

Table 5.1 BASIC SOCIO DATA IN THE PROJECT AREA

Province/City/ Municipality	Population		Population Growth Rate 1975/1980 (%)	Area (ha)	Population Density (1980) (person/km ²)	Total Households (1980)	Family Size (1980)	No. of Farm Households (1980)	% of Farm Households (1980)
	1975	1980							
Nueva Ecija									
1. Aliaga	28,290	32,354	2.72	8,470	382	5,679	5.7	3,320	58.5
2. Cabanatuan City	115,258	139,327	3.87	18,375	758	24,179	5.8	6,870	28.4
3. Cabiao	32,752	37,895	2.96	11,760	323	6,010	6.3	2,000	33.3
4. Gapan	50,506	60,021	3.51	15,590	385	10,034	6.0	2,240	22.3
5. Gen. Natividad	14,505	17,244	3.52	10,375	166	2,982	5.8	2,210	74.1
6. Jaen	33,626	40,165	3.62	8,545	470	6,600	6.7	2,950	44.7
7. Licab	13,374	14,549	1.70	5,200	280	2,567	5.7	920	35.8
8. Lianera	16,160	18,651	2.91	7,350	254	3,319	5.6	2,830	85.3
9. Muñoz	38,619	43,230	2.28	12,150	356	7,257	6.0	3,490	48.1
10. Penaranda	15,142	16,720	2.00	9,560	175	2,913	5.7	970	33.3
11. Quezon	17,178	20,845	3.95	6,838	305	3,622	5.8	1,450	40.0
12. Risal	28,517	31,452	1.98	15,110	209	5,551	5.7	3,620	65.2
13. San Antonio	38,063	42,928	2.43	15,590	275	7,493	5.7	2,440	32.6
14. San Isidro	25,621	28,525	2.71	5,750	496	4,941	5.8	1,420	28.7
15. San Jose City	58,387	64,280	1.94	5,190	1,239	11,821	5.4	5,150	43.5
16. San Leonardo	29,201	34,652	3.48	19,790	175	5,770	6.0	1,880	32.6
17. Santa Rosa	25,732	32,420	4.73	16,140	201	5,588	5.8	3,190	57.1
18. Sto. Domingo	25,306	28,970	2.74	7,580	382	5,085	5.7	3,780	74.3
19. Talavera	53,011	62,076	3.21	14,220	437	10,573	5.9	6,050	57.2
20. Zaragoza	21,598	24,414	2.48	11,760	208	4,326	5.6	2,470	57.1
Bulacan									
1. San Ildefonso	39,593	44,693	2.45	12,900	346	7,774	5.7	3,900	50.2
2. San Miguel	66,870	73,138	1.81	72,572	101	12,515	5.8	5,260	42.0
Pampanga									
1. Arayat	52,739	56,770	1.48	13,475	421	8,726	6.5	2,700	30.9
2. Candaba	48,458	52,643	1.67	20,870	252	8,086	6.5	4,240	52.4
Total	888,506	1,017,962	2.76	345,160	295	173,411	5.9	75,350	43.5
Project Area	739,300	847,100	2.76	157,000	540	144,300	5.9	62,800	43.5

Source: NSCO Region III

Table 5.2 FARM HOUSEHOLD AND LANDLESS HOUSEHOLDS

Province/City/ Municipality	Total House- holds	No. of Farm Households		No. of/1 Landless Laborer Households		Others	
	No.	No.	%	No.	%	No.	%
<u>Nueva Ecija</u>							
1. Aliaga	5,679	3,320	58.5	1,851	32.6	508	8.9
2. Cabanatuan City	24,179	6,870	28.4	5,912	24.5	11,397	47.1
3. Cabaiao	6,010	2,000	33.3	1,552	25.8	2,458	40.9
4. Capan	10,034	2,240	22.3	3,051	30.4	4,743	47.3
5. Gen. Natividad	2,982	2,210	74.1	512	17.2	260	8.7
6. Jaen	6,600	2,950	44.7	808	12.4	2,842	43.1
7. Licab	2,567	920	35.8	885	34.5	762	29.7
8. Lianera	3,319	2,830	85.3	293	8.8	196	5.9
9. Munoz	7,257	3,490	48.1	2,899	39.9	868	12.0
10. Penaranda	2,913	970	33.3	336	11.5	1,607	55.2
11. Quezón	3,622	1,450	40.0	767	21.2	1,405	38.8
12. Risal	5,551	3,620	65.2	1,474	26.6	457	8.2
13. San Antonio	7,493	2,440	32.6	2,779	37.1	2,274	30.3
14. San Isidro	4,941	1,420	28.7	1,715	34.7	1,806	36.6
15. San Jose City	11,821	5,150	43.6	2,242	19.0	4,429	37.4
16. San Leonard	5,770	1,880	32.6	1,871	32.4	2,019	35.0
17. Santa Rosa	5,588	3,190	57.1	1,822	32.0	576	10.3
18. Sto. Domingo	5,085	3,780	74.3	942	18.5	363	7.1
19. Talayera	10,573	6,050	57.2	3,447	32.6	1,076	10.2
20. Zaragoza	4,326	2,470	57.1	882	20.4	974	22.5
<u>Bulacan</u>							
1. San Ildefonso	7,774	3,900	50.2	2,501	32.2	1,373	17.6
2. San Miguel	12,515	5,260	42.0	6,842	54.7	413	3.3
<u>Pampanga</u>							
1. Arayat	8,726	2,700	30.9	2,382	27.3	3,644	41.8
2. Candaba	8,086	4,240	52.4	2,630	32.6	1,210	15.0
Total	173,411	75,350	43.5	56,527	32.6	41,534	23.9
Project Area	144,300	62,800	43.5	47,000	32.6	34,500	23.9

Source: NSCO Region III

Remarks: /1: Results of survey on the number of landless laborer household (1983)

Table 5.3 MONTHLY LABOR REQUIREMENT IN THE PROJECT AREA
- PRESENT CONDITION -

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	(Unit: 1,000 man-days)												
A) Labor Force Available ^{/1}	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	37,200
B) Labor Requirement for Farming at Present Condition	707	550	535	1,228	1,183	1,289	1,188	1,437	946	694	1,756	1,987	13,500
1) Rainfed paddy field (33,800 ha)	32	-	-	-	-	84	366	444	290	153	335	324	2,028
2) Irrigated paddy field													
- Double cropping (84,900 ha)	665	550	535	1,228	1,183	1,187	760	920	607	499	1,317	1,561	11,012
- Single cropping (6,900 ha)	10	-	-	-	-	18	62	73	49	42	104	102	460
C) Balance (A-B)	2,393	2,550	2,565	1,872	1,917	1,811	1,912	1,663	2,154	2,406	1,344	1,113	23,700
D) Balance (Project + Area) ^{/2}	1,914	2,040	2,052	1,498	1,534	1,449	1,530	1,330	1,723	1,925	1,075	890	18,960

^{/1}: (Labor force from farm households + Labor force from landless laborer households) x Yearly workable days
= (56,700 + 70,700) x (365 x 80%) = 37,200,000 man-day/year

Labor force from farm households (Lff) and labor force from landless laborer households (Lfl) are estimated as follows:

$$Lff = Fh \times Fs \times Ra \times Rf = 62,800 \times 5.9 \times 0.51 \times 0.30 = 56,700$$

$$Lfl = Lh \times Fs \times Ra \times Rf = 47,000 \times 5.9 \times 0.51 \times 0.50 = 70,700$$

where, Fh: number of farm households (62,800)

Lh: number of landless laborer households (47,000)

Fs: family size (5.9)

Ra: ratio of age distribution between 15 and 59 (51%)

*Rf: ratio of available family labor force (30%)

Re: ratio of available landless labor force (50%)

* Based on ratio of family labor input to total labor requirement of paddy.

^{/2}: About 80% of the balance in the objective area.

Table 5.4 HECTARAGE SUMMARY OF VARIOUS SOIL SERIES
IN THE PROJECT AREA

Soil Series	Soil Type	Area (ha)	Proportional Extent (%)
PRENSA	Sandy Loam	1,300	0.8
	Clay Loam	1,800	1.1
	Silt Loam	4,500	2.9
	Sandy Loam - Shallow Phase	15,300	9.7
	Sandy Clay Loam	3,000	1.9
	Silt Clay Loam	200	0.1
	Sub-total	26,100	16.5
QUINGUA	Fine Sandy Loam	100	0.1
	Silt Loam	30,400	19.4
	Clay Loam	20,500	13.1
	Fine Sand	5,300	3.4
	Sub-total	56,300	36.0
MALIGAYA	Clay Loam	6,400	4.1
	Clay	300	0.2
	Sub-total	6,700	4.3
UMINGAN	Sandy	500	0.3
	Silt Loam	5,300	3.4
	Sub-total	5,800	3.7
BANTOG	Clay	300	0.2
	Clay Loam	16,100	10.2
	Sub-total	16,400	10.4
ZARAGOZA	Clay	400	0.2
ANNAM	Clay Loam	400	0.2
CANDABA	Clay Loam	600	0.4
	Silt Loam	200	0.1
	Sub-total	800	0.5
BIGAA	Clay Loam	2,600	1.7
BUENAVISTA	Sandy Clay Loam	1,500	1.0
	Silt Loam	900	0.6
	Sub-total	2,400	1.6
UNCLASSIFIED		7,700	4.9
Village/Road/River/Canal		31,400	20.0
Total		157,000	100.0

Table 5.5 SUMMARY OF CLIMATIC CONDITIONS

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
<u>Mean Temperature (°C)</u>													
Muñoz (1974-1983)	25.2	25.8	26.9	28.5	28.5	28.0	27.4	26.6	27.0	26.8	26.0	25.7	26.9
Cabanatuan (1976-1979)	25.9	23.5	27.4	29.3	28.6	28.3	28.2	27.1	27.6	27.7	27.0	26.5	27.3
San Miguel (1968-1979)	25.1	25.0	27.0	28.6	28.8	28.1	27.4	26.8	27.3	26.8	26.3	25.4	26.9
<u>Mean Maximum Temperature (°C)</u>													
Muñoz (1974-1983)	30.2	31.0	32.3	34.1	34.2	32.5	31.5	30.3	31.0	31.2	30.0	30.3	31.6
San Miguel (1968-1979)	31.0	31.7	33.9	35.3	34.7	33.3	32.1	30.9	31.6	31.7	30.2	30.7	33.3
<u>Mean Minimum Temperature (°C)</u>													
Muñoz (1974-1983)	20.2	20.8	21.5	22.9	23.7	23.5	23.2	22.9	23.0	22.6	21.9	21.0	22.3
San Miguel (1968-1979)	18.8	19.0	20.3	21.9	23.1	23.2	22.8	23.2	22.6	22.3	21.6	20.2	21.6
<u>Mean Relative Humidity (%)</u>													
Muñoz (1974-1983)	68.0	67.0	64.8	61.6	65.8	74.3	78.7	82.3	78.5	76.5	73.0	70.1	71.7
Cabanatuan (1976-1979)	73.1	67.8	66.1	63.1	76.8	80.4	83.8	88.0	85.6	81.9	77.9	75.6	76.7
San Miguel (1968-1979)	83.1	75.4	77.6	71.9	79.2	86.0	87.9	90.7	88.8	86.5	82.5	82.3	82.7
<u>Sunshine Hour (hr/day)</u>													
Muñoz (1974-1983)	7.5	8.5	8.3	8.8	7.3	6.3	5.6	4.5	5.2	6.1	7.0	7.4	6.9
San Miguel (1968-1979)	6.2	7.3	7.1	8.3	7.5	5.2	5.1	3.9	4.1	5.6	6.3	6.5	6.1
<u>Mean Wind Speed (km/hr)</u>													
Muñoz (1974-1983)	13.7	13.4	12.4	11.3	9.5	7.9	6.0	6.5	6.4	8.8	11.2	12.7	10.0
<u>Evaporation (mm/month)</u>													
Muñoz (1974-1983)	179.5	188.7	229.3	248.7	206.4	154.4	117.5	93.8	108.5	123.5	130.1	153.8	1,934.2
San Miguel (1968-1979)	145.8	152.3	194.1	204.2	170.2	138.2	127.5	112.5	126.9	130.5	131.4	134.5	1,768.1

Table 5.6 RAINFALL AT CABANATUAN CITY
(1951 - 1982)

(Unit: mm)

Month	Monthly Rainfall		
	Average	Maximum	Minimum
January	6.5	67.2	0
February	5.3	49.5	0
March	13.7	69.8	0
April	31.0	261.4	0
May	170.2	931.1	0
June	260.0	590.9	0
July	319.0	1,064.7	141.9
August	397.2	628.3	182.1
September	314.1	628.7	140.9
October	178.5	584.2	0
November	144.5	477.6	14.0
December	41.9	197.1	0
Annual	1,881.9	2,464.0	1,089.6
<u>Wet Season</u>			
(May - Oct.)	1,639.0	-	-
Percentage (%)	87.1	-	-

Table 5.7 PRESENT LAND USE IN THE PROJECT AREA

Item	Area (ha)	Proportional Extent (%)
1. <u>Paddy Field</u>	<u>125,600</u>	<u>80.0</u>
Rainfed paddy field	8,700	5.5
Paddy field with irrigation facilities	116,900	74.5
- Irrigated double cropping of paddy	(84,900)	(54.1)
- Irrigated wet season paddy only	(6,900)	(4.4)
- Rainfed wet season paddy only	(25,100)	(16.0)
2. <u>Village/Road/River/Canal</u>	<u>31,400</u>	<u>20.0</u>
Total	157,000	100.0

