,727	1,496,275	537,548
Middle	2,192,488	3,334,257	1,141,769
Lower	1,902,242	3,168,683	1,266,441
Total	5,053,457	7,999,215	2,945,758

Table O-2-3 Production Cost Cost and Value with Project
Upper Zone (Probability of 1/2)

Upper Zone						
Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	4,520	181,740	821,465	440,000	1,988,800	1,167,335
Paddy rice (w.s)	55	181,740	9,996	328,000	18,040	8,044
Maize	500	89,310	44,655	130,000	65,000	20,345
Maize (Non irr)	130	89,310	11,610	104,000	13,520	1,910
Soybean	655	138,100	90,456	225,000	147,375	56,920
Soybean (w.s)	45	138,100	6,215	200,000	9,000	2,786
Sorghum	265	113,880	30,178	189,000	50,085	19,907
Sorghum (w.s)	35	113,880	3,986	163,800	5,733	1,747
Other crops	200	178,430	35,686	315,000	63,000	27,314
Other crops (w.s)	35	178,430	6,245	210,000	7,350	1,105
Plantain	920	147,680	135,866	500,000	460,000	324,134
Plantain (w.s)	40	147,680	5,907	300,000	12,000	6,093
Plantain (Non irr)	60	147,680	8,861	300,000	18,000	9,139
Cacao	230	148,830	34,231	274,680	63,176	28,946
Cacao (w.s)	30	148,830	4,465	196,200	5,886	1,421
Papaya	375	207,970	77,989	880,000	330,000	252,011
Papaya (w.s)	35	207,970	7,279	800,000	28,000	20,721
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm		252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,600	15,310	39,806			-39,806
Cattle	2,600	10,140	26,364	70,200	182,520	156,156
Total			1,496,275		3,820,285	2,324,010

Table 0-2-4 Production Cost Cost and Value with Project
Middle Zone (Probability of 1/2)

Middle Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,865	181,740	2,701,565	440,000	6,540,600	3,839,035
Paddy rice (w. s)	95	181,740	17,265	328,000	31,160	13,895
Maize	495	89,310	44,208	130,000	64,350	20,142
Maize (w. s)	30	89,310	2,679	104,000	3,120	441
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	1,150	138,100	158,815	225,000	258,750	99,935
Soybean (w. s)	50	138,100	6,905	200,000	10,000	3,095
Sorghum	465	113,880	52,954	189,000	87,885	34,931
Sorghum (w. s)	35	113,880	3,986	163,800	5,733	1,747
Other crops	170	178,430	30,333	315,000	53,550	23,217
Other crops (w. s)	30	178,430	5,353	210,000	6,300	947
Plantain	560	147,680	82,701	500,000	280,000	197,299
Plantain (w. s)	30	147,680	4,430	300,000	9,000	4,570
Plantain (Non irr)	0	147,680	0	300,000	0	0
Cacao	350	148,830	52,091	274,680	96,138	44,048
Cacao (w. s)	30	148,830	4,465	196,200	5,886	1,421
Papaya	0	207,970	0	880,000	0	0
Papaya (w. s)	0	207,970	0	800,000	0	0
Papaya (Non irr)	0	207,970	0	800,000	0	0
Oil palm	290	252,760	73,300	870,200	252,358	179,058
Oil palm (w. s)	30	252,760	7,583	870,200	26,106	18,523
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,395	15,310	51,977			-51,977
Cattle	3,395	10,140	34,425	70,200	238,329	203,904
Total			3,338,046		7,972,665	4,634,619

Table 0-2-5 Production Cost Cost and Value with Project
Lower Zone (Probability of 1/2)

