

**THE FEASIBILITY STUDY ON
THE WESTERN LEGAZPI IRRIGATION AND
RURAL DEVELOPMENT PROJECT IN THE PHILIPPINES**

TABLES

Table F.2.1 Basic Economic Indicators in the Philippines

Indicator	Unit		1990	1991	1992	1993	1994	Growth Rate (1990-94, %/year)
Population	Thousand	(1980)						
Philippine	Actual	48,098	60,703				(1980-90)	2.35
	Projected		62,049	63,692	65,339	66,982	68,624	2.55
Region V	Actual	3,477	3,910					
	Projected		3,995	4,094	4,193	4,292	4,391	2.39
Albay	Actual	809	903					
	Projected							
Gross Domestic Product	Million Pesos							
At Current Prices								
Philippine			1,077,237	1,248,011	1,351,559	1,474,458	1,687,704	-
Region V			31,927	36,201	39,616	44,479	50,705	-
AT Constant 1985 Prices								
Philippine	Total		720,692	716,522	718,942	734,155	765,692	1.53
	Agriculture		160,734	162,937	163,571	167,053	171,240	1.60
	Industry		255,549	248,719	247,385	251,460	266,687	1.07
	Service		304,409	304,866	307,986	315,642	327,765	1.87
Region V	Total		21,687	21,733	21,902	22,503	23,353	1.87
	Agriculture		8,567	8,797	8,557	8,647	8,853	0.82
	Industry		4,422	4,236	4,568	4,748	5,072	3.49
	Service		8,698	8,700	8,777	9,108	9,428	2.04
Gross National Product/Philippines	Million Pesos							
At Current Prices			1,082,557	1,266,070	1,385,562	1,519,229	1,751,963	-
AT Constant 1985 Prices			724,386	726,819	737,139	756,293	795,017	2.35
Per Capita GDP	Pesos							
At Current Prices			17,361	19,594	20,685	22,013	24,593	9.10
AT Constant 1985 Prices			11,615	11,250	11,003	10,960	11,158	-1.00
Per Capita GNP	Pesos							
At Current Prices			17,447	19,878	21,206	22,681	25,530	9.98
AT Constant 1985 Prices			11,674	11,411	11,282	11,291	11,585	-0.19
Inflation Rate	%		14.2	18.7	8.9	7.6	9.0	(Average) (11.7)
Unemployment Rate	%		8.1	9.0	8.6	8.9	8.4	(8.6)
Gross Savings as ratio to GNP	%		18.6	18.3	19.0	18.0	20.0	(18.8)

Source : NSCB, NSO, Central Bank

Table F.2.2 Poverty Threshold and Poverty Incidence

Item	Unit	Region V			Philippine		
		Rural	Urban	Total	Rural	Urban	Total
Annual Per Capita Poverty Threshold							
1985	Pesos	3,372	3,676	3,434	3,353	4,365	3,744
1988		3,756	5,625	4,144	4,094	5,893	4,777
1991		5,695	7,978	6,385	6,276	8,327	7,302
1994*		8,313	8,673	8,421	8,035	9,910	8,969
Annual Per Capita Food Threshold							
1985	Pesos	-	-	2,401	-	-	2,609
1988		-	-	2,926	-	-	3,188
1991		4,024	5,377	4,433	4,402	5,454	4,928
1994*		5,764	5,924	5,812	5,569	6,478	6,022
Incidence of Poor Families							
1985	%	65.3	42.1	60.5	50.7	33.6	44.4
1988		55.9	49.3	54.5	46.3	30.1	40.2
1991		52.8	60.0	55.0	48.6	31.1	39.9
1994*		60.5	39.8	54.2	47.1	24.2	35.7
Incidence of Population							
1985	%	72.0	49.9	67.6	56.4	37.9	49.3
1988		63.6	52.7	61.4	52.3	34.3	45.5
1991		60.0	64.5	61.3	55.1	35.6	45.3
1994*		66.5	46.0	60.4	53.7	28.8	41.3
Subsistence Incidence of Families							
1985	%	-	-	<u>37.4</u>	-	-	24.4
1988		-	-	<u>31.5</u>	-	-	20.3
1991		28.8	37.9	31.6	26.4	14.3	20.4
1994*		37.0	20.1	31.9	25.7	10.6	18.2

Note: * ; Preliminary

Annual Per Capita Poverty Threshold ; The annual per capita income required or the amount to be spent to satisfy nutritional requirements and other basic needs.

Annual Per Capita Food Threshold ; The annual per capita income required or the amount spent to satisfy nutritional requirements.

Incidence of Poor Families ; The proportion of poor families to total number of families

Incidence of Poor Population ; The proportion of poor population to total population

Subsistence Incidence ; The proportion of families with annual per capita incomes falling below the annual per capita food threshold.

Source : National Statistical Coordination Board

Table F.3.1 Demography in the Study Area, 1970, 1980 and 1990 (1/2)

Municipality / Barangay	Area (ha)	Population			Population Density (Person/ha)		
		1970	1980	1990	1970	1980	1990
Camalig							
C-1 Quirangay	651	1,311	1,784	1,955	2.0	2.7	3.0
C-2 Salugan	105	742	838	1,281	7.1	8.0	12.2
C-3 Gapo	88	660	893	1,135	7.5	10.1	12.9
C-4 Poblacion	36	3,200	3,326	3,590	88.9	92.4	99.7
C-5 Tinago	65	652	979	1,198	10.0	15.1	18.4
C-6 Ilawod	187	1,602	2,142	2,488	8.6	11.5	13.3
C-7 Libod	327	1,276	1,735	2,272	3.9	5.3	6.9
C-8 Ligban	91	515	492	584	5.7	5.4	6.4
C-9 Tagaytay	387	1,511	1,659	1,946	3.9	4.3	5.0
C-10 Gotob	91	384	398	458	4.2	4.4	5.0
C-11 Baligang	347	2,197	2,223	2,662	6.3	6.4	7.7
C-12 Tagoytoy	127	553	587	573	4.4	4.6	4.5
C-13 Taladong	203	1,020	1,102	1,040	5.0	5.4	5.1
C-14 Binitayan	69	300	361	398	4.3	5.2	5.8
C-15 Comun	157	869	1,011	1,124	5.5	6.4	7.2
C-16 Bongabong	316	721	947	763	2.3	3.0	2.4
C-17 Cotmon	595	1,860	1,867	2,136	3.1	3.1	3.6
C-18 Del Rosario	246	891	894	816	3.6	3.6	3.3
C-19 Panoytoy	455	1,108	1,201	1,038	2.4	2.6	2.3
C-20 Magogon	240	577	652	543	2.4	2.7	2.3
Study Area/Camalig	4,783	21,949	25,091	28,000	4.6	5.2	5.9
Camalig Municipality	13,090	38,946	46,823	49,961	3.0	3.6	3.8
Daraga							
D-1 Inarado	682	968	1,193	1,392	1.4	1.7	2.0
D-2 Gapo	389	1,240	1,521	1,579	3.2	3.9	4.1
D-3 De La Paz	73	444	482	508	6.1	6.6	7.0
D-4 Dinoronan	61	368	386	323	6.0	6.3	5.3
D-5 Peña Francia	194	992	1,297	1,509	5.1	6.7	7.8
D-6 Aloba	161	439	587	568	2.7	3.6	3.5
D-7 Tabon-Tabon	208	827	1,056	1,227	4.0	5.1	5.9
D-8 Gabawan	93	871	1,215	1,227	9.4	13.1	13.2
D-9 Mabini	124	443	612	500	3.6	4.9	4.0
D-10 Kinawitan	79	462	421	430	5.8	5.3	5.4
D-11 Burgos	149	729	829	837	4.9	5.6	5.6
D-12 Bascaran	424	1,608	2,246	2,511	3.8	5.3	5.9
D-13 Talahib	432	683	730	587	1.6	1.7	1.4
D-14 Namantao	363	915	1,110	1,149	2.5	3.1	3.2
D-15 San Vicente Pequeño	64	1,031	192	192	16.1	3.0	3.0
D-16 Maopi	253	697	875	836	2.8	3.5	3.3
D-17 Anislag	659	2,218	2,813	2,807	3.4	4.3	4.3
D-18 Canarom	247	543	587	490	2.2	2.4	2.0
D-19 San Ramon	785	1,363	1,363	1,346	1.7	1.7	1.7
D-20 Mayon	357	850	992	1,108	2.4	2.8	3.1
D-21 San Rafael	33	217	307	275	6.6	9.3	8.3
Study Area/Daraga	5,830	17,908	20,814	21,401	3.1	3.6	3.7
Daraga Municipality	11,860	58,335	73,153	83,603	4.9	6.2	7.0
Study Area/Total	10,613	39,857	45,905	49,401	3.8	4.3	4.7
Camalig/Daraga	24,950	97,281	119,976	133,564	3.9	4.8	5.4

