2.4 Replacement Cost

The useful life of facilities and machinery is assumed to be three years for threshing sheet and pedal thresher, five years for power thresher, power winnower and rice mill unit, and twenty years for drying floor, warehouse and milling house. Financial replacement costs in the respective pilot areas were estimated as shown in Table X 2-7.

2.5 Repayment of Loan

Condition of the loan for procurement and construction of machinery and facilities are set as follows :

-	Machinery	Repayment period	; 5 years
		Interest	; 18% /year
•	Facilities	(drying floor, wareho	use, milling house)
		Repayment period	; 10 years
		Interest	; 6% /year

The repayment covers principal and interest as shown in Table X 2-8. The annual repayment in the pilot plans were estimated as follows:

			(Unit:	Rp '000)
Cost Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
1. Machinery	9,597	10,665	6,302	15,728
2. Construction of facilities				
- Drying floor	1,450	1,035	1,104	1,588
- Warehouse/milling house	8,141	5,935	6,163	8,673
Sub-total	9,591	6,970	7,267	10,261

2.6 Estimation of Operation Expenses

Operation expenses for machinery and facilities in the respective pilot areas covers the operation and maintenance costs, depreciation cost and repayment cost for the loan as shown in Tables X 2-9 and 2-10. The following unit operation expenses will be collected from the member farmers so as to compensate the several costs for the activities :

Item		asari After 6th Year	lst- 5th	After 6th	1.1	After 6th	lst- 5th	After 6th
						eret (†		
I. Custom Threshing (Rp/kg of paddy) - Pedal Thresher - Power Thresher	-	6 -	10	6	, , , , , , , , , , , , , , , , , , , 	5	- 9	6
II. Processing and marketing (Rp/kg of r - Drying (Drying floor)	ice) 6	6	7	7	6	6	6	6
- Storage (Warehouse, milling house)	17	17	19	19	19	19	17	17
- Cleaning (Power winnower)	5	4	5	4	4	4	4	4
- Milling (Rice mill)	20	13	20	13	20	13	20	13
- Transportation	2	2	2	2	2	2	2	2
Sub-total	50	42	53	45	51	44	49	42

3. COST ESTIMATION FOR THE SERVICE CENTER

3.1 Preliminary Cost Estimate

The cost of the Service Center comprises the construction cost of building and facilities, equipment and machinery for demonstration, equipment and implement of laboratory for paddy/rice inspection, furniture and others. The following basic assumptions are considered for the preliminary cost estimate:

- The cost for construction, equipment and machinery are basically estimated by applying the retail price and local cost in Indonesia in 1988.
- The construction works will be executed under the local contract basis.
- 3) The cost of equipment and implement for laboratory are estimated at the retail prices in Japan. The exchange rate is Rp 1,730 and Yen 130 per US\$.

The cost of the Service Center are estimated in Table X 3-1, and summarized as follows :

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4 - 5. 5 - 1 1. 8		(Unit: Rp '000)
	Cost Item	Amount
	1. Building/ facilities	132,500
	2. Equipment/ implement for laboratory	68,480
	3. Farm machinery for demonstration	86,200
а 1 1	 Equipment/ furniture for office (truck, jeep others) 	137,700
	Total	424,880

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Table X 2-1 RETAIL PRICE LIST OF AGRICULTURAL MACHINERY

Machinery	Model	Specification	н Ц	Price (Rupiah)	
			Without Engine	Engine	Total
1. Reaper/1		(Working Width)			
- Reaper	AR120	120 cm	•		6,387,000
2. Binder/1		(Working Width)		•	· ·
- 2 wheel	RA30	30 cm	i	I	9,580,000
- 2 wheel	RASO	50 cm	t	ł	12,135,000
					· · .
3. Thresher		(Working Capa.)		•	:
- Fedal	-	300 kg/hr	100,000	•	100,000
- Power	with Engine 5HP	500 kg/hr	550,000	594,000	1,144,000
- Power	with Engine 6.5HP	750 kg/hr	550,000	847,000	1,397,000
- Power/I	with Engine 3HP	1500 kg/hr	3,460,000	473,000	3,933,000
		-			
4. Winnower/2		(Working Capa.)			
- Mannual		400 kg/hr	50,000	0	50,000
- DOWER	with Engine 5HP	500 kg/hr	200,000	594,000	794,000
- Power	with Engine 6.5HP	750 kg/hr	300,000	847,000	1,147,000
5. Drver		(Capacity)		·	
- Flat Type	Burner 3HP	800 kg	l		2,500,000 /4
Ł		1600 kg	I	l	5,000,000 /4
		3200 kg	2,255,000	3,124,000	5,379,000
6. Rice Mill Unit/5	Ω.	(Working Capa.)			
- one pass	Diesel Engine	300 kg/hr	3,190,000	4,300,000	7,490,000
- one pass	Diesel Engine	500 kg/hr	3,300,000	4,300,000	7,600,000
- one pass	Diesel Engine	750 kg/hr	3, 685, 000	4,300,000	7,985,000
7. Unit Cost of Agricultural	ricultural Equipment/Machinery	achinery			
- Serrated sickle	Ū,		3	ł	2,200
- Mat for threshing	ing	5m x5m	3	ı	20,000
Math Raw Junit		1			

Note;/1: CIF Jakarta, imported from Japan (15=1,730Rp.=130 yen).

/2: Results from interview survey in Karawang.
/3: Batch Dryer. Burner only (AB 3200) "Rp.2,530,000.
/4: Frice of Box is estimated by use of actual price for 3.2 ton capa.
/5: One Pass Rice Mill Unit.
/6: Price in West Java.
Source : "MANUAL OF MODEL FFC DISK MILLS WITH ILLUSTRATIONS (ROC)", JAVA KARAWANG 1989

Description		Area	Unit	Local Currency (Rp)
1. Unit Cost	of Labor Ch	arge		
Agricultura	l Labor	Java/1	Man-day	2,500
		Out of Java/2	Man-day	2,000
Operator/ Laborer	-Reaper		Man-day	3,000
	-Thresher	Java/1	Man-day	2,500
		Out of Java/2	Man-day	2,000
	-Winnower	Java/1	Man-day	2,500
		Out of Java/2	Man-day	2,000
			. · ·	
	-Drying	Java/1	Man-day	2,500
		Outer Java/2	Man-day	2,000
	-Milling		Man-day	3,000
2. Unit Cost	of Material			
		Tawa /1	lit.	381
Gasoline		Java/1 Outer Java/2	lit.	38:
		oucor oura, r		
Light Oil			lit.	200
3. Unit Const	ruction Cos	t		
Concrete (1	:4:8)/3		m3	56,49
Gravel Fill			m3	16,85
Land Levell		· · ·	ha	3,170,45
4. Unit Const	ruction Cos	t of Warehouse		en de la compañía de La compañía de la comp
Base/3			mЗ	22,40
Wall/3			m3	16,80
Roof/3			m3	11,20
Painting, e	tc. /3		m3	5,60
e :/1:Karawang	and Bagor			
/2:Mattiro				
/2:Mattiro	Bulu and Te	lagasari.		

Table X 2-2 FINANCIAL PRICE LIST FOR CONSTRUCTION

Table X 2-3	FINANCIAL	PROJECT	COST	FOR	PILOT	PLANS	

			Tela	igasari	Baq	or
	Cost Items	Unit Cost	Q'ty	Amount	Q'ty	Amount
		(Rp1000)	(No)	(Rp'000)	(No)	(Rp'000)
1.	Machinery					
	- Threshing Mat (larger than 5m x 5m)	20	41	820	12	24
	- Pedal Thresher (300 kg/hr)	100	41	4,100	-	24
	- Power Thresher (750 kg/hr)	1,397			12	16,76
	- Power Winnower (750 kg/hr)	1,147	2	2,294	12	1,14
	- Rice Mill Unit (500 kg/hr)	7,600	3	22,800	2	15,20
	sub-total	,,	5	30,014	2	33,35
						00700
2.	Construction/1		(m2)		(m2)	
	- Drying Floor	5.08	2,100	10,668	1,500	7,62
	- Warehouse	56	850	47,600	620	-
	- Milling House	56	220	12,320	160	8,96
	Sub-Total			70,588		51,30
3.	Total (1+2)			100,602	:	84,65
				· · · · · · · · · · · · · · · · · · ·		
	Cost Items		Mattiro		Trimu	
	Cost Items	Unit Cost	Q'ty	Amount	Q'ty	Amount
		(Rp'000)	(No)	(Rp'000)	(No)	(Rp'000)
	Machinery					
L.	Machinery - Threshing Mat (larger than 5m x 5m)	20	26	560	17	24
 L .	- Threshing Mat (larger than 5m x 5m)	20	28	560	17	34
	- Threshing Mat (larger than 5m x 5m) - Pedal Thresher (300 kg/hr)	100	28	2,800	-	•
 L .	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) 	100 1,397	28	2,800	17	23,74
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) 	100 1,397 1,147	28 - 1	2,800 - 1,147	17 2	23,74 2,29
L.	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) 	100 1,397	28	2,800 - 1,147 15,200	17	23,74 2,29 22,80
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) 	100 1,397 1,147	28 - 1	2,800 - 1,147	17 2	23,74 2,29 22,80
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) 	100 1,397 1,147	28 - 1	2,800 - 1,147 15,200	17 2	23,74 2,29 22,80
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total Construction/1 	100 1,397 1,147	28 - 1 2 (m2)	2,800 - 1,147 15,200 19,707	17 2 3 (m2)	23,74 2,29 22,80 49,18
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total 	100 1,397 1,147 7,600	28 - 1 2	2,800 - 1,147 15,200 19,707 8,128	17 2 3 (m2) 2,300	23,74 2,29 22,80 49,18 11,68
	 Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total Construction/1 Drying Floor 	100 1,397 1,147 7,600 5.08	28 - 1 2 (m2) 1,600	2,800 - 1,147 15,200 19,707	17 2 3 (m2)	34(23,74) 2,29 22,80(49,18) 11,68 51,52(12,32)

Note ; /1: Indicating by m2.

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Cable X 2-4 FINANCIAL O & M COST FOR MACHINERY (1/2)

1,355,000 1,000 1,240 1,240,000 600 180 63 380 127 1,350 1,267 1,000 355 600 180 63 380 1,350 , 240 1,267 829,250 Cost Der Hour 1,674,000 Rice Mill(0.5t/hour) 2 Rp 7,600,000/6,000hours= 2 5% 50% 1,1 1,1 1,1 1,1 5% /_1 20% /_1 10% /_1 Rp 7,600,000/6,000hours= Quantity 200 180 500 200 180 500 Unit Price 1,505,370 338 110 110 110 110 110 110 1,030,655 10 10 10 10 10 10 1,034,160 191 834 1,240 708,040 388 116 191 834 Cost HOLL nac Power Winnower(0.75t/hour Unit Quantity 5% /_1 20% /_1 10% /_1 Rp 1,147,000/6,000hours= 2 Rp 1,147,000/6,000hours= じじじ 5% 20% 10% 388 116 417 388 116 417 Price 1,574 154,290 1,251 180 225,180 582 175 79 315 157 1,308 13,860 834 222 1,85 Cost Ö 112 241,980 Hour рег | 53 /_1 20% /_1 10% /_1 5% / 1 20% / 1 10% / 1 ო 1.5 1.5 3 Thresher Quantity Rp 1,417,000/900 hours= Rp 120,000/540 hours= Pedal/Power /_1 : Percentage of depreciation cost per hour. /_2 : Including threshing mat of Rp 20,000(5mx5m) 388 175 388 116 417 417 price Wages for operators (Rp/hour) Annual operating hour Annual cost 1. Wages for operators (Rp/hour) Operation and Maintenance Cost 2. Oil and others (30% of fuel) Operation and Maintenance Cost 1. Fuel (Rp/11t) 2. Oil and others (30% of fuel) Annual operating hour Annual cost Annual operating hour Annual cost Annual operating hour Annual cost Depreciation per hour Depreciation per hour Repair cost
 Parking, tax, etc.
 Cost per hour Repair cost
 Parking, tax, etc. Cost per hour 1. Fuel (Rp/llt) Telagasari (West Java) II.Personnel Cost II.Personnel Cost .Item 3. Others Bagor (East Java) 3. Others Note : н. Ļ

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					4 ⁵				- - -
	Table X 2-4	FINANCIAL	O & M COST	FOR MACHINERY (2/2)	2/2)		•		
				-				· · · · · · · · · · · · · · · · · · ·	
I team	Pedal/Power Unit	r Thresher Quantity	Cost Hour	Power Win Unit Brice	Power Winnower (0. 75t/hour Unit Quantity Price	hour) Cost	Rice Mil Unit	<u>ll (0.5t/hour)</u> Quantity	
Mattiro Bullu (South Sulawoel)	D) T T J		1						Thou Tad
				-		 			• .
I. Operation and Maintenance Cost	•				,				
1. Fuel (Rp/lit) 2. 2414 ottoor 2005 of 44221)	1380 1380 1	00	00	385 116	r1 r	un u corr	200	Мг	600
2. ULL ANG CLUCES (30% OF TUEL) 3. Others	0-4	58 / 1		0117	58 / 1	017	001	58 / 1	C P V V
4. Repair cost		20% / 1	44		. `	80 1 M			380
5. Parking, tax, etc.		10% / 1	22		10% / 1	19	-	10% / 1	127.
Cost per hour			14			00 00 00			1,350
Annual operating hour Annual cost			13, 860			1, 65U			1 667 250
DOD TONING	/ 2		200						00710011
Depreciation per hour	Rp 120,000/540	/540 hours=	222	Rp 1,147,000/6,000hours=	,000hours≂	191	Rp 7,600,000/6,000hours=	00hours=	1,267
II.Personnel Cost						• .			
1. Wages for operators (Rp/hour)	333	e	665	333	N	666 1. 660	500	5	1,000
Annual operating nour Annual cost			179,820			1,098,900			1,235,000
Trimurjo (Lampung)									
I. Operation and Maintenance Cost									
1. Fuel (Rp/lit)	385	1.5	578	385	-	38 C	200	in .	600
2. Oil and others (30% of fuel)	173		57 U U U U	116	ריל רי א נו	116	180		180
3. Others 4 Renair cost		1 / *0 c	315 15		20% / 1	0 T	•	20% / T	9 0 9 0 0
5. Parking, tax, etc.		10% / 1	157		10% / 1	67		10% / 1	127
Cost per hour			1,302		Į	568		ł	1,350
Annual operating hour			180			1,350			1,350
Annual cost	/_2		234,270			766, 800			1,822,500
Depreciation per hour	Rp 1,417,000/	co/900 hours=	1,574	Rp 1,147,000/6,000hours=	, 000hours=	191	Rp 7,600,000/6,000hours=	00hours=	1,267
II.Personnel Cost 1. Wages for operators (Rp/hour)	333	8	666	333	2	666	500	8	1,000
Annual operating hour			180		-	1,350			1,350
Annual cost			119,880			808, 100		*1	,350,000

Note : /_1 ; Percentage of depreciation cost per hour. /_2 ; Including threshing mat of Rp 20,000(5mx5m)

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Items	Telagasari	Bagor	Mattiro Bulu	Trimurjo
≈ un de la constant a constant de la constant () de la constant				
I. Drying Floor				
I-1 Maintenance Cost			•	
-Total construction cost (Rp'000)	10,668	7,620	8,128	11,684
-Necessary % for annual maintenance	5%	5%	5%	5%
	533	381	406	584
-Annual maintenance cost (Rp'000)	1,516	1,005		-
-Annual quantity of paddy (GKG) dried (t)	0.35	0.38	0.40	-
-Annual maintenance cost (Rp/kg)	0.35	0.55	0.40	0.57
I-2 Personnel Cost				
-Annual quantity of paddy (GKG) dried (t)	1,516	1,005	1,018	1,581
-Required days for operation of drying floor(t)	60	60	60	
-Labor cost (Rp/man-day)	2,500	2,500	2,000	-
-Daily labor requirement (man-day/500m)	5	5	5	
-Area of drying floor (m2)	2,100	1,500	1,600	2,300
-Daily labor requirement (man-day)	21	15	16	23
-Annual personnel cost (Rp'000)	3,150	2,250	1,920	2,760
-Annual personnel cost (Rp/kg)	2.08	2.24		-
			5	
I-3 Total O&M cost of drying floor per kg (Rp/kg)				
-Per kg in paddy(I-1+I-2)	2.43	2.62		
-Per kg in rice (c.f.=0.65 of paddy)	3.74	4.53	4.02	3.75
			÷	
II. Warehouse and Milling House			· .	
II 1 Withourse Cost				
II-1 Maintenance Cost	59,920	43,680	45,360	63,840
-Total construction cost	3%	3%	-	•
-Necessary % for annual maintenance	56			, U
-Annual maintenance cost (Rp'000)	1,798	1,310	1,361	1,915
-Annual quantity of paddy (GKG) stored (t)	1,516	1,005		
-Annual maintenance cost (Rp/kg)	1.19	1.30	1.34	1.21
II-2 Personnel cost				
-Annual quantity of paddy (GKG) stored (t)	1,516	1,005	1,018	1,581
-Daily handling quantity for milling /_1	8.1	5.4	5.4	8.1
-Required days for operation of warehouse	187	186	189	195
-Labor cost (Rp/man-day)	2,500	2,500	2,000	2,000
-Daily labor requirement (man-day/day)	5	3	3	5
-Annual personnel cost (Rp'000)	2,338	1,395	1,134	1,950
-Annual personnel cost (Rp/kg)	1.54	1.39		
II-3 Total O&M cost of warehouse per kg (Rp/kg)		·		·
-Per kg in paddy (II-1+II-2)	2.73	2.69		
-Per kg in rice (c.f.≃0.65 of paddy)	4.20	4.14	3.77	3.76

Table X 2-5 FINANCIAL 0 & M COST FOR FACILITIES

Note;/1:Number of rice mills installed x 0.5ton/hr x 0.9 x 6hours

	· . ·	Table X 2-6	FINANCIAL	0	۶M	COST	FOR	PILOT	PLAN
1									

Cost Items	the second se	isari		Bagor		
	Unit	Q'ty	Amount	Unit	Q'ty	Amount
and the second	Cost	(No)	(Rp'000)	Cost	(No)	(Rp'000)
			••••••••••••••••••••••••••••••••••••••			<u>(,,p 0007</u>
I. Operation and Maintenance Cost	/_1					
1. Machinery	(Rp'000)			(Rp'000)		
- Pedal Thresher (300 kg/hr)	14	41	574	-	· _	_
- Pedal Thresher (750 kg/hr)	_	_	-	242	12	2,904
- Power Winnower (750 kg/hr)	708	2	1,416			
- Rice Mill Unit (500 kg/hr)	1,674	3	5,022	1,031	1	1,031
2. Facilities / 2	(Rp/ton;rice)		J, 022	1,829	2	3,658
- Drying	541	986	500	(Rp/ton;rice)		~ ~ ~
- Warehouse and others			533	584	652	331
- Bagging	1,824	986	1,798	2,009	652	1,310
Sub total	3,000	986	2,958	3,000	652	1,956
Sub Cocar			12,301			11,240
TT Deveryer Cost						
II. Personnel Cost						
1. Machinery	(Rp1000)			(Rp'000)		
- Pedal Thresher (300 kg/hr)	225	41	9,225	-	-	-
- Power Thresher (750 kg/hr)	-	-	-	154	. 12	1,848
- Power Winnower (750 kg/hr)	1,034	2	2,068	1,505	1	1,505
- Rice Mill Unit (500 kg/hr)	1,240	3	3,720	1,355	2	2,710
2. Facilities / 2	(Rp/ton;rice)			(Rp/ton;rice)	-	-,
- Drying	3,195	986	3,150	3, 451	652	2,250
- Warehouse and others	2,371	986	2,338	2,140	652	
Sub total	2,511	200		2,140	652	1,395
Sub cocar	(Do (kan ini as)		20,501	4		9,708
TTT Burnarahatian Grat ()	(Rp/ton;rice)			(Rp/ton;rice)		
<pre>III. Transpotation Cost /_2</pre>	2,000	986	1,972	2,000	652	1,304
Total (I+II+III)			34,774			22,252
	Mattir	o Bulu		Trim	irjo	
Cost Items	Unit	Q'ty	Amount	Unit	Q'ty	Amount
	Cost	(No)	(Rp ¹ 000)	Cost	(No)	(Rp'000)
I. Operation and Maintenance Cost	/_1					
1. Machinery	(Rp'000)			(Rp'000)		
- Pedal Thresher (300 kg/hr)	14	28	392		-	-
- Power Thresher (750 kg/hr)	-	-	-	234	17	3,978
- Power Winnower (750 kg/hr)	937	1	937	767	2	1,534
- Rice Mill Unit (500 kg/hr)	1,667	2	3,334	1,823	3	5,469
2. Facilities / 2	(Rp/ton;rice)	_		(Rp/ton;rice)	-	- •
- Drying	614	661	406	568	1,028	584
		661	1,361	1,863	1,028	1,915
- Warehouse and others	2,059				-	
- Bagging	3,000	661	1,983	3,000	1,028	3,084
Sub total			8,413			16,564
II. Personnel Cost						
1. Machinery	(Rp'000)			(Rp'000)		
- Pedal Thresher (300 kg/hr)	180	28	5,040		-	-
- Power Thresher (750 kg/hr)		-		120	17	2,040
	1,100	1	1,100	899	2	1,798
- Douge Winnerson (750 barbar)		2	2,470	1,350	3	4,050
- Power Winnower (750 kg/hr)	1,235	2	6,710	(Rp/ton;rice)	5	.,
- Rice Mill Unit (500 kg/hr)	(Rp/ton;rice)		1 020		1 020	2 70
- Rice Mill Unit (500 kg/hr) 2. Facilities /_2	ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER OWN		1,920	2,685	1,028	2,760
- Rice Mill Unit (500 kg/hr)	2,905	661			4	
- Rice Mill Unit (500 kg/hr) 2. Facilities /_2	ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER OWN	661 661	1,134	1,897	1,028	
- Rice Mill Unit (500 kg/hr) 2. Facilities /_2 - Drying	2,905			1,897	1,028	
- Rice Mill Unit (500 kg/hr) 2. Facilities /_2 - Drying - Warehouse and others	2,905		1,134		1,028	12,598
- Rice Mill Unit (500 kg/hr) 2. Facilities /_2 - Drying - Warehouse and others	2,905 1,716		1,134	1,897	1,028	1,950 12,598 2,036

Nota;/ 1:Cost for fuel, oil, spairparts, repairment, excluding personnel cost. /_2:Unit of quantity is indicated by ton of marketable rice.