Lower Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,430	181,740	2,622,508	440,000	6,349,200	3,726,692
Paddy rice (w. s)	95	181,740	17,265	328,000	31,160	13,895
Maize	300	89,310	26,793	130,000	39,000	12,207
Maize (w. s)		89,310	0	104,000	0	0
Maize (Non irr)	220	89,310	19,648	104,000	22,880	3,232
Soybean	810	138,100	111,861	225,000	182,250	70,389
Soybean (w. s)	40	138,100	5,524	200,000	8,000	2,476
Sorghum	465	113,880	52,954	189,000	87,885	34,931
Sorghum (w. s)	35	113,880	3,986	163,800	5,733	1,747
Other crops	245	178,430	43,715	315,000	77,175	33,460
Other crops (w. s)	30	178,430	5,353	210,000	6,300	947
Plantain	725	147,680	107,068	500,000	362,500	255,432
Plantain (w. s)	35	147,680	5,169	300,000	10,500	5,331
Plantain (Non irr)		147,680	0	300,000	0	0
Cacao	195	148,830	29,022	274,680	53,563	24,541
Cacao (w. s)	35	148,830	5,209	196,200	6,867	1,658
Papaya		207,970	0	880,000	0	0
Papaya (w. s)		207,970	0	800,000	0	0
Papaya (Non irr)		207,970	0	800,000	0	0
Oil palm		252,760	0	870,200	0	0
Oil palm (w. s)		252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,205	15,310	64,379			-64,379
Cattle	4,205	10,140	42,639	70,200	295,191	252,552
Total			3,168,683		7,547,004	4,378,320

Table 0-2-6 Estimation of IRR (Probability of 1/2)

(Unit: \$1,000)						
Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	3,109,267			3,109,267		-3,109,267
2	3,109,267			3,109,267		-3,109,267
3	3,109,267			3,109,267		-3,109,267
4	3,109,267			3,109,267		-3,109,267
5	3,109,267			3,109,267		-3,109,267
6		310,927	2,945,758	3,256,685	9,906,219	6,649,534
7		310,927	2,945,758	3,256,685	9,906,219	6,649,534
8		310,927	2,945,758	3,256,685	9,906,219	6,649,534
9		310,927	2,945,758	3,256,685	9,906,219	6,649,534
10		310,927	2,945,758	3,256,685	9,906,219	6,649,534
11		310,927	2,945,758	3,256,685	9,906,219	6,649,534
12		310,927	2,945,758	3,256,685	9,906,219	6,649,534
13		310,927	2,945,758	3,256,685	9,906,219	6,649,534
14		310,927	2,945,758	3,256,685	9,906,219	6,649,534
15		310,927	2,945,758	3,256,685	9,906,219	6,649,534
16		310,927	2,945,758	3,256,685	9,906,219	6,649,534
17		310,927	2,945,758	3,256,685	9,906,219	6,649,534
18		310,927	2,945,758	3,256,685	9,906,219	6,649,534
19		310,927	2,945,758	3,256,685	9,906,219	6,649,534
20		310,927	2,945,758	3,256,685	9,906,219	6,649,534
21		310,927	2,945,758	3,256,685	9,906,219	6,649,534
22		310,927	2,945,758	3,256,685	9,906,219	6,649,534
23		310,927	2,945,758	3,256,685	9,906,219	6,649,534
24		310,927	2,945,758	3,256,685	9,906,219	6,649,534
25		310,927	2,945,758	3,256,685	9,906,219	6,649,534
26		310,927	2,945,758	3,256,685	9,906,219	6,649,534
27		310,927	2,945,758	3,256,685	9,906,219	6,649,534
28		310,927	2,945,758	3,256,685	9,906,219	6,649,534
29		310,927	2,945,758	3,256,685	9,906,219	6,649,534
30		310,927	2,945,758	3,256,685	9,906,219	6,649,534
31		310,927	2,945,758	3,256,685	9,906,219	6,649,534
32		310,927	2,945,758	3,256,685	9,906,219	6,649,534
33		310,927	2,945,758	3,256,685	9,906,219	6,649,534
34		310,927	2,945,758	3,256,685	9,906,219	6,649,534
35		310,927	2,945,758	3,256,685	9,906,219	6,649,534
36		310,927	2,945,758	3,256,685	9,906,219	6,649,534
37		310,927	2,945,758	3,256,685	9,906,219	6,649,534
38		310,927	2,945,758	3,256,685	9,906,219	6,649,534
39		310,927	2,945,758	3,256,685	9,906,219	6,649,534
40		310,927	2,945,758	3,256,685	9,906,219	6,649,534
41		310,927	2,945,758	3,256,685	9,906,219	6,649,534
42		310,927	2,945,758	3,256,685	9,906,219	6,649,534
43		310,927	2,945,758	3,256,685	9,906,219	6,649,534
44		310,927	2,945,758	3,256,685	9,906,219	6,649,534
45		310,927	2,945,758	3,256,685	9,906,219	6,649,534
46		310,927	2,945,758	3,256,685	9,906,219	6,649,534
47		310,927	2,945,758	3,256,685	9,906,219	6,649,534
48		310,927	2,945,758	3,256,685	9,906,219	6,649,534
49		310,927	2,945,758	3,256,685	9,906,219	6,649,534
50		310,927	2,945,758	3,256,685	9,906,219	6,649,534
	15,546,336	13,991,702	132,559,110	162,097,148	445,779,855	283,682,707