Source : NSO

Table F.3.1 Demography in the Study Area, 1970, 1980 and 1990 (2/2)

Municipality / Barangay	Population Growth (%/year)			Household		Family Size	
	1970-90	1970-80	1980-90	1980	1990	1980	1990
Camalig							
C-1 Quirangay	2.02	3.13	0.92	328	362	5.4	5.4
C-2 Salugan	2.77	1.22	4.34	150	223	5.6	5.7
C-3 Gapo	2.75	3.07	2.43	164	233	5.4	4.9
C-4 Poblacion	0.58	0.39	0.77	564	640	5.9	5.6
C-5 Tinago	3.09	4.15	2.04	160	213	6.1	5.6
C-6 Ilawod	2.23	2.95	1.51	393	470	5.5	5.3
C-7 Libod	2.93	3.12	2.73	295	376	5.9	6.0
C-8 Ligban	0.63	-0.46	1.73	80	114	6.2	5.1
C-9 Tagaytay	1.27	0.94	1.61	289	367	5.7	5.3
C-10 Golob	0.89	0.36	1.41	73	89	5.5	5.1
C-11 Baligang	0.96	0.12	1.82	402	469	5.5	5.7
C-12 Tagoytoy	0.18	0.60	-0.24	116	110	5.1	5.2
C-13 Taladong	0.10	0.78	-0.58	201	214	5.5	4.9
C-14 Binitayan	1.42	1.87	0.98	65	71	5.6	5.6
C-15 Comun	1.29	1.53	1.07	176	213	5.7	5.3
C-16 Bongabong	0.28	2.76	-2.14	147	122	6.4	6.3
C-17 Cotmon	0.69	0.04	1.36	371	410	5.0	5.2
C-18 Del Rosario	-0.44	0.03	-0.91	172	165	5.2	4.9
C-19 Panoytoy	-0.33	0.81	-1.45	217	211	5.5	4.9
C-20 Magogon	-0.30	1.23	-1.81	110	97	5.9	5.6
Study Area/Camalig	1.22	1.35	1.10	4,473	5,169	5.6	5.4
Camalig Municipality	1.25	1.86	0.65	8,261	9,216	5.7	5.4
Daraga							
D-1 Inarado	1.83	2.11	1.55	232	278	5.1	5.0
D-2 Gapo	1.22	2.06	0.37	292	315	5.2	5.0
D-3 De La Paz	0.68	0.82	0.53	97	103	5.0	4.9
D-4 Dinoronan	-0.65	0.48	-1.77	76	72	5.1	4.5
D-5 Peña Francia	2.12	2.72	1.53	221	241	5.9	6.3
D-6 Alobo	1.30	2.95	-0.33	122	101	4.8	5.6
D-7 Tabon-Tabon	1.99	2.47	1.51	191	241	5.5	5.1
D-8 Gabawan	1.73	3.38	0.10	213	225	5.7	5.5
D-9 Mabini	0.61	3.28	-2.00	114	105	5.4	4.8
D-10 Kinawitan	-0.36	-0.93	0.21	82	94	5.1	4.6
D-11 Burgos	0.69	1.29	0.10	153	161	5.4	5.2
D-12 Bascaran	2.25	3.40	1.12	419	489	5.4	5.1
D-13 Talahib	-0.75	0.67	-2.16	149	114	4.9	5.1
D-14 Namantao	1.15	1.95	0.35	198	212	5.6	5.4
D-15 San Vicente Pequeño	-8.06	-15.47	0.00	34	39	5.6	4.9
D-16 Maopi	0.91	2.30	-0.45	162	168	5.4	5.0
D-17 Anislag	1.18	2.40	-0.02	493	521	5.7	5.4
D-18 Canarom	-0.51	0.78	-1.79	102	88	5.8	5.6
D-19 San Ramon	-0.06	0.00	-0.13	246	261	5.5	5.2
D-20 Mayon	1.33	1.56	1.11	185	198	5.4	5.6
D-21 San Rafael	1.19	3.53	-1.09	54	48	5.7	5.7
Study Area/Daraga	0.89	1.52	0.28	3,835	4,074	5.4	5.3
Daraga Municipality	1.82	2.29	1.34	12,948	15,551	5.6	5.4
Study Area/Total	1.08	1.42	0.74	8,308	9,243	5.5	5.3
Camalig/Daraga	1.60	2.12	1.08	21,209	24,767	5.7	5.4

Source : NSO

Table F.3.2 Demographic Estimation in the Study Area, 1995

Municipality / Barangay	Area (ha)	Population	Population		Household		Population
		Growth (%/year) 1980-90	Actual 1990	Estimated 1995	Actual 1990	Estimated 1995	Density/1995 (Person/ha)
Camalig							
C-1 Quirangay	651	0.92	1,955	2,047	362	379	3.1
C-2 Salugan	105	4.34	1,281	1,584	223	278	15.1
C-3 Gapo	88	2.43	1,135	1,280	233	261	14.5
C-4 Poblacion	36	0.77	3,590	3,730	640	666	103.6
C-5 Tinago	65	2.04	1,198	1,325	213	237	20.4
C-6 Hawod	187	1.51	2,488	2,682	470	506	14.3
C-7 Libod	327	2.73	2,272	2,600	376	433	8.0
C-8 Ligban	91	1.73	584	636	114	125	7.0
C-9 Tagaytay	387	1.61	1,946	2,108	367	398	5.4
C-10 Gotob	91	1.41	458	491	89	96	5.4
C-11 Baligang	347	1.82	2,662	2,913	469	511	8.4
C-12 Tagoytoy	127	-0.24	573	566	110	109	4.5
C-13 Taladong	203	-0.58	1,040	1,010	214	206	5.0
C-14 Binitayan	69	0.98	398	418	71	75	6.1
C-15 Comun	157	1.07	1,124	1,185	213	224	7.5
C-16 Bongabong	316	-2.14	763	685	122	109	2.2
C-17 Cotmon	595	1.36	2,136	2,285	410	439	3.8
C-18 Del Rosario	246	-0.91	816	780	165	159	3.2
C-19 Panoytoy	455	-1.45	1,038	965	211	197	2.1
C-20 Magogon	240	-1.81	543	496	97	89	2.1
Study Area/Camalig	4,783	1.10	28,000	29,786 *	5,169	5,497 *	6.2
Camalig Municipality	13,090	0.65	49,961	51,606	9,216	9,557	3.9
Daraga							
D-1 Inarado	682	1.55	1,392	1,503	278	301	2.2
D-2 Gapo	389	0.37	1,579	1,608	315	322	4.1
D-3 De La Paz	73	0.53	508	522	103	107	7.2
D-4 Dinoronan	61	-1.77	323	295	72	66	4.8
D-5 Peña Francia	194	1.53	1,509	1,628	241	258	8.4
D-6 Aloba	161	-0.33	568	559	101	100	3.5
D-7 Tabon-Tabon	208	1.51	1,227	1,322	241	259	6.4
D-8 Gabawan	93	0.10	1,227	1,233	225	224	13.3
D-9 Mabini	124	-2.00	500	452	105	94	3.6
D-10 Kinawitan	79	0.21	430	435	94	95	5.5
D-11 Burgos	149	0.10	837	841	161	162	5.6
D-12 Bascaran	424	1.12	2,511	2,655	489	521	6.3
D-13 Talahib	432	-2.16	587	526	114	103	1.2
D-14 Namantao	363	0.35	1,149	1,169	212	216	3.2
D-15 San Vicente Pequeño	64	0.00	192	192	39	39	3.0
D-16 Maopi	253	-0.45	836	817	168	163	3.2
D-17 Anislag	659	-0.02	2,807	2,804	521	519	4.3
D-18 Canarom	247	-1.79	490	448	88	80	1.8
D-19 San Ramon	785	-0.13	1,346	1,337	261	257	1.7
D-20 Mayon	357	1.11	1,108	1,171	198	209	3.3
D-21 San Rafael	33	-1.09	275	260	48	46	7.9
Study Area/Daraga	5,830	0.28	21,401	21,777 *	4,074	4,141 *	3.7
Daraga Municipality	11,860	1.34	83,603	89,357	15,551	16,548	7.5
Study Area/Total	10,613	0.74	49,401	51,563 *	9,243	9,638 *	4.9
Camalig/Daraga	24,950	1.08	133,564	140,963	24,767	26,105	5.6