	Table X	2-7 EINANC	IAU ASPUA	CEMENT COST	÷
	Useful			ial Cost	m
Description	Life (Year)	Telagasari (Rp'000)	Bagor (Rp'000)	Mattiro Bulu (Rp'000)	Trimurjo (Rp'000)
1. Replacement in 4th	n year	-			
Threshing Mat	3	820	240	560	340
Pedal Thresher	3	4,100	0	2,800	0
Total		4,920	240	3,360	340
2. Replacement in 6th	n year				and a start
Power Thresher	5	0.	16,764	. · · · · 0	23,749
Power Winnower	5	2,294	1,147	1,147	2,294
Rice Mill Unit	5	22,800	15,200	15,200	22,800
Total		25,094	33,111	16,347	48,843
3. Replacement in 21t	h year				
Drying Floor	20	10,668	7,620	8,128	11,684
Warehouse	20	47,600	34,720	and the second	51,520
Milling House	20	12,320	8,960		12,320
Total		70,588	51,300	53,488	75,524

Table X 2-7 FINANCIAL REPLACEMENT COST

			·	
Cost Items	Telagasari	Bagor	Mattiro Bulu	Trimurjo
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(Rp'000)	(Rp'000)	(Rp'000)	(Rp'000)
I. Loan for Investment				
1. Machinery	00 01 ·			
2. Construction of facilities	30,014	33,351	19,707	49,183
-Drying floor	10 660			
-Warehouse/milling house	10,668	7,620	8,128	11,684
in a string mouse	59,920	43,680	45,360	63,840
3. Total	100,602	84,651	73,195	124,707
II. Total Repayment				· .
1. Machinery/1	47,989	53,325	31,509	78,638
2. Construction of facilities			•	•
-Drying floor	14,494	10,353	11,043	15,875
-Warehouse/milling house	81,412	59,347	61,630	86,738
3. Total	143,895	123,025	104,182	181,251
III. Annual Repayment Amount				
1. Machinery/1	9,597	10,665	6,302	15,728
2. Construction of facilities				1
-Drying floor	1,450	1,035	1,104	1,588
-Warehouse/milling house	8,141	5,935	6,163	8,673
sub-total	9,591	6,970	7,267	10,261
V. Annual Repayment				
1				
1st 2nd	19,188	17,635	13,570	25,990
3rd	19,188	17,635	13,570	25,989
4th	19,188	17,635	13,569	25,989
5th	19,188	17,635	13,569	25,989
6th	19,188	17,635	13,569	25,989
oth 7th	9,591	6,970	7,267	10,261
8th	9,591 9,591	6,970 6,970	7,267 7,267	10,261
9th	9,591	6,970		10,261
10th	9,591	6,970	7,267 7,267	10,261 10,261
	21231	0,910	1,201	10,201
Total	143,895	123,025	104,182	181,251

Table X 2-8 ANNUAL REPAYMENT SCHEDULE FOR LOAN

Note;/1:Repayment Period=5years, Interest=18%/year /2:Repayment Period=10years, Interest=6%/year

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Table X 2-9 UNIT OPERATION EXPENSES FOR MACHINERY (1/4)

		Pedal Thresher	θĽ	Pot	Power Winnower	wer (0.75ton	ton)	R	Rice Mill	Unit (0.5ton)	OD)
ltem	Unit Price	Ř	per Hour/1 (540)	Unit Price	Υ.	11	per Hour/2 (6,000)	Unit Price	Q'ty	Total p	per Hour/2 (6,000)
A. Machinery Cost	1						r C				
	2	120,000	00 227	7	Ä	1, 14 /, 000				1, euu, uuu	1,267
B. Operation and Maintenance Lost per Hour 1) Operation Cost	per Hour										
- Fuel (Rp/lit.)	388	o			-	1	388	200	m	1	600
- Oil and others (30% of Fuel)	116	0	1			I	116	180	r-1	1	180
- Wage for operator (Rp/hr)	417	m	- 1,251	1 417	17		834	500	2		1,000
- Others	·	5% of A1	-	н	5% of	1-1	10		580	of A1	63
2) Maintenance Cost		*	***	×	20% 04	i I A	a r		20% 04	0f 2 11	
H KEDALAING COSC H Darking Tay Atr				1 T	104 01		5 5 7		10% 01	6 4	701
tary the sub-			1,329	100	2		1,405		, , ,		2,350
C. Rebayment for Loan										-	
1) Repayment		18% 191,867	67 355	S	18% 1,	1,833,926	306	•	18% 8%	18% 12,151,558	2,025
D. Total Cost for Machinery	(A+B+C)		1,906	6 (A+B+C)		÷	1,902	(9+B+C)			5,642
E. Estimated Cost per ha & kg /4			(n;p;p;q;q)				(21Ce)				(Rice)
- With Repayment (Repayment Period of 5 Years)	od of 5 Ye	· :	1.7			ı	4.3			, I , , , , , , , , , , , , , , , , , , ,	6°51
 MITROUC Repayment (AIGE Repayment Period OI Only Oberation and Maintenance Cost 	ment rerio Cost	a or c tears)	~ 6.4	~ 51			9.2	·	-		4 7 7 7
2) Unit Cost per ha (Rp/ha)/6				•	•						
- With Repayment (Repayment Period of 5 Years)	od of 5 Ye	i	60,013				₽ ₹.				1 ·
 Mitholic kepayment (Airer Kepayment Feriod of - Only Oberation and Maintenance Cost 	ment rerio 2 Cost	D OL 2 IGALS)	41,832	0 0							
3) Working Capacity (hr/ha)/7			25.5	5			1				
Note:/1; Useful year=3, Less than 600 hour	10 600 hour								•		
/2; USEIUL YEARS3; LESS TRAN LU,UUU NOUR /3: Neoful normal Toss thin 10 000 hour	rhan lo'non hour	our Tho									
/47 Working Condition		400		i	• .						
(1) Working Capacity (ton/hr)				(1) 0.75			•. •				
(2) Working Efficiency	806			(2) 90%	•		- 1 2 	(2) 90%		•	
(3) Unit Yield (ton/ha)	8°.5	•		1.1	5 5 7						
<pre>/5; = Unit Cost per hour/(working capacity (ton/hr) x working efficiency</pre>	vorking cap	acity (ton/hr)	x working e	fficiency (%)							
/6; = (unit cost/xg) X unit yield (con/na) /7; = Unit yield (con/ha) / (working capacity t	/ (Working	n/na) capacity ton/h	IL) X (WOLKII	on/hr) × (working efficiency %)	8)	. :	292 1915 19	. *	9		
			-	•						· .	
			_								

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Regor Flict Area) (Bagor Flict Area) Power Thresher (0.75 ton) Power Winnower (0.75 ton) 0'ty Total per Hour/1 0'ty Total per Hour/1 1,417,000 1,574 1,147,000 1,417,000 1,574 1,147,000 1 1,990) Price 0.000 1 1,990 1,574 1,147,000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<	Unit:Ro	Rice Mill Unit (0.5ton)	Unit Q'ty Total per Hour/2 Price (6,000)		7,600,000 I,267		200 3 - 600		5% Of A1	of A1	108 of A1 127	2,350	C70'7 856'TCT'7T \$87	(A+B+C) 5, 642	(Bice)	10°.0	0.8	ı		2		0.5
(Bagor Flict Area) Power Thresher (0.75 ton) Power Winnower (0.7 Power Thresher (0.75 ton) Power Winnower (0.7 Q'ty Total per Hour/1 Unit Q'ty Total Q'ty Total per Hour/1 Unit Q'ty Total Power Thresher (0.75 ton) prover Minnower (0.7 Q'ty Total per Hour/1 Unit Q'ty Total 1,417,000 1,574 Unit Q'ty Total 15 16 1 79 96 A1 16 1 73 916 1,147,000 17 18 1,6900 price 1,147,000 17 19 29 417 2 2 17 13 157 106 6 A1 10% of A1 315 10% of A1 20% of A1 10% of A1 2142 10% of A1 2142 20% of A1 10% of A1 2142 10% of A1 2142 20% of A1 10% of S Years) 5.265,626 2.142 10% of S Years) 5.255 100 5 Years) 2		. (u	our/2 000)		161	· . ·	388	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	01	38	19	1,405	306		(Rice)	4 N Q	3.2	t		3		(1)
Power Thresher (0.75 ton) Power Thresher (0.75 ton) Q:ty Total per Hour/l 0900) 1,417,000 1,574 17 1,417,000 1,574 17 2 3.15 17 2 3.15 17 2 3.15 17 2 3.15 17 2 3.15 10% 0f A1 315 10% 0f A1 2,142 10% 10% A1 2,142 10% 10% 4,056 2,517 10% 5 2,656 6,265 2,5	(Bagor Pilot Area)	Power Winnower (0.75tc	Q'ty Total		1,147,000		, i ,	-1 0	5% of A1					(A+B+C)						(Useful Year) = 9	5 (Useful Year) ≖	
Power Thresher (0.7 Power Thresher (0.7 2,1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,417,000 1,55,65,626 1,55,65,626 1,55,65,626 1,55,65,656 1,55,65,656 1,55,656 1,55,656 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556 1,55,556	Ξ.	ton)	er Hour/1 (900)		1,574		582	2/T	6L	315	157	2,142	2,517	6,233	(Paddy)	0 5 0 5	3.2	 46,795	26,969	10.2 180hr) x	= 180hr)	
		Power Thresher (0.75	Q'ty Total	. /3	1,417,000	B. Operation and Maintenance Cost per Hour		1 I C C C C C C C C C C C C C C C C C C	5% of	20% of y1	10% of A1			(A+B+C)		Ś	,	ഗ	Only Operation and Maintenance Cost	(15days/season x 2 x 6hr/day	Total Operation Hour = (100days/season x 2 x 6hr/day Including Mat for threshing of Rp 20,000 (5m x 5m) Working Condition	(1) Working Capacity (ton/hr) 0.75

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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Y BIGPT	א ו ע	KALLON EXFENSES FOR MACH (Mattiro Bulu Filot Area)	INERY	(3/4)	:	E	11041 - 20
120,000 222 $1,147,000$ 191 $7,600,000$ $1,2$ realiterance Cost per Hour 385 0 $= 0$ 385 1 $= 365$ 200 $= 1,2$ s (30, 6) 111 315 0 $= 0$ 385 1 $= 365$ 200 $= 1,2$ s (30, 6) 111 11 11 35 $6,6,6$ 200 $= 1,2$ $= 1,2$ s (30, 6) 111 11 11 $= 395$ 200 $= 1,2$ $= 1,2$ c (8,1) 11 11 11 $= 315$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $= 1,2$ $=$	Α.	Pedal Q'ty) Der	Powe Unit O' Price	r Winnower (0.75t. 'ty Total pe: (on) r Hour/2 6,000)		Unit (0.5t Total	
Operation and Maintenance Cast par Rou: Operation and Maintenance Cast par Rou: Operation Cast Sis 0 385 1 - 385 200 3 - 10 10 Peration Cast 100 of Free) 115 0 355 1 - 335 0 - 10 55 of A1 10 56 of A1 10 56 of A1 10 56 of A1 10 56 of A1 20 35 0 3 10 0 56 of A1 20 20 3 20 2 10 25 10 0 35 0 - 10 0 10 10 10 0 10 10 10 0 10 10 10 10 10 10 0 10 0 10 0 10 0 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 1	A. Machinery Cost 1) Depreciation	120,0				161		7,600,000	1,267
385 0 - 0 385 1 - 385 200 3 - - 116 1 - 116 1 - 116 1 - 116 1 - 116 1 - 1 0 56 of A1 - 10 56 of A1 1 1 27 1 10 56 of A1 1 1 27 1 10 56 of A1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3. Operation and Maintenance Cost per	Hour							
333 3 - 99 333 2 - 10 5 66 500 2 - 1 20% of A1 11 22 10% of A1 11 23 5% of A1 38 30% of A1 2 20% of A1 10% of A1 12 10% of A1 12 10% of A1 23 10% of A1 12 10% of A1 12 10% of A1 23 2 - 10% of A1 2 2 - 10% of A1 2 2 - 10% of A1 2 2 2 - 10% of A1 2 2 - 2 2 - 10% of A1 2 2 - 2 2 - 10% of A1 2 2 2 - 10% of A1 2 2 2	1) Operation Cost - Fuel (Rp/lit.)			50 V 60 F		385	200		600
26% of A1 44 20% of A1 38 30% of A1 2 10% of A1 1,077 1,077 10% of A1 38 30% of A1 2 18% 191,867 355 18% 1,833,926 306 18% 12,151,558 2 18% 191,867 355 18% 1,833,926 306 18% 12,151,558 2 10% of S 355 18% 1,833,926 306 18% 12,151,558 2 10% of S 5 36 1,730 (A+B+C) 5 5 11 27 1,730 (A+B+C) 1,730 (A+B+C) 5 5 11 2.5 305 36 1,730 (A+B+C) 5 5 5 12 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	- ULL AUR OUNTS (JOY OF THE I) - WAGE for operator (Rp/hr) - Othors	א ע ני ע	: 1	9 H H 9 H H 9 H H	ر ب ب	9 4 C 1 Q 1 Q	200	оf В Г	1,000
10% of A1 22 10% of A1 1,077 1,077 1,077 1,077 2.233 10% of A1 2.3 18% 191,867 355 18% 1,833,926 306 18% 12,151,558 2. 18% 191,867 355 18% 1,833,926 306 18% 12,151,558 2. 13% 191,867 1,654 (A+B+C) 1,730 (A+B+C) 5. 14 1,654 (A+B+C) 1,730 (A+B+C) 5. 15 1,730 (A+B+C) 5. 5. 15 4.0 5. 5. 5. 5. 2 4.0 5. 5. 5. 5. 5. 2 2.5 2.8 2.8 2.8 2.8 1.1 2 2.5.5 2.9 2.6 5. 5. 5. 5. 2 2.5.5 2.8 2.6 2.8 2.9 2.8 1.1 1.1 2 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	2) Maintenance Cost - Repairing Cost	, A			of A.	9 9 9 9		of A.	380
18% 191,867 355 18% 1,833,926 306 19% 12,151,558 2, (A+B+C) 1,654 (A+B+C) 1,730 (A+B+C) 5, tod of 5 Years) (E.1 3.9 1,730 (A+B+C) 5, ayment Period of 5 Years) (E.1 3.9 1,730 (A+B+C) 5, ayment Period of 5 Years) 4.0 2.8 3.9 1 1 ayment Period of 5 Years) 4.0 2.8 3.2 1 1 ayment Period of 5 Years) 4.0 2.8 3.2 1 1 ayment Period of 5 Years) 3.936,093 2.8 2.8 1 1 ayment Period of 5 Years) 3.056,010 2.8 2.8 1 1 1 ayment Period of 5 Years) 2.9,910 2.8 2.8 2.8 1 1 1 1 ayment Period of 5 Years) 2.9,910 2.8 2.6 1 0.5 1 1 1 1 1 1 1 1 1 1 1 1 1 <t< td=""><td>- Parking, Tax, etc. Sub Total</td><td>à</td><td></td><td></td><td>oť À.</td><td>19 1,233</td><td></td><td>of A.</td><td>127 2,350</td></t<>	- Parking, Tax, etc. Sub Total	à			oť À.	19 1,233		of A.	127 2,350
(A+B+C) 1,730 (A+B+C) 5, ztod of 5 Years) 6.1 3.2 ayment Period of 5 Years) 6.1 3.2 ayment Period of 5 Years) 6.1 3.2 ayment Period of 5 Years) 4.0 2.8 ayment Period of 5 Years) 5.033 2.8 ayment Period of 5 Years) 5.033 2.8 ayment Period of 5 Years) 5.000 hr 7.8 ayment Period of 5 Years) 2.0500 7.5 ayment Period of 5 Years) 2.000 hr 7.5 ayment Period of 5 Years) 5.000 hr 7.5 ayment Period of 5 Years) 0.75 0.1 ayment Period of 7 Years) 5.000 hr 7.5 ayment Period of 7 Years) 0.000 hr 0.5 ayment Period of 7 Years) 0.000 hr 0.5 ayment Period (fon/h	. Repayment for Loan 1) Repayment					306		18% 12,151,558	2,025
riod of 5 Years) aywent Period of 5 Years) c Cost c Cost riod of 5 Years) c Cost riod of 5 Years) aywent Period of 5 Years) (81, 00, 2, 8 (10, 0, 2, 6, 000 hr (11, 0, 5, 000 hr (12, 0, 0, 2, 000 fint year) (13, 0, 5, 000 hr (14, yield (ron/hr) x working efficiency (%)) (14, yield (ron/hr) x working efficiency (%))		A+B+C)	1,654	(A+B+C)		1,730	(A+B+C)		5,642
<pre>ha (Rp/ha)/6 ha (Rp/ha)/6 (Repayment Period of 5 Years) 36,083 and Maintenance Cost 29,910 ty (hr/ha)/7 eration Hour = (15days/season x 2 x 6hr/day = 180hr) x 3 (Useful Year) = 540 hr eration Hour = (10days/season x 2 x 6hr/day = 180hr) x 5 (Useful Year) = 6,000 hr g Mat for threshing of Rp 20,000 (5m x 5m) Condition Condition 0.3 f(1) 0.75 cost/kg) x unit yield (ton/hr) x working efficiency (%)) cost/kg) x unit yield (ton/ha) </pre>	 L Estimated Cost per ha & Kg /4 Unit Cost per kg (Rp/kg)/5 With Repayment (Repayment Period c Without Repayment (After Repayment Only Operation and Maintenance Cos 	ŝ	(Paddy) 6.1 4.8		 	(Rice) 3.9 3.2 2.8			(Rice) 19.3 12.4 8.0
riod of 5 Years) 45,953 ayment Period of 5 Years) 36,083 ce Cost $2.5,083$ ce Cost $2.5,083$ 22.5 (10days/season x 2 x 6hr/day = 180hr) x 3 (Useful Year) = 540 hr $(10days/season x 2 x 6hr/day = 180hr) x 5 (Useful Year) = 6,000 hr eshing of Rp 20,000 (5m x 5m) hr) 0.3 (1) 0.3(1)$ 0.3 (1) 0.3 (1) 0.75 (2) 90% (2) 90% (2) 10% (1) (1) (2) (2) $(2)(1)$ (1) (2) $(2)(2)$ (2) $(2)(2)$ $(2)(2)$ (2) $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$ $(2)(2)$	2) Unit Cost per ha (Rp/ha)/6								
22.5 = (15days/season x 2 x 6hr/day = 180hr) x 3 (Useful Year) = 540 hr = (100days/season x 2 x 6hr/day = 180hr) x 5 (Useful Year) = 5,000 hr eshing of Rp 20,000 (5m x 5m) hr) 0.3 (1) 0.3 (1) 0.3 (1) 0.3 (2) 90% (2) 90% (2) 1) (1) (2) (1) (2) (1) (2) (2) 1) (2) 1) (2) 1) (2) 2) (2) 2) (2) 2) (2) 2) (2) 2) (2) 2) (2) 2) (2) 2) (2) 2) (3) (4) (4) (4) (4) (5) (5) (5) (5) (5) (5) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7	 With Repayment (Repayment Period Without Repayment (After Repayment Only Operation and Maintenance Cos 	of 5 Years) L Períod of 5 Years) st	45,953 36,083 29,910	·		L.	x		
<pre>2 x 6hr/day = 180hr) x 5 (Useful Year) = 6,000 hr (5m x 5m) (5m x 5m) (1) (2) (2) 0.75 (1) (2) 0.75 (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2</pre>	<pre>3) Working Capacity (hr/ha)/7 Note:/1: Total Operation Hour = (15c</pre>	×	= 180hr)	3 (Useful	1	l			•
<pre>(1) 0.75 (2) 90% (2) x working efficiency (%)</pre>	<pre>/2: Total Operation Hour = (10) /3: Including Mat for threshing /4: Working Condition</pre>	X ES	= 180hr)	5 (Useful	81				·
90% 7.5 unit Working capacity (ton/hr) x working efficiency (%)) unit yield (ton/ha)	(1) Working Capacity (ton/hr)	0.3							
<pre>ur/(working capacity (to unit yield (ton/ha)</pre>	<pre>(2) Working Efficiency (3) Unit Yield (ton/ha)</pre>	90% 7.5	3	*05 (7		.			
= OUIC ATEIG (COU/UG) / (MOTVING CAPACILY	<pre>/5; = Unit Cost per hour/(worki /6; = (unit cost/kg) x unit yie /7; = Unit yield (ton/ha) / (wo /</pre>	lng capacity (ton/hr) eld (ton/ha) orking capacity ton/l) x working effi hr) x (working e	ciency (%)) fficiency %)					