Estimated IRR = 25.7%

Table 0-2-7 Increased Production Value (Probability of 1/5)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	3,843,646	1,628,121
Middle	3,816,151	7,995,389	4,179,238
Lower	3,402,059	7,570,146	4,168,087
Total	9,433,735	19,409,181	9,975,446

Table 0-2-8 Increased Production Cost (Probability of 1/5)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Cost
Upper	958,727	1,496,275	537,548
Middle	2,192,488	3,334,257	1,141,769
Lower	1,902,242	3,168,683	1,266,441
Total	5,053,457	7,999,215	2,945,758

Table 0-2-9 Production Cost Cost and Value with Project
Upper Zone (Probability of 1/5)

Upper Zone						
Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	4,569	181,740	830,370	440,000	2,010,360	1,179,990
Paddy rice (w.s)	6	181,740	1,090	328,000	1,968	878
Maize	500	89,310	44,655	130,000	65,000	20,345
Maize (Non irr)	130	89,310	11,610	104,000	13,520	1,910
Soybean	696	138,100	96,118	225,000	156,600	60,482
Soybean (w.s)	4	138,100	552	200,000	800	248
Sorghum	300	113,880	34,164	189,000	56,700	22,536
Sorghum (w.s)	0	113,880	0	163,800	0	0
Other crops	234	178,430	41,753	315,000	73,710	31,957
Other crops (w.s)	1	178,430	178	210,000	210	32
Plantain	957	147,680	141,330	500,000	478,500	337,170
Plantain (w.s)	3	147,680	443	300,000	900	457
Plantain (Non irr)	60	147,680	8,861	300,000	18,000	9,139
Cacao	259	148,830	38,547	274,680	71,142	32,595
Cacao (w.s)	1	148,830	149	196,200	196	47
Papaya	409	207,970	85,060	880,000	359,920	274,860
Papaya (w.s)	1	207,970	208	800,000	800	592
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm		252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,600	15,310	39,806			-39,806
Cattle	2,600	10,140	26,364	70,200	182,520	156,156
Total			1,496,275		3,843,646	2,347,371

Table 0-2-10 Production Cost Cost and Value with Project
Middle Zone (Probability of 1/5)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,943	181,740	2,715,741	440,000	6,574,920	3,859,179
Paddy rice (w. s)	17	181,740	3,090	328,000	5,576	2,486
Maize	525	89,310	46,888	130,000	68,250	21,362
Maize (w. s)	0	89,310	0	104,000	0	0
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	1,196	138,100	165,168	225,000	269,100	103,932
Soybean (w. s)	4	138,100	552	200,000	800	248
Sorghum	498	113,880	56,712	189,000	94,122	37,410
Sorghum (w. s)	2	113,880	228	163,800	328	100
Other crops	200	178,430	35,686	315,000	63,000	27,314
Other crops (w. s)	0	178,430	0	210,000	0	0
Plantain	589	147,680	86,984	500,000	294,500	207,516
Plantain (w. s)	1	147,680	148	300,000	300	152
Plantain (Non irr)	0	147,680	0	300,000	0	0
Cacao	379	148,830	56,407	274,680	104,104	47,697
Cacao (w. s)	1	148,830	149	196,200	196	47
Papaya	0	207,970	0	880,000	0	0
Papaya (w. s)	0	207,970	0	800,000	0	0
Papaya (Non irr)	0	207,970	0	800,000	0	0
Oil palm	320	252,760	80,883	870,200	278,464	197,581
Oil palm (w. s)	0	252,760	0	870,200	0	0
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,395	15,310	51,977			-51,977
Cattle	3,395	10,140	34,425	70,200	238,329	203,904
Total			3,338,046		7,995,389	4,657,342