Table 5.8 LABOR, ANIMAL POWER AND MECHANICAL POWER REQUIREMENT AT PRESENT CONDITION

Requirements	Irrigated-Transplanting			Irrigated-Direct Seeding			Rainfed-Transplanting								
	Wet Season Paddy		Total	Wet Season Paddy		Total	Wet Season Paddy		Total						
	F/1	H/2	Total	F	H	Total	F	H	Total						
1) Labor Force (Man-day/ha)	17.2	55.8	73.0	17.3	59.7	77.0	16.2	35.8	52.0	16.3	40.7	57.0	15.9	44.1	60.0
- Land Preparation	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0
- Nursery Preparation/3	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0
- Transplanting	1.0	20.0	21.0	1.0	19.0	20.0	-	-	-	-	-	-	1.0	20.0	21.0
- Weeding	2.5	0.5	3.0	2.5	0.5	3.0	2.5	0.5	3.0	2.5	0.5	3.0	2.5	0.5	3.0
- Spraying	1.6	0.4	2.0	1.6	0.4	2.0	1.6	0.4	2.0	1.6	0.4	2.0	1.6	0.4	2.0
- Fertilizing	1.8	0.2	2.0	1.8	0.2	2.0	1.8	0.2	2.0	1.8	0.2	2.0	1.8	0.2	2.0
- Irrigating/Others	4.0	-	4.0	4.0	-	4.0	4.0	-	4.0	4.0	-	4.0	4.0	-	4.0
- Harvesting/Threshing	1.3	32.7	34.0	1.4	37.6	39.0	1.3	32.7	34.0	1.4	37.6	39.0	1.0	21.0	22.0
2) Animal Power (Animal/day/ha)	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1
- Nursery	0.6	-	0.6	0.3	-	0.3	-	-	-	-	-	-	-	-	0.6
- Land Preparation	2.3	0.2	2.5	2.1	0.2	2.3	2.9	0.2	3.1	2.4	0.2	2.6	2.3	0.2	2.5
3) Mechanical Power (Machine/hour/ha)	12.0	12.0	24.0	14.0	14.0	28.0	12.0	12.0	24.0	14.0	14.0	28.0	12.0	12.0	24.0
- Nursery	1.0	-	1.0	1.0	-	1.0	-	-	-	-	-	-	1.0	-	1.0
- Land Preparation	11.0	7.0	18.0	13.0	9.0	22.0	12.0	7.0	19.0	14.0	9.0	23.0	11.0	7.0	18.0
- Threshing	-	5.0	5.0	-	5.0	5.0	-	5.0	5.0	-	5.0	5.0	-	5.0	5.0

Remarks: /1: Family labor
/2: Hired labor
/3: Seeding in case of direct seeding

Source: - Results of farm survey by IOMP Office in 1981
- Farm economic survey by O&M Team in 1982

Table 5.9 RESULTS OF YIELD SURVEY (WET SEASON PADDY)

Sampling Area	Number of Samples	Name of Varieties (IR Series)	Number of Hills per Ha.	Number of Panicles per m ²	Number of Grains per Panicle	Weight of 1,000 Grains (g)	Percentage of Reaped Grains (%)	Unit Yield of Paddy (t/ha)
Muñoz-TRIS (Lower)	9	42(6) ^{/1} , 52(1), 54(2)	276,875	323	96	21.0	78	5.17
Rizal-Munic	5	6(1), 36(1), 58(1)	200,333	335	58	22.5	72	3.24
LTRIS	3	36(1), 42(1), 50(1)	330,000	462	60	21.5	76	4.51
Sto. Domingo ^{/2}	2	36(1), 52(1)	270,417	390	75	24.8	62	3.93
PRIS	14	23(1), 36(4), 50(2), 54(1), 58(1), 24(2), 1,300(1), 2,050(1), other(1)	222,252	311	61	22.2	72	3.03
Murcon	4	36(2), 42(1), 56(1)	252,431	373	62	22.1	75	3.68
Aliaga	11	23(1), 36(1), 42(4), 47(1), 54(2), 58(1), other(1)	193,763	230	85	23.3	70	3.16
Platero-PBRIS Proper	6	36(4), 42(2)	254,861	312	65	22.5	72	3.23
PBRIS Extension	2	36(1), 2,307(1)	314,445	509	60	24.5	75	5.58
District IV	14	5(1), 42(6), others(7)	282,604	466	71	20.9	72	4.85
Submerged Area	14	36(2), 42(8), 52(2), 54(1), 58(1)	297,528	398	75	21.1	74	4.47
Average	84		256,497	356	72	22.0	73	4.00

^{/1}: Number of samples

^{/2}: Excluding submerged area

Table 5.10 PRODUCTION OF PADDY IN THE PROJECT AREA

Year/ District	Wet Season			Dry Season			
	Area Harvested (ha)	Unit Yield (t/ha)	Pro- duction (t)	Area Harvested (ha)	Unit Yield (t/ha)	Pro- duction (t)	
I) Irrigated Paddy Field							
<u>1979</u>	I	20,600	3.9	80,600	15,700	4.6	72,400
	II	22,800	3.1	69,800	21,400	3.9	82,400
	III	* ^{/1}	*	*	*	*	*
	IV	15,900	4.1	64,900	17,700	4.4	78,300
	Total	(59,300) ^{/2}	(3.6)	(215,300)	(54,800)	(4.3)	(233,100)
<u>1980</u>	I	21,600	3.0	64,900	17,200	4.4	75,200
	II	22,200	2.6	57,000	21,100	3.4	72,200
	III	23,900	3.1	73,200	24,000	4.1	98,100
	IV	13,000	2.9	37,300	17,700	3.9	68,700
	Total	<u>80,700</u>	<u>2.9</u>	<u>232,400</u>	<u>80,000</u>	<u>3.9</u>	<u>314,200</u>
<u>1981</u>	I	21,000	4.0	83,400	17,300	4.3	75,000
	II	22,500	3.4	77,500	21,700	3.9	83,800
	III	24,000	3.5	83,200	24,600	4.1	99,700
	IV	15,700	4.1	64,700	15,000	4.0	59,800
	Total	<u>83,200</u>	<u>3.7</u>	<u>308,800</u>	<u>78,600</u>	<u>4.0</u>	<u>318,300</u>
<u>1982</u>	I	21,800	4.4	95,900	16,300	4.3	70,100
	II	22,600	3.9	88,100	22,300	4.3	95,900
	III	21,700	4.1	89,000	24,500	4.0	98,000
	IV	17,200	4.3	74,000	16,900	4.1	69,300
	Total	<u>83,300</u>	<u>4.2</u>	<u>347,000</u>	<u>80,000</u>	<u>4.2</u>	<u>333,300</u>
Average (1979-1982)							
	I	21,300	3.8	81,200	16,600	4.4	73,200
	II	22,500	3.2	73,100	21,600	3.9	83,600
	III	23,200	3.5	81,800	24,400	4.0	98,600
	IV	15,500	3.9	60,200	16,800	4.1	69,000
	Total	<u>82,500</u>	<u>3.6</u>	<u>296,300</u>	<u>79,400</u>	<u>4.1</u>	<u>324,400</u>
II) Rainfed Paddy Field							
		33,800	2.4	81,000	-	-	-

Remarks: ^{/1}: No data, ^{/2}: Exclude district III

Source: UPRIIS Office/Farm economic survey

Table 5.11 MASAGANA-99 PHASE XVIII (NOV. 1981 - APR. 1982)

Province/City Municipality	No. of Farmers	Area Planted (ha)	Area Harvested (ha)	Pro- duction (ha)	Yield/ha (cav/ha)	With Credit	
						No. %	Area Planted (ha) %
<u>Nueva Ecija</u>							
1. Aliaga	2,384	5,235	5,235	324,153	62	19	1 73
2. Cabanatuan City	2,821	6,068	6,068	557,809	95	386	14 1,152
3. Cabiao	1,247	3,490	3,490	309,762	89	90	7 248
4. Gapan	1,612	4,620	4,620	368,518	80	492	31 1,299
5. Gen. Natividad	2,141	5,866	5,866	473,764	81	173	8 381
6. Jaen	2,089	3,176	3,176	323,714	102	268	13 803
7. Licab	893	1,760	1,760	161,175	92	164	18 383
8. Lianera	1,635	4,582	4,582	396,813	87	147	9 468
9. Muñoz	1,461	3,471	3,471	277,762	80	232	16 653
10. Peñaranda	634	1,374	1,374	140,873	103	18	3 48
11. Quezon	1,391	3,495	3,495	376,373	108	330	24 1,002
12. Rizal	2,630	5,820	5,820	602,393	104	214	8 504
13. San Antonio	1,319	3,268	3,268	293,399	90	8	1 25
14. San Isidro	1,117	3,212	3,212	289,793	90	282	25 872
15. San Jose City	1,040	2,049	2,049	164,646	80	77	7 180
16. San Leonardo	1,499	3,165	3,165	320,612	101	246	16 551
17. Santa Rosa	2,082	4,887	4,887	379,469	78	93	4 211
18. Sto. Domingo	2,772	5,720	5,720	625,671	109	100	4 226
19. Talavera	3,280	7,605	7,604	711,000	93	111	3 267
20. Zaragoza	1,042	1,977	1,976	159,710	81	7	1 15
<u>Bulacan</u>							
1. San Ildefonso	1,142	2,220	2,220	199,461	90	6	1 22
2. San Miguel	1,904	4,352	4,352	377,572	87	279	15 777
<u>Pampanga</u>							
1. Arayat	649	1,220	778	62,290	80	10	2 21
2. Candaba	995	2,603	1,149	77,719	67	0	0 0
Total	39,779	91,236	89,337	7,974,451	89	3,752	9 10,181

Table 5.12 MASAGANA-99 PHASE XIX (MAY - OCT. 1982)

Province/City Municipality	No. of Farmers	Area Planted (ha)	Area Harvested (ha)	Pro- duction (ha)	Yield/ha (cav/ha)	With Credit	
						No. of Farmers %	Area Planted (ha) %
<u>Nueva Ecija</u>							
1. Aliaga	2,371	5,171	5,171	390,322	75	218	9 136 3
2. Cabanatuan City	2,889	5,616	5,616	441,620	79	458	16 195 3
3. Cabaio	2,338	2,546	2,546	190,038	75	40	2 131 5
4. Gapan	1,707	6,627	6,627	546,305	82	663	39 2,392 36
5. Gen. Natividad	2,070	4,136	4,136	321,169	78	117	6 112 3
6. Jaen	2,085	3,568	3,568	328,349	92	566	27 225 6
7. Licab	2,261	1,685	1,685	149,445	89	404	18 213 13
8. Lianera	1,015	4,139	4,139	324,056	78	280	28 579 14
9. Muñoz	878	7,869	7,869	720,263	92	363	41 984 13
10. Peñaranda	1,494	2,321	2,321	225,711	97	314	21 76 3
11. Quezon	825	5,036	5,036	426,819	85	466	56 1,528 30
12. Rizal	1,774	3,643	3,643	323,986	89	287	16 370 10
13. San Antonio	261	2,225	2,225	201,343	90	94	36 39 2
14. San Isidro	1,149	3,743	3,743	301,173	80	94	8 1,254 34
15. San Jose City	2,358	3,493	3,493	373,246	107	205	9 787 23
16. San Leonardo	2,016	1,518	1,518	152,092	100	214	11 166 11
17. Santa Rosa	2,314	3,000	3,000	291,940	97	215	9 416 14
18. Sto. Domingo	2,646	6,769	6,769	566,231	84	26	1 258 4
19. Talavera	676	6,394	6,394	548,217	86	131	19 144 2
20. Zaragoza	644	1,701	1,701	145,341	85	3	0 8 0
<u>Bulacan</u>							
1. San Ildefonso	3,121	7,721	7,721	718,774	93	119	4 323 4
2. San Miguel	4,860	13,397	13,397	1,339,001	100	740	15 2,017 15
<u>Pampanga</u>							
1. Arayat	2,353	6,466	6,466	475,869	74	41	2 218 3
2. Candaba	1,827	4,632	4,632	374,201	81	0	0 0 0
Total	45,932	113,416	113,416	9,875,511	87	6,068	13 12,571 11

Table 5.13 MASAGANA-99 PHASE XX (NOV. 1982 - APR. 1983)