x ~ 20

	· .	Table X	2		(Trimurjo Pilot Area)	11ot Ar	ea)					Un1	UnitaRo
	Powe Unit Q Price	Power Thresher (0 0'ty Total.	2	5 ton) per Hour/1 (900)	D Unit Price	ower Wi	Power Winnower (0.75ton) Q'ty Total per H (6,1	75ton) per Hour (6,000)	1) Hour/2 ,000)	Unit Frice	Rice Mill Unit ((Q'ty Total	0.5t	con) per Bour/2 (6,000)
		1,417,00	/3 000	1,574			1,147,000		191		7, 600, 000	000	1,267
B. Operation and Maintenance Cost per Hour 1) Operation Cost	ruor 1												
Fuel (Rp/lit.) Oil and others (30% of Fuel)	385 116	ی. ۲	1 1	578 173	385 116			F (385 116	200 180	m m	11	600 180
Wage for operator (Rp/hr)	2 M 2 M 2 M 2 M	1	ı	666		• • •		1	5666 666	500		ł	1, 200
- Others 2) Maintenance Cost		58 Of A1	÷	97 9 r c							≪ . ⊎. v		69 0 09 0
kepairing cosc Parking, Tax, etc. Sub Total		10% of A1		512 1,968 1,968		108 OF	of AL	1.	233 233		20% OI A L		127
 C. Repayment for Loan (5 years) 1) Repayment 		18% 2,265,62	526	2,517		18%	1,833,926		306		18% 12,151,558	558	2,025
Total Cost for Machinery	(A+B+C)			6,060	(3+B+C)			1,	1,730	(A+3+C)			5,642
 E. Estimated Cost per ha & kg /4 Unit Cost per kg (Rp/kg)/5 With Repayment (Repayment Period of 5 Years) Without Repayment (After Repayment Period of 01 Only Operation and Maintenance Cost Unit Cost per ha (Rp/ha)/6 	of 5 Year nt Feriod ost	s) of 5 Years)		(Paddy) 9.0 5.2 2.9				(31	(31ce) 3.9 3.2 2.8				(<u>Rice)</u> 19.3 12.4 8.0
With Repayment (Repayment Period of 5 Years) Without Repayment (After Repayment Period of	. of 5 Year nt Period	s) of 5 Years)		61,943 36;210				u.	1				I
 Only Operation and Maintenance Cost Working Capacity (hr/ha)/7 	ost			20,115 8.3			•		I				1
Note:/1; Total Operation Hour = (15days/season x 2 x 6hr/day /2; Total Operation Hour = (100days/season x 2 x 6hr/da) /3; Including Mat for threshing of Rp 20,000 (5m x 5m) /4; Morking Condition	5days/seas 00days/sea ng of Rp 2	:on x 2 x 6hr/ son x 2 x 6hr 0,000 (5m x 5	H	180hr) x 5 180hr) x 5	(Useful (Usefu	Year) - Year)	900 hr = 6,000	лч					
 Working Capacity (ton/hr) Working Efficiency Unit Yield (ton/ha) 	0 909 908	·		(1)	() 0.75 2) 90%	<u>ب</u> م *			(7)	0 - 0 0 - 5 9 - 5			
<pre>/5; = Unit Cost per hour/(working capacity (ton/hr) > /6; = (unit cost/kg) x unit yield (ton/ha) //=///********************************</pre>	king capac feld (ton/	tity (ton/hr) ha) macity ton/hr	× -	ing effic: http://www.afi	<pre>working efficiency (%)) x /working efficiency %)</pre>	<u> </u>							

x - 21

<u></u>	Item	Unit	Telagasari	Bagor	Mattiro Bulu	Trimurjo
I. Dry	ring Floor					-
1. 2.1						
1-1	Depreciation Cost					11
	-Construction Cost	Rp'000	10,668	7,620	8,128	11,684
	-Useful life	Year	20	20	20 406	20
	-Depreciation cost per year	Rp'000	533	381		584 1,581
	-Annual handling quantity	t	1,516	1,005	1,018	0.37
	-Depreciation cost per kg of paddy	Rp/kg	0.35	0.30	0.40	0.37
1-2	Maintenance Cost /_1		• • •		1.1.5.	
	-Maintenance cost per kg of paddy	Rp/kg	0.35	0.38	0.40	0.37
T-3	Personnel Cost / 1		. *		н ¹	
	-Personnel cost per kg of paddy	Rp/kg	2.08	2.24	1.89	1.75
T 4	Repayment Cost					÷ .
1-4	-Annual repayment amount	Rp1000	1,450	1,035	1,104	1,588
	-Annual handling quantity	t	1,516	1,005	1,018	1,581
	-Repayment cost per kg of paddy	Rp/kg	0.96	1.03	1.08	1.00
т с	Total O&M Cost					
1-2	-O&M cost per kg of paddy	Rp/kg	3.74	4.03	3.77	3.49
	-O&M cost per kg of rice	Rp/kg	5.75	6.2	5.81	5.38
II. War	ehouse and Milling House					
11-1	Depreciation Cost			· · ·		
	-Construction Cost	Rp'000	59,920	43,680	45,360	63,840
	-Useful life	Year	20	20	20	20
	-Depreciation cost per year	Rp'000	2,996	2,184	2,268	3,192
	-Annual handling quantity	t	1,516	1,005	1,018	1,581
	-Depreciation cost per kg of paddy	Rp/kg	1.98	2.17	2.23	2.02
11-2	Maintenance Cost / 1			$(1,1) \in \mathbb{R}^{n+1}$		
	-Maintenance cost per kg of paddy	Rp/kg	1.19	1.30	1.34	1.21
11-3	Personnel Cost / 1					
	-Personnel cost per kg of paddy	Rp/kg	1.54	1.39	1,11	1.23
TT_A	Repayment Cost		*	· · · · · ·		
11-4	-Annual repayment amount	Rp'000	9,591	6,970	7,267	10,261
	-Annual handling quantity	t t	1,516	1,005	1,018	1,581
	-Repayment cost per kg of paddy	Rp/kg	6.33	6.94	7.14	6.49
ŤΫ_⊑	Total O&M Cost				n an	•
11-2	-OLM cost per kg of paddy	Rp/kg	11.03	11.80	11.82	10.95
	-OaM cost per kg of paddy	Rp/kg	16.97	18.15	18.18	16.84

Table X 2-10 UNIT OPERATION EXPENSES FOR FACILITIES

Note : /_1 ; See Table X 2-5

Table X 3-1 PRELIMINARY COST ESTIMATE FOR THE SERVICE CENTER

Items	Required	
A. (J. 2111)	Area and Number	Amount
A. Building/ Facilities		(Rp '000)
1) Display room	1002	25 000
2) Meeting/ lecture room	100 m2 100 m2	25,000
3) Service center office	60 m2	25,000 15,000
4) Monitoring/ marketing information	room 60 m2	15,000
5) Inspection/ laboratory for rice a	nd paddy 100 m2	25,000
6) Farm machinery warehouse		2.5,000
(rice mill, dryer, winnower, etc.) 150 m2	22,500
7) Garage for farm machinery	/ 100 Mil	22/500
(reaper, binder, truck, etc.)	50 m2	5,000
Sub-total		132,500
B. Equipment for Rice/ Paddy Inspection	Service	
1) Grain moisture tester	3 sets	3,400
2) Test husker	l set	8,600
3) Test mill unit	1 set	10,000
4) Test dryer	1 set	12,600
5) Test thickness grader	1 set	8,000
6) Test grader	1 set	8,000
7) Beam balance	1 set	700
8) Grain volume-weight tester	1 set	700
9) Digital rigidity tester	1 set	2,000
10) Digital witheness tester	l set	5,700
11) Grain thermometer	l set	80
12) Tachometer	1 set	700
13) Sample divider	1 set	300
14) Grain shape tester	1 set	700
15) Sampler, others	L.S.	7,000
Sub-total		68,480
C. Farm machinery and Equipment for Demo	metrotio	
-Ordinary machinery for common practic		
1) Rice mill unit	1 set	7,600
2) Power winnower	2 sets	2,400
3) Power thresher	2 sets	2,800
-Modernized machinery for advanced pro-		2,000
4) Reaper	5 sets	32,000
5) Binder/ harvester	2 sets	24,400
6) Mechanical dryer	2 sets	12,000
7) Other equipment	L.S	5,000
Sub-total	·	86,200
D. Equipment for Marketing Information a	nd Monitoring	
1) Photo copy/ printing machine	1 set	5,200
2) White board	2 sets	1,300
3) Furniture and equipment	L.S.	3,000
Sub-total		9,500
E. Office Equipment		_
1) Truck (3 tons)	1	26,000
2) Jeep	1	30,000
3) Motor cycle	6	31,200
4) Micro computer/ typewriters	L.S.	13,000
5) Telecommunication equipment*	L.S.	15,000
6) Table, chair/ cabinets and others	; L.S.	13,000
Sub-total		128,200
		424,880

Note : *; Side single band (SSB) wireless radio, telephones and handy talkies

1996 1995 Pilot Plan Period 1994 1993 1992 4 Preparatory Stage ł ł ; す 1661 1990 (1) Pilot farmer groups set-up (Pre and post harvest and marketing for rice) Development Stage (3) Guidance, assistance and monitoring on farmer group activities (7) Preparation of manual on appropriative technology packages (2) Training and demonstration of machinery operation (1) Training for machinery and facilities operation (6) Preparation of monitoring and evaluation report (4) Demonstration of reaper, and mechanical dryer (1) Study & survey for Pilot Plan implementation - Pedal thresher (Telagasari, Mattiro Bulu) (3) Joint processing and marketing of rice (2) Orientation for farmer groups set-up(3) Service Center organization set-up Power thresher (Bagor, Trimurjo) (1) Guidance for farmer groups set-up (2) Improved harvesting activities Pilot Farmer Groups' Activities 2. Construction of Service Centers (5) Market information service (2) Construction of facilities T Rice milling facilities (3) Procurement of machinery Service Center Activities Development of Pilot Area 3. Procurement of Machinery - Power winnower Development Items Drying floor Preparatory Stage - Rice mill - Warehouse . v . თ ÷.

Fig. X 1-1 IMPLEMENTATION SCHEDULE OF PILOT PLAN

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ANNEX XI

PROJECT EVALUATION

STUDY ON

IMPROVEMENT OF RICE POST HARVEST AND MARKETING IN FARMER GROUPS

ANNEX-XI PROJECT EVALUATION

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1. GENERAL

This Annex XI is the study report on project evaluation for the pilot plans to be applied to the respective pilot areas of Telagasari (West Java), Bagor (East Java), Mattiro Bulu (South Sulawesi), and Trimurjo (Central Lampung)

The study includes the financial and economic price forecast, financial evaluation on farmers' economy as well as on farmer group activities, economic evaluation and socio-economic impact assessment.

The data and information were mainly collected from the following government authorities concerned:

- 1) Directorate of Food Crops, MOA
- 2) Central Bureau of Statistics(CBS)
- 3) Agricultural Office, Province and Kabupaten
- 4) Bureau of Statistics, Province and Kabupaten
- 5) DOLOG and Sub-DOLOG

2. PRICE FORECAST

2.1 Financial Price Forecast

2.1.1 Basic Assumptions

The financial prices to be applied for assessment of both with- and without-project conditions are estimated on the basis of the following assumptions :

- All of the financial prices used for financial evaluation of the project works are referred to the current prices in 1988.
- No increase of prices owing to infration, etc. is foreseen in this study
- 3) The prices of paddy under the without-project condition are assumed to be the same as the present low price which is applied to the low quality paddy.

- 4) The prices of rice under the with-project conditions are presumably set making reference to the present prices applied to the high quality rice.
- 5) Prices of farm inputs, laborers, tools, equipment, agricultural machines and facilities are directly referred to the current prices in 1988.

2.1.2 Prices of Rice Production

In case of the without-project condition, no drastic change will be appeared on the paddy and/or rice marketing. Selling of rice product will be scheduled by fresh/wet paddy immediately after harvesting in each season.

In case of the with-project condition, it is assumed that all the rice product will be sold in terms of the milled rice which is processed in rice mill to be owned by the respective farmer groups. Marketing of the said rice will be managed by the following schedule:

- The wet season rice will be sold immediately after milling without storage due to no remarkable price increase before the next dry harvesting season and difficulties of quality control under rainy and high moisture condition.
- 2) In contrast, the dry season rice will be sold a few month after the harvesting where the rice price increases to the highest ranges. The quality control of paddy and rice is considered to be easy during this dry season.

The financial prices of rice product under the without- and withproject conditions are estimated as follows:

- Financial prices estimated are the farm gate prices for paddy and the wholesale prices for rice.
- Paddy prices both for wet and dry seasons are taken average prices during both harvesting seasons.

- 3) Rice price in wet season is taken an average price during wet harvesting season. On the other hand, rice price in dry season is taken an average price between dry harvesting season and off season of December because of increase in rice price.
- 4) Price differences on rice quality classes are estimated at Rp 20/kg between prices of class B and a class lower than B and Rp 30/kg between B and A classes. Outlets of rice are DOLOG for B class and the local wholesale markets for both A and B classes. DOLOG buying price of B class rice from KUDs or task force is applied Rp 405/kg which is set since January, 1989.

Financial prices of the paddy/rice are estimated as shown in Tables XI 2-1 and 2-2 and summarised as follows:

	Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
	out-Project Conditi esent Farm Gate Pri				
1) 1	Net Season Price (Rp/kg)	200	187	174	176
2) 1	Dry Season Price (Rp/kg)	. 251	231	194	244
	h-Project Condition plesale Price of Ri				
1) 1	Net Season				
· -	- Class B Rice for Price (Rp/kg)	DOLOG/Market 405/378	405/377	405/348	405/393
2) I	Dry Season				
	- Class B Rice for Price (Rp/kg)	DOLOG/Market 405/458	405/449	405/414	405/446
-	- Class A Rice for H	Market 488	479	444	476

2.1.3 Prices and Costs of Farm Inputs

Farming tools, equipment, machinery and facilities such as rice mill, warehouse, drying floor. will be introduced as the necessary counter arrangement for the improvement of rice post harvest and

marketing activities. Financial prices of these goods and machinery are directly referred to the retail prices in 1988 in Indonesia.

The custom charges or expenses for hired machinery powers, rice milling, etc. under the with-project condition are estimated on the basis of the operation and maintenance costs including the costs for depreciation and repayment. Financial prices and costs of farm inputs in the respective pilot areas are estimated in Table XI 2-3 and summarized as follows:

		and the second	
Item	Unit	Without Project Condition	With Project Condition
Labor charge	Rp/day		
- Telagasari (West Java)		2,500	2,500
- Bagor (East Java)		2,500	2,500
- Outside of Java		2,000	2,000
Hired animal power	Rp/day	12,000	12,000
Custom Charges/Expenses			
- Hand tractor	Rp/day	and the second second	
Telagasari		27,500	27,500
Bagor		25,000	25,000
Outside of Java		32,500	32,500
			lst to After
			<u>5th year 6th year</u>
- Thresher 1	Rp/kg	· · · ·	
Telagasari	(Paddy)	-	8 6
Bagor			10 6
Mattiro Bulu		-	7 5
Trimurjo			9 6
 Processing/Marketing/1 	Rp/kg		•
Drying	(Rice)	-	6-7 6-7
Storage		**	17-19 17-19
Cleaning		· 🛁	4-5 4
Milling		20	20 13
Transportation			2 2
Total	·	20	49-53 42-45

<u>/1</u>: Unit expenses consist of O&M cost including both depreciation and repayment costs.

2.2 Economic Price Forecast

The economic prices used for the economic evaluation of pilot plans are studied on both farm inputs and outputs as follows:

Economic prices for rice production are estimated on each quality classes, i.e. class A, B and C (others) on the basis of the projected world market prices in the long term range for the period of 1987 to 1995 by the World Bank. In Indonesia, it is forecasted that the rice production would be continuously short for meeting the self-sufficiency, hence the price of paddy production is estimated at the import substitution value. The world market price of rice is converted to 1988 constant price by the rate of 1.407 based on the manufacturing unit value index. The price forecast are presented in detail in Table XI 2-4.

1)

- 2) Seasonal financial price increase through shipment control of rice product is excluded from economic price forecast, because the similar economic activities are done by other private sectors and there are no remarkable increase in economic value. Economic prices of paddy and rice are forecasted taking quality increse into consideration.
- Economic labor charges are estimated by appling shadow wage rates of 60% for Java and 70% for outer Java.
- 4) The economic prices for others are converted from the respective financial prices by appling the standard conversion factor of 0.9.

Economic prices of farm inputs and outputs are shown in Table XI 2-5 and summarized as follows:

Item	Unit	Economic Price (1995)
Outputs		
1) Paddy (Farm gate price)	(Rp/kg)	
a) For Class C rice - 60% milling rate (Without Cond	ition)	159
 b) For Class B rice - 65% milling rate (With Condition 2) Rice (Wholesale price) 		242
a) Class A rice	1-1-21	439
b) Class B rice		393
c) Class C rice		350
Inputs	(Rp/day)	1,450
1) Labor charges 2) Hired animal power	(Rp/day)	10,800
3) Custom charges for hand tractor		27,500
- Telagasari		25,000
- Bagor - Outer Java		32,500

3. FINANCIAL EVALUATION

3.1 General

Financial evaluation of the pilot plans is made by analysis of both typical farm budget and cash flow statement related to the farmer groups' activities.

Analysis of farm budget is conducted aiming to assess how the pilot operation could provide sufficient incentives to the member of group farmers and bring enough increment of farm income.

Assessment of cash flow statement concerning the management of the pilot farmer groups' activities is examined to clarify how the groups could financially manage their activities i.e. joint investment for reinforcement of structural function, joint use of machinery and facilities and joint marketing activities, etc.

3.2 Farmers' Economy

In order to assess the feasibility of the pilot plan from farmers' economic view point, farmers' economy is examined by the analysis of the typical farm budget under the future conditions without and with project.

After the implementation of the pilot plan, harvesting and processing losses will be reduced considerably through improvement of the post harvest activities.

Harvesting cost will also be reduced to significant extent by the introduction of improved harvesting system. Timely reaping by organized laborers under cash payment system and effective threshing works by pedal and power threshers through farmer groups' custom service will produce the reduction of production cost. The farmer groups should repay the loan for the threshers until the fifth year from the commencement of the pilot plan, but there will be no debt after the sixth year. Accordingly, the reduction of threshing expenses is expected after the sixth year.

The analysis on harvesting cost is shown in Table XI 3-1 and summarized as follows:

All All All All All

(Unit: Rp '0	00/ha/year)
--------------	-------------

Item	<u> Telagasari </u>			Bagor		Mattiro Bulu			Trimurjo			
	W/O	w-1	w-6	w/o	w-1	w~6	w/o	w-1	w-6	w/o	w-1	w-6
1. Labor charge	428	130	130	412	115	115	145	38	38	155	40	40
2. Custom threshing charge	-	120	98	~	157	94	-	92	72		124	72
3. Others		12	12		12	12		12	12	-	12	12
4. Total	428	262	240	412	284	221	145	142	122	155	176	124

Note: w/o = without project condition

w-1 = with project condition (1st-5th year)

w-6 = with project condition (after 6th year)

Increase in farmers' gross income will be brought by joint marketing of milled rice in with-project condition. The following prices are set according to the marketing outlets and rice quality classes:

	<u> Telagasari </u>		Bagor		<u>Mattiro Bulu</u>		<u> </u>	
	Price (Rp/kg)	Share (१)	Price (Rp/kg)	Share (%)	Price (Rp/kg)	Share (१)	Price (Rp/kg)	Share (%)
Wet Season (Class B only)								
To DOLOG	405	10	405	10	405	10	405	10
To Market	378	90	377	90	348	90	393	. 90
Weighted Average	381	100	380	100	354	100	394	100
Dry Season								
To DOLOG (Class B)	405	10	405	10	405	10	405	10
To Market								
Class B	458	80	449	80	414	80	446	80
Class A	488	10	479	10	444	10	476	10
Weighted Average	456	100	448	100	416	100	445	100

The improvement of profitability will be brought about by decrease in losses, reduction of production cost and increase in gross income. The crop budget is made for paddy sales under the without-project condition and for rice sales under the with-project condition as shown in Table XI 3-2. The net return under the with-project condition will be increased by the rice sales even though additional processing and marketing costs are required. The net return will be moreover enlarged from the 6th year due to no debt on threshers and rice mills.