Table 0-2-11 Production Cost Cost and Value with Project
Lower Zone (Probability of 1/5)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,511	181,740	2,637,229	440,000	6,384,840	3,747,611
Paddy rice (w. s)	14	181,740	2,544	328,000	4,592	2,048
Maize	300	89,310	26,793	130,000	39,000	12,207
Maize (w. s)		89,310	0	104,000	0	0
Maize (Non irr)	220	89,310	19,648	104,000	22,880	3,232
Soybean	847	138,100	116,971	225,000	190,575	73,604
Soybean (w. s)	3	138,100	414	200,000	600	186
Sorghum	498	113,880	56,712	189,000	94,122	37,410
Sorghum (w. s)	2	113,880	228	163,800	328	100
Other crops	274	178,430	48,890	315,000	86,310	37,420
Other crops (w. s)	1	178,430	178	210,000	210	32
Plantain	758	147,680	111,941	500,000	379,000	267,059
Plantain (w. s)	2	147,680	295	300,000	600	305
Plantain (Non irr)		147,680	0	300,000	0	0
Cacao	229	148,830	34,082	274,680	62,902	28,820
Cacao (w. s)	1	148,830	149	196,200	196	47
Papaya		207,970	0	880,000	0	0
Papaya (w. s)		207,970	0	800,000	0	0
Papaya (Non irr)		207,970	0	800,000	0	0
Oil palm		252,760	0	870,200	0	0
Oil palm (w. s)		252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,205	15,310	64,379			-64,379
Cattle	4,205	10,140	42,639	70,200	295,191	252,552
Total			3,168,683		7,570,146	4,401,462

Table O-2-12 Estimation of IRR (Probability of 1/5)

(Unit: \$1,000)

Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	3,123,449			3,123,449		-3,123,449
2	3,123,449			3,123,449		-3,123,449
3	3,123,449			3,123,449		-3,123,449
4	3,123,449			3,123,449		-3,123,449
5	3,123,449			3,123,449		-3,123,449
6		312,345	2,945,758	3,258,103	9,975,446	6,717,343
7		312,345	2,945,758	3,258,103	9,975,446	6,717,343
8		312,345	2,945,758	3,258,103	9,975,446	6,717,343
9		312,345	2,945,758	3,258,103	9,975,446	6,717,343
10		312,345	2,945,758	3,258,103	9,975,446	6,717,343
11		312,345	2,945,758	3,258,103	9,975,446	6,717,343
12		312,345	2,945,758	3,258,103	9,975,446	6,717,343
13		312,345	2,945,758	3,258,103	9,975,446	6,717,343
14		312,345	2,945,758	3,258,103	9,975,446	6,717,343
15		312,345	2,945,758	3,258,103	9,975,446	6,717,343
16		312,345	2,945,758	3,258,103	9,975,446	6,717,343
17		312,345	2,945,758	3,258,103	9,975,446	6,717,343
18		312,345	2,945,758	3,258,103	9,975,446	6,717,343
19		312,345	2,945,758	3,258,103	9,975,446	6,717,343
20		312,345	2,945,758	3,258,103	9,975,446	6,717,343
21		312,345	2,945,758	3,258,103	9,975,446	6,717,343
22		312,345	2,945,758	3,258,103	9,975,446	6,717,343
23		312,345	2,945,758	3,258,103	9,975,446	6,717,343
24		312,345	2,945,758	3,258,103	9,975,446	6,717,343
25		312,345	2,945,758	3,258,103	9,975,446	6,717,343
26		312,345	2,945,758	3,258,103	9,975,446	6,717,343
27		312,345	2,945,758	3,258,103	9,975,446	6,717,343
28		312,345	2,945,758	3,258,103	9,975,446	6,717,343
29		312,345	2,945,758	3,258,103	9,975,446	6,717,343
30		312,345	2,945,758	3,258,103	9,975,446	6,717,343
31		312,345	2,945,758	3,258,103	9,975,446	6,717,343
32		312,345	2,945,758	3,258,103	9,975,446	6,717,343
33		312,345	2,945,758	3,258,103	9,975,446	6,717,343
34		312,345	2,945,758	3,258,103	9,975,446	6,717,343
35		312,345	2,945,758	3,258,103	9,975,446	6,717,343
36		312,345	2,945,758	3,258,103	9,975,446	6,717,343
37		312,345	2,945,758	3,258,103	9,975,446	6,717,343
38		312,345	2,945,758	3,258,103	9,975,446	6,717,343
39		312,345	2,945,758	3,258,103	9,975,446	6,717,343
40		312,345	2,945,758	3,258,103	9,975,446	6,717,343
41		312,345	2,945,758	3,258,103	9,975,446	6,717,343
42		312,345	2,945,758	3,258,103	9,975,446	6,717,343
43		312,345	2,945,758	3,258,103	9,975,446	6,717,343
44		312,345	2,945,758	3,258,103	9,975,446	6,717,343
45		312,345	2,945,758	3,258,103	9,975,446	6,717,343
46		312,345	2,945,758	3,258,103	9,975,446	6,717,343
47		312,345	2,945,758	3,258,103	9,975,446	6,717,343
48		312,345	2,945,758	3,258,103	9,975,446	6,717,343
49		312,345	2,945,758	3,258,103	9,975,446	6,717,343
50		312,345	2,945,758	3,258,103	9,975,446	6,717,343
	15,617,244	14,055,520	132,559,110	162,231,874	448,895,070	286,663,196

Estimated IRR =

25.8%

Table 0-2-13 Increased Production Value (Probability of 1/10)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Benefit
Upper	2,215,525	3,845,145	1,629,620
Middle	3,816,151	7,997,385	4,181,234
Lower	3,402,059	7,572,198	4,170,139
Total	9,433,735	19,414,728	9,980,993

Table 0-2-14 Increased Production Cost (Probability of 1/10)

(Unit: Col. \$1,000)

Zone	Without Project	With Project	Increased Production Cost
Upper	958,727	1,496,275	537,548
Middle	2,192,488	3,334,257	1,141,769
Lower	1,902,242	3,168,683	1,266,441
Total	5,053,457	7,999,215	2,945,758

Table 0-2-15 Production Cost Cost and Value with Project
Upper Zone (Probability of 1/10)

Upper Zone

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	4,574	181,740	831,279	440,000	2,012,560	1,181,281
Paddy rice (w. s)	1	181,740	182	328,000	328	146
Maize	500	89,310	44,655	130,000	65,000	20,345
Maize (Non irr)	130	89,310	11,610	104,000	13,520	1,910
Soybean	699	138,100	96,532	225,000	157,275	60,743
Soybean (w. s)	1	138,100	138	200,000	200	62
Sorghum	300	113,880	34,164	189,000	56,700	22,536
Sorghum (w. s)	0	113,880	0	163,800	0	0
Other crops	235	178,430	41,931	315,000	74,025	32,094
Other crops (w. s)	0	178,430	0	210,000	0	0
Plantain	960	147,680	141,773	500,000	480,000	338,227
Plantain (w. s)	0	147,680	0	300,000	0	0
Plantain (Non irr)	60	147,680	8,861	300,000	18,000	9,139
Cacao	260	148,830	38,696	274,680	71,417	32,721
Cacao (w. s)	0	148,830	0	196,200	0	0
Papaya	410	207,970	85,268	880,000	360,800	275,532
Papaya (w. s)	0	207,970	0	800,000	0	0
Papaya (Non irr)	430	207,970	89,427	800,000	344,000	254,573
Oil palm		252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	2,600	15,310	39,806			-39,806
Cattle	2,600	10,140	26,364	70,200	182,520	156,156
Total			1,496,275		3,845,145	2,348,869