Province/City Municipality	No. of Farmers	Area Planted (ha)	Area Harvested (ha)	Pro- duction (ha)	Yield/ha (cav/ha)	With Credit			
						No. of Farmers %	Area Planted Area %		
<u>Nueva Ecija</u>									
1. Aliaga	1,625	3,833	3,833	311,554	81	66	4	192	5
2. Cabanatuan City	2,854	5,782	5,782	4,284,677	741	386	14	839	15
3. Cabiao	835	2,180	2,180	201,451	92	32	4	285	13
4. Gapan	1,785	5,350	5,350	458,272	86	534	30	1,892	35
5. Gen. Natividad	2,777	5,255	5,255	444,647	85	49	2	129	2
6. Jaen	1,198	2,634	2,634	230,975	88	702	59	1,535	58
7. Licab	391	672	672	50,185	75	72	18	143	21
8. Lianera	1,563	4,353	4,353	353,894	81	75	5	222	5
9. Muñoz	1,686	4,279	4,279	416,010	97	172	10	474	11
10. Peñaranda	486	1,072	1,072	106,213	99	4	1	42	4
11. Quezon	1,168	2,422	2,422	201,270	83	303	26	733	30
12. Rizal	1,655	3,693	3,693	372,399	101	124	7	282	8
13. San Antonio	464	1,051	1,051	60,120	57	2	0	7	1
14. San Isidro	1,598	4,358	4,358	346,968	80	221	14	671	15
15. San Jose City	819	1,620	1,620	145,413	90	35	4	63	4
16. San Leonadro	1,787	3,720	3,720	350,359	94	90	5	194	5
17. Santa Rosa	1,218	4,928	4,928	438,063	89	181	15	447	9
18. Sto. Domingo	2,711	5,246	5,246	659,910	126	46	2	104	2
19. Talavera	2,837	591	591	379,308	642	25	1	58	10
20. Zaragoza	860	1,744	1,744	129,494	74	3	0	7	0
<u>Bulacan</u>									
1. San Lidefonso	548	1,069	1,069	106,610	100	18	3	58	5
2. San Miguel	1,602	4,175	3,719	348,453	94	251	16	619	15
<u>Pampanga</u>									
1. Arayat	224	441	0	0	0	3	1	11	2
2. Candaba	1,363	3,507	0	0	0	0	0	0	0
Total	34,054	73,975	69,571	10,396,245	149	3,394	10	9,007	12

Table 5.14(1) MASAGANA-99 PERFORMANCE IN NUEVA ECIJA PROVINCE

M-99 Phase	1		2		3		4		5		6		7		8		9		10		
	May '73	Nov. '73	May '74	Nov. '74	May '75	Nov. '75	May '76	Nov. '76	May '77	Nov. '77	May '78	Nov. '78	May '79	Nov. '79	May '80	Nov. '80	May '81	Nov. '81	May '82	Nov. '82	
Period	Oct. '73	Apr. '74	Oct. '74	Apr. '75	Oct. '75	Apr. '76	Oct. '76	Apr. '77	Oct. '77	Apr. '78	Oct. '78	Apr. '79	Oct. '79	Apr. '80	Oct. '80	Apr. '81	Oct. '81	Apr. '82	Oct. '82	Apr. '83	
1. Target Area (ha)	70,000	35,000	80,000	80,000	113,000	80,000	120,000	70,681	121,900	95,900											
2. Area Planted (ha)	97,000	41,000	188,167	59,855	82,649	29,082	83,309	22,744	124,710	71,228											
3. Area Planted/Target Area (%)	138	117	235	75	63	36	59	32	102	74											
4. Area Harvested	77,000	41,000	188,167	59,855	77,518	28,399	69,842	22,256	119,692	68,609											
5. Production (cav.)	6,237,000	3,157,000	7,338,513	4,728,549	2,945,694	363,152	4,073,897	1,557,920	8,253,813	5,624,116											
6. Ave. Yield (cav./ha)	81	77	39	79	38	48	58	70	74	82											
7. Loan Released	47,599,799	19,525,574	98,453,014	47,797,751	102,369,702	23,697,725	38,069,576	13,282,795	48,317,328	25,591,150											
8. Loan Repaid (Collected)	47,345,988	18,673,711	93,636,768	43,414,693	71,661,306	22,585,119	30,992,801	12,038,612	35,895,089	25,449,814											
9. % Repayment	99	96	95	91	70	95	81	91	74	99											
10. No. of Farmers Financed	32,279	14,323	68,355	20,489	35,040	7,706	15,097	4,739	17,242	7,889											
11. Problems Encountered																					

Table 5.14(2) MASAGANA-99 PERFORMANCE IN NUEVA ECIJA PROVINCE

M-99 Phase	11		12		13		14		15		16		17		18		19		20			
	May '78 Oct. '78	Nov. '78 Apr. '79	May '79 Oct. '79	Nov. '79 Apr. '80	May '80 Oct. '80	Nov. '80 Apr. '81	May '81 Oct. '81	Nov. '81 Apr. '82	May '82 Oct. '82	Nov. '82 Apr. '83	May '81 Oct. '81	Nov. '81 Apr. '82	May '82 Oct. '82	Nov. '82 Apr. '83	May '81 Oct. '81	Nov. '81 Apr. '82	May '82 Oct. '82	Nov. '82 Apr. '83	May '81 Oct. '81	Nov. '81 Apr. '82	May '82 Oct. '82	
1. Target Area (ha)	125,710	103,196	134,852	86,812	128,447	75,942	137,252	85,000	135,000	66,527												
2. Area Planted (ha)	128,528	89,425	133,269	83,367	172,450	85,918	154,227	86,548	143,402	74,397												
3. Area Planted/Target Area (%)	102	87	99	96	134	113	112	102	106	111												
4. Area Harvested	96,452	89,425	133,269	83,305	108,760	85,918	154,227	86,545	143,359	74,135												
5. Production (cav.)	4,303,202	8,584,800	11,001,710	7,119,588	7,825,784	7,217,112	12,051,818	7,848,140	11,834,998	5,574,432												
6. Ave. Yield (cav./ha)	45	96	83	85	67	84	78	90	83	89												
7. Loan Released	37,611,283	38,906,615	36,741,894	22,658,157	27,529,339	28,667,617	29,701,953	12,521,038	16,033,298	8,586,472												
8. Loan Repaid (Collected)	25,235,145	35,734,960	28,932,317	20,478,341	22,023,732	20,020,416	17,823,553	8,893,764	11,391,934	3,073,607												
9. % Repayment	67	92	79	90	80	70	60	71	71	36												
10. No. of Farmers Financed	12,504	7,700	11,491	8,527	10,098	8,229	8,200	3,420	4,485	-												
11. Problems Encountered	Typhoon Welling Yaning Kading Rats, BPH LF, SB BLB BLS	Stemborer Rats Sheath Blight	Good Weather	Leaf- Folder Sheath Blight	Rats BPH Steam- Borer Typhoon Aring	Continous Rains June & July '81 Causing Palay Har- vested to Perment	Typhoon Anding	Water Supply Fungal & Bacterial Diseases			Drought Lack of Water											

Table 5.15 CROP INSURANCE IN MASAGANA-99 PHASE XIX
(May - Oct. 1982)

Province/City/ Municipality	No. of Farmers/* Insured	Area/* (ha)	Amount of Coverage (P)
<u>NUEVA ECIJA</u>			
1. ALIAGA	156	369.00	₱ 500,000.00
2. CABANATUAN CITY	2,967	6,777.23	6,859,847.34
3. CABIAO	20	68.00	91,800.00
4. GAPAN	759	2,333.70	3,749,768.00
5. GENERAL NATIVIDAD	-		
6. JAEN	716	1,690.50	2,296,350.00
7. LICAB	383	924.00	1,139,567.40
8. LLANERA	-		
9. MUÑOZ	143	30.00	194,022.25
10. PEÑARANDA	-		
11. QUEZON	553	1,727.00	2,177,810.00
12. RIZAL	342	738.20	963,078.00
13. SAN ANTONIO	-		
14. SAN ISIDRO	692	1,809.52	3,149,786.00
15. SAN JOSE CITY	1,910	4,681.25	6,172,137.50
16. SAN LEONARDO	225	500.50	675,675.00
17. SANTA ROSA	229	575.00	708,513.70
18. SANTO DOMINGO	198	626.00	802,418.00
19. TALAVERA	102	241.40	333,731.00
20. ZARAGOZA	-		
<u>BULACAN</u>			
21. SAN ILDEFONSO	-		
22. SAN MIGUEL	12	22.00	31,600.00
<u>PAMPANGA</u>			
23. ARAYAT	-		
24. CANDABA	849	1,444.30	1,891,118.50
Total	10,256	24,557.60	₱31,737,222.69

Remarks: /* Total of borrowing and self-financed
No. of farmers in the project area: 46,141 (as of March 1980)

Source: PCIC Regional Office in San Fernando

Table 5.16 CROP INSURANCE IN MASAGANA-99 PHASE XX
(Nov. 1982 - Apr. 1983)

Province/City/ Municipality	No. of Farmers/ Insured	Area/ [*] (ha)	Amount of Coverage (P)
<u>NUEVA ECIJA</u>			
1. ALIAGA			
2. CABANATUAN CITY	1,686	3,943.52	₱ 4,896,270.60
3. CABIAO	-	-	-
4. GAPAN	409	1,194.15	1,967,927.00
5. GEN. NATIVIDAD	-	-	-
6. JAEN	69	174.00	255,200.00
7. LICAB	73	166.58	198,535.00
8. LLANERA	-	-	-
9. MUÑOZ	14	67.70	96,036.00
10. PEÑARANDA	-	-	-
11. QUEZON	240	795.37	1,081,560.00
12. RIZAL	-	-	-
13. SAN ANTONIO	-	-	-
14. SAN ISIDRO	427	1,239.67	2,021,023.00
15. SAN JOSE CITY	486	1,229.475	1,501,816.00
16. SAN LEONARDO	-	-	-
17. SANTA ROSA	94	228.50	308,475.00
18. SANTO DOMINGO	-	-	-
19. TALAVERA	-	-	-
20. ZARAGOZA	-	-	-
<u>BULACAN</u>			
21. SAN ILDEFONSO	21	35.80	57,280.00
22. SAN MIGUEL	35	75.00	120,000.00
<u>PAMPANGA</u>			
23. ARAYAT	5	9.00	12,150.00
24. CANDABA	62	91.40	123,390.00
Total	3,621	9,250.165	₱12,639,662.60

Remarks: /* Total of borrowing and self-financed
No. of farmers in the project area: 46,141 (as of March 1980)

Source: PCIC Regional Office in San Fernando

Table 5.17 DETAILED RESULTS OF TRAINING PROGRAMS IN THE UPRIIS

a) LIVE-IN TRAINING FOR IGLs

District	Number of Trained Farmers					Total
	1978	1979	1980	1981	1982	
I	80	70	37	39	46	272
II	104	72	28	34	32	270
III	95	73	27	36	38	269
IV	50	32	39	37	19	177
Total	329	247	131	146	135	988

b) ONE DAY ECHO-SEMINAR

District	1978	1979	1980	1981	1982	Total
I	736	753	788	2,610	2,515	7,402
II	730	756	712	1,892	857	4,947
III	1,381	895	2,282	5,189	5,314	15,061
IV	1,235	911	1,318	2,690	879	7,033
Total	4,082	3,315	5,100	12,381	9,565	34,443

c) FIA OFFICERS TRAINING

District	Attendance	Months Conducted
I	21	Aug. 14 & 18, 1982
II	14	Oct. 1 & 18, 1982
III	28	Sept. 3 & 6, 1982
IV	-	-
Total	63	

Table 5.18 NUMBER OF RETAILERS, WHOLESALERS, WAREHOUSES, MILLS AND ITS CAPACITY IN THE PROJECT AREA

Province/City/ Municipality	Re- tailers	Whole- salers	Warehouse		Mills	
			No. of Units	Total Capacity (cav.)	No. of Units	Input Capacity (cav./12 hr)
<u>Nueva Ecija</u>						
1. Aliaga	23	27	4	55,000	8	846
2. Cabanatuan City	208	180	44	559,955	43	7,906
3. Cabiao	96	94	23	135,160	26	4,249
4. Gapan	175	185	53	457,739	66	13,440
5. Gen. Natividad	48	55	4	30,338	7	848
6. Jaen	66	58	10	65,025	13	2,520
7. Licab	28	29	5	6,000	10	1,128
8. Lianera	24	34	2	5,000	9	1,024
9. Muñoz	70	62	22	185,246	17	2,832
10. Peñaranda	18	22	3	8,099	4	1,092
11. Quezon	31	31	5	53,326	14	1,440
12. Rizal	33	33	13	50,316	13	1,627
13. San Antonio	52	45	5	6,508	7	1,068
14. San Isidro	43	34	11	88,715	11	2,499
15. San Jose	115	87	36	311,074	27	5,325
16. San Leonardo	62	63	21	310,082	21	4,779
17. Sta. Rosa	64	73	24	134,200	21	4,258
18. Sto. Domingo	60	67	15	351,000	17	2,510
19. Talavera	114	131	44	230,560	28	4,800
20. Zaragoza	39	40	6	34,700	8	787
<u>Bulacan</u>						
21. San Ildefonso	65	65	19	84,773	22	3,094
22. San Miguel	87	87	20	116,395	17	2,789
<u>Pampanga</u>						
23. Arayat	35	35	5	85,090	10	102
24. Candaba	27	27	7	48,240	13	1,188
Total	1,583	1,564	401	3,392,531	432	72,151

Remarks: One cavan is 50 kg of paddy.