	÷.		(Unit: Rp '000/ha							
	Telac	asari	Ba	gor	Mattiro	Bulu	Trimurjo			
		D.S.		D.S.	W.S.	D.S.	W.S.	D.S.		
Without-Project Conditio	on (Paddy)					1	21. 1. 1. 1. 1.			
1. Gross income	1,400	1,682	1,253	1,478	1,027	1,145	1,021	1,293		
2. Production cost	568	606	. 578	576	267	287	239	268		
3. Net return (1-2)	832	1,076	675	902	759	858	782	1,025		
With-Project Condition (1st-5th y	ear) (F	Rice)		· .					
1. Gross income	1,829	2,098	1,710	1,971	1,416	1,664	1,576	1,647		
2. Production cost	749	729	754	745	478	481	458	449		
3. Net return (1-2)	1,080	1,369	956	1,227	938	1,184	1,118	1,198		
With-Project Condition	After 6th	year)	(Rice)					. :		
1. Gròss income	1,829	2,098	1,710	1,971	1,416	1,664	1,576	1,647		
2. Production cost	699	681	686	677	440	443	404	397		
3. Net return (1-2)	1,130		1,024	1,294	976	1,222	1,172	1,250		

Note: W.S.; Wet season D.S.; Dry season

Farm budget is prepared for the average size farmers in both without- and with-project conditions on the basis of the above crop budget analysis as shown in Table XI 3-3 and summarized in the following table. The budget conditions are different among the pilot areas because of the difference in farm size and rice productivity. The increase in net reserve under the with-project condition is fairly large being Rp 400-1,400 thousand in case of owner, while that is limited to Rp 30-150 thousand in case of tenant. This is mainly due to the land rent as high as 50% to the total paddy product.

(Unit: Rp '000)

	Telac	<u>Telagasari</u>		<u>qor</u>	Mattire	<u>Bulu</u>	Trimurjo	
	Owner	Tenant	Owner	Tenant	Owner	Tenant	Owner	Tenant
Farm size (ha)	0.98	0.69	1.30	0.30	2.56	1.21	0.76	0.62
Without-Project Condition							· .	
1. Farm income	1,722	383	1,822	268	3,481	1,148	1,264	502
2. Non-farm income	419	412	451	489	18	30		162
3. Total income	2,141	795	2,273	756	3,499	1,178	1,288	664
4. Living expense	2,065	749	1,480	667	2,145	925	1,184	662
5. Net reserve (3-4)	76	46	793	89	1,354	253	104	2
With-Project Condition (1s	t - 5th ye	ar)					tin ser	
1. Farm income	2,259	465	2,609	301	4,776	1,191	1,662	538
2. Non-farm income	419	412	451	489	18	30	24	162
3. Total income	2,678	877	3,060	789	4,794	1,220	1,685	700
4. Living expense	2,065	749	1,480	667	2,145	925	1,184	662
5. Net reserve (3-4)	613	128	1,580	122	2,649	295	501	38
With-Project Condition (af	ter 6th ye	ar)		· ·		¹ e ate		
1. Farm income	2,326	532	2,644	335	4,859	1,273	1,728	603
2. Non-farm income	419	412	451	489	18	30	24	162
3. Total income	2,746	944	3,095	824	4,877	1,303	1,751	765
4. Living expense	2,065	749	1,480	667	2,145	925	1,184	662
5. Net reserve (3-4)	681	195	1,615	157	2,732	378	567	103

3.3 Farmer Groups' Economy

Farmer groups' economy is assessed for ten years from the commencement of the pilot plan taking the groups' incomes and expenditures into consideration. The machinery and the facilities will be jointly procured or constructed respectively by the utilization of loan. Operation and maintenance cost including depreciation and repayment costs will be compensated by the collection of the expenses for threshing, processing and marketing activities.

The cash inflow of the groups' activities consists of custom threshing charges, processing and marketing charges, rice sales income and loan. The charges for joint use of machinery and facilities are calculated so as to compensate the expenses for operation, maintenance, depreciation and repayment for loan detailed in Annex X. The unit charges collecting from group members are decided as follows:

Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
1. Custom Threshing Charges (Rp/kg of paddy)				
1. 1st to 5th year	8	10	7	9
2. After 6th year	6	6	5	6
II. Processing/Marketing Charges (Rp/kg of rice)			
1. 1st to 5th year	50	53	51	49
2. After 6th year	42	45	44	42

Annual incomes from the charges as shown in Table XI 3-4 are estimated on the basis of the threshing, processing and marketing quantities of rice product and the above unit charges and summarized as follows:

Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
. 1st to 5th year				
1. Custom Threshing Charges	15,984	14,920	9,506	18,504
2. Processing/Marketing Charges	51,850	38,031	30,548	47,948
Total	67,834	52,951	40,054	66,452
I. 6th to 10th year				10.000
1. Custom Threshing Charges	11,988	8,952	6,790	12,336
2. Processing/Marketing Charges	43,146	31,703	30,121	45,828
Total	55,134	40,655	36,911	58,164

(Unit: Rp '000)

Milled rice will be jointly sold to the local wholesale markets or DOLOG after milling at the farmer group' mills. The income of sold rice as shown in Table XI 3-5 will be shared with the members on the basis of the members' deliveries of paddy. Loan incomes will be spent for the procurement of machinery and construction of facilities.

The cash outflow for the management of groups' activities comprises 1) investment cost for procurement of machinery and construction of facilities i.e. drying concrete floors, warehouses and milling houses, 2) operating cost for machinery, facilities, paddy procurement from farmers and transportation cost to DOLOG or the wholesale markets, 3) replacement cost for machinery, 4) repayment for the loan.

Cash flow statements in the respective pilot areas are prepared on the basis of the above conditions and of implementation schedule of the pilot plan as shown in Table XI 3-6. It is concluded that the pilot farmer groups can manage their activities economically even during the repayment periods for machinery untill the fifth year. The groups' accounts will be improved after the repayment of the loan for machiney when the farmer groups could have possibilities for the other investments i.e. expansion of capacities for storage, introduction of mechanical dryers, a truck for transportation, etc.

4. ECONOMIC EVALUATION

4.1 Economic Benefit

Economic benefit will accrue from the decrease in losses of paddy and rice and increase in rice quality which are considerd as the quantitative and qualitavive benefits respectively. Incremental benefits between without- and with-project conditions are estimated in terms of economic value of milled rice.

Quantitative benefits consist of the decrease in reaping and threshing losses at field level and in rice milling losses which will be produced by the improvement of harvesting and milling activities with introduction of machinery and equipment. Quantitative benefits accrued from the decrease in field losses are estimated taking the following assumptions:

- Decrease in field losses of paddy is converted to quantity of milled rice by applying the present milling recovery rate of about 60% (from GKP to white rice).
- Milled rice converted is considered as the class C rice on the basis of the low milling efficiency of present rice mills in and around the pilot areas.
 - Milled rice is evaluated by the class C price of Rp 328/kg in terms of economic value.

Increase in milling recovery rates is estimated at 5% between the present rate of around 60% and the improved rate of around 65% in with project condition. The saving of milling losses is evaluated by applying the class C price.

Qualitative benefit is evaluated by the differences of economic value among the different rice qualities. The milled rice in withoutproject condition is considered as the class C rice which is common product around the pilot areas. The rice quality in with project condition will be improved to the class B or A by the improvement of drying, cleaning and milling activities with introduction of winnowers, drying and storage facilities and rice mills. Qualitative benefit is calculated in terms of economic price differences between the class C and B for the class B rice, and the class C and A for the class A rice in with project condition.

The quantitative and qualitative annual benefits are estimated as shown in Table XI 4-1 and summarized as follows:

Item	Unit	Telagasari	Bagor	Mattiro Bulu	Trimurjo
I. Quantitative Benefit					• .
 Decrease in Field Losses Decrease in losses Increase in rice Price of Class C rice Benefit 	t of paddy t of rice Rp'000/t Rp'000	99 59 328 19,352	47 28 328 9,184	328	328
 Decrease in Milling Losses Decrease in milling losses Benefit 	t Rp'000	84 27,552	61 20,008	56 18,368	91 29, 848
3. Quantitative Benefit II. Qualitative Benefit	Rp'000	46,904	29,192	37,720	43,952
1. Class B Rice Production - Production in with - Price difference (Class B and C) - Benefit	t Rp'000/t Rp'000	1,034 22 22,748	754 22 16,588	690 22 15,180	22
 Class A Rice Production Production in with Price difference (Class A and C) Benefit 	t Rp'000/t Rp'000	40 65 2,600	27 65 1,755	24 65 1,560	42 65 2,730
3. Qualitative Benefit	Rp'000	25,348	18,343	16,740	27,524

The benefits will be expected to increase linearly year by year and reach the full benefits in and after five years after the implementation of the pilot plan.

4.2 Economic Cost

4.2.1 Economic Project Cost

Economic project costs for the pilot plan are estimated for the construction cost for drying floor, warehouse and milling house, and procurement cost for machinery.

Economic project costs is converted from the financial costs by applying the standard convertion factor (SCF) of 0.9. The economic project costs are calculated as shown in Table XI 4-2 and summarized as follows:

			(Unit:	Rp '000)
	Telagasari	Bagor	Mattiro Bulu	Trimurjo
 Machinery and Equipment Construction 	28,864	31,432	19,181	46,241
- Drying Floor - Building	9,597 53,928	6,855 39,312	7,312 40,824	10,511 57,456
Sub-total	63,525	46,167	48,136	67,967
3. Total (1 + 2)	92,389	77,599	67,317	114,208

4.2.2 Operation and Maintenance Cost

Operation and maintenance cost (O&M costs) for the pilot plan comprise expenses for operators and laborers, fuel and oil, spareparts and materials for repair. O&M costs for processing and marketing activities using drying floors, winnowers, rice mills and warehouse are considered the additional cost in with-project condition. Economic unit O&M costs are estimated by applying the economic labor cost of Rp 1,450/man-day and the SCF of 0.9 for the other cost portion as shown in Table XI 4-3 for machinery and Table XI 4-4 for facilities. Economic annual O&M costs in the respective pilot areas are shown in Table XI 4-5 and summarized as follows:

	·			(Unit: Rp	'000/year)
	Cost Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
Ι.	Operation and Maitnenance Cost	10,561	7,506	7,224	11,332
II.	Personnel Cost	6,801	4,750	4,617	7,355
III.	Transportation Cost	1,775	1,174	1,190	1,850
	Total (I+II+III)	19,137	13,430	13,033	20,534

4.2.3 Change of Cost for Harvesting

Labor requirements for the post harvest activities i.e. reaping, threshing, winnowing, bagging, drying and transportation at field level are changed by the introduction of pedal or power threshers and additional labor inputs for drying. O&M cost for the threshers accrues in with-project condition instead of threshing labor costs in withoutproject condition. Total economic harvesting cost will increase between without- and with-project conditions as shown in Table XI 4-6. The incremental harvesting costs are summarized as follows:

		· ·	(Unit:	Rp '000)
Item	Telagasari	Bagor	Mattiro Bulu	Trimurjo
ncremental cost Wet season Dry season	518 835 -	1,018 1,253	588 524	1,364 1,758
Total	1,353	2,271	1,062	3,122

4.2.4 Replacement Cost

The following machinery and equipments are considered to be replaced by 5 years and 2 or 3 years respectively. Building and drying floor will be replaced by 20 years. Economic replacement costs for machinery and equipment are estimated by applying the SCF of 0.9 to those of financial prices as follows:

	·	1		(Unit:	Rp '000)
Item	Useful Life (year)	Telagasari	Bagor	Mattiro Bulu	Trimurjo
1. Replacement in 3rd year		· · · ·			
- Serrated Sickle - Drying Sheet Total	2 2	412 1,440	340 1,080	365 1,080	542 1,440
2. Replacement in 4th year	· 1	1,852	1,420	1,445	1,982
- Threshing Sheet - Pedal Thresher Total	3 3	738 3,690 4,428	216 0 216	504 2,520 3,024	306 0 306
 Replacement in 6th year Power Thresher Power Winnower Rice Mill Unit 	5 5 5	0 2,064 20,520	15,084 1,032 13,680	0 1,032 13,680	21,369 2,064 20,520
Total 4. Replacement in 21th year		22,584	29,796	14,712	43,953
- Building - Drying Floor	20 20	53, 928 9, 597	39,312 6,855	40,824 7,312	57,456 10,511
Total		63, 525	46,167	48,136	67,967

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4.3 Economic Evaluation

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The economic useful life of the pilot plan is considered to be 20 years on the basis of the useful life for building and drying floors of 20 years. The economic internal rate of return(EIRR) is caluculated from the economic cost and benefit flows for each pilot area as shown in Table XI 4-7. The EIRRs are as follows:

······				
	Telagasari	Bagor	Mattiro Bulu	Trimurjo
EIRR (%)	25	18	24	19
	······································	······································		

Project sensitivity is analyzed with respect to change in the project benefits and costs. The results of sensitivity test are summarized in Table XI 4-8. The above table indicates that the pilot plan is still expected to become economically feasible even if there are considerably increase in the project costs and or decrease in benefits.

5. SOCIO-ECONOMIC IMPACTS

In addition of the direct benefits assessed in the economic and financial evaluations, various secondary and intangible benefits and/or favourable socio-economic impacts may be expected from the implementation of the pilot plans as follows:

(1) Activation of Village Economy

The present economy in the pilot areas depends on the paddy production sector. The agro-processing industries including rice milling are limited to the home consumption for farmers and most of marketable surplus are brought out by paddy or raw materials. The operation of rice mills by farmer groups will create the employment oppotunities of laborers and operators for drying, cleaning and milling. Initial rice milling activities by farmer groups would promote the other processing industries for palawija crops. The village economy will be stabililized and enlarged by the close coordination between production and processing sectors.

(2) Spreading Effects to Other Area

Each of the pilot area is located at the major rice producing area in the respective four provinces. The development effects by the pilot plan will be easily spread to the other farmer groups around the pilot areas through the existing Rural Extension Centers and the proposed Post Harvest Service Centers.

Technologies introduced by the pilot plan will be monitored and evaluated by the Service Centers. These accumulated and consolidated technologies will be effectively used for the improvement activities in the other farmer groups.

(3) Enhancement of Farmer Groups Organization

Joint post harvest and marketing activities by farmer groups will accrue close coordination with pre harvesting activities and KUDs' activities. Effective post harvest activities heavily rely on the pre harvesting activities i.e. planting of same variety for timely harvesting, coordinated plant protection activities for increase in production, timely drainage for increase in harvesting work efficiency, etc. Farmer group activities for the improvement of post harvest will be expanded to pre harvesting activities on the basis of SUPRA INSUS technologies. Pilot farmer groups will easily join the KUDs' activities through the timely arrangement for the procurement of farm inputs, surely repayment of SUPRA INSUS credit and close coordination of marketing activities.

When the farmer groups by the unit of tertiary irrigation block are reorganized and their post harvest and marketing activities are fairly under way, the respective farmer groups will be integrated as a rice growers' association. This association will have chances to introduce more effective technologies on the basis of scale merits, i.e. mechanical dryers, larger scale rice mills with higher efficiency, and to get more strong bargaining powers. The set-up of the growers' association will bring more benefits to the member farmers.

(4) Enhancement of Village Society

The proposed pilot plan will play the leading activities in the village society. Not only member farmers but also agricultural laborers and the government officials in the villages will participate in the pilot activities. Most of the village members will be required to attend the meetings for the promotion of the plan and have the joint activities each other. The village society can be enhanced through these activities.

(5) Promotion of Palawija Crop Production

The present major constraints for the production of palawija crops are lower productivities due to improper farming practicies as well as limited water supply or production under rainfed conditions, and lower prices due to limited market outlets. The farmer groups set-up by the pilot plan could improve the constraints on the marketing outlets through the joint processing and marketing activities as well as rice production. The technical problems will be solved by the enhancement of extension activities from the Rural Extension Centers. The farmers' income could be increased by the promotion of palawija crops.

			Table XI	2-1 FINA	FINANCIAL WHOLESALE	PRIC	COF RICE	
	WILDOUL	5				al	Condition	
Item	Selling Month	Quality Class	Present Price	Selling Month	Selling to	Quality Class	Price Increase	Estimated Price for Farmer Groups
			н Ц				Ratio	Rp/kg)
				. <i>1</i>			/_1	/_2
Telagasari (Karawang)	(Su							
Wet Season	Apr-May	υ	358	Apr-Jul	DOLOG	m	•	405 / 3
-				Apr-Jul	Market	р та	•	378 (358+20)
			-			•		
Dry Season	Jul-Aug	ò	389	Jul-Aug	DOLOG	μΩ,	•	
				Aug-Dec	Market	م	1.12	
				Aug-Dec	Market	ፍ	I	488 (458+30)
Bagor (Ngan juk)								
Wet Season	Apr	υ	357	Apr-Jul	DOLOG	m _.	ı	405
•				Apr-Jul	Market	ф	l V	377 (357+20)
Drv Season	Jul-Aug	υ	400	Jul-Aug	DOLOG	щ	ı	405
ı				Aug-Dec	Market	цĴ	1.07	449 ((400+20)*1 07)
•				Aug-Dec	Market	Å	1	479 (449+30)
Mattiro Bulu (Pinrang)								
Wet Season	Мау	υ	328	May-Jul	DOLOG	щ	i	
				May-Jul	Market	ற	1	348 (328+20)
Drue Societ	500 - 102 	t	676	€ SAL Let	DOT OG	æ	I	205
		,		5117 T 117		ł	¢	
				Aug-pec	Marker	ц,	00.T	
				Aug-nec	Marker	ť	I	
IETHICLO (CEUCLET PEMDOUG)	(Bundwer							
Wet Season	Apr	υ	373	Apr-Aug	DOLOG	ក្រុ	1	405
				Apr-Aug	Market	£	ı	393 (373+20)
Drv Season	Aug-Sep	U	401	Aug-Sep	DOLOG	μ	i	405
1 1 1 1	4 			Sep-Dec	Market	മ	1 06	446 ((401+20)*1.06)
				Sepubec	Market	¢,	1	476 (446+30)
Nota .	• 1 /	10000 (00 th)		nolessie nrine	a anal vei a	+ brough 1983	1988 1988	
2005	· •	Price incr	monuniy se ratio	MUCLESALE PLACE is estimated at		a half of increase i	r vee	
		dry harvesting	season	and off season				
	/_2:	B= (C+20)	or A	= 10 + 30 =				
			••	increase ratio	0			
-	•		c ; Wholes	ື່	C class	rice in the l	harvesting	season (without condition)
				Q #				
			A ; FILCE OL	A CLA	ŭur Fi⊨Cor J.+ Fi≜O YOY COR			5 f D100/20
					ALLICICUS DOCWERD D Alfforonces botheon D			
			$\sum_{n=1}^{\infty} \frac{1}{n} \sum_{n=1}^{\infty} \frac{1}{n} \sum_{n$	3) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	TALLACTOR VOLTON SOLATING			
	·· · ·		r to aptid butfing	0 0 1 0	LE CHI PALE			

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	PADDY
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	PRICE
	FINANCIAL
	ВO
-	SUMMARY
	2-2
	ЧX
	Table

•

Trimurjo		176 Apr-May Private	244 Aug-Sep Private		405 / 393 Apr-Aug DOLOG / Market	405 / 446 Aug-Sep/Sep-Dec DOLOG / Market	476 Sep-Dec Market
Mattiro Bulu		174 Mar-Apr Private	194 Jul-Aug Prívate	••• •	405 / 348 MaymJul DOLOG / Market	405 / 414 Jul-Aug/Aug-Dec DOLOG / Market	444 Aug-Dec Market
Bagor		187 Mar-Apr Private	231 Jul-Aug Private		405 / 377 Apr-Jul DOLOG / Market	405 / 449 Jul-Aug/Aug-Dec DoloG / Market	479 Aug-Dec Market
Telagasari	Price of Paddy)	200 Mar-Apr Private	251 Jul-Aug Private	ice)	405 / 378 Apr-Jul DOLOG / Market	405 / 458 Jul-Aug/Aug-Dec DOLOG / Market	488 Aug-Dec Market
Item	I. Without Condition (Present Farm Gate Pric	 Wet Season Price(Rp/kg) Month Selling to 	<pre>2) Dry Season Price(Rp/kg) Month Selling to</pre>	<pre>II. With Project Condition (Wholesale Price of Rice) 1) Wet Season</pre>	Price(Rp/kg) Month Selling to 2) Dry Season - Class B Rice	<pre>Price(Rp/kg) Month Selling to - Class A Rice</pre>	Price(Rp/kg) Month Selling to