* ; Total of the respective barangays

Table F.3.3 Illiterate Population in the Study Area

Area/Barangay	Above 10 Years Old			Above 20 Years Old		
	Total Population	Illiterate Population Number	%	Total Population	Illiterate Population Number	%
Total Camalig Study Area	20,359	698	3.4	13,433	531	4.0
C-1 Quirangay	1,392	26	1.9	889	23	2.6
C-2 Salugan	880	47	5.3	561	42	7.5
C-3 Gapo	828	12	1.4	583	12	2.1
C-4 Poblacion	2,837	51	1.8	1,971	38	1.9
C-5 Tinago	831	54	6.5	521	46	8.8
C-6 Ilawod	1,860	33	1.8	1,230	23	1.9
C-7 Libod	1,587	80	5.0	1,030	48	4.7
C-8 Ligban	444	10	2.3	318	9	2.8
C-9 Tagaytay	1,371	21	1.5	918	17	1.9
C-10 Gotob	311	18	5.8	210	5	2.4
C-11 Baligang	1,951	72	3.7	1,277	63	4.9
C-12 Tagoytoy	379	5	1.3	249	3	1.2
C-13 Taladong	745	59	7.9	485	46	9.5
C-14 Binitayan	293	4	1.4	183	3	1.6
C-15 Comun	842	26	3.1	560	23	4.1
C-16 Bongabong	537	4	0.7	324	3	0.9
C-17 Cotmon	1,494	47	3.1	987	42	4.3
C-18 Del Rosario	629	56	8.9	405	46	11.4
C-19 Panoytoy	742	60	8.1	473	29	6.1
C-20 Magogon	406	13	3.2	259	10	3.9
Total Daraga Study Area	15,277	875	5.7	10,014	629	6.3
D-1 Inarado	966	33	3.4	649	31	4.8
D-2 Gapo	1,117	25	2.2	752	19	2.5
D-3 De La Paz	359	7	1.9	247	7	2.8
D-4 Dinoronan	247	11	4.5	160	8	5.0
D-5 Peña Francia	1,092	64	5.9	676	47	7.0
D-6 Aobo	418	18	4.3	273	13	4.8
D-7 Tabon-Tabon	868	36	4.1	583	33	5.7
D-8 Gabawan	845	51	6.0	550	39	7.1
D-9 Mabini	361	34	9.4	253	25	9.9
D-10 Kinawitan	312	16	5.1	237	12	5.1
D-11 Burgos	606	99	16.3	415	76	18.3
D-12 Bascaran	1,829	71	3.9	1,158	53	4.6
D-13 Talahib	389	80	20.6	256	49	19.1
D-14 Namantao	811	39	4.8	547	31	5.7
D-15 San Vicente Pequeño	143	1	0.7	91	1	1.1
D-16 Maopi	596	15	2.5	384	13	3.4
D-17 Anistag	2,029	182	9.0	1,309	117	8.9
D-18 Canarom	353	9	2.5	228	6	2.6
D-19 San Ramon	954	27	2.8	622	16	2.6
D-20 Mayon	781	41	5.2	488	25	5.1
D-21 San Rafael	201	16	8.0	136	8	5.9
Total Study Area	35,636	1,573	4.4	23,447	1,160	4.9

Source : NSO, 1990

Table F.3.4 Educational Attainment by Age Group in the Study Area

Age Group	Total	Pre- Elem	Elemen- taly	High School	Under- graduate	Graduate	Academic	NR	NA
Camalig Study Area									
0 - 9	7,641	1,989	2,002	-	-	-	-	3	3,647
10 - 19	6,926	94	4,294	2,151	344	24	10	9	-
20 - 29	4,302	54	1,695	1,328	582	159	479	5	-
30 - 39	3,109	50	1,709	727	239	93	284	7	-
40 - 49	2,481	49	1,640	414	128	33	216	1	-
50 - 59	1,596	52	1,108	246	59	9	119	3	-
60 - 69	1,095	120	803	85	19	5	62	1	-
70 - 89	662	142	456	42	7	1	14	-	-
80 - 129	188	46	115	15	5	1	6	-	-
Total	28,000	2,596	13,822	5,008	1,383	325	1,190	29	3,647
Daraga Study Area									
0 - 9	6,124	1,642	1,400	-	-	-	-	1	3,081
10 - 19	5,263	73	3,393	1,619	160	8	3	7	-
20 - 29	3,129	24	1,491	1,084	288	81	159	2	-
30 - 39	2,396	23	1,527	561	128	40	114	3	-
40 - 49	1,782	30	1,323	282	58	8	81	-	-
50 - 59	1,294	68	993	184	24	1	23	1	-
60 - 69	822	133	600	68	10	1	10	-	-
70 - 89	477	129	327	13	1	1	3	3	-
80 - 129	114	60	49	4	-	-	-	1	-
Total	21,401	2,182	11,103	3,815	669	140	393	18	3,081
Study Area Total									
0 - 9	13,765	3,631	3,402	-	-	-	-	4	6,728
10 - 19	12,189	167	7,687	3,770	504	32	13	16	-
20 - 29	7,431	78	3,186	2,412	870	240	638	7	-
30 - 39	5,505	73	3,236	1,288	367	133	398	10	-
40 - 49	4,263	79	2,963	696	186	41	297	1	-
50 - 59	2,890	120	2,101	430	83	10	142	4	-
60 - 69	1,917	253	1,403	153	29	6	72	1	-
70 - 89	1,139	271	783	55	8	2	17	3	-
80 - 129	302	106	164	19	5	1	6	1	-
Total	49,401	4,778	24,925	8,823	2,052	465	1,583	47	6,728

Source : NSO

Remarks: Educational Attainment of population 20 years old and above

	Population	%
Pre-elementary	980	4.2
Elementary school	13,836	59.0
High school	5,053	21.6
College and above	3,551	15.1
No answer	27	0.1
Total Population	23,447	100.0