Source: NFA, Cabanatuan

Table 5.19 SUPPORT PRICE FOR PALAY

Year	Support Price		Application
	P/cav. $\frac{1}{1}$	P/kg	
1972	27.2	0.59	
1973	35.0	0.70	September
1974	50.0	1.00	November
1975	50.0	1.00	
1976	55.0	1.10	May
1977	55.0	1.10	
1978	55.0	1.10	
1979	65.0	1.30	April
1980	72.5	1.45	October
1981	77.5	1.55	June
1982	85.0	1.70	May
1983	85.0	1.70	

Remarks: $\frac{1}{1}$: 1 cavan = 50 kg

Source: National Food Authority, Manila

Table 5.20 INFLOW OF RICE SUPPLY TO METRO MANILA
THROUGH THE CHANNEL OF NFA IN 1982

Source	Rice (ton)	Percentage (%)
<u>Region III</u>		
Nueva Ecija	13,771	36.98
Bulacan	4,182	11.23
Tarlac	6,079	16.32
Bataan	238	0.64
<u>Sub-total</u>	<u>24,270</u>	<u>65.17</u>
<u>Other Province</u>		
Batangas	40	0.11
Cagayan	9,786	26.28
S. Cotobato	19	0.05
N. Vizcaya	633	1.70
Isabela	1,471	3.95
Other Provinces	1,021	2.74
<u>Sub-total</u>	<u>12,970</u>	<u>34.83</u>
<u>Total</u>	<u>37,240</u>	<u>100.00</u>

Source: NFA

Table 5.21 FINANCIAL AND ECONOMIC PRICE STRUCTURE OF RICE

(Unit: ₱/ton)

Item	1983		1995
	Financial	Economic ^{/1}	Economic
Export price FOB Manila ^{/2} (25 - 30% broken)	2,670	2,670 (US\$243)	3,540 (US\$322)
Port charges	75	60	60
Port handling & storage	60	50	50
Cost of transportation (Project area to Manila)	100	80	80
Milling cost	135	110	110
Value of milling by-products	105	85	85
Price, ex-mill project area	2,405	2,455	3,325
Paddy equivalent price (63% milling recovery)	1,515	1,547	2,095
Paddy procurement cost ^{/3}	60	50	50
Farm gate paddy price ^{/4}	1,455	1,497	2,045

Remarks: All prices expressed in term of 1983 value.

US\$1.00 = ₱11.0

^{/1}: Economic prices have been determined by applying to transportation cost the conversion factor for transport (0.78) and for other items, the standard conversion factor (0.82).

^{/2}: Derived by taking a 30% discount from the price of 5% broken FOB Bangkok.

^{/3}: Includes cost of required storage capacity.

^{/4}: Financial price for 1983 is actual, for 1995 it is the export parity price for paddy.

Table 5.22 FINANCIAL AND ECONOMIC PRICE STRUCTURE OF FERTILIZER

Item	Urea		Triple Superphosphate		Muriate of Potash		(Unit: P/ton)
	1983	1995	1983	1995	1983	1995	
	F/1	F/2	F	E	F	E	
Export price, FOB US Gulf	(US\$210)	(US\$303)	(US\$180)	(US\$215)	(US\$105)	(US\$121)	
Ocean freight & insurance	(US\$28)	(US\$28)	(US\$70)	(US\$70)	(US\$25)	(US\$25)	
Import price, CIF, Manila	2,620	2,620	2,750	2,750	1,430	1,430	1,606
	(US\$238)	(US\$331)	(US\$250)	(US\$285)	(US\$130)	(US\$146)	
Port handling, storage and processing charges/3	130	105	130	105	130	105	105
Importer's cost/3	450	370	605	495	300	245	245
Average cost of transportation and handling at distribution center/4	150	115	150	115	150	115	115
Dealer's margin/3	85	70	85	70	85	70	70
Average cost of transportation from distribution center to farm/4	20	15	20	15	20	15	15
Urea farm-gate price	3,445	3,295	3,740	3,550	2,115	1,980	2,160
	(N: 46%)		(P: 46%)		(K: 60%)		
Nutrient farm-gate price (P/kg)	7.5	7.2	8.1	7.7	8.6	3.3	3.6

Remarks: All prices expressed in terms of constant 1983 values.

/1: Financial price

/2: Economic price

/3: The economic prices for these items were obtained by applying the standard conversion factor of 0.82.

/4: The economic price for transportation were determined by applying the transportation conversion factor of 0.78.

Table 5.23 SURVEY ITEMS OF QUESTIONNAIRE
FOR FARM ECONOMIC SURVEY

-
1. Family Size
 2. Farm Size
 3. Tenurial Status
 4. Cropping Pattern and Farming Practices
 - 1) Cropping pattern
 - 2) Farming practices and inputs requirement
 - Seed
 - Fertilizer
 - Agro-chemicals
 - Labor requirement
 - Animal power and machinery requirement
 5. Production and Disposition of Products
 6. Livestock Inventory
 7. Inventory of Farm Machinery and Equipment
 8. Market and Farm Gate Price
 9. Gross Income
 - 1) Farm income
 - 2) Off-farm income
 10. Production Cost
 - 1) Farm inputs
 - 2) Irrigation fee
 - 3) Land rent and amortizing fee
 - 4) Labour cost
 - 5) Animal power and machinery
 11. Living Expenses
 - 1) Food consumption
 - Rice
 - Other food
 - 2) Living expenses except food
 12. Farmer's Intension
-

Table 5.24 FARM BUDGET BY LAND TENURE AND FARM SIZE
(PRESENT CONDITION)
-IRRIGATED-DOUBLE CROPPING PADDY FARMER-

Item	Owner Operator						Amortizing Owner Operator						Lessee						
	Below 1.0 ha		2.0 - 3.0 ha		Above 3.0 ha		Below 1.0 ha		2.0 - 3.0 ha		Above 3.0 ha		Below 1.0 ha		2.0 - 3.0 ha		Above 3.0 ha		
	1.0 ha	2.0 ha	3.0 ha	1.0 ha	2.0 ha	3.0 ha	1.0 ha	2.0 ha	3.0 ha	1.0 ha	2.0 ha	3.0 ha	1.0 ha	2.0 ha	3.0 ha	1.0 ha	2.0 ha	3.0 ha	
Average Farm Size (ha)	(0.63)	(1.14)	(2.77)	(3.42)	(3.42)	(3.42)	(0.58)	(1.40)	(2.45)	(3.10)	(3.10)	(0.59)	(1.34)	(2.29)	(3.32)	(0.59)	(1.34)	(2.29)	(3.32)
I. Gross Income	14,080	21,060	43,820	55,770	55,770	55,770	13,220	22,450	35,160	41,750	41,750	15,030	22,350	35,880	49,640	15,030	22,350	35,880	49,640
1) Farm income	7,080	12,810	31,130	38,440	38,440	38,440	6,520	15,740	27,540	34,840	34,840	6,630	15,060	25,740	37,320	6,630	15,060	25,740	37,320
- Paddy ^{1/1}	670	670	440	170	170	170	670	670	440	170	170	210	210	110	720	210	210	110	720
- Others ^{1/1}	5,130	5,410	6,990	10,860	10,860	10,860	4,930	3,380	2,520	850	850	7,070	4,530	5,680	5,290	7,070	4,530	5,680	5,290
2) Off and non farm income ^{2/2}	1,200	2,170	5,260	6,500	6,500	6,500	1,100	2,660	4,660	5,890	5,890	1,120	2,550	4,350	6,310	1,120	2,550	4,350	6,310
3) Net proceeds of loan ^{3/3}	11,600	16,350	29,720	37,090	37,090	37,090	12,640	19,400	28,330	31,040	31,040	14,650	21,140	30,750	40,060	14,650	21,140	30,750	40,060
II. Gross Outgo	2,750	4,980	12,090	14,930	14,930	14,930	2,500	6,110	10,690	13,530	13,530	2,580	5,850	10,000	14,490	2,580	5,850	10,000	14,490
1) Production cost	347	628	1,527	1,885	1,885	1,885	320	772	1,350	1,708	1,708	325	738	1,262	1,830	325	738	1,262	1,830
- Seed	647	1,170	2,843	3,510	3,510	3,510	595	1,437	2,514	3,181	3,181	605	1,375	2,350	3,407	605	1,375	2,350	3,407
- Fertilizer	378	684	1,662	2,052	2,052	2,052	348	840	1,470	1,860	1,860	354	804	1,374	1,992	354	804	1,374	1,992
- Agro-chemicals	229	415	1,008	1,245	1,245	1,245	211	510	892	1,128	1,128	215	488	834	1,208	215	488	834	1,208
- Hired labor ^{4/4}	8	14	33	41	41	41	7	17	29	37	37	7	16	27	40	7	16	27	40
- Hired animal ^{4/4}	302	547	1,330	1,642	1,642	1,642	278	672	1,176	1,488	1,488	283	643	1,099	1,594	283	643	1,099	1,594
- Harvesting and threshing ^{5/5}	708	1,281	3,113	3,844	3,844	3,844	652	1,574	2,754	3,484	3,484	663	1,506	2,574	3,732	663	1,506	2,574	3,732
- Miscellaneous ^{6/6}	131	241	574	711	711	711	116	288	505	644	644	128	281	480	687	128	281	480	687
2) Amortizing fee	-	-	-	-	-	-	60	150	270	340	340	-	-	-	-	-	-	-	-
3) Land rent ^{7/7}	-	-	-	-	-	-	-	-	-	-	-	1,110	2,530	4,320	6,260	1,110	2,530	4,320	6,260
4) Loan repayment	1,340	2,430	5,890	7,280	7,280	7,280	1,230	2,980	5,220	6,600	6,600	1,250	2,860	4,870	7,070	1,250	2,860	4,870	7,070
5) Living expenses	7,510	8,940	11,740	14,880	14,880	14,880	8,910	10,160	12,150	10,570	10,570	9,710	9,900	11,560	12,240	9,710	9,900	11,560	12,240
III. Net Reserve (capacity to pay)	2,480	4,710	14,100	18,880	18,880	18,880	580	3,050	6,830	10,710	10,710	380	1,210	5,130	9,580	380	1,210	5,130	9,580

Remarks: ^{1/1}: Includes incomes from livestock raising.

^{2/2}: Includes incomes of wage earning from work at other farm, cottage industry, rent for farm machine, remittance from their family working at other place, etc.

^{3/3}: Includes loans obtained from Masagana-99, relatives and friends. ^{4/4}: Excludes harvesting and threshing.

^{5/5}: Includes costs of hired labor and hired machine. (10% of farm income of paddy based on the result of socio-economic survey)

^{6/6}: Includes fuel of farm machine, minor farm tools and equipment, etc.

^{7/7}: Land rent per hectare was calculated as follows: $13 \text{ cav.} \times 2 \text{ crop seasons} = 26 \text{ cav./ha} = 1,300 \text{ kg/ha}$
 $1,300 \text{ kg/ha} \times (P1.3/a + 1.6/b)/2 = 1,885 \text{ P/ha}$

^a: Farm gate price of wet season paddy

^b: Farm gate price of dry season paddy

Source: Results of farm economic survey in 1982 and data of Input and Output Monitoring Survey conducted by NIA in 1981.

Table 5.25 INFLOW OF RICE SUPPLY TO METRO MANILA THROUGH
THE CHANNEL OF NFA METRO MANILA IN 1979

Source	Rice (ton)	Percent (%)
<u>Five Provinces</u>		
Nueva Ecija	13,596	15.12
Pampanga	1,101	1.22
Tarlac	5,887	6.54
Sub-total	<u>20,584</u>	<u>22.88</u>
<u>Other Source</u>		
Ilocos Norte	887	0.98
Ilocos Sur	1,020	1.13
La Union	1,414	1.57
Pangasinan	5,417	6.02
Allacapan	425	0.47
Cagayan	11,971	13.31
Isabela	7,394	8.22
Kalinga-Apayao	1,799	2.00
Nueva Vizcaya	2,299	2.55
Quirino	1,546	1.72
Aurora (Sub-province)	579	0.64
Batangas	231	0.25
Laguna	800	0.89
Mindoro Occidental	10,701	12.00
Mindoro Oriental	2,412	2.68
Palawan	195	0.21
Albay	2,483	2.76
Camarines Norte	635	0.70
Camarines Sur	4,056	4.51
Catanduanes	67	0.07
Sorsogon	1,049	1.16
Iloilo	409	0.45
Southern Leyte	258	0.28
Zamboanga Norte	39	0.04
Misamis Occidental	378	0.42
Agusan Norte	1,250	1.39
Misamis Oriental	440	0.49
Davao Norte	205	0.23
Davao Sur	644	0.71
South Cotabato	1,094	1.21
Maguindanao	2,948	3.28
North Cotabato	1,956	2.17
Sultan Kudarat	2,345	2.61
Sub-total	<u>69,346</u>	<u>77.12</u>
Total	89,930	100.00

Table 5.26 LAND USE WITH PROJECT CONDITION

Item	Present Condition (A)	Future with Project Condition (B)	(Unit: ha)
			Difference (B) - (A)
(A) PROJECT AREA			
(1) Paddy Field	125,600	125,600	0
a) Rainfed paddy field	8,700	8,700	0
b) Paddy field with irrigation facilities	116,900	116,900	0
i) Irrigated double cropping of paddy per annum	84,900	103,600	18,700
ii) Irrigated single cropping of paddy per annum	6,900	7,600	700
- wet season only	6,900	3,200	-3,700
- dry season only	-	4,400	4,400
iii) Rainfed wet season paddy only	25,100	5,700	-19,400
(2) Village/Road/River/Canal/etc.	31,400	31,400	0
(3) Project Area	157,000	157,000	0
(4) Multi-cropping index	1.68	1.82	-
(B) IRRIGATION SERVICE AREA			
(1) Rainfed Paddy Field	0	0	0
(2) Paddy Field with Irrigation Facilities			
i) Irrigated dry season paddy	84,900	108,000	23,100
ii) Irrigated wet season paddy	91,800	106,800	15,000
iii) Rainfed wet season paddy	19,400	4,400	-15,000
(3) Irrigation Service Area	111,200	111,200	0
(4) Multi-cropping Index	1.76	1.97	-