Table XI 2-3 FINANCIAL PRICES OF FARM INPUTS AND CUSTOM CHARGES

•

Item		Unit	Without Project Condition	Wi Pro Condi	ject
• • • •		an Ann a	Sonarcion	Condi	LUION
Labor charge		Rp/day			
Java (Telaga	Pari /Pagan				
Outside of			2,500		500
	lu/Trimurjo)	i	2,000	2,	000
Hired animal power		Rp/day	12,000	12.	000
Custom Charges/Cost			·	107	
-Hand tractor		Rp/day			
		NP/ GGY			
Telagasari			27,500	97	500
Bagor			25,000		000
Outside of	Java		32,500		500
-Thresher		Rp/kg		1st to 5th	After
		(Paddy)		Year	6th Year
		(oth lear
Telagasari(Manual)		-	8	6
Bagor (Power				10	6
Mattiro Bul			· _	7	9 5
Trimurjo(Po			-	9	. 6
				-	U
-Processing/Mar	keting	Rp/kg			н
	- -	(Rice)			
Drying (Conc	rete Floor)		_	4 ~ 5	3
Ceaning (Win			_	4 ~ 5	-3 4
Milling			20	4 ~ 3 20	13
Storage			-	13 ~ 14	13 - 14
	•			13 - 14	13 - 14
Transportat					

Table XI 2-4 ECONOMIC FRICE STRUCTURE FOR RICE / PADDY, 1995 (Import substitution value, 1988 Constant Price)

۳ More than 35% 328 * 147 Broken Rice 183 196 0 189 349 60%) 16 20 H 158 327 ΰ 3 (Class 1995 Price 350 214 173 Rice 65%) 227 50 35 % Broken 170 201 348 吕 5 8 (Class B) 393 414 10 Rice 194 225 389 51 11 10 % Broken 37 (Class A) Based on Revision of Commodity Price Forecasts and Quarterly Review Prices converted at an exchange rate of US\$ 1.0 = Rp 1,730 243 Rp/kg (GKG) Rp/kg (GKP) of Commodity Markets, September 1988, World Bank. Rp/kg Rp/kg \$/ton Rp/kg Rp/kg Rp/kg Rp/kg Rp/kg Rp/kg \$/ton \$/ton Rp/kg Rp/kg Unit \$/ton 80%/70%/65% Operation 65%/60% *1.73 +(2%) 1 + łi J Ņ H Based on the following assumptions Economic farm gate price of dry clean paddy Economic farm gate price of wet paddy Fort handling, storage and losses Thai 5% brokens, FOB Bangkok /_1 Transport, mill to wholesaler Transport, port to wholesaler Wholesale price, related area CIF price, related ports/_2 Transport, farm to mill Freight and insurance Conversion to paddy Quality adjustment Item Nm Trader margins Ex-mill price Milling cost Note

-Weight convertion rate of 85% from wet paddy (GKP) to dry clean paddy (GKG)

-Drying cost of Rp 10/kg of dry paddy(GKG)

-Price (GKP) = (Price (GKG) -10) *0.85

Tabl	е X.	Ľ	2-	5	SUMMARY	OF	FINANCIAL	AND	ECONOMIC	PRICES	
------	------	---	----	---	---------	----	-----------	-----	----------	--------	--

	Item	Unit	Financial Price	÷	Economic Price/_1
Outpi)+ a	and the first state of the second state of the	(1988)		(1995)
oucpe					
1)	Paddy (Farm gate price)	Rp/kg			
	a) For Class C Rice	(Wet Paddy)	•		
	- 60% milling rate (Without Condition)		174-282	2 /_2	147
	b) For Class B Rice - 65% milling rate (With Condition)			_	173
2)	Rice(Wholesale price)	Rp/kg			
	a) Class A(10% broken)		444-48	3/2	439
	b) Class B(35% broken)		348-45	—	393
	c) Class C (More than 35% broken)		328-40		350
Input	- <u>-</u> -				· · · ·
1)	Labor charges/ 3	Rp/day			
	-Telagasari (West Java)	1.15,1	2,500)	1,500
	-Bagor (East Java)		2,500		1,500
	-Outside of Java		2,000		1,400
				Ave	rage; 1,450
2)	Hired animal power/_4	Rp/day	12,000	0	10,800
3)	Custom Charges/_5				
	-Hand tractor	Rp/day			
	Telagasari		27,500)	24,700
	Bagor		25,000		22,500
	Outside of Java		32,500)	29,200
	-Thresher	Rp/kg	1st to 5th	After	
		(Paddy)	Year	<u>6th Year</u>	
	Telagasari (Manual)		~	~	
	Bagor (Power)		8 10	6 6	-
	Mattiro Bulu(Manual) Trimurjo(Power)		10	5 5	-
	IIIMIIJO(FOWEL)		9	6	_
	-Processing/Marketing	Rp/kg (Rice)			
1	Drying (Concrete Floor)	•	6 - 7	6 ~ 7	-
	Ceaning (Winnower)		4 - 5	4	_
÷	Milling		20	13	
<u>.</u>	Storage		17 - 19	17 - 19	-
· .	Transportation		<u>2</u> 49 - 53	$\frac{2}{42 - 45}$	_
		Total		12 10	

/ 1 1988 constant prices based on World Bank September 1988, Commodity

Price Forecasts. The other economic prices are converted by SCF of 0.9.

IBRD Staff Appraisal Report, Irrigation Sub-sector, 1987, Oct.

/ 2 Financial price ranges in the related areas.

 $/_3$ Economic shadow wage rates of 60% for Java and 70% for outside of Java are applied. IBRD Staff Appraisal Report, Irrigation Sub-sector, 1987, Oct.

/ 4 Hired animal power comprises 2 heads of bull with 1 operator.

/ 5 Custom charges consist of O&M cost including depriciation and

repayment costs.

Table XI 3-1	FINANCIAL	HARVESTING	COST	אז	WITH	AND	WITHOUT	PROJECT	CONDITION	S
									-	

			With					W.S.		With D	.s.	
	W Labor(md	<u>, S</u> , (ha)	Cost	Labor (m).S. 1/ha)	Cost		nd/ha)	Cost	Labor (m	d/ha)	Cost
	rapot (mo.		(Rp+000	<u>. Dation (ins</u>		(Rp 000		(R	in'000			•
	Family Hi	red	7ha)	Family H	ired	<u>/ha)</u>	Family		<u>/ha)</u>	Family H	ired DORp/mc	/ha)
TELAGASARI	(7.0 t/ha	, 200	Rp/kg)	(6.7 t/ha	2518	(p/kg)	(2,	500Rp/md	,	(2) 5	ook þý mi	
1.Labor Charge		14	73.7	1	11	82,6	· 1	15	37,5		12	30.0
Reaping	0	10	63.2	0	10	75.1	ō	8	-	0	8	-
Threshing	0	5	26.3	ō	5	37.5	0	2	5.0	0	2	5.0
Winnowing Bagging	õ	2	10.5	0	2	15.0	0	2	5.0	. 0	2	5.0
Drying	õ	ö	0.0	0	0	0.0	0	4	10.0	0	. 4	10.0
Transportation	0	4	21.1	0	3	22.5	0	5	12.5	0	4	10.0
sub-total /1	1	37	194.7	1	31	232.7	. 1	36	70.0	. 1	32	60,0
2.Custom threshing charge	2 /2											
Pedal thresher						_			60.0			60.0
- 1st-5th year			-			-		- 1	48.8			48.8
~ after 6th year			-									
3. Depreciation Cost of T	0015		-			~			1.2			1.2
Serrated sickles Drying mat			_			-			5.0	•		5.0
4. Total								:	1. A.			
- 1st-5th year			194.7			232.7			136.2			126.2
- after 6th year			194.7			232.7			125.0			115.0
									 \	/7 5	00Rp/m	11
	(8.2 t/ha,	187	Kb\Kd}	(7.5 t/ha	1, 2310	rbi kĝj	(2,	500Rp/md	t	(2) 3	o o v fo V Inc	~1
1.Labor Charge	~	11	57 0	2	9	67,6	2	12	30.0	2	10	25.0
Reaping	2 0	11 12	57.9 63.2	2	9 10	75,1	0	4			4	
Threshing	0	12	26.3	0	4	30.0	ŏ	2	5.0		2	5.0
Winnowing	0	2	10.5	ŏ	2	15.0	ō		5.0	0	2	5.0
Bagging	Ð	0	0.0	e	ō	0.0	õ	4	10.0	0	4	10.0
Drying Transportation	o	3	15.8	0	3	22.5	0	4	10.0	. 0	4	10.0
sub-total	2	33	206.5	2	28	204.5	2	28	60.0	2	26	55.0
2.Custom threshing charge		-										
Power thresher												
- 1st-5th year			-			-			78.5			78,5
- after 6th year			-			-		1	46.8	-		46.8
3. Depreciation Cost of 3	lools											
Serrated sickles			-			-			1.2			1.2
Drying mat			-			-			5.0		· · ·	5.0
4. Total												120.2
- 1st-5th year			206.5			204.5			144.7		1.1	139.7
- after 6th year			206.5			204.5		i	113.0			100.0
				(5.9t/ha	1 940	/kat	12.	000Rp/md	1	12.0	m\qR00	a)
MATTIRO BULU	(5.9¢/ha	1745	prigr	13.307112	1,1,2,10	/ ~ y /			•			•
1.Labor Charge	8	6	31.6	6	6	45.0	11	4	10.0	7.	6	15.0
Reaping	2	5	26.3	5	5	37.5	0	8	· -	0	7	-
Threshing Winnewing	3	2	10.5	3	2	15.0	2	0	0.0	. 2	0	0.0
Bagging	ĩ	1	5.3	1	1	7.5	2	0	0.0	2	0	0.0
Drying	ō	ō	0.0	Q	Q	0.0	3	1	2.5	√ ^{+ 11} 3	1	2.5
Transportation	1	1	5.3	0	1	7.5	2	.2	5.0	· 2	1	2.5
sub-total	20	15	62.9	15	15	81.8	20	15	17,5	16	15	20.0
2.Custom threshing charge												
Pedal thresher												
- 1st-5th year			-			-			46.0			46.0
- after 6th year			-			-			36.1			36.1
3. Depreciation Cost of T	`00! S											• •
Serrated sickles			-			-			1.2			1.2 5.0
Drying mat			-			-			5.0			
4. Total			(A . P			010			69.7			72.2
- 1st-5th year			62.9 62.9			81.8 81.8			59.8	1.1		62.3
- after 6th year			02.3									
TRIMURJO	(5.8t/ha,	176	Ro/km1	(5.3t/ha	2448	o/ka)	(2.	000Rp/md)) ·	(2,0	00Rp/m	d)
INTERNA	(0.0071107			10100100	, -, .,		1-7				• • • •	
1 Labor Charge		6	31.6	6	5	37.5	11	. 4	10.0	7	- 5	12.5
l.Labor Charge Reaping	8		26.3	5	4	30.0	0	4	·	0	4	-
Reaping	8	- 5			3	22.5	2	0	0.0	2	0	0.0
Reaping Threshing		5 2	10.5	2				1	2.5		0	0.0
Reaping Threshing Winnowing	6			2 1	1	7.5	1 ·	-				
Reaping Threshing	6 3	2	10.5		1 0	0.0	3	1	2.5	- 2	2	
Reaping Threshing Winnowing Bagging	6 3 1	2 1	10.5 5,3	1	1				2.5 2.5		2	5.0
Reaping Threshing Winnowing Bagging Drying	6 3 1 0	2 1 0	10,5 5,3 0,0	1 0	1 0	0.0	3	1	2.5	- 2		5.0
Reaping Threshing Winnowing Bagging Drying Transportation	6 3 1 0 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3 3	1	2.5 2.5	2 2	2	5.0
Reaping Threshing Winnowing Bagging Drying Transportation sub-total	6 3 1 0 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5	2 2	2	22.5
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge	6 3 1 0 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5 61.9	2 2 15	2	5.(22.5 61.9
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher	6 3 1 0 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5	2 2 15	2	5.(22.5 61.9
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher - 1st-5th year	6 3 1 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5 61.9 36.2	2 2 15	2	61.9 36.1
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher - 1st-5th year - after 6th year	6 3 1 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5 61.9 36.2 1.2	2 2 15	2	61.9 36.3
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher - lst-5th year - after 6th year 3. Depreciation Cost of T	6 3 1 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5 61.9 36.2	2 2 15	2	61.9 36.1
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher - 1st-Sth year - after 6th year Serrated sickles	6 3 1 2 20	2 1 0 1	10.5 5.3 0.0 5.3 62.5	1 0 1	1 0 2	0.0 15.0 92.4	3	1	2.5 2.5 17.5 61.9 36.2 1.2 5.0	2 2 15	2	61.9 36.1 5.0
Reaping Threshing Winnowing Bagging Drying Transportation sub-total 2.Custom threshing charge Power thresher - 1st-Sth year - after 6th year Serrated sickles Drying mat	6 3 1 2 20	2 1 0 1	10.5 5,3 0,0 5,3	1 0 1	1 0 2	0.0 15.0	3	1	2.5 2.5 17.5 61.9 36.2 1.2	2 2 15	2	61. 36. 1.

Note: /1 = for without project, unit price of paddy x yield x sharing rate(1/7) x (hired labor/total labor) for with project, unit wage x hired labor /2 = Custom threshing charge includes operator charge, therefore above labor charge does not include threshing in with project condition.

Table	XI	3-2	CROP	BUDGET	IN	WITH	AND	WITHOUT	PROJECT	CONDITIONS	
				·····							- 0

			TELAG	ASARI			<u> </u>		BAG		t:'000Rs	/na)
	With	out		Wi	th	·····	With	out	540		ith	
				h Year	After 6	th Year			lst-5th			th Year
	W.S.	D.S.	W.S.	D.S.	W.S.	D.S.	W.S.	D.S.	W.S.	D.S.	W.S.	D.S.
A. Gross Income	1 400								·····	·····		
1) Yield(t/ha)	1,400	1,682	1,829	2,098	1,829	2,098	1,253	1,478	1,710	1,971	1,710	1,97
-Paddy	7.0											
-Rice	·.u	6.7	7.4	7.1	7.4	7.1	6.7	6.4	6.9	6.7	6.9	6.
2) Unit price (Rp/kg)	-	-	4.8	4.6	4.8	4.6	-	-	4.5	4.4	4.5	4.4
-Paddy	200	251										
-Rice	200	201	381	-	-	-	187	231	-	-	-	-
NICO .		-	781	456	381	456	-		380	448	380	448
B. Production Cost												
1) Farm input	143	143	143	143	143	143	159	159	100	159		
			145	145	145	145	123	123	159	159	159	159
2) Cost for pre harvest												
-Labor	150	150	150	150	150	150	140	140	140	140	140	140
-Animal	0	0	0	0	0	0	0	140	0	0	. 0	141
-Machinery	55	55	55	55	55	55	5 Ŏ	50	50	50	50	50
· · · · ·							••	••				
 Harvesting cost /1 	195	- 233	136	126	125	115	207	205	145	140	113	10
 Processing/Marketing 	- ·	-	240	230	202	193	-	-	239	233	203	19
charge												
5) Irrigation fee	2	3	2	3	2	3	2	2	2	2	2	:
6) Land tax	23	23	23	23	23	23	20	20	20	. 20	20	21
7) Land rent	700	841	914	1,049	914	1,049	626	739	855	986	855	98(
8) Total	6.00		340	200	600	603				246		
-Owner	568	606	749	729	699	681	578	576	754	745		67
-Tenant	1,174	1,353	1,569	1,684	1,520	1,636	1,105	1,216	1,510	1,631	1,442	1,56
C. Net Return (A-B)												
-Owner	832	1,076	1,080	1,369	1 130	1,416	675	902	956	1,227	1,024	1,29
-Tenant	227	329	260	414	309	462	148	262	200	341	268	40

									(Uni	t:'000R	s/ha)			
		MATTIR	O BULU					TRIM						
With	out		Wi	th		With	nout			th				
		lst-5t	h Year	After 6	th Year		,	lst-5t	h Year	After (5th Year			
W.S.	D.S.	W.S.	D.S.	W.S.	D.S.	<u>W.S.</u>	D.S.	W.S.	D.S.	W.S.	D.S.			
1,027	1,145	1,416	1,664	1,416	1,664	1,021	1,293	1,576	1,647	1,576	1,647			
5.9	5.9	6.2				5.8	5,3				5.7			
-	-	4.0	4.0	4.0	4.0	-	-	4.0	3.7	4.0	3.7			
174	194	-	-	-	-	176	244	-	-	-	-			
-	-	354	416	354	416	-	-	394	445	394	445			
113	113	113	113	113	113	131	131	131	131	131	131			
6	6	6	6	б	6	4			-		4			
36	36	36	36	36							24			
33	33	33	33	33	33	0	0	0	0	0	0			
63	82	70	72	60	62	63	92	86	91	60	65			
		204	204	176	176	-	-	196	181	168	155			
2	2	2	2	2	2	2	2	2	2	2	2			
15	15	15	15	15	15	15	15	15	15	15	15			
10														
513	572	708	832	708	832	510	647	788	823	783	823			
717														
267	287	478	481	440	443	239			-		397			
			1,241	1,077	1,203	669	835	1,165	1,191	1,111	1,140			
. 109	,	-,*		•										
											1 050			
750	858	938	1,184	976	1,222			-			1,250			
			. 493	339	461	352					507			
	W.S. 1,027 5.9 - 174 - 113 6 36 33 63	1,027 1,145 5.9 5.9 174 194 113 113 6 6 36 36 33 33 63 82 2 2 15 15 513 572 267 287 709 787 759 858	MATTIR Without 1st-5t 1,027 1,145 1,416 5.9 5.9 6.2 - - 4.0 174 194 - - - 354 113 113 113 6 6 6 36 36 36 33 33 33 63 82 70 - - 204 2 2 2 15 15 15 513 572 708 267 287 478 709 787 1,115 759 858 938	MATTIRO BULU Without Wi 1st-5th Year Wi W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,664 5.9 5.9 6.2 6.2 - - 4.0 4.0 174 194 - - - - 354 416 113 113 113 113 6 6 6 6 36 36 36 36 33 33 33 33 63 82 70 72 - - 204 204 2 2 2 2 15 15 15 15 513 572 708 832 267 287 478 481 709 787 1,115 1,241 759 858 938 1,184	MATTIRO BUJU With Without Ist-5th Year After 6 W.S. D.S. W.S. D.S. W.S. 1,027 1,145 1,416 1,664 1,416 5.9 5.9 6.2 6.2 6.2 - - 4.0 4.0 4.0 174 194 - - - - 354 416 354 113 113 113 113 113 6 6 6 6 6 36 36 36 36 33 63 82 70 72 60 - - 204 204 176 2 2 2 2 2 2 15 15 15 15 15 15 513 572 708 832 708 267 287 478 481 440 709	MATTIRO BUJU With Without Ist-5th Year After 6th Year W.S. D.S. W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,664 1,416 1,664 5.9 5.9 6.2 6.2 6.2 6.2 - - 4.0 4.0 4.0 4.0 174 194 - - - - - 354 416 354 416 113 113 113 113 113 113 6 6 6 6 6 6 36 36 36 36 36 36 33 33 33 33 33 33 63 82 70 72 60 62 - - 204 204 176 176 2 2 2 2 2 2 2 15 </td <td>MATTIRO BULU With with with with with with with sear After 6th Year W.S. W.S. D.S. W.S. D.S. W.S. D.S. W.S. D.S. W.S. 1,027 1,145 1,416 1,664 1,416 1,664 1,021 5.9 5.9 6.2 6.2 6.2 6.2 5.8 - - 4.0 4.0 4.0 4.0 - 174 194 - - - - 176 - - 354 416 354 416 - 113 113 113 113 113 131 131 6 6 6 6 6 4 - 33 33 33 33 33 33 0 63 82 70 72 60 62 63 - - 204 204 176 176 - 2 2 <t< td=""><td>MATTIRO BULU With With With Without Without Ist-5th Year After 6th Year W.S. D.S. Without 1,027 1,145 1,416 1,664 1,416 1,664 1,021 1,293 5.9 5.9 6.2 6.2 5.8 5.3 - 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 - - 176 244 - - 176 244 - - 176 2 2 2 2 2 2 <th 2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2<="" colspa="2" td=""><td>MATTIRO BULU TRIM Without With Without Ist-5th Year After 6th Year W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,416 1,416 1,576 S.9 6.2 6.2 5.8 5.3 6.2 - - 4.00 4.0 176 244 - - - - - 113 113 131 131 131 131 131 131 <td <="" colspan="2" td=""><td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td><td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td></td></td></th></td></t<></td>	MATTIRO BULU With with with with with with with sear After 6th Year W.S. W.S. D.S. W.S. D.S. W.S. D.S. W.S. D.S. W.S. 1,027 1,145 1,416 1,664 1,416 1,664 1,021 5.9 5.9 6.2 6.2 6.2 6.2 5.8 - - 4.0 4.0 4.0 4.0 - 174 194 - - - - 176 - - 354 416 354 416 - 113 113 113 113 113 131 131 6 6 6 6 6 4 - 33 33 33 33 33 33 0 63 82 70 72 60 62 63 - - 204 204 176 176 - 2 2 <t< td=""><td>MATTIRO BULU With With With Without Without Ist-5th Year After 6th Year W.S. D.S. Without 1,027 1,145 1,416 1,664 1,416 1,664 1,021 1,293 5.9 5.9 6.2 6.2 5.8 5.3 - 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 - - 176 244 - - 176 244 - - 176 2 2 2 2 2 2 <th 2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2<="" colspa="2" td=""><td>MATTIRO BULU TRIM Without With Without Ist-5th Year After 6th Year W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,416 1,416 1,576 S.9 6.2 6.2 5.8 5.3 6.2 - - 4.00 4.0 176 244 - - - - - 113 113 131 131 131 131 131 131 <td <="" colspan="2" td=""><td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td><td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td></td></td></th></td></t<>	MATTIRO BULU With With With Without Without Ist-5th Year After 6th Year W.S. D.S. Without 1,027 1,145 1,416 1,664 1,416 1,664 1,021 1,293 5.9 5.9 6.2 6.2 5.8 5.3 - 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 - - 176 244 - - 176 244 - - 176 2 2 2 2 2 2 <th 2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2<="" colspa="2" td=""><td>MATTIRO BULU TRIM Without With Without Ist-5th Year After 6th Year W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,416 1,416 1,576 S.9 6.2 6.2 5.8 5.3 6.2 - - 4.00 4.0 176 244 - - - - - 113 113 131 131 131 131 131 131 <td <="" colspan="2" td=""><td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td><td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td></td></td></th>	<td>MATTIRO BULU TRIM Without With Without Ist-5th Year After 6th Year W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,416 1,416 1,576 S.9 6.2 6.2 5.8 5.3 6.2 - - 4.00 4.0 176 244 - - - - - 113 113 131 131 131 131 131 131 <td <="" colspan="2" td=""><td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td><td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td></td></td>	MATTIRO BULU TRIM Without With Without Ist-5th Year After 6th Year W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. Without W.S. D.S. W.S. D.S. 1,027 1,145 1,416 1,416 1,416 1,576 S.9 6.2 6.2 5.8 5.3 6.2 - - 4.00 4.0 176 244 - - - - - 113 113 131 131 131 131 131 131 <td <="" colspan="2" td=""><td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td><td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td></td>	<td>Uni WATTIRO BULU TRIMURJO Without Mithout Mithout</td> <td>(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.</td>		Uni WATTIRO BULU TRIMURJO Without Mithout Mithout	(Unit: *000R Without With Without With Without With w.s. D.S. W.S. D.S. MATTIRO BULU With Hithout With w.s. D.S. W.S. D.S. M.S. D.S. W.S. D.S. M.S.