Table F.3.5 Number of Establishment in the Study Area

Item	Camalig		Daraga	
	Number	%	Number	%
Agri-Related Establishment				
<u>Manufacturer</u>	<u>32</u>	<u>18.4</u>	<u>34</u>	<u>4.6</u>
Rice Mill	24	13.8	17	2.3
Feed Mill	0	0	1	0.1
Manufacturing of Abaca Product	0	0	3	0.4
Coco grating	1	0.6	4	0.5
Handicraft	7	4.0	8	1.1
Pulp & Paper Factory	0	0	1	0.1
<u>Dealers/Agricultural Products</u>	<u>18</u>	<u>10.3</u>	<u>62</u>	<u>8.3</u>
Wholesale of Rice	0	0	7	0.9
Abaca Dealer	0	0	6	0.8
Copra Dealer	4	2.3	3	0.4
Coco Lumber Dealer	0	0	4	0.5
Buy & Seel of Fruits	0	0	1	0.1
Flowers and Ornamental Plant	0	0	2	0.3
Dealer of Livestock and Poultry	4	2.3	7	0.9
Dealer of Meat Product	6	3.4	2	0.3
Dried Fish Dealer	4	2.3	15	2.0
Exporter	0	0	15	2.0
<u>Dealers/Agricultural Inputs</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>0.7</u>
Agri. Supplier	0	0	2	0.3
Dealer of Fertilizer	0	0	1	0.1
Dealer of Pesticide Product	0	0	1	0.1
Nursery Seedling	0	0	1	0.1
Dealer of Chainsaw/Agri-Machinery	0	0	0	0
<u>Retailer/Vender</u>	<u>49</u>	<u>28.2</u>	<u>129</u>	<u>17.3</u>
Rice Retailer	0	0	17	2.3
Vegetable Vender	0	0	67	9.0
Retailer of Abaca Products	0	0	11	1.5
Retailer of Pili nut Candies	1	0.6	2	0.3
Meat Vender	0	0	31	4.2
Furniture	1	0.6	1	0.1
Sari-Sari Store	47	27.0	0	0
<u>Transportation</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>0.7</u>
Trucking Services	0	0	5	0.7
<u>Others</u>	<u>4</u>	<u>2.3</u>	<u>5</u>	<u>0.7</u>
Rural Bank	1	0.6	1	0.1
Warehouse	0	0	1	0.1
Lumber & Construction Suppy	3	1.7	3	0.4
<u>Total Agri-related Establishment</u>	<u>103</u>	<u>59.2</u>	<u>240</u>	<u>32.3</u>
Other Establishment	71	40.8	505	67.7
Total	174	100.0	745	100.0

Source : Revenue Office, Camalig and Daraga Municipalities

Table F 3.6 Present Land Use in the Study Area by Barangay

(Unit : ha)

Municipality / Barangay	Total Area (ha)	Paddy Field	Coconut	Upland Crops (Open areas)	Shrubs and Grass	Agricultural Lands Total	Residential and Others
Camalig							
C-1 Quirangay	651	62	375	5	192	634	17
C-2 Salugan	105	0	76	6	14	96	9
C-3 Gapo	88	21	50	8	7	86	2
C-4 Poblacion	36	1	1	0	25	27	9
C-5 Tinago	65	0	53	0	9	62	3
C-6 Ilawod	187	67	77	2	19	165	22
C-7 Libod	327	194	85	3	18	300	27
C-8 Ligban	91	34	45	1	8	88	3
C-9 Tagaytay	387	56	243	5	60	364	23
C-10 Gotob	91	38	37	4	9	88	3
C-11 Baligang	347	10	226	20	76	332	15
C-12 Tagoytoy	127	0	91	8	21	120	7
C-13 Taladong	203	8	158	4	27	197	6
C-14 Binitayan	69	16	41	2	7	66	3
C-15 Comun	157	37	89	4	16	146	11
C-16 Bongabong	316	21	218	10	55	304	12
C-17 Cotnion	595	74	420	11	78	583	12
C-18 Del Rosario	246	3	212	0	18	233	13
C-19 Panoytoy	455	3	421	3	20	447	8
C-20 Magogon	240	5	190	20	17	232	8
Total	4,783	650	3,108	116	696	4,570	213
Daraga							
D-1 Inarado	682	109	467	7	83	666	16
D-2 Gapo	389	16	285	12	70	383	16
D-3 De La Paz	73	0	62	2	6	70	3
D-4 Dinoronan	61	18	30	2	8	58	3
D-5 Peña Francia	194	7	124	7	45	180	14
D-6 Alobo	161	86	60	2	8	156	5
D-7 Tabon-Tabon	208	61	113	0	24	198	10
D-8 Gabawan	93	24	46	3	12	85	8
D-9 Mabini	124	23	89	0	8	120	4
D-10 Kinawitan	79	0	63	5	8	76	3
D-11 Burgos	149	47	84	2	11	140	9
D-12 Bascaran	424	63	289	8	48	408	16
D-13 Talahib	432	11	370	9	30	420	12
D-14 Namantao	363	36	279	6	27	348	15
D-15 San Vicente Pequeño	64	49	12	0	2	63	1
D-16 Maopi	253	22	199	3	20	242	11
D-17 Anislag	656	46	442	55	91	634	22
D-18 Canarom	247	29	190	11	15	245	2
D-19 San Ramon	785	21	534	130	84	769	16
D-20 Mayon	357	32	216	40	50	338	19
D-21 San Rafael	33	0	28	0	3	31	2
Total	5,827	700	3,982	304	653	5,630	207
Study Area Total	10,610	1,350	7,090	420	1,340	10,200	420

Source: MAS; PCA; MPDO; Study Team

Table F 3.7 Major Types of Farm Land Use in Philippines, Bicol Region, Albay Province, Camalig, Daraga, and the Study Area

Major Land Use	Philippines		Bicol Region		Albay Province		Camalig		Daraga		Study Area *	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
All Classes of Farm Lands	9,974,871	100.0	936,174	100.0	134,620	100.0	9,405	100	7,922	100.0	10,190	100.0
Home lot	63,025	0.6	4,135	0.4	712	0.5	28	0.3	31	0.4	26	0.3
Temporary Crops	5,332,770	53.5	276,706	29.6	48,379	35.9	1,851	19.7	2,494	31.5	1,770	17.4
Permanent Crops	4,172,540	41.8	609,202	65.1	83,885	62.3	7,358	78.2	5,355	67.6	7,080	69.4
Temporarily Fallow	70,505	0.7	2,550	0.3	257	0.2	18	0.2	4	0.1	11	0.1
Temporary Meadows / Pasture	83,682	0.9	10,391	1.1	452	0.3	12	0.1	12	0.1	14	0.1
Permanent Meadows / Pasture	130,943	1.3	26,365	2.8	453	0.4	0	0.0	18	0.2	-	-
Wood Land and Forest	70,144	0.7	6,084	0.7	363	0.3	101	1.1	0	0.0	0	0.0
All Others Lands	51,263	0.5	720	0.1	119	0.1	36	0.4	7	0.1	1,290	12.7

Sources: NSO, 1991 Census of Agriculture;

Note : * Study Team based on topographic map made in 1995, JICA

Table F.3.8 Land Holding Status based on Census of Agriculture, 1991

Item	Unit	1991				
		Comalig (%)	Daraga (%)	Albay (%)	Region V (%)	Philippines (%)
FARMS	No.	5,627	5,829	76,675	377,791	4,610,041
AREA	ha	9,405	7,922	134,620	936,174	9,974,871
AVERAGE FARM AREA	ha	1.67	1.36	1.76	2.48	2.16
NUMBER OF FARMS BY SIZE						
TOTAL	No.	5,627 (100.0)	5,829 (100.0)	76,675 (100.0)	377,791 (100.0)	4,610,041 (100.0)
Under 1.00 Hectare		2,543 (45.2)	3,190 (54.7)	35,583 (46.4)	135,489 (35.9)	1,685,380 (36.6)
1.00 - 2.99 Hectares		2,120 (37.7)	1,976 (33.9)	31,055 (40.5)	147,572 (39.1)	1,967,639 (42.7)
3.00 - 4.99 Hectares		561 (10.0)	387 (6.6)	7,621 (9.9)	46,328 (12.3)	523,201 (11.3)
5.00 - 9.99 Hectares		334 (5.9)	240 (4.1)	4,345 (5.7)	34,303 (9.1)	325,243 (7.1)
10.00 - 24.99 Hectares		59 (1.0)	35 (0.6)	59 (0.1)	12,536 (3.3)	95,537 (2.1)
25.00 Hectares and Over		10 (0.2)	1 (0.0)	12 (0.0)	1,563 (0.4)	13,041 (0.3)
NUMBER OF FARMS REPORTING BY TENURIAL STATUS						
TOTAL	No.	5,627 (100.0)	5,829 (100.0)	76,675 (100.0)	377,791 (100.0)	4,610,041 (100.0)
Owned <i>d/</i>		2,321 (41.2)	2,547 (43.7)	29,297 (38.2)	146,341 (38.7)	1,999,979 (43.4)
Partly Owned <i>e/</i>		531 (9.4)	723 (12.4)	25,072 (32.7)	126,437 (33.5)	1,522,516 (33.0)
Tenanted		1,629 (28.9)	1,421 (24.4)	14,203 (18.5)	70,604 (18.7)	681,469 (14.8)
Leased		163 (2.9)	193 (3.3)	3,417 (4.5)	10,648 (2.8)	116,174 (2.5)
Other Forms		983 (17.5)	945 (16.2)	4,686 (6.1)	23,761 (6.3)	289,903 (6.3)
AREA OF FARMS REPORTING BY TENURIAL STATUS						
TOTAL	ha	9,405 (100.0)	7,922 (100.0)	134,620 (100.0)	936,174 (100.0)	9,974,871 (100.0)
Owned <i>d/</i>		3,680 (39.1)	3,406 (43.0)	51,080 (37.9)	388,066 (41.5)	4,855,059 (48.7)
Partly Owned <i>e/</i>		961 (10.2)	1,237 (15.6)	41,581 (33.1)	306,340 (32.7)	3,226,083 (32.3)
Tenanted		3,586 (38.1)	2,199 (27.8)	30,935 (23.0)	210,588 (22.5)	1,284,179 (12.9)
Leased		123 (1.3)	127 (1.6)	3,985 (3.0)	16,055 (1.7)	252,689 (2.5)
Other Forms		1,055 (11.2)	953 (12.0)	4,039 (3.0)	24,125 (2.6)	356,861 (3.6)