Table 5.27 DESIGN CRITERIA OF PROPOSED FARMING PRACTICES FOR PADDY WITH PROJECT

1. Varieties	IR series
2. Growing period	125 days
3. Transplanting method	
- Amount of seed	160 kg per ha
- Nursery period	15 - 20 days
- Area of nursery bed	1/20 - 1/25 of paddy field
4. Direct seeding method	
- Amount of seed	80 kg per ha
5. Land preparation	One time of ploughing, and three times of hallowing-leveling
6. Fertilization	
Nursery bed	2 kg of N/ha
Paddy field	- 81 kg of N/ha, 31 kg of P/ha and 21 kg of K/ha for wet season paddy
	- 96 kg of N/ha, 41 kg of P/ha and 21 kg of K/ha for dry season paddy
Time in paddy field	
All P and K	Basic dressing
35% of N	Basic dressing at transplanting time
25% of N	First top dressing at two weeks after transplanting time
40% of N	2nd top dressing in the late period of of young panicle formation stage
7. Weeding	Two times about 25th and 50th day after transplanting

Table 5.28: LABOR, ANIMAL POWER AND MECHANICAL POWER REQUIREMENTS
(WITHOUT PROJECT)

Requirements	Irrigated - Transplanting			Irrigated - Direct Seeding			Rainfed - Transplanting								
	Wet Season Paddy		H/2 Total	Wet Season Paddy		H Total	Dry Season Paddy		H Total	Wet Season Paddy					
	F	H		F	H		F	H		F	H	Total			
1) Labor Force (man-day/ha)	19.1	58.0	77.1	19.2	60.9	80.1	18.1	38.0	56.1	18.2	41.9	60.1	15.9	44.1	60.0
- Land preparation	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0
- Nursery preparation ^{/3}	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0
- Transplanting	1.0	20.0	21.0	1.0	19.0	20.0	-	-	-	-	-	-	1.0	20.0	21.0
- Weeding	3.1	0.6	3.7	3.1	0.6	3.7	3.1	0.6	3.7	3.1	0.6	3.7	2.5	0.5	3.0
- Spraying	2.4	0.6	3.0	2.4	0.6	3.0	2.4	0.6	3.0	2.4	0.6	3.0	1.6	0.4	2.0
- Fertilizing	2.2	0.2	2.4	2.2	0.2	2.4	2.2	0.2	2.4	2.2	0.2	2.4	1.8	0.2	2.0
- Irrigating/others	4.0	-	4.0	4.0	-	4.0	4.0	-	4.0	4.0	-	4.0	3.0	-	3.0
- Harvesting/threshing	1.4	34.6	36.0	1.5	38.5	40.0	1.4	34.6	36.0	1.5	38.5	40.0	1.0	21.0	22.0
2) Animal Power (animal day/ha)	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1
- Nursery	0.6	-	0.6	0.3	-	0.3	0.6	-	0.6	0.3	-	0.3	0.6	-	0.6
- Land preparation	2.3	0.2	2.5	2.1	0.2	2.3	2.3	0.2	2.5	2.1	0.2	2.3	2.3	0.2	2.5
3) Mechanical Power (machine hour/ha)	12.0	12.3	24.3	14.0	14.8	28.8	12.0	12.3	24.3	14.0	14.8	28.8	12.0	12.0	24.0
- Nursery	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0
- Land preparation	11.0	7.0	18.0	13.0	9.0	22.0	11.0	7.0	18.0	13.0	9.0	22.0	11.0	7.0	18.0
- Threshing	-	5.3	5.3	-	5.8	5.8	-	5.3	5.3	-	5.8	5.8	-	5.0	5.0

/1: Family labor /2: Hired labor /3: Seeding in case of direct seeding

Table 5.29 LABOR, ANIMAL POWER AND MECHANICAL POWER REQUIREMENTS (WITH PROJECT)

Requirements	Irrigated - Transplanting					Irrigated - Direct Seeding					Rainfed - Transplanting				
	Wet Season Paddy		Dry Season Paddy		Total	Wet Season Paddy		Dry Season Paddy		Total	Wet Season Paddy		H	Total	
	F/1	H/2	F	H	Total	F	H	Total	F	H	Total	F	H	Total	
1) Labor Force (man-day/ha)	23.3	64.7	88.0	23.1	69.9	93.0	22.3	44.7	67.0	22.1	50.9	73.0	15.9	44.7	60.0
- Land preparation	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0	3.0	2.0	5.0
- Nursery preparation/3	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0	2.0	-	2.0
- Transplanting	1.0	20.0	21.0	1.0	19.0	20.0	-	-	-	-	-	-	1.0	20.0	21.0
- Weeding	4.2	0.8	5.0	4.0	1.0	5.0	4.2	0.8	5.0	4.0	1.0	5.0	2.5	0.5	3.0
- Spraying	2.4	0.6	3.0	2.4	0.6	3.0	2.4	0.6	3.0	2.4	0.6	3.0	1.6	0.4	2.0
- Fertilizing	2.7	0.3	3.0	2.7	0.3	3.0	2.7	0.3	3.0	2.7	0.3	3.0	1.8	0.2	2.0
- Irrigating/ others	6.0	-	6.0	6.0	-	6.0	6.0	-	6.0	6.0	-	6.0	3.0	-	3.0
- Harvesting/ threshing	2.0	41.0	43.0	2.0	47.0	49.0	2.0	41.0	43.0	2.0	47.0	49.0	1.0	21.0	22.0
2) Animal Power (animal day/ha)	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1	2.4	0.2	2.6	2.9	0.2	3.1
- Nursery	0.6	-	0.6	0.3	-	0.3	0.6	-	0.6	0.3	-	0.3	0.6	-	0.6
- Land preparation	2.3	0.2	2.5	2.1	0.2	2.3	2.3	0.2	2.5	2.1	0.2	2.3	2.3	0.2	2.5
3) Mechanical Power (machine hour/ha)	12.0	13.0	25.0	14.0	16.0	30.0	12.0	13.0	25.0	14.0	16.0	30.0	12.0	12.0	24.0
- Nursery	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0	1.0	-	1.0
- Land preparation	11.0	7.0	18.0	13.0	9.0	22.0	11.0	7.0	18.0	13.0	9.0	22.0	11.0	7.0	18.0
- Threshing	-	6.0	6.0	-	7.0	7.0	-	6.0	6.0	-	7.0	7.0	-	5.0	5.0

/1: Family labor /2: Hired labor /3: Seeding in case of direct seeding

Table 5.30 MONTHLY LABOR REQUIREMENT IN THE IRRIGATION SERVICE AREA
- PRESENT CONDITION -

(Unit: 1,000 man-days)

Item	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
A) Labor Force Available/1	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	33,000
B) Labor Requirement for Farming at Present Condition	693	550	535	1,228	1,183	1,253	1,032	1,248	823	629	1,613	1,849	12,636
1) Rainfed paddy field (19,400 ha)	18	0	0	0	0	48	210	255	167	88	192	186	1,164
2) Irrigated paddy field													
- Double cropping (84,900 ha)	665	550	535	1,228	1,183	1,187	760	920	607	499	1,317	1,561	11,012
- Single cropping (6,900 ha)	10	0	0	0	0	18	62	73	49	42	104	102	460
C) Balance (A - B)	2,057	2,200	2,215	1,522	1,567	1,497	1,718	1,502	1,927	2,121	1,137	901	20,364

/1: Except following factors, labor force available is estimated as Table 5.3.

- Number of farm household (55,600)
- Number of landless laborer household (41,600)

Table 5.31 MONTHLY LABOR REQUIREMENT IN THE IRRIGATION SERVICE AREA
- WITH PROJECT -

(Unit: 1,000 man-days)

Item	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
A) Labor Force Available/1	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	33,000
B) Labor Requirement for Farming with Project	689	671	3,240	1,906	415	1,445	1,372	645	1,156	3,250	1,695	1,038	17,522
1) Rainfed paddy field/2 (4,400 ha)	4	0	0	0	0	11	48	58	38	20	43	42	264
2) Irrigated paddy field													
- Double cropping (103,600 ha)	662	612	3,069	1,906	406	1,393	1,281	569	1,093	3,118	1,580	960	16,649
- Single cropping (7,600 ha)	23	59	171	0	9	41	43	18	25	112	72	36	609
C) Balance (A - B)	2,061	2,079	-490	844	2,335	1,305	1,378	2,105	1,594	-500	1,055	1,712	15,478

/1: Except following factors, labor force available is estimated as Table 5.3.

- Number of farm household (55,600)

- Number of landless laborer household (41,600)

/2: Rainfed paddy field is cultivated in dry season under irrigation.

Table 5.32 NET RETURN PER HECTARE FOR TRANSPLANTING-PADDY ON IRRIGATED LAND IN WET SEASON WITH PROJECT CONDITION

Item		Value (P)
(I) Gross Income	4.5 t x P2,045/t	9,203
(II) Production Cost		
- Seed	60 kg x P2.6/kg	156
- Fertilizer		
N	83 kg x P9.4/kg	780
P	31 kg x P8.6/kg	267
K	21 kg x P3.6/kg	76
- Agro-chemicals		440
- Labor	88 man-days x P14	1,232
- Animal power	3.1 day x P30	93
- Mechanical power		
for land preparation	19 hr x P26	494
for threshing	6 hr x P30	180
- Miscellaneous		112
Total (II)		3,830
(III) Net Return (I - II)		5,373
		≐ 5,370

Table 5.33 NET RETURN PER HECTARE FOR DIRECT SEEDING-
PADDY ON IRRIGATED LAND IN WET SEASON
WITH PROJECT CONDITION

Item		Value (P)
(I) Gross Income	4.5 t x P2,045/t	9,203
(II) Production Cost		
- Seed	80 kg x P2.6/kg	208
- Fertilizer		
N	83 kg x P9.4/kg	780
P	31 kg x P8.6/kg	267
K	21 kg x P3.6/kg	76
- Agro-chemicals		440
- Labor	67 man-days x P14	938
- Animal power	3.1 day x P30	93
- Mechanical power		
for land preparation	19 hr x P26	494
for threshing	6 hr x P30	180
- Miscellaneous		104
Total (II)		3,580
(III) Net Return (I - II)		5,623
		≐ 5,620

Table 5.34 NET RETURN PER HECTARE FOR TRANSPLANTING-PADDY ON IRRIGATED LAND IN DRY SEASON WITH PROJECT CONDITION

Item		Value (P)
(I) Gross Income	5.2 t x P2,045/t	10,634
(II) Production Cost		
- Seed	60 kg x P2.6/kg	156
- Fertilizer		
N	98 kg x P9.4/kg	921
P	41 kg x P8.6/kg	353
K	21 kg x P3.6/kg	76
- Agro-chemicals		440
- Labor	93 man-days x P14	1,302
- Animal power	2.6 day x P30	78
- Mechanical power		
for land preparation	23 hr x P26	598
for threshing	7 hr x P30	210
- Miscellaneous		124
Total (II)		4,258
(III) Net Return (I - II)		6,376
		≐ 6,380

Table 5.35 NET RETURN PER HECTARE FOR DIRECT SEEDING-
PADDY ON IRRIGATED LAND IN DRY SEASON
WITH PROJECT CONDITION

Item		Value (P)
(I) Gross Income	5.2 t x P2,045/t	10,634
(II) Production Cost		
- Seed	80 kg x P2.6/kg	208
- Fertilizer		
N	98 kg x P9.4/kg	921
P	41 kg x P8.6/kg	353
K	21 kg x P3.6/kg	76
- Agro-chemicals		440
- Labor	73 man-days x P14	1,022
- Animal power	2.6 day x P30	78
- Mechanical power		
for land preparation	23 hr x P26	598
for threshing	7 hr x P30	210
- Miscellaneous		117
Total (II)		4,023
(III) Net Return (I - II)		6,611
		≐ 6,610

Table 5.36 NET RETURN PER HECTARE FOR TRANSPLANTING-
PADDY ON IRRIGATED LAND IN WET SEASON
WITHOUT PROJECT CONDITION

Item		Value (P)
(I) Gross Income	3.8 t x P2,045/t	7,771
(II) Production Cost		
- Seed	100 kg x P2.0/kg	200
- Fertilizer		
N	71 kg x P9.4/kg	667
P	20 kg x P8.6/kg	172
K	7 kg x P3.6/kg	25
- Agro-chemicals		440
- Labor	77.1 man-days x P14	1,079
- Animal power	3.1 day x P30	93
- Mechanical power		
for land preparation	19 hr x P26	494
for threshing	5.3 hr x P30	159
- Miscellaneous		100
Total (II)		3,429
(III) Net Return (I - II)		4,342
		≐ 4,340

Table 5.37 NET RETURN PER HECTARE FOR DIRECT SEEDING-
PADDY ON IRRIGATED LAND IN WET SEASON
WITHOUT PROJECT CONDITION

Item		Value (P)
(I) Gross Income	3.8 t x P2,045/t	7,771
(II) Production Cost		
- Seed	130 kg x P2.0/kg	260
- Fertilizer		
N	71 kg x P9.4/kg	667
P	20 kg x P8.6/kg	172
K	7 kg x P3.6/kg	25
- Agro-chemicals		440
- Labor	56 man-days x P14	784
- Animal power	3.1 day x P30	93
- Mechanical power		
for land preparation	19 hr x P26	494
for threshing	5.3 hr x P30	159
- Miscellaneous		93
Total (II)		3,187
(III) Net Return (I - II)		4,584
		÷ 4,580