Table 0-2-16 Production Cost Cost and Value with Project
Middle Zone (Probability of 1/10)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,957	181,740	2,718,285	440,000	6,581,080	3,862,795
Paddy rice (w.s)	3	181,740	545	328,000	984	439
Maize	525	89,310	46,888	130,000	68,250	21,362
Maize (w.s)	0	89,310	0	104,000	0	0
Maize (Non irr)	25	89,310	2,233	104,000	2,600	367
Soybean	1,200	138,100	165,720	225,000	270,000	104,280
Soybean (w.s)	0	138,100	0	200,000	0	0
Sorghum	500	113,880	56,940	189,000	94,500	37,560
Sorghum (w.s)	0	113,880	0	163,800	0	0
Other crops	200	178,430	35,686	315,000	63,000	27,314
Other crops (w.s)	0	178,430	0	210,000	0	0
Plantain	590	147,680	87,131	500,000	295,000	207,869
Plantain (w.s)	0	147,680	0	300,000	0	0
Plantain (Non irr)	0	147,680	0	300,000	0	0
Cacao	380	148,830	56,555	274,680	104,378	47,823
Cacao (w.s)	0	148,830	0	196,200	0	0
Papaya	0	207,970	0	880,000	0	0
Papaya (w.s)	0	207,970	0	800,000	0	0
Papaya (Non irr)	0	207,970	0	800,000	0	0
Oil palm	320	252,760	80,883	870,200	278,464	197,581
Oil palm (w.s)	0	252,760	0	870,200	0	0
Other tree crops	10	77,680	777	80,000	800	23
Pasture	3,395	15,310	51,977			-51,977
Cattle	3,395	10,140	34,425	70,200	238,329	203,904
Total			3,338,046		7,997,385	4,659,339

Table 0-2-17 Production Cost Cost and Value with Project
Lower Zone (Probability of 1/10)

Crop	Area (ha)	Production cost		Production value		N. P. V (\$1,000)
		(\$/ha)	(\$1,000)	(\$/ha)	(\$1,000)	
Paddy rice	14,523	181,740	2,639,410	440,000	6,390,120	3,750,710
Paddy rice (w.s)	2	181,740	363	328,000	656	293
Maize	300	89,310	26,793	130,000	39,000	12,207
Maize (w.s)	0	89,310	0	104,000	0	0
Maize (Non irr)	220	89,310	19,648	104,000	22,880	3,232
Soybean	850	138,100	117,385	225,000	191,250	73,865
Soybean (w.s)	0	138,100	0	200,000	0	0
Sorghum	500	113,880	56,940	189,000	94,500	37,560
Sorghum (w.s)	0	113,880	0	163,800	0	0
Other crops	275	178,430	49,068	315,000	86,625	37,557
Other crops (w.s)	0	178,430	0	210,000	0	0
Plantain	760	147,680	112,237	500,000	380,000	267,763
Plantain (w.s)	0	147,680	0	300,000	0	0
Plantain (Non irr)	0	147,680	0	300,000	0	0
Cacao	230	148,830	34,231	274,680	63,176	28,946
Cacao (w.s)	0	148,830	0	196,200	0	0
Papaya	0	207,970	0	880,000	0	0
Papaya (w.s)	0	207,970	0	800,000	0	0
Papaya (Non irr)	0	207,970	0	800,000	0	0
Oil palm	0	252,760	0	870,200	0	0
Oil palm (w.s)	0	252,760	0	870,200	0	0
Other tree crops	10	559,030	5,590	880,000	8,800	3,210
Pasture	4,205	15,310	64,379			-64,379
Cattle	4,205	10,140	42,639	70,200	295,191	252,552
Total			3,168,683		7,572,198	4,403,515