Note :

nr No report

a/ A farm was counted once under "All Classes" but maybe counted under each reported land use.

b/ Included lands temporarily followed and lands temporary meadows/pastures.

c/ Included homlot, etc.

d/ Included ownerlike possession such as CTL holders, lands to be inherited, etc.

e/ Partly owned means some parcels of the farm were fully owned and the others were either tenanted, etc.

f/ Included in tenanted farms.

Source : Census of Agriculture, 1991, NSO

Table F.3.9 Parcel Distribution of Agricultural Land by Size in the Study Area

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Parcel		Area Distribution		No. of Parcel		Area Distribution		No. of Parcel		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
Camalig Study Area Total												
Below 0.249	1,681	29.3	237	5.0	638	39.3	90	11.1	817	24.4	116	3.7
0.250 - 0.499	1,421	24.7	515	10.8	470	29.0	165	20.4	741	22.1	271	8.7
0.500 - 0.999	1,388	24.2	991	20.8	331	20.4	219	27.0	877	26.2	621	19.9
1.000 - 1.499	570	9.9	690	14.5	101	6.2	118	14.6	401	12.0	482	15.5
1.500 - 1.999	258	4.5	451	9.5	34	2.1	58	7.2	188	5.6	319	10.2
2.000 - 2.999	238	4.1	587	12.3	25	1.5	60	7.4	177	5.3	424	13.6
3.000 - 4.999	113	2.0	430	9.0	18	1.1	67	8.3	84	2.5	311	10.0
5.000 - 6.999	33	0.6	201	4.2	5	0.3	23	2.8	27	0.8	162	5.2
7.000 - 9.999	22	0.4	196	4.1	1	0.1	9	1.1	18	0.5	149	4.8
10.000 and over	23	0.4	471	9.9	0	0.0	0	0.0	17	0.5	262	8.4
Total	5,747	100.0	4,767	100.0	1,623	100.0	809	100.0	3,347	100.0	3,116	100.0
Daraga Study Area Total												
Below 0.249	1,326	22.7	198	3.7	587	38.4	89	11.9	683	16.6	105	2.3
0.250 - 0.499	1,419	24.3	515	9.5	475	31.1	171	22.8	905	22.0	330	7.4
0.500 - 0.999	1,524	26.1	1,077	19.9	320	20.9	219	29.0	1,167	28.3	833	18.6
1.000 - 1.499	698	12.0	847	15.7	87	5.7	107	14.2	634	15.4	792	17.6
1.500 - 1.999	316	5.4	544	10.1	23	1.5	40	5.3	264	6.4	473	10.5
2.000 - 2.999	274	4.7	664	12.3	22	1.4	59	7.8	232	5.6	573	12.8
3.000 - 4.999	162	2.8	596	11.0	10	0.7	36	4.8	137	3.3	518	11.6
5.000 - 6.999	63	1.1	364	6.7	2	0.1	14	1.5	60	1.5	359	8.0
7.000 - 9.999	28	0.5	237	4.4	1	0.1	8	1.1	23	0.6	209	4.6
10.000 and over	21	0.4	368	6.8	1	0.1	13	1.8	16	0.4	297	6.6
Total	5,831	100.0	5,410	100.0	1,528	100.0	753	100.0	4,121	100.0	4,488	100.0
Study Area Total												
Below 0.249	3,007	26.0	435	4.3	1,225	38.9	180	11.5	1,500	20.1	220	2.9
0.250 - 0.499	2,840	24.5	1,030	10.1	945	30.0	337	21.5	1,646	22.0	601	7.9
0.500 - 0.999	2,912	25.2	2,068	20.3	651	20.7	437	28.0	2,044	27.4	1,453	19.1
1.000 - 1.499	1,268	11.0	1,537	15.1	188	6.0	225	14.4	1,035	13.9	1,274	16.8
1.500 - 1.999	574	5.0	995	9.8	57	1.8	97	6.2	452	6.1	792	10.4
2.000 - 2.999	512	4.4	1,250	12.3	47	1.5	119	7.6	409	5.5	997	13.1
3.000 - 4.999	275	2.4	1,026	10.1	28	0.9	103	6.6	221	3.0	829	10.9
5.000 - 6.999	96	0.8	565	5.6	7	0.2	34	2.2	87	1.2	521	6.9
7.000 - 9.999	50	0.4	433	4.3	2	0.1	17	1.1	41	0.5	358	4.7
10.000 and over	44	0.4	839	8.2	1	0.0	13	0.9	33	0.4	559	7.4
Total	11,578	100.0	10,177	100.0	3,151	100.0	1,562	100.0	7,468	100.0	7,603	100.0

Source : DAR Albay Provincial Office

Table F.3.10 Land Owner Distribution of Agricultural Land by Size in the Study Area

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Owner		Area Distribution		No. of Owner		Area Distribution		No. of Owner		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
Camagig Study Area Total												
Below 0.249	916	23.4	132	2.8	478	37.1	71	8.8	511	20.7	72	2.3
0.250 - 0.499	890	22.7	325	6.8	346	26.9	123	15.3	491	19.9	179	5.8
0.500 - 0.999	904	23.1	610	13.4	262	20.3	182	22.5	618	25.1	436	14.0
1.000 - 1.499	428	10.9	518	10.9	99	7.7	120	14.9	285	11.6	364	11.7
1.500 - 1.999	245	6.3	422	8.9	39	3.0	72	8.9	179	7.3	308	9.9
2.000 - 2.999	247	6.3	601	12.6	38	3.0	92	11.4	176	7.1	427	13.7
3.000 - 4.999	162	4.1	616	12.9	19	1.5	73	9.0	111	4.5	411	13.2
5.000 - 6.999	58	1.5	341	7.1	2	0.2	12	1.4	48	1.9	281	9.0
7.000 - 9.999	29	0.7	239	5.0	1	0.1	8	1.0	24	1.0	202	6.5
10.000 and over	40	1.0	932	19.5	4	0.3	55	6.8	23	0.9	436	14.0
Total	3,919	100.0	4,767	100.0	1,288	100.0	809	100.0	2,466	100.0	3,116	100.0
Daraga Study Area Total												
Below 0.249	728	18.6	111	2.0	403	32.7	60	8.0	421	14.4	67	1.5
0.250 - 0.499	765	19.6	281	5.2	374	30.4	134	17.9	533	18.2	196	4.4
0.500 - 0.999	969	24.8	693	12.8	273	22.2	194	25.8	744	25.4	534	11.9
1.000 - 1.499	532	13.6	640	11.8	102	8.3	123	16.3	437	14.9	537	12.0
1.500 - 1.999	261	6.7	453	8.4	33	2.7	59	7.8	231	7.9	400	8.9
2.000 - 2.999	292	7.5	746	13.8	30	2.4	76	10.1	256	8.7	622	13.9
3.000 - 4.999	206	5.3	774	14.3	12	1.0	48	6.3	176	6.0	675	15.0
5.000 - 6.999	70	1.8	397	7.3	2	0.2	11	1.4	52	1.8	300	6.7
7.000 - 9.999	35	0.9	288	5.3	0	0.0	0	0.0	32	1.1	263	5.8
10.000 and over	54	1.4	1,027	19.0	2	0.2	48	6.4	48	1.6	894	19.9
Total	3,912	100.0	5,410	100.0	1,231	100.0	753	100.0	2,930	100.0	4,488	100.0
Study Area Total												
Below 0.249	1,644	21.0	243	2.4	881	35.0	131	8.4	932	17.3	139	1.8
0.250 - 0.499	1,655	21.1	606	6.0	720	28.6	258	15.5	1,024	19.0	375	4.9
0.500 - 0.999	1,873	23.9	1,334	13.1	535	21.2	376	24.1	1,362	25.2	970	12.8
1.000 - 1.499	960	12.3	1,158	11.4	201	8.0	243	15.6	722	13.4	900	11.8
1.500 - 1.999	506	6.5	875	8.6	72	2.9	131	8.4	410	7.6	708	9.3
2.000 - 2.999	539	6.9	1,348	13.2	68	2.7	168	10.8	432	8.0	1,049	13.8
3.000 - 4.999	368	4.7	1,390	13.7	31	1.2	120	7.7	287	5.3	1,086	14.3
5.000 - 6.999	128	1.6	738	7.2	4	0.2	22	1.4	100	1.9	582	7.7
7.000 - 9.999	64	0.8	527	5.2	1	0.0	8	0.5	56	1.0	465	6.1
10.000 and over	94	1.2	1,958	19.2	6	0.2	103	6.6	71	1.3	1,330	17.5
Total	7,831	100.0	10,177	100.0	2,519	100.0	1,562	100.0	5,396	100.0	7,603	100.0