Table 5.38 NET RETURN PER HECTARE FOR TRANSPLANTING-PADDY ON IRRIGATED LAND IN DRY SEASON WITHOUT PROJECT CONDITION

Item		Value (P)
(I) Gross Income	4.3 t x P2,045/t	8,794
(II) Production Cost		
- Seed	100 kg x P2.0/kg	200
- Fertilizer		
N	81 kg x P9.4/kg	761
P	20 kg x P8.6/kg	172
K	7 kg x P3.6/kg	25
- Agro-chemicals		440
- Labor	80.1 man-days x P14	1,121
- Animal power	2.6 day x P30	78
- Mechanical power		
for land preparation	23 hr x P26	598
for threshing	5.8 hr x P30	174
- Miscellaneous		107
Total (II)		3,676
(III) Net Return (I - II)		5,118
		≐ 5,120

Table 5.39 NET RETURN PER HECTARE FOR DIRECT SEEDING-
PADDY ON IRRIGATED LAND IN DRY SEASON
WITHOUT PROJECT CONDITION

Item		Value (P)
(I) Gross Income	4.3 t x P2,045/t	8,794
(II) Production Cost		
- Seed	130 kg x P2.0/kg	260
- Fertilizer		
N	81 kg x P9.4/kg	761
P	20 kg x P8.6/kg	172
K	7 kg x P3.6/kg	25
- Agro-chemicals		440
- Labor	60.1 man-days x P14	841
- Animal power	2.6 day x P30	78
- Mechanical power		
for land preparation	23 hr x P26	598
for threshing	5.8 hr x P30	174
- Miscellaneous		100
Total (II)		3,449
(III) Net Return (I - II)		5,345
		≐ 5,350

Table 5.40 NET RETURN PER HECTARE FOR TRANSPLANTING-PADDY ON RAINFED LAND IN WET SEASON WITHOUT PROJECT CONDITION

Item		Value (P)
(I) Gross Income	2.4 t x P2,045/t	4,908
(II) Production Cost		
- Seed	143 kg x P2.0/kg	286
- Fertilizer		
N	25 kg x P9.4/kg	235
P	15 kg x P8.6/kg	129
K	7 kg x P3.6/kg	25
- Agro-chemicals		300
- Labor	60 man-days x P14	840
- Animal power	3.1 day x P30	93
- Mechanical power		
for land preparation	19 hr x P26	494
for threshing	5.0 hr x P30	150
- Miscellaneous		77
Total (II)		2,629
(III) Net Return (I - II)		2,279
		≐ 2,280

Table 5.41 IRRIGATION BENEFIT AT FULL STAGE

Item	With Project			Without Project		
	Area (ha)	Net Return (P/ha)	Total Net Return (x106P)	Area (ha)	Net Return (P/ha)	Total Net Return (x106P)
<u>Irrigated Land</u>						
Wet season	106,800			91,800		
- transplanting-paddy	74,760	5,370	401.46	64,260	4,340	278.89
- direct seeding-paddy	32,040	5,620	180.06	27,540	4,580	126.13
Dry season	108,000			84,900		
- transplanting-paddy	32,400	6,380	206.71	25,470	5,120	130.41
- direct seeding-paddy	75,600	6,610	499.72	59,430	5,350	317.95
<u>Rainfed Land</u>						
Wet season	4,400			19,400		
- transplanting	4,400	2,280	10.03	19,400	2,280	44.23
Total			1,297.98			897.61
						400.37

Table 5.42 FARM BUDGET BY LAND TENURE AND FARM SIZE
(WITHOUT PROJECT)
- IRRIGATED-DOUBLE CROPPING PADDY FARMER -

Item	Owner Operator			Amortizing Owner Operator			Lessee		
	Below 1.0 ha	2.0 ha	Above 3.0 ha	Below 1.0 ha	2.0 ha	Above 3.0 ha	Below 1.0 ha	2.0 ha	Above 3.0 ha
	(0.63)	(1.14)	(2.77)	(0.58)	(1.40)	(2.45)	(0.59)	(1.34)	(2.29)
Average Farm Size (ha)									
I. Gross Income	14,450	21,720	45,430	13,560	33,260	36,580	15,370	23,130	37,210
1) Farm income									
- Paddy	7,450	13,470	32,740	6,860	16,550	28,960	6,970	15,840	27,070
- Others ¹	670	670	440	670	670	440	210	210	110
2) Off and non farm income ²	5,130	5,410	6,990	4,930	3,380	2,520	7,070	4,530	5,680
3) Net proceeds of loan ³	1,200	2,170	5,260	1,100	2,660	4,660	1,120	2,550	4,350
II. Gross Outgo	11,820	16,750	30,700	12,940	19,900	29,200	14,850	21,610	31,550
1) Production cost	2,970	5,380	13,070	2,740	6,610	11,560	2,780	6,320	10,800
- Seed	242	438	1,064	223	538	940	227	515	879
- Fertilizer	746	1,350	3,280	687	1,588	2,501	699	1,587	2,711
- Agro-chemicals	554	1,003	2,438	510	1,232	2,156	519	1,179	2,015
- Hired labor ⁴	234	423	1,028	215	519	909	219	497	850
- Hired animal ⁴	8	14	33	7	17	29	7	16	27
- Hired machine ⁴	302	547	1,330	278	672	1,176	283	643	1,099
- Harvesting and threshing ⁵	745	1,347	3,274	586	1,555	2,896	697	1,584	2,707
- Miscellaneous ⁶	139	258	623	134	319	553	129	299	512
2) Amortizing fee	-	-	-	60	150	270	-	-	-
3) Land rent ⁷	-	-	-	-	-	-	1,110	2,530	4,320
4) Loan repayment	1,340	2,430	5,890	1,230	2,980	5,220	1,250	2,860	4,870
5) Living expenses	7,510	8,940	11,740	8,910	10,160	12,150	9,710	9,900	11,560
III. Net Reserve (capacity to pay)	2,630	4,970	14,730	620	3,360	7,380	520	1,520	5,560

Remarks: Analyzed by financial prices in 1983.

¹: Includes incomes from livestock raising.

²: Includes incomes of wage earning from work at other farm, cottage industry, rent for farm machine, remittance from their family working at other place, etc.

³: Includes loans obtained from Masagana-99, relatives and friends.

⁴: Excludes harvesting and threshing.

⁵: Includes costs of hired labor and hired machine. (10% of farm income of paddy based on the result of socio-economic survey)

⁶: Includes fuel of farm machine, minor farm tools and equipment, etc.

⁷: Land rent per hectare was calculated as follows: $13 \text{ cav.} \times 2 \text{ crop seasons} = 26 \text{ cav./ha} = 1,300 \text{ kg/ha}$

^a: Farm gate price of wet season paddy

^b: Farm gate price of dry season paddy

Source: Results of farm economic survey in 1982 and data of Input and Output Monitoring Survey conducted by NIA in 1981.

Table 5.43 FARM BUDGET BY LAND TENURE AND FARM SIZE
(WITH PROJECT)
- IRRIGATED-DOUBLE CROPPING PADDY FARMER -

Item	(Unit: P)											
	Owner Operator		Amortizing Owner Operator		Lessee							
	Below 1.0 ha	2.0 - 3.0 ha	Below 1.0 ha	2.0 - 3.0 ha	Below 1.0 ha	2.0 - 3.0 ha						
Average Farm Size (ha)	(0.63)	(1.14)	(2.77)	(3.42)	(0.58)	(1.40)	(2.45)	(3.10)	(0.59)	(1.34)	(2.29)	(3.32)
I. Gross Income	15,930	24,400	51,940	65,990	14,920	26,550	42,340	50,840	16,760	26,280	42,590	59,360
1) Farm income												
- Paddy /1	8,930	16,150	39,250	48,460	8,220	19,840	34,720	43,930	8,360	18,990	32,450	47,040
- Others /1	670	670	440	170	670	670	440	170	210	210	110	720
2) Off and non farm income /2	5,130	5,410	6,990	10,860	4,930	3,380	2,520	850	7,070	4,530	5,680	5,290
3) Net proceeds of loan /3	1,200	2,170	5,260	6,500	1,100	2,660	4,660	5,890	1,120	2,550	4,350	6,310
II. Gross Outgo	12,230	17,490	32,510	40,530	13,310	20,810	30,800	34,160	15,240	22,490	33,050	42,400
1) Production cost	3,380	6,120	14,880	18,370	3,110	7,520	13,160	16,650	3,170	7,200	12,300	17,830
- Seed	147	267	648	800	136	328	573	725	138	314	536	777
- Fertilizer	1,078	1,951	4,739	5,852	992	2,395	4,192	5,304	1,009	2,293	3,918	5,681
- Agro-chemicals	554	1,003	2,438	3,010	510	1,232	2,156	2,728	519	1,179	2,015	2,922
- Hired labor /4	241	435	1,058	1,306	222	535	936	1,184	225	512	875	1,268
- Hired animal	8	14	33	41	7	17	29	37	7	16	27	40
- Hired machine /4	302	547	1,330	1,642	278	672	1,176	1,488	283	643	1,099	1,594
- Harvesting and threshing /5	893	1,615	3,925	4,846	822	1,984	3,472	4,393	836	1,899	3,245	4,704
- Miscellaneous /6	157	288	709	873	143	357	626	791	153	344	585	844
2) Amortizing fee	-	-	-	-	60	150	270	340	-	-	-	-
3) Land rent /7	-	-	-	-	-	-	-	-	1,110	2,530	4,320	6,260
4) Loan repayment	1,340	2,430	5,890	7,280	1,230	2,980	5,220	6,600	1,250	2,860	4,870	7,070
5) Living expenses	7,510	8,940	11,740	14,880	8,910	10,160	12,150	10,570	9,710	9,900	11,560	12,240
III. Net Reserve (capacity to pay)	3,700	6,910	19,430	25,460	1,610	5,740	11,540	16,680	1,520	3,790	9,540	15,960

Remarks: Analyzed by financial prices in 1983.

/1: Includes incomes from livestock raising.

/2: Includes incomes of wage earning from work at other farm, cottage industry, rent for farm machine, remittance from their family working at other place, etc.

/3: Includes loans obtained from Masagana-99, relatives and friends. /4: Excludes harvesting and threshing.

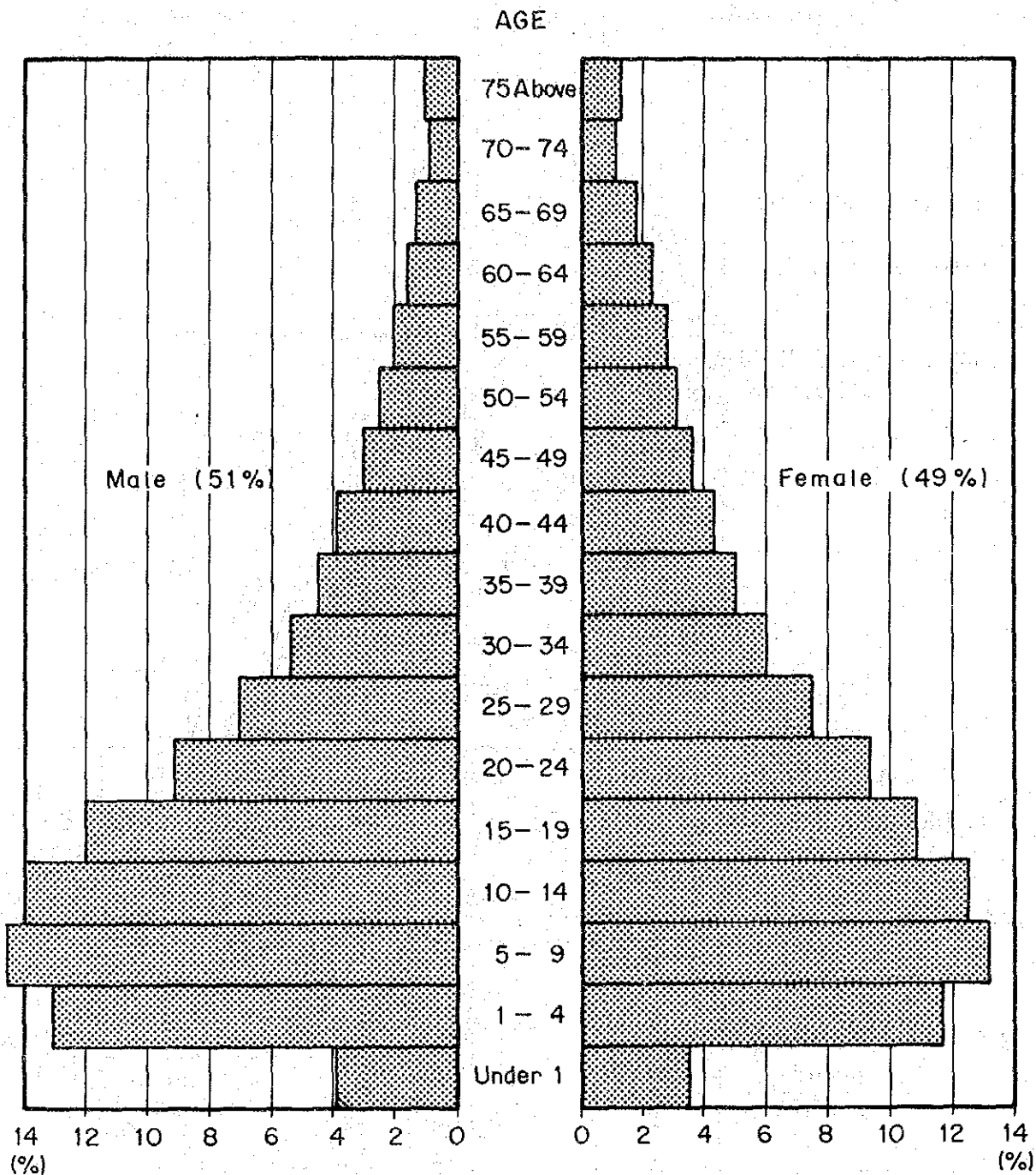
/5: Includes costs of hired labor and hired machine. (10% of farm income of paddy based on the result of socio-economic survey)

/6: Includes fuel of farm machine, minor farm tools and equipment, etc.