Table O-2-18 Estimation of IRR (Probability of 1/10)

(Unit: \$1,000)						
Year	Const. Cost	O/M Cost	Prod. Cost	Total	Inc. Benefit	Project Return
1	3,137,374			3,137,374		-3,137,374
2	3,137,374			3,137,374		-3,137,374
3	3,137,374			3,137,374		-3,137,374
4	3,137,374			3,137,374		-3,137,374
5	3,137,374			3,137,374		-3,137,374
6		313,737	2,945,758	3,259,495	9,980,993	6,721,498
7		313,737	2,945,758	3,259,495	9,980,993	6,721,498
8		313,737	2,945,758	3,259,495	9,980,993	6,721,498
9		313,737	2,945,758	3,259,495	9,980,993	6,721,498
10		313,737	2,945,758	3,259,495	9,980,993	6,721,498
11		313,737	2,945,758	3,259,495	9,980,993	6,721,498
12		313,737	2,945,758	3,259,495	9,980,993	6,721,498
13		313,737	2,945,758	3,259,495	9,980,993	6,721,498
14		313,737	2,945,758	3,259,495	9,980,993	6,721,498
15		313,737	2,945,758	3,259,495	9,980,993	6,721,498
16		313,737	2,945,758	3,259,495	9,980,993	6,721,498
17		313,737	2,945,758	3,259,495	9,980,993	6,721,498
18		313,737	2,945,758	3,259,495	9,980,993	6,721,498
19		313,737	2,945,758	3,259,495	9,980,993	6,721,498
20		313,737	2,945,758	3,259,495	9,980,993	6,721,498
21		313,737	2,945,758	3,259,495	9,980,993	6,721,498
22		313,737	2,945,758	3,259,495	9,980,993	6,721,498
23		313,737	2,945,758	3,259,495	9,980,993	6,721,498
24		313,737	2,945,758	3,259,495	9,980,993	6,721,498
25		313,737	2,945,758	3,259,495	9,980,993	6,721,498
26		313,737	2,945,758	3,259,495	9,980,993	6,721,498
27		313,737	2,945,758	3,259,495	9,980,993	6,721,498
28		313,737	2,945,758	3,259,495	9,980,993	6,721,498
29		313,737	2,945,758	3,259,495	9,980,993	6,721,498
30		313,737	2,945,758	3,259,495	9,980,993	6,721,498
31		313,737	2,945,758	3,259,495	9,980,993	6,721,498
32		313,737	2,945,758	3,259,495	9,980,993	6,721,498
33		313,737	2,945,758	3,259,495	9,980,993	6,721,498
34		313,737	2,945,758	3,259,495	9,980,993	6,721,498
35		313,737	2,945,758	3,259,495	9,980,993	6,721,498
36		313,737	2,945,758	3,259,495	9,980,993	6,721,498
37		313,737	2,945,758	3,259,495	9,980,993	6,721,498
38		313,737	2,945,758	3,259,495	9,980,993	6,721,498
39		313,737	2,945,758	3,259,495	9,980,993	6,721,498
40		313,737	2,945,758	3,259,495	9,980,993	6,721,498
41		313,737	2,945,758	3,259,495	9,980,993	6,721,498
42		313,737	2,945,758	3,259,495	9,980,993	6,721,498
43		313,737	2,945,758	3,259,495	9,980,993	6,721,498
44		313,737	2,945,758	3,259,495	9,980,993	6,721,498
45		313,737	2,945,758	3,259,495	9,980,993	6,721,498
46		313,737	2,945,758	3,259,495	9,980,993	6,721,498
47		313,737	2,945,758	3,259,495	9,980,993	6,721,498
48		313,737	2,945,758	3,259,495	9,980,993	6,721,498
49		313,737	2,945,758	3,259,495	9,980,993	6,721,498
50		313,737	2,945,758	3,259,495	9,980,993	6,721,498
	15,686,872	14,118,185	132,559,110	162,364,167	449,144,685	286,780,518

Estimated IRR =

25.7%