Source : DAR Albay Provincial Office

Table F.3.11 Average and Median Holding Size by Barangay in the Study Area

Municipality / Barangay	Total Agricultural Land					Paddy Land					Coconut Land				
	No. of Land Owner Registered (No.)	Total Average		Median		No. of Land Owner Registered (No.)	Total Average		Median		No. of Land Owner Registered (No.)	Total Average		Median	
		Area	Scale	Scale	Cumulative Area (%)		Area	Scale	Scale	Cumulative Area (%)		Area	Scale	Scale	Cumulative Area (%)
	(ha)	(ha)	(ha)	(%)	(ha)	(ha)	(ha)	(ha)	(%)	(ha)	(ha)	(ha)	(ha)	(%)	
Camalig Study Area Total	3,919	4,766.8	1.22	0.55	11.3	1,288	809.4	0.63	0.34	15.0	2,466	3,115.5	1.26	0.65	12.3
C-1 Quirangay	256	707.8	2.76	0.67	5.6	37	63.7	1.72	0.39	5.5	135	301.6	2.23	0.53	6.0
C-2 Salugan	32	108.2	3.38	1.17	9.6	-	-	-	-	-	22	78.3	3.56	1.17	11.7
C-3 Gapo	102	96.5	0.95	0.56	14.0	46	32.3	0.70	0.46	17.5	48	33.7	0.70	0.40	12.9
C-4 Poblacion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C-5 Tinago	61	93.7	1.54	0.96	16.3	1	0.1	0.10	-	-	30	43.8	1.46	0.99	16.4
C-6 Ilawod	180	179.1	1.00	0.65	15.8	102	90.1	0.88	0.59	15.1	59	54.8	0.93	0.55	18.3
C-7 Libod	407	332.4	0.82	0.42	13.7	346	228.7	0.66	0.38	15.5	55	67.2	1.22	0.53	8.0
C-8 Ligban	126	85.2	0.68	0.42	14.5	45	16.6	0.37	0.24	20.8	85	61.1	0.72	0.44	16.0
C-9 Tagaytay	332	372.9	1.12	0.50	11.1	160	100.5	0.63	0.32	13.9	163	189.2	1.16	0.70	15.2
C-10 Gotob	134	94.7	0.71	0.45	15.8	60	28.6	0.48	0.32	19.1	79	54.5	0.69	0.40	16.2
C-11 Baligang	272	366.5	1.35	0.50	9.9	25	11.8	0.47	0.35	26.5	208	284.8	1.37	0.59	10.3
C-12 Tagoytoy	122	115.2	0.94	0.61	17.9	-	-	-	-	-	94	88.1	0.94	0.71	19.5
C-13 Talabong	211	194.8	0.92	0.53	15.6	13	10.2	0.78	0.47	18.00	172	161.4	0.91	0.52	15.4
C-14 Binitayan	107	66.9	0.63	0.30	12.9	45	15.7	0.35	0.29	26.3	65	47.2	0.73	0.30	10.1
C-15 Comun	188	153.5	0.82	0.38	11.8	98	45.5	0.46	0.25	13.8	106	108.7	1.03	0.63	15.4
C-16 Bongabong	224	288.9	1.29	0.49	7.6	38	19.8	0.52	0.23	13.0	190	244.4	1.29	0.52	7.6
C-17 Cotmon	482	575	1.19	0.51	11.7	227	116.9	0.51	0.34	18.6	315	429.4	1.36	0.70	13.0
C-18 Del Rosario	227	259.5	1.14	0.67	15.8	24	16.5	0.69	0.44	20.2	203	238.6	1.18	0.69	15.9
C-19 Panoytoy	307	447.2	1.46	0.77	14.5	8	5.0	0.63	0.40	22.1	300	422.6	1.41	0.75	14.7
C-20 Magogon	149	228.8	1.54	1.07	21.1	13	7.4	0.57	0.36	10.8	137	206.1	1.50	1.00	21.8
Daraga Study Area	3,912	5,410.1	1.38	0.69	12.4	1,231	753.0	0.61	0.37	16.6	2,930	4,487.8	1.53	0.81	13.3
D-1 Inarado	229	184.9	0.81	0.52	16.1	143	80.3	0.56	0.39	22.0	129	102.8	0.80	0.47	14.8
D-2 Gapo	450	353.0	0.81	0.41	13.3	224	115.1	0.51	0.32	17.2	281	240.0	0.85	0.48	14.5
D-3 De La Paz	78	72.9	0.93	0.43	13.0	1	0.1	0.10	-	-	75	61.3	0.82	0.42	14.6
D-4 Dinoronan	92	74.2	0.81	0.47	18.1	13	7.3	0.56	0.52	26.3	82	66.9	0.82	0.41	17.3
D-5 Peña Francia	158	163.3	1.03	0.55	12.3	24	10.8	0.45	0.19	11.0	134	134.9	1.01	0.62	15.7
D-6 Alobo	344	240.3	0.70	0.42	16.0	278	149.7	0.54	0.36	18.1	88	83.5	0.95	0.60	17.3
D-7 Tabon-Tabon	252	168.1	0.67	0.38	14.2	132	71.1	0.54	0.34	16.2	140	94.0	0.67	0.39	14.6
D-8 Gabawan	57	81.4	1.43	0.63	10.0	27	35.0	1.30	1.02	23.1	44	42.4	0.96	0.31	7.8
D-9 Mabini	150	191.2	1.27	0.68	14.2	45	27.0	0.60	0.37	18.6	109	141.4	1.30	0.77	15.8
D-10 Kinawitan	60	74.0	1.23	0.88	21.7	4	2.0	0.50	0.47	42.8	58	72.0	1.24	0.94	21.3
D-11 Burgos	114	198.2	1.74	0.80	13.1	29	19.6	0.68	0.53	24.0	76	160.2	2.11	1.25	14.7
D-12 Bascaran	405	415.3	1.03	0.59	16.0	168	92.9	0.55	0.42	21.0	284	317.3	1.12	0.68	17.1
D-13 Talahib	219	395.6	1.81	0.99	16.3	20	11.1	0.56	0.35	21.3	206	384.5	1.87	1.00	16.7
D-14 Namantao	219	339.5	1.55	1.04	17.3	67	35.7	0.53	0.38	14.8	187	295.2	1.58	1.08	18.9
D-15 San Vicente Poqueño	40	86.3	2.16	1.02	11.2	-	-	-	-	-	40	86.3	2.16	1.02	11.2
D-16 Maopl	161	271.5	1.69	1.15	17.5	12	3.8	0.32	0.25	33.2	156	266.4	1.71	1.16	18.0
D-17 Anislag	293	567.5	1.94	0.91	11.7	28	29.0	1.04	0.40	13.2	272	530.4	1.95	0.89	11.9
D-18 Canarom	102	243.4	2.39	1.32	17.2	2	2.3	1.15	1.17	50.0	95	217.4	2.29	1.32	17.9
D-19 San Ranton	313	807.2	2.58	1.16	11.0	4	3.8	0.95	0.90	34.0	308	784.9	2.55	1.15	11.0
D-20 Mayon	155	402.1	2.59	1.12	11.5	10	56.4	5.64	0.97	4.6	145	336.3	2.32	1.15	13.4
D-21 San Rafael	21	70.2	3.34	2.10	15.7	-	-	-	-	-	21	69.7	3.32	2.10	15.7
Study Area/Total	7,831	10,176.9	1.30	0.62	11.7	2,519	1,562.4	0.62	0.36	15.8	5,396	7,603.3	1.41	0.73	12.7