/7: Land rent per hectare was calculated as follows: 13 cav. x 2 crop seasons = 26 cav./ha = 1,300 kg/ha
1,300 kg/ha x (P1.3/a + 1.6/a)/2 = 1,885 P/ha
/a: Farm gate price of wet season paddy
/b: Farm gate price of dry season paddy

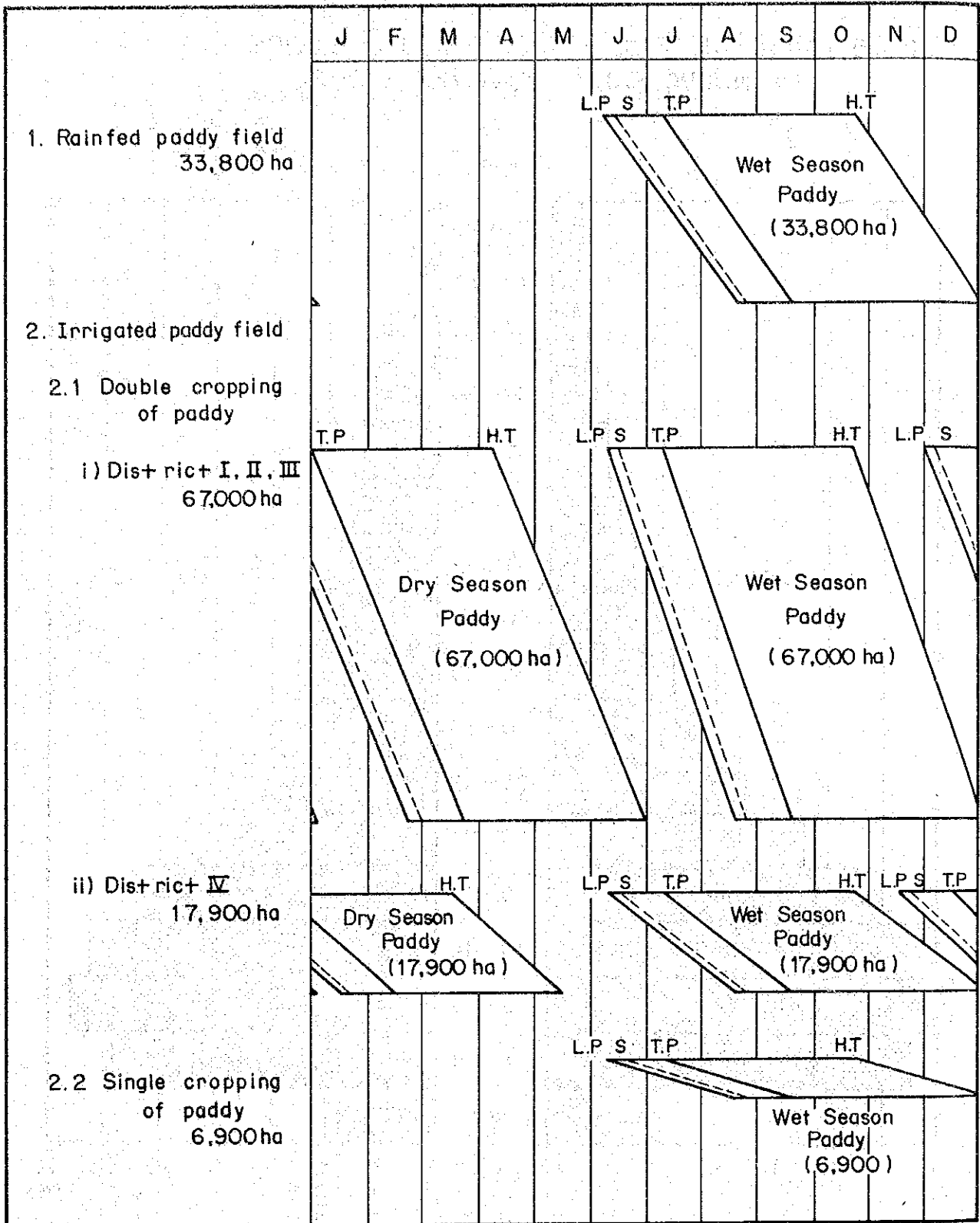
Source: Results of farm economic survey in 1982 and data of Input and Output Monitoring Survey conducted by NIA in 1981.

Fig. 5.1 AGE DISTRIBUTION OF THE POPULATION
IN NUEVA ECIJA PROVINCE (1980)



Source : National Census and Statistics, 1980 (NCSO)