Note: This budget is for paddy in without project condition, and for rice in with project condition. /1= See Table XI 3-1

Table XI 3-3 FARM BUDGET IN WITH AND WITHOUT PROJECT CONDITIONS (1/2)

0 M	1014 - FUO			I									
A CONTRACTOR OF		out		Wit	1.1		Wichout	út		With	2		
0.8				l Year		6th Year		- 	lst-5th		After 6th	n Year	
	ner	Tenant	Owner	Tenant	Owner	Tenant	Owner	Tenant	Owner	Tenant	Owner	Tenant	1
	4,1	4.1	4.1	4.1	4.1	4.1	4.3	4.3	4 ° 3	4.3	4.3	4.9	
	0.69	0.69	0.69	0.69	Ū,	0.69	۳.	0,30	<u>م</u>	0.30	<u>م</u>	0,30	
rmer(s)	0.29	I	0.29		0.29		1.00	1	1.00		1.00	1	
Cropping Intensity (%)													
Paddy (WS)	100	100	100	100	100	100	06		. 90	06	06	06	
Paddy (DS)	100	100	100	100	100	100	80		80	80	80	80	
Palawija	0	0	0	0	0	0	70/2	70 /2	2 70 /	2 70/2	270.72	70 /2	2
Sugarcane	I	1	ı	i .	,	t	10		10	10	01	10	
I. Farm Income													
rđ													
ss income	2,127	2,127	71	2,710	2,710	· · ·	693	693	935	935	935	935	
ost	810	1,744	02	2,245	952	2,178	ര	590	382	199	348	764	
	1,317	383	1,690	465	1,757	532	365	103	552	136	587	170	
U. Falaw⊥ja Nat Jacat					I	ł	11 V F	14 V F	9 V F	11 1 1	4 5 7	4 7 7	
INGLE TRICORE	I	-	ł	1		I	r	r	L,	r	۳	p .	
c. Sugarcane													
-Net income	ı	ı	1	1	1	E.	ŢL.	20	11	20	71	20	
II. Land rent from tenant	405	I	5 9 S	.1	569	1	1,207	1	1,841	ł	1,841	1	
III Income from On-farm	1	1	1	1	I	1	ı	1	I	ı	1	1	
Employment													
IV. Non-farm income	619	412	615	412	419	412	451	489	451	489	451	489	
V. Total Income 2	2,141	795	2,678	877	2,746	944	2,273	756	3,060	789	3,095	824	
+ IV)												. !	•
Ixpense	2,065	749	2,065	749	2,065	749	1,480	667	1,480	667	1,480	667	
a. Food	846	476	846	476	5	~ •	659	440	600	440	500	5 7 7 7 7	•
-Rice	206	206	206	206	\sim \cdot	206	159 159	4 C	א מ רי ר	- - -		201	
70	640	270	64	270	64	-	004	187	000	197	000	191	
b. Other items	1.219	273	1,219	273	1,219		821	221	821	221	821	127	
VII Net Reserve(V-VI)	35	46	613	128	681	195	193	6 8	1,580	122	1,615	157	
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1,354 253 2,649 295 2,732 378 104 2 501 38 567		1,255	340	1,255	340	25	340	ው	239	165	239	497	239
	VI:Net Reserve (V-VI)	1,354	253	2,649	d n	2,732	378	104	2	501	38	567	103

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67,834 52,951 300 kg/hr) 67,834 52,951 (300 kg/hr) 6 1,998 - (750 kg/hr) - 6 1,492 8,952 (150 kg/hr) - 6 1,492 8,952 al - - - 6 1,492 8,952 al - - - - 6 1,492 8,952 al - - - - - 6 1,492 8,952 al - - - - - - 6 1,492 8,952 ating Charge - - - - - - - - ating Charge - - - - - - - - ating Charge - - - - -	
Charge Faddy Faddy Faddy - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	
Charge Faddy 1,998 Paddy - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	
Paddy Paddy 6 1,998 11,988 - - - 6 1,492 8,952 - - 11,988 - 6 1,492 8,952 - - - 6 1,492 8,952 - - 6 1,492 8,952 - - - 6 1,492 8,952 - - - 6 5,916 7 652 4,564 17 986 5,916 7 652 12,388 17 986 16,762 19 652 12,388 13 1,088 /2 4,352 4 791 /2 10,283 13 1,088 /2 4,144 13 791 /2 10,283 42 986 1,972 2 652 1,303 42 986 1,972 2 31,703 42 55,134 45 652 31,703	
6 1,998 - 6 1,492 8,952 - 11,988 - 6 1,492 8,952 Rice 986 5,916 7 652 4,564 17 986 5,916 7 652 12,388 17 986 16,762 19 652 12,388 13 1,088 2 4,144 13 791 23,164 2 986 1,972 2 652 1,304 42 986 1,972 2 652 1,304 42 986 1,972 2 652 1,304 42 986 43,972 2 652 1,304 42 986 43,976 45 652 1,304	Paddy
6 1,492 8,952 11,988 8,952 8,952 8,952 8,952 17 986 5,916 7 652 4,564 4 1,088 /2 4,352 4 791 /2 3,164 13 2,986 43,146 45 652 31,703 55,134 40,655	ı
I1,988 \$10,988 \$10,952 Rice 986 5,916 7 652 4,564 17 986 16,762 19 652 4,564 17 986 16,762 19 652 12,388 13 1,088 /2 4,352 4 791 /2 3,164 13 1,088 /2 1,972 2 652 1,304 2 986 1,972 2 652 1,304 42 986 43,146 45 652 31,304 42 55,134 45 652 31,904	6 2,056 12,336
Rice Rice 5,916 7 652 4,564 17 986 16,762 19 652 12,388 17 986 16,762 19 652 12,388 4 1,088/2 4,352 4 791/2 3,164 13 1,088/2 14,144 13 791/2 10,283 2 986 1,972 2 652 1,303 42 986 93,146 45 652 31,703	12,336
6 986 5,916 7 652 4,564 17 986 16,762 19 652 12,388 4 1,088 2 4,352 4 791 2 3,164 13 1,088 2 4,144 13 791 2 3,164 2 986 1,972 2 652 1,0283 3,1703 42 986 43,144 13 791 204 31,703 42 986 43,144 45 652 31,703 40,655	Rice
storage/_1 17 986 16,762 19 652 12,388 Cleaning 4 1,088 / 2 4,352 4 791 / 2 3,164 Milling 13 1,088 / 2 14,144 13 791 / 2 10,283 Milling 13 1,088 / 2 14,144 13 791 / 2 10,283 Transportation 2 986 1,972 2 652 1,304 Sub total 42 986 1,972 2 652 31,703 Total 25,134 55,134 40,655	
Cleaning Cleaning 4 1,088 /2 4,352 4 791 /2 3,164 Milling 13 1,088 /2 14,144 13 791 /2 10,283 Transportation 2 986 1,972 2 652 1,304 Sub total 42 986 43,146 45 652 31,703 Total 42 55,134 40,655	:
Milling 13 1,088 /2 14,144 13 791 /2 10,283 Transportation 2 986 1,972 2 652 1,304 Sub total 42 986 43,146 45 652 31,703 Total 70:655 40,655	I,184 /2
Transportation 2 986 1,972 2 652 1,304 Sub total 42 986 43,146 45 652 31,703 Total 42 986 43,146 45 652 31,703	/2
cal 42 986 43,146 45 652 31,303 1 55,134 40,655	1,028
55,134	v
	58,164
Note · / · · Including OrM cost and remains cost for milling house.	30, 121 36, 911

/_Z3 Milling quantity including home consumption.

	Tel	agasari			Bagor	
Item	Unit Price (Rp)	Q'ty (ton)	Total (Rp'000)	Unit Price (Rp)	Q'ty (ton)	Total (Rp'000)
				(1.5)	<u>(conj</u>	(Kp 000)
I. Wet Season	·					
1) Class B Rice						
To DOLOG						
	405	50	20,250	405	36	14,580
To Market	378	455	171,990	377	322	121,394
sub total		505	192,240		358	135,974
TT Date Or						,
II. Dry Season						
1) Olaan B D						
1) Class B Rice						
To DOLOG	405	44	17,820	405	27	10,935
To Market	458	397	181,826	449	240	107,760
sub total		441	199,646		267	118,695
2) Class A Rice						
To Market					· ·	
10 Market	488	40	19,520	479	27	12,933
III Annual (I +II)		000	133 100			· _
i i i i i i i i i i i i i i i i i i i		986	411,406		652	267,602

Table XI 3-5 RICE SALES INCOME BY FARMER GROUPS IN WITH PROJECT CONDITION

	Mat	tiro Bul	u	Т	imurjo	
Item	Unit Price (Rp)	Q'ty (ton)	Total (Rp'000)	Unit Price (Rp)	Q'ty (ton)	Total (Rp'000)
1						
I. Wet Season						
1) Class B Rice						
To DOLOG	405	37	14,985	405	54	21,87
To Market	348	336	116,928	393	486	190,99
sub total		373	131,913		540	212,86
II. Dry Season						
1) Class B Rice						
To DOLOG	405	26	10,530	405	45	18,22
To Market	414	238	98,532	446	401	178,84
sub total		264	109,062		446	197,07
2) Class A Rice						
To Market	444	24	10,656	476	42	19,99
III.Annual (I +II)		661	251,631		1,028	429,93

1/4)
PLAN
II PILOT PLAN AREA
, TELAGASARI P
CASH FLOW STATEMENT FOR FARMER GROUP ACTIVITIES, TELAGASARI
GROUP
FARMER
FOR
STATEMENT
FLOW
CASH 1
Table XI 3-6

			:							
I. Inflow							- -			
Custom										
	15,984	15,984	15,984	15,984	15,984	11,988	11,988	11,988	11,988	11,988
Power Thresher/Equipment	0		0	0		0	0	0	0	о ,
	51,850	1,8	51	н 0	ĥ	13,1	ы Ч	з, 1	3,1	ц, Ч
(3) Rice Sales Income	411,406	, 40	1,40	1,40	, 40	, 40	,40	,40	411,406	411,406
(4) Loan /_l								•		
l. Machinery	30,014	Ö	0	0	0	0	0	0	0	
2. Facilities	100,602	0	0	0	0	0	0	0	0	0
Sub-total	130,616									
	609,856	479,240	479, 240	479,240	479,240	466,540	466,540	466,540	466,540	466,540
`										
(T) TUNESIMENT COST / T							,			
1. Machinery	30,014	0	0	0	0	0	0	0	0	0
2. Facilities	100,602	0	0	0	0	0	0	0	0	U
Sub-total	130,616	0	0	0	0	0	0	0	0	0
(2) Operating Cost										
						·				
Dedal or nower thresher	574	574	574	574	574	574	574	574	574	574
DATOR IN DACEDE CITEDUTE	1.416	∀	, 4	2	1 4) V	1.416			1.416
	0 0 0 0 0 1 U	5 0 2 2	000 1 1		201 0 1 1	10	5000	12	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
KICE MILL	22010	2	20.	2	201	201	•	104	2	2
Z. Facilities / Z		((, C C L			(((. (C C L	•
Drivng	120		n ı	ດ່	ົ່	220		550 - 111	U I	0 0 0 0 0 0 0
Warehouse and others	1,798	À.	- -	- ' -	<u>ე</u> .	1	1,798	5		1, 79
3. Personnel Cost	20,501	20,501	ഹ	ഹ്	\circ	20,501	20, 501	О И	n.	20,50
4. Transportation Cost	1,972	Ъ,	റ പ്	ч 9	<u> </u>	1,972	à.	1, 97	പ്	È.
5. Rice Procurement	411,406	411,406	Υr.	4	<u>_</u>	411,406	411,406	40	111, 4	411,40
	2,958	2,958	2,958	2,958	2,958	2,958	2,958			2,95
Sub-total	446,130	446,180	- H	1	ω,	ŝ	446, 180	446,180	446,180	446,180
(3) Replacement Cost	0	0	•	S.	Ö	×	4,920	0	0	4,920
	19,188	19,188	19,188		19,188	9, 59	9,591	9,591	9,591	· •
	5.95,984	5,36	, 36	470,288	465,368	480,865	460,691	455,771	455,771	460,69
III.Cash Surplus			۰.						.	
1. Annual Balance (I-II)	13,872	r ~	13,872	8 0		-14,325	ົ້		10,769	ີ ອ
2. Cumulative	13,872	27,744	ŝ	9 0	4,44	0, 11	96	6, 73	7,50	, 35

Item / Year	H	5	ຕ	ব্দ ^{••}	2	19	L	. 00	• 0 1 • •	0
						· · · · · · · · · · · · · · · · · · ·				
Inflow										
(1) Custom Threshing Charges		·						•		•
 Pedal Thresher/Equipment 	0	0	o	0	0	0	0	0	0	
Power	14,920	4,92	4,92	4,92	4,92	62	95	95	, 95	S
	38,031	38,031	38, 031	38,031	38,031	1,70	31,703	31,703		31,703
	267,602	7, 60	7,60	7, 60	7,60	ିତ	60	. 60	<u>,</u> 60	000
1. Machinery	33,351	0	0	0	0	0	0	O	0	•
2. Facilities	51,300	0	0	о	0	0	0	0	0	0
Sub-total	84,651	0	0	0	٥	٥	0	0	0	0
Total Inflow	405,204	320, 553	320,553	320,553	320,553	308,257	308, 257	308,257	308,257	308,257
II. Outflow										
<pre>(1) Investment Cost / 1</pre>									-	
1. Machinery	33,351	0	0	0	0	0	0	0	Ö	0
2. Facilities	51,300	0	0	o	0	0	0	0	0	0
Sub-total	84,651	0	0	0	0	0	0	0	0	0
(2) Operating Cost										
Pedal or power thresher	2,904	06	01	06	90	, 90	, 90	, 90	, 90	, 90
Power winnower	1,031	1,031	1,031	1,031	1,031	1.031	1,031	1,031	1,031	1,031
Rice mill	3,658	65	Ψ.	65	65	, 65	, 65	, 65	, 65	, 65
2. Facilities / 2									·	
Driyng	381	381	381	381	381	381	381	с С	ന	∞
Warehouse and others	1,310	31	3	ų	, 31	· · ·	5	31	\sim	۱ -۱
3. Personnel Cost	9,708	9,708	5	9,708	\circ	12	52	9,708	9,708	0
	1,304	30	ς Ω	<u>м</u>	, 30	1.1	6	90	\mathbf{c}	80
	267,602	00	ဖ	ശ	, 60	. <i>°</i> .	6,0	60	ø	60
	1,956	1,95	Т	1, 9	1,95	-1	1,95	1,95	ത	1,95
	289,854	289,854	289,854	289,854		ີດ	289,854	289,854	289,854	289,854
(3) Replacement Cost	0			0		33,1	24			-
Repayment	17,635	17,635	17,635	17,635	17,635	່ຜ່	5	5	6,970	5
1	392,140	7,48	8	307,729	ω		,06	,82	296,824	297,064
III.Cash Surplus										
1. Annual Balance (I-II)	13,064	13,064	13,064	12,824	13,064	-21.678	11,193	11,433	11,433	11.193
								1		

Note : /_1 ; Income and expenditure for the procurement of machinery and construction of facilities in the previous year. /_2 ; Cost for fuel, oil, spareparts and repair excluding personnel costs. /_3 ; Cost for bagging of marketable rice.