Table F.3.12 Agricultural Land Holding Status by Barangay Household in the Study Area

Item	No. of Household		Agricultural Land Holding			
			Yes		No	
	No.	%	No.	%	No.	%
Camalig Study Area*						
C-1 Quirangay	362	100.0	24	6.6	338	93.4
C-2 Salugan	223	100.0	28	12.6	195	87.4
C-3 Gapo	233	100.0	19	8.2	214	91.8
C-5 Tinago	213	100.0	2	0.9	211	99.1
C-6 Ilawod	470	100.0	73	15.5	397	84.5
C-7 Libod	376	100.0	21	5.6	355	94.4
C-8 Lighan	114	100.0	16	14.0	98	86.0
C-9 Tagaytay	367	100.0	16	4.4	351	95.6
C-10 Gotob	89	100.0	19	21.3	70	78.7
C-11 Baligang	469	100.0	78	16.6	391	83.4
C-12 Tagoytoy	110	100.0	1	0.9	109	99.1
C-13 Taladong	214	100.0	46	21.5	168	78.5
C-14 Binitayan	71	100.0	13	18.3	58	81.7
C-15 Conun	213	100.0	34	16.0	179	84.0
C-16 Bongabong	122	100.0	4	3.3	118	96.7
C-17 Cotmon	410	100.0	95	23.2	315	76.8
C-18 Del Rosario	165	100.0	43	26.1	122	73.9
C-19 Panoypoy	211	100.0	83	39.3	128	60.7
C-20 Magogon	97	100.0	19	19.6	78	80.4
Total	4,529	100.0	634	14.0	3,895	86.0
Daraga Study Area						
D-1 Inarado	278	100.0	61	21.9	217	78.1
D-2 Gapo	315	100.0	64	20.3	251	79.7
D-3 Dela Paz	103	100.0	16	15.5	87	84.5
D-4 Dinoronan	72	100.0	26	36.1	46	63.9
D-5 Pena Francia	241	100.0	15	6.2	226	93.8
D-6 Alobo	101	100.0	24	23.8	77	76.2
D-7 Tabon-tabon	241	100.0	27	11.2	214	88.8
D-8 Gabawan	225	100.0	31	13.8	194	86.2
D-9 Mabini	105	100.0	9	8.6	96	91.4
D-10 Kinawitan	94	100.0	21	22.3	73	77.7
D-11 Burgos	161	100.0	9	5.6	152	94.4
D-12 Bascaran	489	100.0	117	23.9	372	76.1
D-13 Talahib	114	100.0	27	23.7	87	76.3
D-14 Namantao	212	100.0	65	30.7	147	69.3
D-15 San Vicente Pequeno	39	100.0	10	25.6	29	74.4
D-16 Maopi	168	100.0	34	20.2	134	79.8
D-17 Anislag	521	100.0	188	36.1	333	63.9
D-18 Canarom	88	100.0	32	36.4	56	63.6
D-19 San Ramon	261	100.0	64	24.5	197	75.5
D-20 Mayon	198	100.0	45	22.7	153	77.3
D-21 San Rafael	48	100.0	21	43.8	27	56.3
Total	4,074	100.0	906	22.2	3,168	77.8
Total Study Area	8,603	100.0	1,540	17.9	7,063	82.1

Note : * ; Excluded Camalig Poblacion

Source : National Statistics Office

Table F 3.13 Comparison of Recommended and Actual Farming Practices

Farming Practice Recommended for Rice Production (Bicol Rice Production Technoguide, DA Region V)	Actual Farming Practice in Rice Production in the Study Area
<p>1) The use of duly certified seeds is recommended</p> <p>2) Rice varieties of short growing period, non-shattering, non-logging, are recommended because of frequent typhoon and high rainfall</p> <p>3) Check the viability of seeds before planting.</p> <p>4) A good seedbed site should be far from rice fields infected with rice disease; Avoid using the same area used as seedbed before.</p> <p>5) Apply 60 to 100 grams of ammonium sulfate or complete fertilizer per square meter of seedbed.</p> <p>6) Land preparation should be done 3 weeks before transplanting; Harrow twice at a week interval.</p> <p>7) Management of water depth according to plant growing stage is recommended (2 to 3 cm after transp; 10 cm at vegetative stage; 2 to 3 cm at tillering; 5 to 10 cm at reproduction stage; Drain at ripening etc.)</p> <p>8) The importance of good weed control is emphasized; Mechanical, chemical, and manual methods are indicated.</p> <p>9) Several measure are recommended as Integrated Pest Management.</p> <p>10) Have the soil analyzed for determining right amount of fertilizer.</p> <p>11) Application of nitrogen fertilizer is recommended twice: before transplanting and 5-7 days before panicle formation.</p> <p>12) The use of organic fertilizers is recommended to improve soil condition and reduce cost of fertilization. Planting <i>Sesbania rostrata</i> and using <i>Trichoderma</i> to make compost from rice straw are recommended.</p> <p>13) Neighbors farmers should plant simultaneously to reduce concentration of damages cause by rats and birds.</p>	<p>1) Only about 18 % of farmers, mostly of irrigated areas, use certified seeds</p> <p>2) Many farmers are still using varieties of relative long growing period and easily logging.</p> <p>3) This practice is seldom done by farmers in the study area</p> <p>4) Almost all farmers make the rice seedbed inside the planting area, after harvesting the previous rice crop.</p> <p>5) Very few farmers apply fertilizer to the seedbed.</p> <p>6) A large number of rice farmers can not make timely land preparation due to lack of control on equipment and water supply.</p> <p>7) The recommended water management practices are not applied by farmers of irrigated rice field in the study area. Rainfed rice farmers can not control water depth.</p> <p>8) Weed control is deficient done; Manual weed control is the common method in the area.</p> <p>9) Integrated Pest Management is not practiced in the study area</p> <p>10) Farmers can no afford to have soil analysis done and adequate fertilization</p> <p>11) Most farmers do no follow the proper timing of fertilizer application. Also, the amount applied are normally below the necessary level.</p> <p>12) These practices are seldom applied by farmers of the study area.</p> <p>13) Large difference in planting date between neighbor farmers is very common in the study area.</p>
Farming Practice Recommended for Coconut Production (The Philippine Recommends for Coconut, PCARRD Philippines Recommends)	Actual Farming Practice for Coconut Production in the Study Area
<p>1) Shallow land tillage stimulates the production of new coconut roots and increase on yield of nuts.</p> <p>2) To obtain maximum productivity, all weeds that may compete with coconut trees for nutrient, water, and sunlight should be suppressed.</p> <p>3) Thinning of coconut planted closely is recommended because shading causes reduction of coconut yield, even if other factors are adequate.</p> <p>4) Judicious application of fertilizers increases the number of nuts and coconut yield by as much as 230 %.</p> <p>5) Apply Organic matter, Green manure, farm by-products to replace part of the nutrients used by the coconut plants.</p> <p>6) When coconut trees reach the age of 60 years, or due to diseases, and damages by natural calamities the yield decreases significantly, therefore it is best to replant. Replanting is recommended to be done in a gradual stage.</p> <p>7) Crop protection against insect and rats should be done to reduce damages.</p>	<p>1) Soil tillage is done only in the coconut areas where inter-cropping is practiced.</p> <p>2) Weed control is very poorly done in the Study area. Different types of weed and shrubs species are commonly competing with the coconut trees.</p> <p>3) There are not much area of coconut planted too closely, but in some areas others trees species are competing for light with the coconuts.</p> <p>4) Very few farmers in the Study area apply fertilizers to the coconut trees.</p> <p>5) This farming practice is seldom done by farmers of the study area.</p> <p>6) It is estimated that about 32 percent of the coconut trees in the Study area need to be replanted. At present only very small areas of unproductive coconuts trees have been replanted.</p> <p>7) Protection against insect, rats, and plant diseases are done by a small number of coconut farmers in the Study area.</p>