Fig. 5.2 PRESENT CROPPING PATTERN



L.P : Land Preparation
T.P : Transplanting

S : Seeding
H.T : Harvesting and Threshing

Fig. 5.3 UNIT YIELD OF PADDY

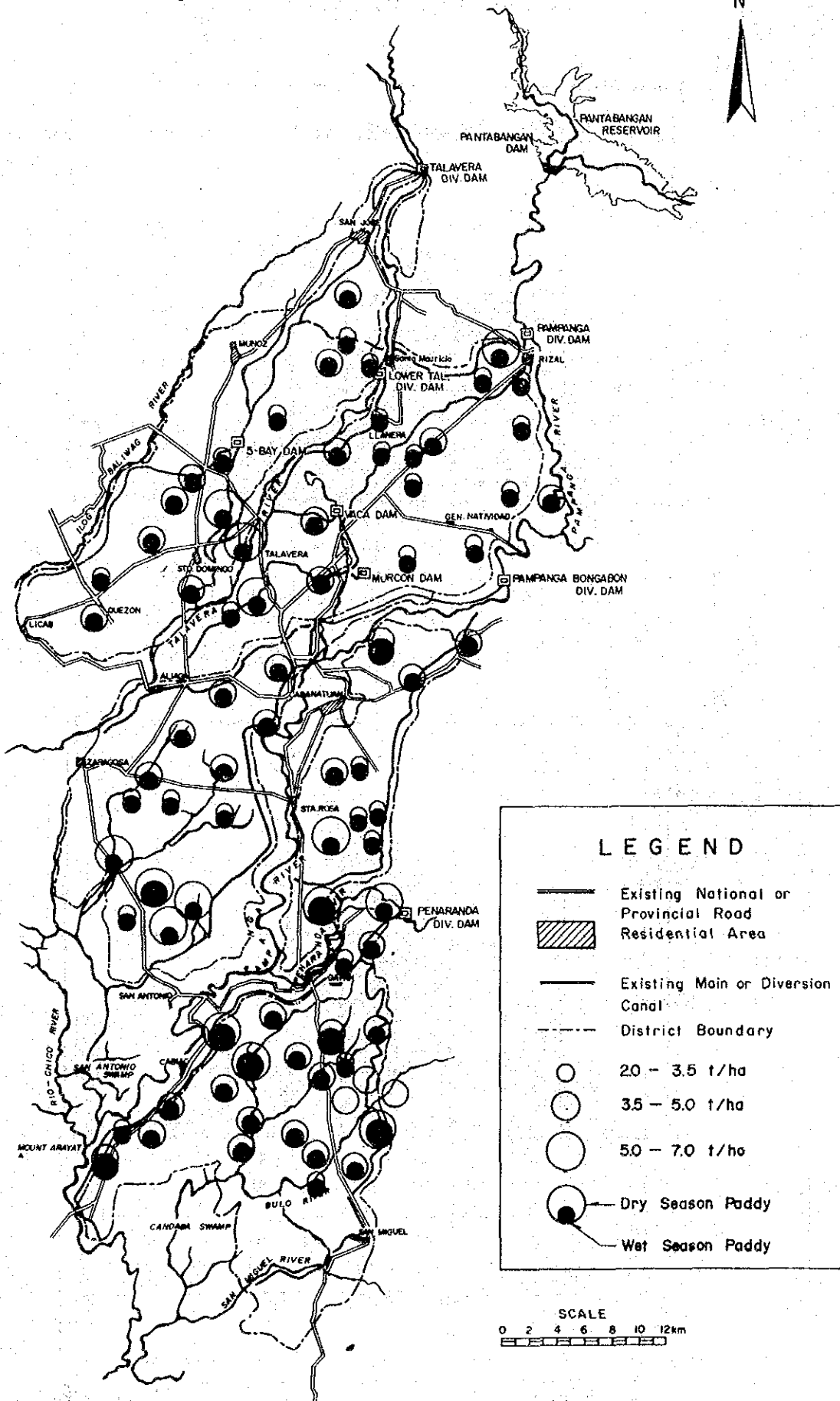


Fig. 5.4 FRAGMENTATION OF FARM SIZE
IN THE PROJECT AREA

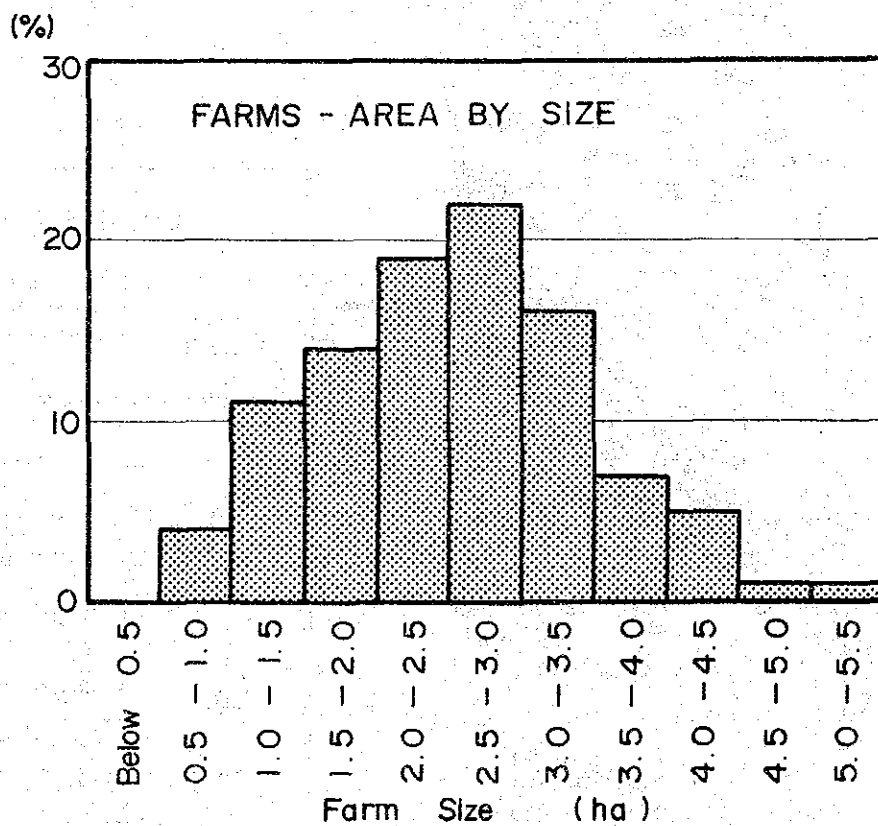
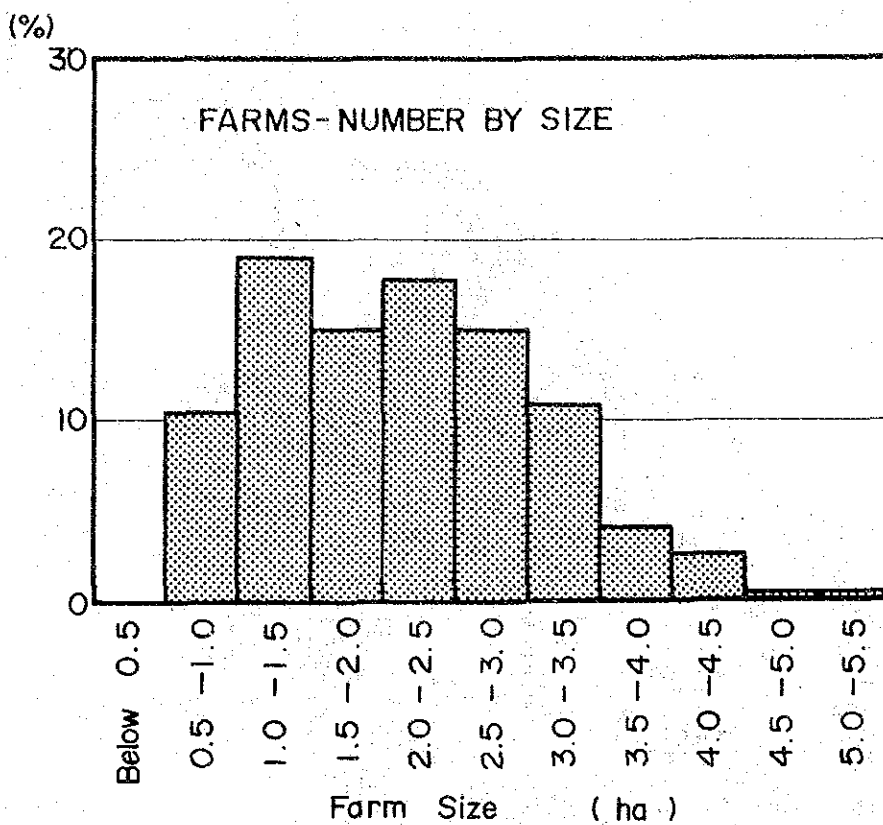
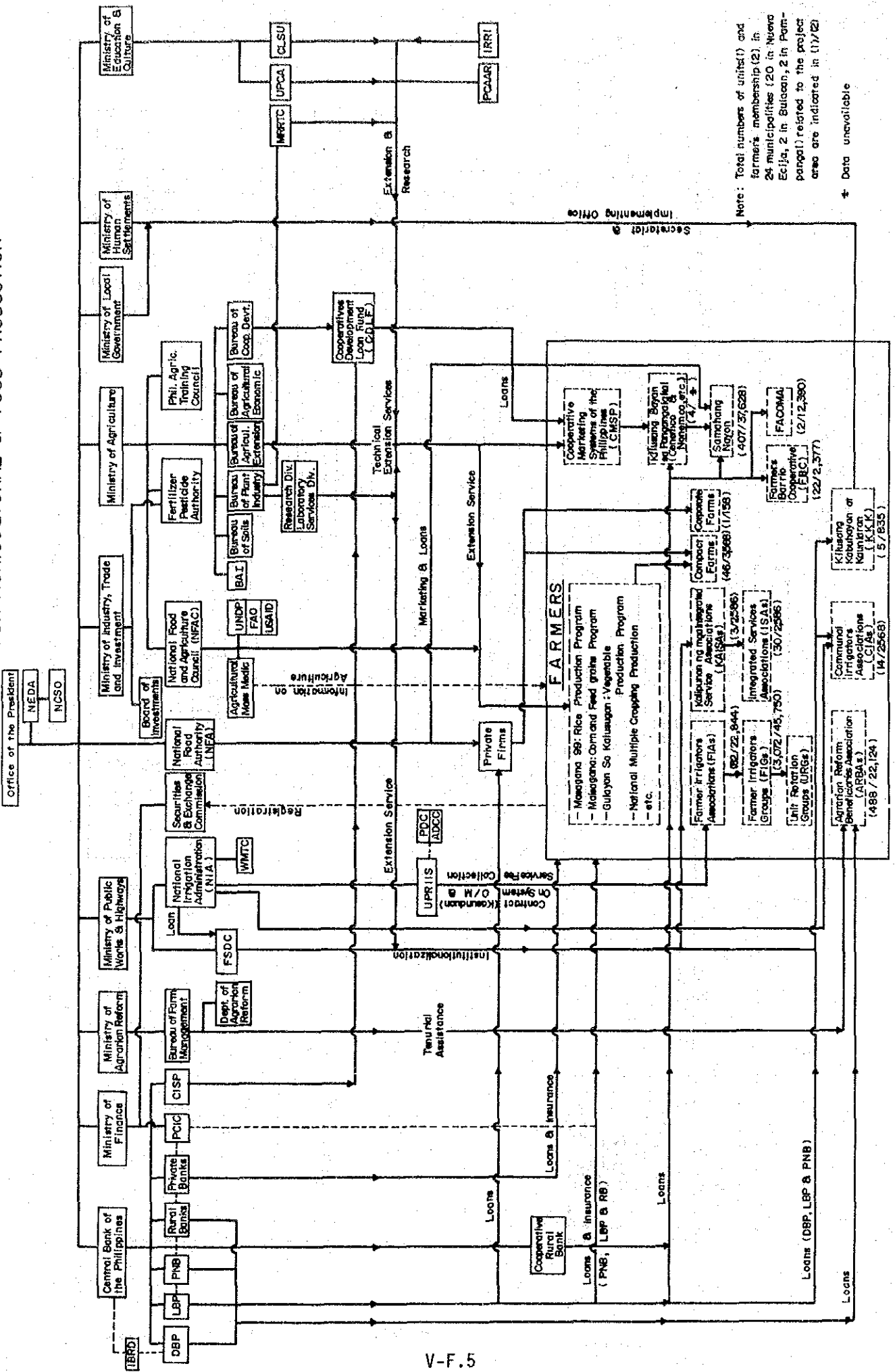


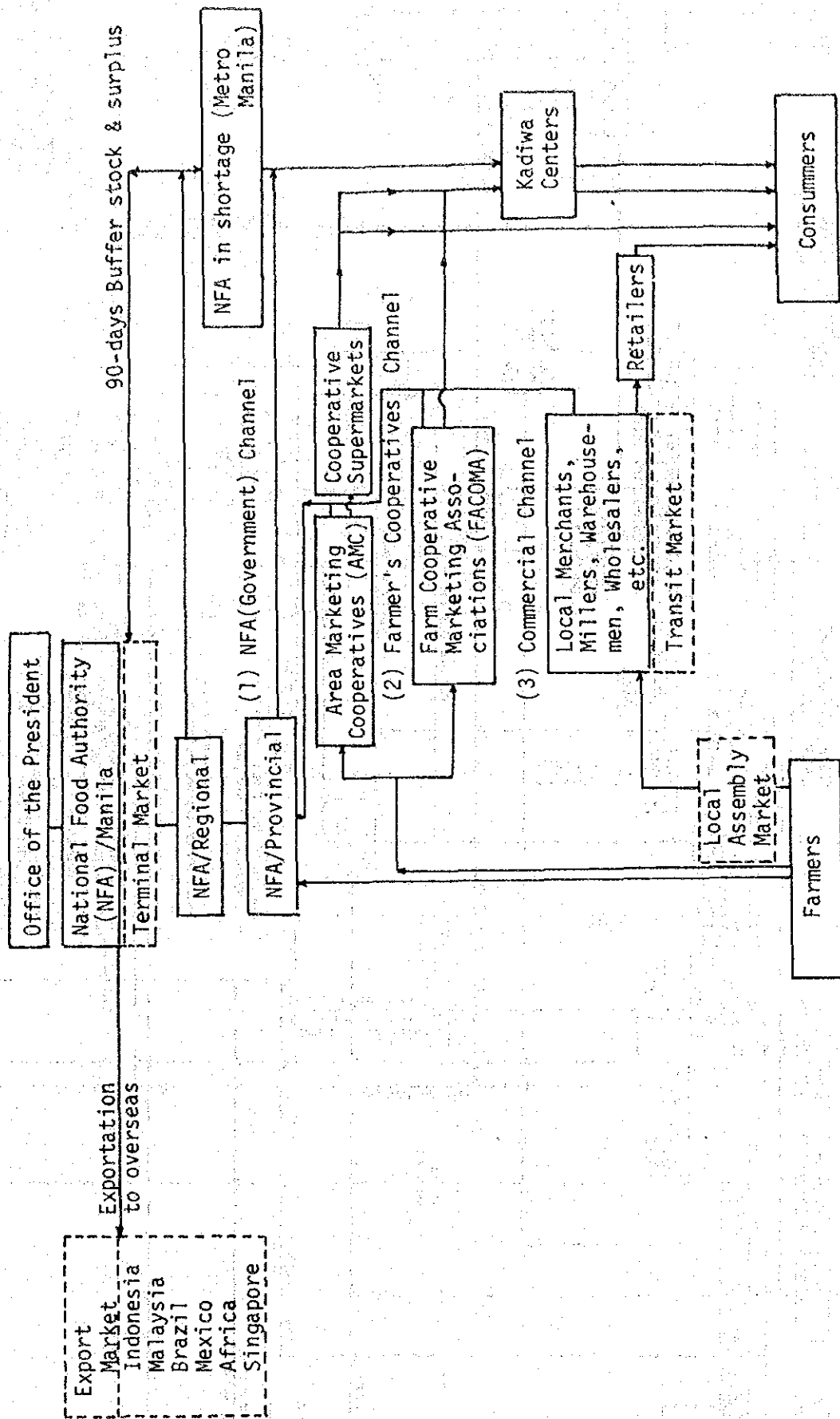
FIG. 5.5 OVERALL DEVELOPMENT ORGANIZATION FOR AGRICULTURAL & FOOD PRODUCTION



Note: Total numbers of units(1) and farmers' membership (2) in 24 municipalities (20 in Nueva Ecija, 2 in Bulacan, 2 in Pangasinan) related to the project area are indicated in (1)/(2)

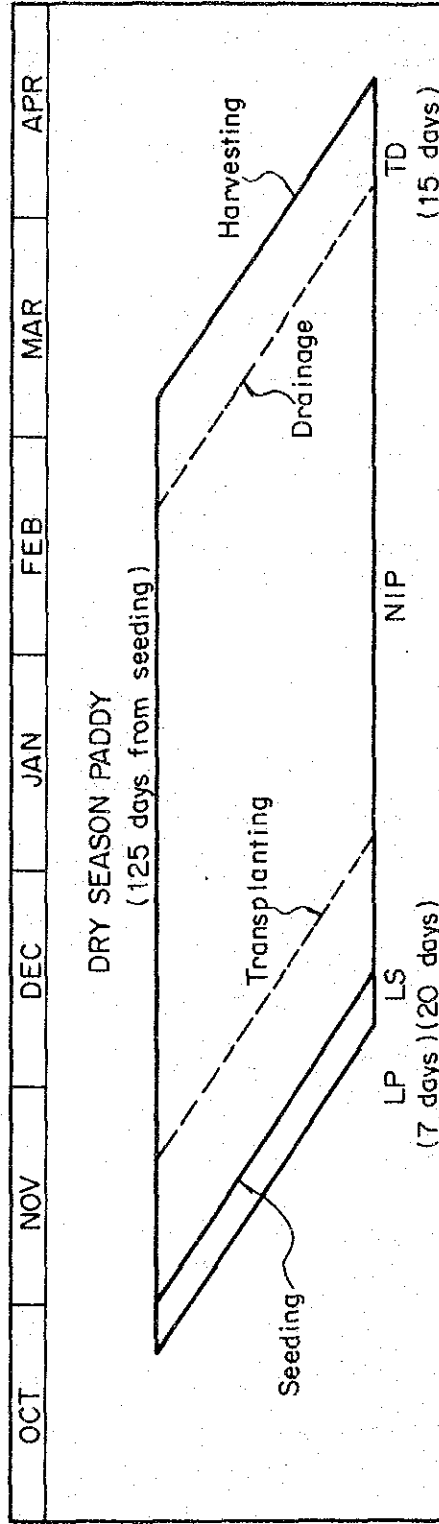
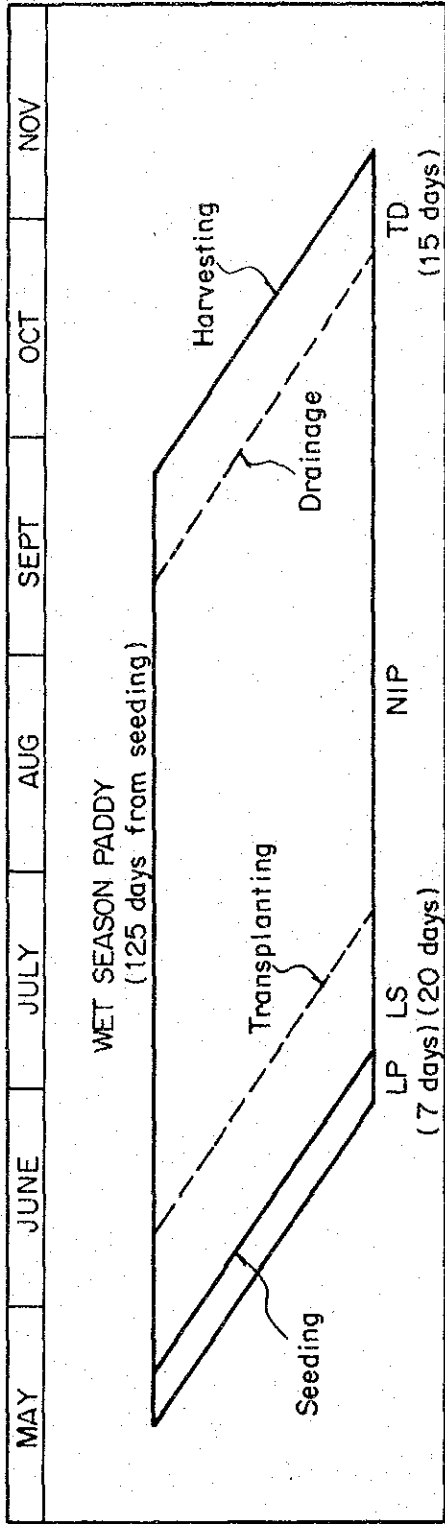
* Data unavailable

Fig. 5.6 MARKETING FLOW CHART OF RICE (OR PADDY)



Source: National Food Authority, Statistics Department, Manila

Fig. 5.7 PROPOSED CROPPING PATTERN (DISTRICT I, II, III)



LP : Land Preparation, NIP : Normal Irrigation Period
 LS : Land Soaking TD : Terminal Drainage

Note : Seeding in District IV is started 15 days before commencement of seeding in other District.