T561 200		, ,	•		>		3	Χ.	-
(1) Custom Threshing Charges									
	9, 50	6 9,506	9,506	9,506	6,790	6,790	6,790	6,790	6,790
Power Thresher/Equipment				0	0		0	0	
(2) Processing/Marketing Charges 35,175	35,17	35,17	5,17	5,1	0, 12	30,121	0,12	12	0,12
(3) Rice Sales Income . 251,631	251,63	1 251,631	63	Ś	63	3	63	1,63	
(4) Loan /_1									
1. Machinery 19,707			0	0	0	0	0	0	0
co.			0	0	0	0	0	Ģ	0
Sub-total 73,195		0	0	0	0	0	0	c	
Total Inflow 3	296,31	2 296,312	296, 312	296,312	288, 542	288, 542	288,542	288,542	288,542
II. Outflow									
(1) Investment Cost /_1									
			0	•	0	ò	0	Q	0
2. Facilities 53,488		0	0	0	Q	0	0	0	0
Sub-total 73, 195			O	G	0	0	0	0	•
st									
							• .		
wer thresher	m		392	392	392	392	392	392	392
	937 937	7 937	937	937	937	937	937	(M	537
3,	3,3	'n	3,334	3,334	3,334	3, 334	3,334	3,334	3,334
2. Facilities / 2							÷		
	406 40	4	406	406	406	<7°	907	S	406
Warehouse and others 1,361	μ,		\sim	1,361	•	1,361	1,361	1,361	1,361
3. Personnel Cost 11,664	11,	11,	vo	11,664	11,664	S O	11,664	vo	11,664
Transportation Cost	ч,	2 1,322	e	1,322	•	1,322	1,322	m	1,322
Rice Procurement 2	251,	251,	251,631	251,631	251,631	251, 631	251,631	~	251,631
6. Others / 3 1,983	, Li	1	1,983	1, 983	×		1,983	ч, 9	1,983
2	273,	273,03	273, 030	273,030	ం సి	्	273,030	273,030	273,030
(3) Replacement Cost	0		ന	•	ς,	ω,		-	m
(4) Repayment 13, 1	570 13,570	0 13,569	ഹ	13,569	7,267	7,267	7,267	7,2	7,267
Total Outflow 286,	626 286, 62	6 286,625	289, 985	286, 625	296, 670	283, 683	280,323	280, 323	283, 683
III.Casa Surprus 11. Annual Balance (I-II) 82,881	9.6		6, 327	9, 687	-8,128	4,859		8,219	4,855
				0			Ċ	LCV LCL	196 206
Z. CUMULATIVE 521 SOL	0,22	7777	100,001	27	∩, ±4	5 2 2	17/07	02,40	22,62

		1	,		2		•)	•) 1
tof. Ox										
 Custom Threshing Charges 		-								•.
1 Pedal Thresher/Equipment	0	0	0	0		0	0	0	o	0
	18,504	18,504	18,504	18,504	8,50	12,336	12,336	<u> </u>	ŝ	12,336
rocesi	54,116	54,116	4 1	54,116	11	82	5, 82	\sim	20	83
	429,931	429,931	റ	429,931	6	429,931	429,931	429,931	429,931	93
(4) Loan / 1										
1. Machinery	49,183	0	0	0	0	0	o	0	0	0
	75,524	0	0	0	0	0	0	0	0	0
	124,707	0	0	0	0	0	0	0	0	0
Total Inflow	627,258	502,551	502,551	502,551	502,551	488,095	488,095	488,095	488,095	488,095
Outflow										
(1) Investment Cost $/_1$										
1. Machinery	49,183	0	0	0	0	0	0	0	0	0
2. Facilities	75,524	0	0	0	0	0	0	0	0	0
	124,707	0	0	0	0	0	0	0	0	0
(2) Operating Cost										
1. Machinery / 2										
Pedal or power thresher	3,978	3,978	~	~	3,978	01	5	a	~	3,978
Power winnower	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534
Rice mill	5,469	6	, 46	,46	46	4	46	S.	Q V	40
2. Facilities / 2										
Driyng	584	584	584	584	co	584	584	584	584	583
Warehouse and others	1,915	91	16,	~	9	1,915	1,915	1,915	1,915	1,915
3. Personnel Cost	12,598	<u>o</u>	, 59	~	5	12,598	12,598	12,598	12,598	12,598
	2,056	2,056	2,056	2,056	2,056	05	2,056	2,056	2,056	2,056
5. Rice Procurement	429,931	ñ	.93		93	429,931	~	429,931	429 , 931	429,931
6. Others	3,084	80	, 08	3,084	08	3,084	3,084	3,084	3,084	3,084
Sub-total	461,149	461,149	461,149	461,149	461,149	461,149	461,149	461,149	461,149	461,149
(3) Replacement Cost	0	0	Ģ	340	0	48,843	340	o	0	340
(4) Repayment	25,990	25,989	25,989	25,989	25,989	10,261	10,261	10,261	10,261	10,261
	487,139	ίΩ,	5	4,1	487,138	520, 253	471,750	471,410	471,410	471,750
III.Cash Surplus										
 Annual Balance (I-II) 	140,119	11	~	ທີ	, 41	32, 15	ພັ	16,685	16,685	26,
2. Cumulative	140,119	155,532	0,94	186,018	201,431	2	185,618	<u>_</u>	80	5,33

xı - 33

Table XI 4-1 ESTIMATION OF ECONOMIC BENEFIT FOR FILOT PLAN

					nrng	
I. Quantitative Benefit						
(A) Decrease in Field Losses						
 Production of paddy for use 		ц.				
a. Without condition			1,582	1,177	1,020	1,759
b. With condition			1,681	1,224	1,118	1,831
c. Decrease in losses			6 6	47	86	72
2) Milling rate in without condition		ጽ	60	60	60	60
		ţ	5 5 5	28	59	43
		Rp'000/t	328	328	328	328
5) Benefit	4×0	Rp'000/t	19,352	9,184	19,352	14,104
(B) Decrease in Milling Losses		r				
6) Increase in milling rate(60% to 65%)	~	dю	D	ŝ	ហ	ŝ
L L M		ų	1,673	1,218	1,111	1,820
8) Decrease in milling losses	6 * 7	փ	84	61	56	ሳ
		Rp'000/t	328	328	328	328
Benefit	o, ⊀ 0	Rp.000	27,552	20,008	18,368	29,848
(C) Quantitative Benefit	A+B	Rp ' 000	46,904	29,192	37,720	43, 952
II. Qualitative Benefit				,		
(A) Class B Rice Production						
1) Production in with		ų	1,034	754	690	1,127
2) Price of rice						
a. Class C rice		Rp.000/t	328	328	328	328
b. Class B rice		Rp'000/t	350	350	350	350
c. Price difference		Rp'000/t	22	22	22	22
3) Benefit	1*2c	Rp ' 000	22,748	16,588	15,180	24,794
(B) Class A Rice Production		I				
4) Production in with		ч	40	27	24	42
5) Price of rice						
		Rp'000/t	328	328	328	328
b. Class A rice		Rp'000/t	393	393	868	26 8
c. Price difference		Rp'000/t	. 65	65	. 65	63
6) Benefit	4*50	Rp 000	2,600	1,755	1,560	2, 730
CON Contraction Boson Based	0 F		25.248	575 81	16 740	27 524
(U) QUALITATIVE BENEIIC	440	KD . COO.	010101	7 5 7 7 1	~~ ~ ~ ~	シンシーク

		Tela	agasari	Ba	igor
Cost Items	Unit Cost	Q'ty	Amount	Q'ty	Amount
	(Rp'000)	(No)	(Rp'000)	(No)	(Rp'000)
1. Machinery and Equipment					
- Serrated Sickle	2.25	183	412	151	34
- Drying Mat (larger than 5m x 5m)	18	80	1,440	60	1,08
- Threshing Mat (larger than 5m x 5m)	18	41	738	12	21
- Pedal Thresher (300 kg/hr)	90	41	3,690	~	
- Power Thresher (750 kg/hr)	1,257	-		12	15,08
- Power Winnower (750 kg/hr)	1,032	2	2,064	1	1,03
- Rice Mill Unit (500 kg/hr)	6,840	3	20,520	2	13,68
sub-total			28,864		31,43
2. Construction/1		(m2)		(m2)	
- Drying Floor	4.57	2,100	9,597	1,500	6,85
- Warehouse	50.4	850	42,840	620	31,24
- Milling House	50.4	220	11,088	160	8,06
Sub-Total			63,525		46,16
3. Total (1+2)			92,389		77,59
		Mattir	o Bulu	Tri	murjo
Cost Items	Unit Cost	Q'ty	Amount	Q'ty	Amount
	(Rp'000)	(No)	(Rp'000)	(No)	(Rp'000)
<u>مەر مەربى بەللىمەر بەلىكى مەربىلىكى مەربىكى بەر مەربىكى بەر بەر بەلىكى بەر بەر بەلىكى بەر بەر بەلىكى بەر بەر بە</u>					
1 Machinery and Equipment					
		162	365	241	54
- Serrated Sickle	2.25	162	365	241	
- Serrated Sickle - Drying Mat (larger than 5m x 5m)	2.25	60	1,080	80	1,44
- Serrated Sickle - Drying Mat (larger than 5m x 5m) - Threshing Mat (larger than 5m x 5m)	2.25 18 18	60 28	1,080 504	80 17	
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) 	2.25 18 18 90	60 28 28	1,080	80 17	1,44 30
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) 	2.25 18 18 90 1,257	60 28 28	1,080 504 2,520	80 17 17	1,4, 30 21,3
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) 	2.25 18 18 90 1,257 1,032	60 28 28 1	1,080 504 2,520 - 1,032	80 17 - 17 2	1,4 30 21,3 2,0
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) 	2.25 18 18 90 1,257	60 28 28 1	1,080 504 2,520 	80 17 17	1,4 3 21,3 2,0 20,5
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) 	2.25 18 18 90 1,257 1,032	60 28 28 1	1,080 504 2,520 - 1,032	80 17 - 17 2	1,4 30 21,3 2,0 20,5
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub~total 	2.25 18 90 1,257 1,032 6,840	60 28 28 1 2 (m2)	1,080 504 2,520 1,032 13,680 19,181	80 17 - 17 2 3 (m2)	1,4 3 21,3 2,0 20,5 46,2
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total 	2.25 18 90 1,257 1,032 6,840 4.57	60 28 28 1 2 (m2) 1,600	1,080 504 2,520 1,032 13,680 19,181 7,312	80 17 - 17 2 3 (m2) 2,300	1,4 30 21,3 2,0 20,5 46,2 10,5
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total 2. Construction/1 	2.25 18 90 1,257 1,032 6,840 4.57 50.4	60 28 28 1 2 (m2) 1,600 650	1,080 504 2,520 1,032 13,680 19,181 7,312 32,760	80 17 - 17 2 3 (m2) 2,300 920	1,4 30 21,3 2,0 20,5 46,2 10,5 46,3
 Serrated Sickle Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total 2. Construction/1 Drying Floor 	2.25 18 90 1,257 1,032 6,840 4.57	60 28 28 1 2 (m2) 1,600 650	1,080 504 2,520 1,032 13,680 19,181 7,312 32,760 8,064	80 17 - 17 2 3 (m2) 2,300	1,4 30 21,3 2,0 20,5 46,2 10,5 46,3 11,0
 Drying Mat (larger than 5m x 5m) Threshing Mat (larger than 5m x 5m) Pedal Thresher (300 kg/hr) Power Thresher (750 kg/hr) Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) sub-total 2. Construction/1 Drying Floor Warehouse 	2.25 18 90 1,257 1,032 6,840 4.57 50.4	60 28 28 1 2 (m2) 1,600 650	1,080 504 2,520 1,032 13,680 19,181 7,312 32,760	80 17 - 17 2 3 (m2) 2,300 920	1,44 30 21,33 2,01 20,55 46,24

Table XI 4-2 ECONOMIC PROJECT COST FOR TECHNOLOGY PACKAGES

Note; /1: Indicating by m2.

Item Telagasari (West Java)	Unit Ouantity							
Telagasari (West Java)		Der Hour	Unit Price	Quantity	Cost Der Hour	Unit Price	Quantity 1	Cost Der Hour
 Operation and Maintenance Cost Prior (New 114) 	1 ರ ಸ ಸ ಸ		070		0 7	001	c	5
2. Oil and others (30% of fuel)			105	4 +4	349 105	162	0 L	142
3. Others	58 /			5% / 1	9		5% / 1	57
4. Repair cost	20% /_1			20% /_1	35		30% /	342
5. Parking, tax, etc.	108 / 1			~	18			114
Cost per hour		70			516			1,215
Annual operating hour Annual cost		12,600	والمراجع المراجع		1,240 639,840			1.506.600
n per hour	/_2 Rp 108,000/540 hours=	200	Rp 1,050,300/6,000hours=	00hours=	175	Rp 6,840,000/6,000hours=		1,140
<pre>II.Personnel Cost</pre>	242	3 726 180	242	N	484 1.740	325	N	650
Annual cost		130,680			600,160			806,000
Bagor (East Java)								
I. Operation and Maintenance Cost 1 Fuel (Rovitt)	349 1.5		349	-	349	180	m	540
2. Oil and others (30% of fuel)	4	157	105		105	162		162
3. Others	~ `				יט רכ יי			10
4. Sepair cosc 5. Parking, tax, etc.	108 / 1				נוס ה ד- ל		10%	
Cost per hour		1,177		l:	219 219 1			1,215
Annual cost		217, 653			931,380			1,646,325
Depreciation per hour Rp	Rp 1,275,300/900 hours≕	1,417	Rp 1,050,300/6,000hours=	-sinouts-	175	Rp 6,840,000/6,000hours=	=sznoq000	1,140
II.Personnel Cost			9 * 0	ç		u C C	ç	
1. Wages for operators (Kp/11041) Annual operating hour			242	י א	1,805	0.7C		1,355
Annual cost		89,540			873, 620			880,750

Table XI 4-3 ECONOMIC O & M COST FOR MACHINERY (1/2)

Item	Pedal/Power Thresher		Power Winn	Power Winnower(0.75t/hour	our)	Rice M	Rice Mill (0.5t/hour)	:)
	Unit Quantity. Price	Cost per Hour	Unit Price	Quantity	Cost Der Hour	Unit Price	Quantity	Cost Der Hour
Mattiro Bulu (South Sulawesi)								
Operation and Maintenance Cost								· .
1. Fuel (Rp/11t) 2 Oil and others (30% of finel)	347 0	о с	758 707	r4 r	347	180	Μ,	540
2. Others (JOT OF LUCE)	58	201	507	58 / 1	50 7	707	58 / 1 58 / 1	197
4. Repair cost	20% / 1	06		20% / 1	ΥΥ Έ			342
5. Parking, tax, etc.	20% / 1	20		~	18		10% /[]	114
Cost per hour annual cocreting hour		70			() () () () () () () () () () () () () (1,215
Annual cost		12,600			846, 450			1,500,525
Depreciation per hour Rp 1	/_2 Rp 108,000/540 heurs=	200	Rp 1,050,300/6,000hours≈	000hours=	175	Rp 6,840,000/6,000hours=	5,000hours=	1,140
<pre>II.Personnel Cost</pre>	242 3	726 180	242	N	484 1,650	325	3	650 1,235
Annual cost		130,680			798,600			802,750
Trimurjo (Lampung)								
Operation and Maintenance Cost 1. Fuel (Rp/11t) 2 Off and othors (30% of fuel)	347 1.5 256 1.5	521 156	347 206	~I -	347 100	0 8 FL 0 8 FL	ሮነ ୮	540
2. Others 3. Others	- *	101	Р С С Ч	_	, 0 ,	4	5% / 1	5.7
4. Repair cost	20% / 1	283		20% / 1	с С		20% / 1	342
5. Parking, tax, etc.	10% /	142		-	18			124
Cost per hour Annual oberating hour		1,173			573			1,215
•		211,050			692,550		p=4	L, 640, 250
Depreciation per hour Rp 1	Rp 1,275,300/900 hours=	1,417	Rp 1,050,300/6,000hours=	000hours=	175	Rp 6,840,000/6,000hours≈	,000hours≈	1,140
t operators	242 2	484	242	N	484	325	2	650
Annual operating hour		1 RO			1,350			1,350

Note : / 1 ; Percentage of depreciation cost per hour. / 2 ; Including threshing mat of Rp 18,000(5mx5m)

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			· · · ·	
Items	Telagasari	Bagor	Mattiro Bulu	Trimurjo
I. Drying Floor			• •	
I-1 Maintenance Cost				
-Total construction cost (Rp'000)	9,597	6,855	7,312	10,511
-Necessary % for annual maintenance	5%	5%	5*	58
-Annual maintenance cost (Rp'000)	480	343	366	526
-Annual quantity of paddy (GKG) dried (t)	1,516	1,005	1,018	1,581
-Annual maintenance cost (Rp/kg)	0.32	0.34	0.36	
I-2 Personnel Cost				
-Annual quantity of paddy (GKG) dried (t)	1,516	1,005	1,018	1,581
-Required days for operation of drying floor(t)	60	60	60	60
-Labor cost (Rp/man-day)	1,450	1,450	1,450	1,450
-Daily labor requirement (man-day/500m)	5	5	5	5
-Area of drying floor (m2)	2,100	1,500	1,600	2,300
-Daily labor requirement (man-day)	21	15	16	23
-Annual personnel cost (Rp'000)	1,827	1,305	1,392	2,001
-Annual personnel cost (Rp/kg)	1.21	1.30		1.27
I-3 Total O&M cost of drying floor per kg (Rp/kg)				
-Per kg in paddy (I-1+I-2)	1.52	1.64	1.73	1.60
-Per kg in rice (c.f.=0.65 of paddy)	2.34	3.02	3.16	2.96
II. Warehouse and Milling House	· .			·
II-1 Maintenance Cost			· .	
-Total construction cost	53,928	39,312	40,824	57,456
~Necessary % for annual maintenance	3%	3%	3%	38
-Annual maintenance cost (Rp'000)	1,618	1,179	1,225	1,724
-Annual quantity of paddy (GKG) stored (t)	1,516	1,005	1,018	1,581
-Annual maintenance cost (Rp/kg)	1.07	1.17	1.20	
II-2 Personnel cost			: · · ·	
-Annual quantity of paddy (GKG) stored (t)	1,516	1,005	1,018	1,581
-Daily handling quantity for milling /_1	8.1	5.4	5.4	8.1
-Required days for operation of warehouse	187	186	189	195
-Labor cost (Rp/man-day)	1,450	1,450	1,450	1,450
-Daily labor requirement (man-day/day)	5	3	3	5
-Annual personnel cost (Rp'000)	1,356	809		-
-Annual personnel cost (Rp/kg)	0.89	0.80	0.81	0.89
11-3 Total O&M cost of warehouse per kg (Rp/kg)				
-Per kg in paddy(II-1+II-2)	1.96	1.98	2.01	1.98
-Per kg in rice (c.f.=0.65 of paddy)	3.02	3.04	3.09	3.05

Table XI 4-4 ECONOMIC O & M COST FOR FACILITIES

Note;/1:Number of rice mills installed x 0.5ton/hr x 0.9 x 6hours

<u>.</u>	Telag	asari		Bagoi	<u> </u>	
Cost Items	Unit	Q'ty	Amount	Unit	Q'ty	Amount
a an	Cost	(No)	(Rp'000)	Cost	(No)	(Rp'000)
. Operation and Maintenance Cost	/_1					
1. Machinery	(Rp'000)			(Rp'000)		
- Power Winnower (750 kg/hr)	640	2	1,280	932	1	932
- Rice Mill Unit (500 kg/hr)	1,507	3	4,521	1,646	2	3,292
2. Facilities /_2	(Rp/ton;rice)			(Rp/ton;rice)		
- Drying	487	986	480	526	652	34.
 Warehouse and others 	1,641	986	1,618	1,808	652	1,17
- Bagging	2,700	986	2,662	2,700	652	1,76
Sub total			10,561			7,50
 Personnel Cost 						
1. Machinery	(Rp'000)			(Rp'000)		
- Power Wihnower (750 kg/hr)	600	2	1,200	874	1	87
- Rice Mill Unit (500 kg/hr)	806	3	2,418	881	2	1,76
2. Facilities / 2	(Rp/ton;rice)			(Rp/ton;rice)		
- Drying	1,853	986	1,827	2,002	652	1,30
- Warehouse and others	1,375	986	1,356	1,241	652	80
Sub total			6,801			4,75
	(Rp/ton;rice)			(Ro/ton;rice)		
III. Transpotation Cost /_2	1,800	986	1,775	1,800	652	1,17
Total (I+II+III)			19,137			13,43
		Da Bala		Trim	urjo	
	Mattir	o buro		1 1 4 11		
Cost Items	Unit	Q'ty	Amount	Unit	Q'ty	Amount
	Unit Cost		Amount (Rp'000)	the second s		Amount (Rp'000)
	Unit Cost	Q'ty		Unit	Q'ty	
 Operation and Maintenance Cost Machinery 	Unit Cost /_1 (Rp'000)	Q'ty (No)	(Rp'000)	Unit Cost (Rp'000)	Q'ty (No)	(Rp'000)
I. Operation and Maintenance Cost 1. Machinery - Power Winnower (750 kg/hr)	Unit Cost /_1 (Rp'000) 846	Q'ty (No)	(Rp'000) 846,	Unit Cost (Rp'000) 693	Q'ty (No) 2	(Rp'000) 1,38
 Operation and Maintenance Cost Machinery 	Unit Cost /_1 (Rp'000)	Q'ty (No)	(Rp'000) 846,	Unit Cost (Rp'000)	Q'ty (No)	(Rp'000)
I. Operation and Maintenance Cost 1. Machinery - Power Winnower (750 kg/hr) - Rice Mill Unit (500 kg/hr)	Unit Cost /_1 (Rp'000) 846	Q'ty (No) 1 2	(Rp'000) 846 3,002	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice)	Q'ty (No) 2 3	(Rp'000) 1,38 4,92
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities /_2 	Unit Cost /_1 (Rp'000) 846 1,501	Q'ty (No) 1 2	(Rp'000) 846 3,002 366	Unit Cost (Rp'000) 693 1,640 (Rb/ton;rice) 512	Q'ty (No) 2 3 1,028	(Rp'000) 1,38 4,92 52
I. Operation and Maintenance Cost 1. Machinery - Power Winnower (750 kg/hr) - Rice Mill Unit (500 kg/hr)	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice)	Q'ty (No) 1 2	(Rp'000) 846 3,002 366 1,225	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677	Q'ty (No) 2 3 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities /_2 Drying Warehouse and others 	Unit Cost /_1 	Q'ty (No) 1 2 661	(Rp'000) 846 3,002 366 1,225	Unit Cost (Rp'000) 693 1,640 (Rb/ton;rice) 512	Q'ty (No) 2 3 1,028	(Rp'000) 1,38 4,92 52 1,72 2,7
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Pacilities / 2 Drying 	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853	Q'ty (No) 1 2 661 661	(Rp'000) 846 3,002 366 1,225	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677	Q'ty (No) 2 3 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72 2,7
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging Sub total 	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853	Q'ty (No) 1 2 661 661	(Rp'000) 846 3,002 366 1,225 1,785	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677	Q'ty (No) 2 3 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72 2,7
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000)	Q'ty (No) 661 661 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000)	Q'ty (No) 2 3 1,028 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72 2,7 ⁻ 11,35
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700	Q'ty (No) 1 2 661 661 661 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799	Unit Cost (Rp'000) 693 1,640 (Rb/ton;rice) 512 1,677 2,700 (Rp'000) 653	Q'ty (No) 2 3 1,028 1,028 1,028 1,028	(Rp'000) 1,36 4,92 52 1,72 2,77 11,33 1,30
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000)	Q'ty (No) 661 661 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000)	Q'ty (No) 2 3 1,028 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72 2,77 11,33
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000) 799	Q'ty (No) 661 661 661 12	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799 1,606	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice)	Q'ty (No) 2 3 1,028 1,028 1,028 1,026	(Rp'000) 1,38 4,92 52 1,72 2,7 11,35 1,33 2,65
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000) 799 803	Q'ty (No) 661 661 661 1 2	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799 1,606	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice) 1,946	Q'ty (No) 2 3 1,028 1,028 1,028 1,028 2 3 1,028	(Rp'000) 1,36 4,92 52 1,72 2,75 11,33 1,30 2,65
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000) 799 803 (Rp/ton;rice)	Q'ty (No) 661 661 661 1 2 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799 1,606 1,392	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice)	Q'ty (No) 2 3 1,028 1,028 1,028 1,028 2 3 1,028	(Rp'000) 1,36 4,92 52 1,72 2,7 11,33 1,30 2,00 1,4
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000) 799 803 (Rp/ton;rice) 2,106	Q'ty (No) 661 661 661 1 2 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799 1,606 1,392	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice) 1,946	Q'ty (No) 2 3 1,028 1,028 1,028 1,028 2 3 1,028	(Rp'000) 1,36 4,92 52 1,72 2,7 11,32 1,33 2,6 2,0 1,4
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 	Q'ty (No) 661 661 661 1 2 661 661	(Rp'000) 846 3,002 366 1,225 1,785 7,224 799 1,606 1,392 822	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice) 1,946	Q'ty (No) 2 3 1,028 1,028 1,028 1,028 1,028 1,028	(Rp'000 1,38 4,92 5; 1,7; 2,7 11,3; 1,3 2,6 2,0 1,4 7,3
 Operation and Maintenance Cost Machinery Power Winnower (750 kg/hr) Rice Mill Unit (500 kg/hr) Facilities / 2 Drying Warehouse and others Bagging	Unit Cost /_1 (Rp'000) 846 1,501 (Rp/ton;rice) 554 1,853 2,700 (Rp'000) 799 803 (Rp/ton;rice) 2,106	Q'ty (No) 1 2 661 661 661 1 2 661 661	(Rp '000) 846 3,002 366 1,225 1,785 7,224 799 1,606 1,392 822 4,619	Unit Cost (Rp'000) 693 1,640 (Rp/ton;rice) 512 1,677 2,700 (Rp'000) 653 878 (Rp/ton;rice) 1,946 1,375	Q'ty (No) 2 3 1,028 1,028 1,028 1,028 1,028 1,028	(Rp'000) 1,38 4,92 52 1,72 2,7 ⁻ 11,33 1,33 2,63 2,00 1,4 7,3

Table XI 4-5 ECONOMIC O & M COST FOR PILOT PLAN

Nota;/_1:Cost for fuel, oil, spairparts, repairment, excluding personnel cost. /_2:Unit of quantity is indicated by ton of marketable rice.

Table XI 4-6 POST HARVEST COST AT FILED IN NITH AND WITHOUT CONDITION

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			Wet Sea				ببويبدس		Dry Sea				Incremental
		hout		th	Increment		WIE			th Cont	Increment.	Total	Production Cost
Item	Tot al	Cost	Total	Cost	fer ha	Total	Total	Cost (Rp/ha)	Total	Cost {Rp/hA}	Per ha	IQUAL	0030
	(md/ha)	(Rp/ha)	(md/ha)	(Sp/ha)	(8p/ha) (8p1000)	(md/ha)		(md/ha)		(Rp/ha) (Rp1000)	(Rp*000)
ELAGASARI													
Harvested Area (ha)	(119)		(119)				(119)		(119)				
	•							-			· · ·	· ·	
Labor Cost/1 - Reaping	15	21,750	16	23,200	1,450	173	12	17,400	13	18,850	1,450	173	346
- Threshing	12	17.400	8	11,600	-5,800	-690	10	14,500	B	11,600	-2,900	-345	-1.035
- Winnowing	5	7,250	2	2,900	-4,350	-518	5	7,250	2	2,900	~4,350 D	-518	-1,036
- Bagging	2	2,900	2	2,900	0 6 800	0 690	2	2,900	2	2,900 5,800	5,800	690	1,380
- Drying ~ Transportation	0 4	0 5.800	4	5,800 7,250	5,800 1,450	173	· 3	4,350	4	5,600	1,450	173	341
sub-total		55.100	37	53,650	-1,450	-172	32	46,400	33	47,850	1,450	173	1
Haintenence Cost for	Nachine	ry & Equi	ipment								·		·
- Pedal thresher/2	-	0	-	2.171	2,171	258	-	0 0	•	2,171	2,171	258	510
- Servated sickles/3	- 1	o C	_	900 2,732	900 2,732	107 325	-	0	-	2,668	2,658	317	64
 Drying mat/4 sub-total 	-	0	-	5,803	5,803	690	-	0	-	5,570	5,570	662	1,35
. Total (2+3)		55,100		59,453	4,353	518		46,400		53, 420	7,020	835	1,353
AGOR	•••••				•••••	•••••			• • • • • • •		••••••	•••••	•••••••
Harvested Area (ha)	(98)		(98)				(87)		(\$7)				
	(30)		(50)						•				
Labor Charge - Reaping	13	18,850	14	20,300	1,450	142	11	15,950	12	17, 400	1,450	126	- 26
- Threshing	12	17,400	4	5,600	-11,600	-1,137	10	14,500	4	5.800	-9,700	-757	-1,89
- Winnowing	5	7,250	2	2,900	-4,350	-426	- 4	5,800	2	2,900	-2,900	-252	-67
~ gaŭĝjuŭ	2	2,900	2	2.900	Q 5 900	0 5 < 0	2	2,900 0	2	2,900 5,800	0 5,800	505	1,07
- Drying	0	0 4,350	4	5,800	5,8D0 1,450	568 142	3	4,350	-	5,800	1,450	126	26
 Transportation sub-total 	3 35	50,750	· 30	43.500	-7,250	-711	30	43,500	28	40,600	-2,900	-252	-96
Maintenence Cost for	Machine	ry & Equi	iprent										
- Power thresher	-	•	-	14,118 788	14,118 788	1,354	-	0 0	-	14,118 675	14,118 675	1.228	2,61 13
~ Serrated sickles		0	-	2,732	2,732	268	_	ñ	-	2.507	2,507	21.8	48
 Drying mat sub-total 	-	ŏ	-	17,638	17,638	1,729	-	0	-	17,300	17,300	1,505	3,23
. Total (2+3)		50,750		61,138	10,388	1,018		43,500		57,900	14,400	1,253	2,27
ATTIRO BULU	•••••	• • • • • • • • • •						• • • • • • • •	• • • • • • •		••••		• • • • • • • • • • • • • • • •
.Harvested Area (ha)	(105)		(105)				(84)		(84)			÷ .	
.Labor Charge											÷		· .
- Reaping	14	20,300	15	21,750	1,450	152	12	17,400	13	18,850	1,450	122	27
- Threshing	12	17,400	8	11.600	-5,800	~609	10	14,500	7	10,150	-4,350	- 365	-97
- Winnewing	5	7,250	2	2,900	-4,350	-457	5	7,250	2	2,900	-4,350	-3,65 0	-82
- Bagging	2	2,900	2	2,900 5,800	0 5.800	0 609	2	2,900	2	2,900	5,800	487	1,09
- Drying - Transportation	2	2,900	4	5,800	2,900	305	1	1,450	3	4,350	2,900	244	54
sub-total	35	50,750	35	50,750	0	0	30	43,500	31	44,950	1,450	123	12
.Maintenence Cost for	Machine		ppent										
- Pedal thresher	-	0	-	1,867	1,867	196	-	0 0	-	1,867 731	1,867 731	157 61	35 15
 Secrated sickles Drying mat 	-	0	-	844 2,413	844 2,411	89 253	-	0	-	2,186	2,186	183	43
sub-Lotal	-	o	-	5,122	5,122	538	-	0	-	4,784	4,784	401	93
. Total (2+3)		50,750		55,872	5,122	538		43,500		49, 734	6,234	524	1,06
rihurjo	••••		• • • • • • • •					• • • • • • •	• • • • • •				· · · · · · · · · · · · · · · · · · ·
.Harvested Area (ha)	(157)		(157)				(157)		(157)			n et er Le tra	
Labor Charge												·	i -
- Reaping	14	20,300	15	21,750	1,450	228	11	15,950	12	17,400	1,450	226	-2,73
- Threshing	11	15,950	4	5,800 2,900	-10,150 -4,350	-1,594 -683	9 5	13,050 7,250	4	5,800 2,900	-7,250 -4,350	-1,138 -683	-2,73
- Winnowing - Bagging	5	2,900	2	2,900	~4,350	603 0	2	2,900	2	2,900	-1,350	-003	
- Drying	õ	0	4	5,800	5,800	911	0	0	4	5,800	5,800	911	1,82
 Transportation 	э	4,350	4	5,800	1,450	227	3	4,350	4	5,800	1,450	22.8	45
	35	50,750	31	44,950	-5,800	-911	30	43,500	. 28	40,600	-2,900	-454	~1,36
aub-total	Hachine		lpment		11,426	1,794		0	-	11,426	11,426	1,794	3,56
Haintenence Cost for		A	-										
-Maintenence Cost for - Power thresher	-	0		11,426			-	ō	-	675	675	106	23
Maintenence Cost for		0 0 0		844 2,218	844 2,218	133 348	-	. 0		1,993	675 1,993	106 312	66
-Maintenence Cost for - Power thresher - Serrated sickles		¢		844	844	133	-	o			675	106	239 660 4,487

Note:/l:Economic unit labor cost is Rp1,450/man-day. /2:(Annual O&H cost excluding personnel expenses) x (total number of thresher)/(annual harvested area). *See Table XI 4-3 /3:[Economic price of serrated sickle of Rp 2,250]/[\$ season x 10% x (labor requirements for reaping) /4:[Economic unit price of drying mat of Rp 18,000]/4 season x 5% x (unit yield)/(0.7 ton/mat).

TELAGASARI PILOT PLAN (WEST JAVA)

Year	-			Flow						Benefit F	Unit : R	Benefi
ln Order	Street, & Management of Street, or other	oject Cosi Building	Total	Machine Cost	0 & M Cost	ment	Change of Cost for Harvesting	Total	Quanti- tative Benefit	Quali- tative	Total	minu Cos
		/_1			/_2		/ 3					
1	9,597	53,928	63,525	28,864	0	0	0	92,389	. 0	. 0	0	-92,38
2	0	0	Q.	0	19,137	0	1,353	20,490	9,381	5,070	14,451	-6,03
3	0	0	0	0	19,137	1,852	1,353	22,342	18,762	10,139	28,901	6,55
4	0	0	0	0	19,137	0	1,353	20,490	28,142	15,209	43,351	22,86
5	0	0	0	0	19,137	6,280	1,353	26,770	37, 523	20,278	57,801	31,03
6	0	0	0	0	19,137	0	1,353	20,490	46,904	25,348	72,252	51,76
7	0	0	0		19,137	24,436	1,353	44,926	46,904	25,348	72,252	27,3
8	0	0	0		19,137	4,428	1,353	24,918	46,904	25,348	72,252	47,3
9	0	0	0		19,137	1,852	1,353	22,342	46,904	25,348	72,252	49.9
10	0	0	0		19,137	0	1,353	20,490	46,904	25,348	72,252	51,7
11	0	0	0		19,137	6,280	1,353	26,770	46,904	25, 348	72,252	45,4
12	0	,0	0	0	19,137	22,584	1,353	43,074	46,904	25,348	72,252	29,1
13	0	0	0		19,137	1,852	1,353	22,342	46,904	25,348	72,252	49,9
14	0	. 0	0		19,137	4,428	1,353	24,918	46,904	25,348	72,252	47,3
15	0	0	. 0	0	19,137	1,852	1,353	22,342	46,904	25,348	72,252	49,9
16	0	0	0	0	19,137	0	1,353	20,490	46,904	25,348	72,252	51,7
17	0	0	Ó	0	19,137	28,864	1,353	49,354	46,904	25,348	72,252	22.8
.18	0	0	0	0	19,137	0	1,353	20,490	46,904	25,348	72,252	51.7
19	0	0	0	0	19,137	1,852	1,353	22,342	46,904	25,348	72,252	49,9
20	0	Ó	. 0	0	19,137	4,428	1,353	24,918	46,904	25,348	72,252	47.3

Note :/_1 ; Construction cost for warehouse, milling house, garage and community house. /_2 ; 0 & M cost for processing and marketing by winnower, rice mill, and building. /_3 ; Incremental production cost for post harvest activities at field level.

BAGOR PILOT PLAN (EAST JAVA)

IRR :	18%										1	(Unit : R	000' q
Year		2	:	Cost	Flow						Benefit F.	low	Benefit
fn	PI	oject Co	st		Machine	OEM	Replace-	Change of	Total	Quanti-	Quali-	Total	minus
Order	Drying	Building	J	Total	Cost	Cost	ment	Cost for		tative	tative		Cost
	Floor						Cost	Harvesting		Benefit	Benefit		
			-			1_2		/_3					
1	6,855	39,312	2	46,167	31,432	0	0	0	77,599	0	0	Ð	-77,599
- 2	0	() (0	0	13,430	0	2,271	15,701	5,838	3,669	9,507	-6,194
3	0	· ()	. 0		13,430	1,420	2,271	17,121	11,677	7,337	19,014	1,893
. 4	0	()	. 0	0	13,430	0	2,271	15,701	17,515	11,006	28,521	12,820
5	0		2	0		13,430	1,636	2,271	17,337	23,354	14,674	38,028	20,591
6	0	()	0	0	13,430	0	2,271	15,701	29,192	18,343	47,535	31,834
7.	0	()	0	0	13,430	31,216	2,271	46,917	29,192	18,343	47,535	618
8	0.	()	0	0	13,430	216	2,271	15,917	29,192	18,343	47,535	31,618
9	0	(2	. 0	0	13,430	1,420	2,271	17,121	29,192	18,343	47,535	3D,414
10	0	(1	. 0	0	13,430	0	2,271	15,701	29,192	18,343	47,535	31,834
11	0	(2	D	0	13,430	1,636	2,271	17,337	29,192	18,343	47,535	30,198
12	0	(2	0	0	13,430	29,796	2,271	45,497	29,192	18,343	47,535	2,038
13	0)	0	0	13,430	1,420	2,271	17,121	29,192	18,343	47,535	30,414
14	0	· ()	. 0	0	13,430	216	2,271	15,917	29,192	18,343	47,535	31,618
15	· 0	()	0	0	13,430	1,420	2,271	17,121	29,192	18,343	47,535	30,414
16	0	·) [`]	0	. 0	13,430	0	2,271	15,701	29,192	18,343	47,535	31,834
17	0	· (2	0	0	13,430	31,432	2,271	47,133	29,192	18,343	47,535	402
18	0	`. (Э	0	0	13,430	0	2,271	15,701	29,192	18,343	47,535	31,834
19	0)	0	. 0	13,430	1,420	2,271	17,121	29,192	18,343	47,535	30,414
20	0	. ¹ . ()	0	0	13,430	216	2,271	15,917	29,192	18,343	47,535	31,618

Note :/ 1 ; Construction cost for warehouse, milling house, garage and community house. / 2 ; 0 6 M cost for processing and marketing by winnower, rice mill, and building. / 3 ; Incremental production cost for post harvest activities at field level.

MATTIRO BULU PILOT PLAN (SOUTH SULAWESI)

Benefit	low	Benefit F						Flow	Cost		248	IRR : Year
minus	Total	Quali-	Quant1-	Total	Change of	Replace-	ΟδΜ	Machine		oject Cost	Pr	in
Cost	Ne l'accel	tative	tative	· · · · ·	Cost for	ment	Cost	Cost		Building		
		Benefit	Benefit		Harvesting	Cost				-	Floor	
					/_3		/ 2			/ 1		
-67,31	0	0	. 0	67,317	0	0	. 0	19,181	48,136	40,824	7,312	1
~8,86	5,228	1,607	3,621	14,095	1,062	0	13,033	0	0.	0 -	0	2
-5,084	10,456	3,214	7,242	15,540	1,062	1,445	13,033	0	0	0	0	3
12,04	26,141	8,035	18,106	14,095	1,062	0	13,033	0	0	0	0	4
25,00	43,568	13,392	30,176	18,564	1,062	4,469	13,033	0	0	0	0	5
40,36	54,460	16,740	37,720	14,095	1,062	; 0	13,033	. 0	0	0	0	6
24,20	54,460	16,740	37,720	30,252	1,062	16,157	13,033	. 0	0	0	0	7
37,343	54,460	16,740	37,720	17,119	1,062	3,024	13,033	0	0	0	0	8
38,920	54,460	16,740	37,720	15,540	1,062	1,445	13,033	0	0	0	0	9
40,36	54,460	16,740	37,720	14,095	1,062	Ō	13,033	0	0	0	0	10
35,89	54,460	16,740	37,720	18,564	1,062	4,469	13,033	0	0	0	0	11
25,65	54,460	16,740	37,720	28,807	1,062	14,712	13,033	0	0	0	0	12
38,920	54,460	16,740	37,720	15,540	1,062	1,445	13,033	0	0	0	0	13
37,34	54,460	16,740	37,720	17,119	1,062	3,024	13,033	Ó	0	0	0	14
38,920	54,460	16,740	37,720	15,540	1,062	1,445	13,033	0	0	0	0	15
40,36	54,460	16,740	37,720	14,095	1,062	0	13,033	0	0	0	0	16
21,18	54,460	16,740	37,720	33,276	1,062	19,181	13,033	0	0	0	0	17
40,36	54,460	16,740	37,720	14,095	1,062	0	13,033	0	0	0	0	18
38,921	54,460	16,740	37,720	15,540	1,062	1,445	13,033	0	0	0	0	19
37,34	54,460	16,740	37,720	17,119	1,062	3,024	13,033	0	0	0	0	20

Note :/_1 ; Construction cost for warehouse, milling house, garage and community house. /_2 ; O & M cost for processing and marketing by winnower, rice mill, and building. /_3 ; Incremental production cost for post harvest activities at field level.

TRIMURJO PILOT PLAN (LAMPUNG)

Benefit	Low	Benefit Fl						Flow	Cost			Year
minus	Total	Quali-	Quanti-	Total	Change of	Replace-	ΟΕΜ	Machine	t i	oject Cost	Pz	in
Cost		tative	tative		Cost for	ment	Cost	Cost	Total	Building	Drying	Order
		Benefit	Benefit		Harvesting	Cost					Floor	
					/_3	-	/_2			/_1	-	
-114,208	. 0	0	0.	114,208	0	. 0	. 0	46,241	67,967	57,456	10,511	1
9,364	14,295	5,505	8,790	23,659	3,122	0	20,537	0	0	0	0	2
2,950	28,591	11,010	17,581	25,641	3,122	1,982	20,537	0	0	0	0	3
19,226	42,885	16.514	26,371	23,659	3,122	0	20,537	0	0	0	0	4
31,234	57,181	22,019	35.162	25,947	3,122	2,288	20,537	0	0	0	0	5
47,817	71,476	27,524	43,952	23,659	3, 122	0	20,537	0	0	0	0	6
1,882	71,476	27,524	43,952	69,594	3,122	45,935	20,537	0	· 0	0	0	7
47,511	71,476	27,524	43,952	23,965	3,122	306	20,537	0	0	0	0	8
45,835	71,476	27,524	43,952	25,641	3,122	1,982	20,537	0	0	0	0	9
47,017	71,476	27,524	43,952	23,659	3,122	•• 0	20,537	0	0	0	0	10
45,529	71,476	27,524	43,952	25,947	3,122	2,288	20,537	0	0	0	0	11
3,860	71,476	27,524	43,952	67,612	3,122	43,953	20,537	0	0	0	0	12
45,835	71,476	27,524	43,952	25,641	3,122	1,982	20,537	0	0	0	0	13
47,511	71,476	27,524	43,952	23,965	3, 122	306	20,537	٥	0	0	0	14
45,835	71,476	27,524	43,952	25,641	3,122	1,982	20,537	0	0	0	0	15
47,817	71,476	27,524	43,952	23,659	3,122	• 0	20,537	0	0	0	0	16
1,576	71,476	27,524	43,952	69,900	3,122	46,241	20,537	0	0	0	0	17
47,817	71,476	27,524	43,952	23,659	3,122	. 0	20,537	0	0	0	0	18
45,835	71,476	27,524	43,952	25,641	3,122	1,982	20,537	0	0	0	0	19
47,511	71,476	27,524	43,952	23,965	3,122	306	20,537	0	0	0	O	20

Note :/_1 ; Construction cost for warehouse, milling house, garage and community house. /_2 ; 0 & M cost for processing and marketing by winnower, rice mill, and building. /_3 ; Incremental production cost for post harvest activities at field level.

Assump	tion (%)	a an			IRR %)
Cost Up	Benefit Down	Telagasari	Bagor	Mattiro Bulu	Trimurjo
0	-10	22	15	21	16
0	-20	18	1,1	17	14
+10	0	24	17	22	17
+10	-10	20	14	19	1.5
+10	-20	16	10	16	13
+2.0	0	22	16	21	16
+20	-10	19	12	18	14
+20	-20	15	9	15	12
D	0	25	18	24	19

Table XI 4-8 SENSITIVITY TEST OF PILOT PLAN