Table F 3.14 Production of Major Crops in the Philippines, Bicol Region, Albay Province, and the Study Area

Crop	Philippines			Bicol Region			Albay Province			Study Area		
	Harvested Area (ha)	Production (ton)	Yield (ton/ha)	Harvested Area (ha)	Production (ton)	Yield (ton/ha)	Harvested Area (ha)	Production (ton)	Yield (ton/ha)	Harvested Area (ha)	Production (ton)	Yield (ton/ha)
	Paddy Rice											
Irrigated	2,020,000	6,730,000	3.3	167,910	495,560	3.0	56,280	165,947	2.9	213	680	3.2
Rainfed	1,270,000	2,710,000	2.1	99,830	169,569	1.7	5,920	9,862	1.7	1,670	4,240	1.9
Coconut	3,075,200	11,328,400	3.7	372,200	734,308	2.0	35,315	152,755	4.3	7,080	7,080	1.0
Corn	3,149,300	4,797,900	1.5	162,970	129,219	0.8	63,900	65,520	1.0	1,000	1,460	1.2
Cassava	211,400	1,844,200	8.7	31,049	251,362	8.1	4,815	47,623	9.9	54	380	7.0
Sweet potato	147,100	693,500	4.7	30,354	174,811	5.8	5,461	37,468	6.9	123	665	7.0
Abaca	106,500	81,500	0.8	41,760	31,061	0.7	4,780	4,118	0.9	64	50	0.8

Source: BAS ; MAS of Camalig and Daraga; Study Team

Table F 3.15 Production of Major Crops in the Study Area by Barangay

Municipality/ Barangay	Total Area (ha)	Coconut (tons)	Paddy Rice (tons)	Corn (tons)
Camalig				
C-1 Quirangay	651	375	188	6
C-2 Salugan	105	76	0	20
C-3 Gapo	88	50	64	3
C-4 Poblacion	36	1	30	0
C-5 Tinago	65	53	0	90
C-6 Ilawod	187	77	204	7
C-7 Libod	327	85	851	2
C-8 Ligban	91	45	103	0
C-9 Tagaytay	387	243	170	5
C-10 Gotob	91	37	116	5
C-11 Baligang	347	226	30	70
C-12 Tagoytoy	127	91	0	50
C-13 Taladong	203	158	24	20
C-14 Binitayan	69	41	49	5
C-15 Comun	157	89	112	20
C-16 Bongabong	316	218	64	20
C-17 Cotmon	595	420	225	30
C-18 Del Rosario	246	212	9	6
C-19 Panoypoy	455	421	10	15
C-20 Magogon	240	190	15	105
Total	4,783	3,108	2,265	480
Daraga				
D-1 Inarado	682	482	354	2
D-2 Gapo	389	220	216	5
D-3 De La Paz	73	62	0	2
D-4 Dinoronan	61	30	55	4
D-5 Peña Francia	194	124	21	30
D-6 Alobo	161	100	140	216
D-7 Tabon-Tabon	208	113	185	5
D-8 Gabawan	93	46	73	6
D-9 Mabini	124	89	70	0
D-10 Kinawitan	79	63	0	5
D-11 Burgos	149	84	143	6
D-12 Bascaran	424	289	192	0
D-13 Talahib	432	370	33	2
D-14 Namantao	363	279	109	22
D-15 San Vicente Pequeño	64	12	148	15
D-16 Maopi	253	199	67	0
D-17 Anistag	659	442	140	0
D-18 Canarom	247	190	88	35
D-19 San Ramon	785	534	64	432
D-20 Mayon	357	216	97	162
D-21 San Rafael	33	28	0	30
Total	5,827	3,972	2,195	980
Study Area Total	10,610	7,080	4,460	1,460

Source: MAS; PCA; MPDO; Study Team

Table F 3.16 Livestock Production in the Study Area by Barangay

(Unit : Number of animals)

Municipality/ Barangay	Cattle		Carabao		Swine		Chicken	
	1990	1994	1990	1994	1990	1994	1990	1994
Camalig								
C-1 Quirangay	60	87	32	35	142	139	699	1,125
C-2 Salugan	79	108	22	27	105	116	840	612
C-3 Gapo	31	24	14	18	159	172	915	592
C-4 Poblacion	6	8	4	8	409	414	854	572
C-5 Tinago	34	24	16	20	168	173	390	182
C-6 Hawod	46	63	25	36	236	283	1,292	1,072
C-7 Libod	35	35	49	57	283	321	1,310	1,093
C-8 Ligban	20	20	15	19	74	82	420	314
C-9 Tagaytay	87	106	49	58	203	204	1,158	1,129
C-10 Gotob	38	43	13	15	73	78	612	528
C-11 Baligang	173	224	117	141	394	412	1,915	2,042
C-12 Tagoytoy	76	84	35	39	73	98	612	519
C-13 Taladong	79	87	65	83	243	268	1,112	1,013
C-14 Binitayan	26	29	21	24	63	72	351	314
C-15 Comun	52	57	31	32	174	173	692	524
C-16 Bongabong	67	74	38	43	138	137	914	1,115
C-17 Cotmon	169	182	116	128	138	142	2,142	2,130
C-18 Del Rosario	63	84	51	62	52	69	686	759
C-19 Panoytoy	60	68	44	49	67	74	719	601
C-20 Magogon	51	56	32	48	52	58	604	553
Total	1,252	1,463	789	942	3,246	3,485	18,237	16,789
Daraga								
D-1 Inarado	194	198	168	182	460	414	1,120	1,230
D-2 Gapo	112	117	95	101	264	225	785	890
D-3 De La Paz	20	19	15	20	51	42	220	330
D-4 Dinoronan	13	17	9	15	45	37	205	290
D-5 Peña Francia	48	52	45	52	123	67	335	415
D-6 Alobo	64	65	55	61	115	68	450	535
D-7 Tabon-Tabon	30	26	25	36	166	120	270	360
D-8 Gabawan	32	35	30	37	85	55	210	340
D-9 Mabini	16	15	10	18	77	58	115	325
D-10 Kinawitan	48	53	42	50	60	43	210	370
D-11 Burgos	113	117	95	115	127	80	325	460
D-12 Basecan	115	115	90	105	265	198	770	865
D-13 Talahib	95	96	75	90	268	188	805	910
D-14 Namantao	15	21	9	15	248	178	655	740
D-15 San Vicente Pequeño	64	70	48	60	63	50	190	190
D-16 Maopi	60	63	45	58	163	115	450	540
D-17 Anislag	174	195	134	147	404	285	1,170	1,210
D-18 Canaron	56	70	53	68	203	150	505	600
D-19 San Ramon	190	202	170	192	512	402	1,340	1,485
D-20 Mayon	96	103	85	90	240	190	725	980
D-21 San Rafael	15	21	12	18	61	52	210	320
Total	1,570	1,670	1,310	1,530	4,000	3,017	11,065	13,385
Study Area Total	2,82	3,133	2,099	2,472	7,246	6,502	29,302	30,174

Source: MAS Camalig and Daraga

Table F.3.17 Diagram on Primary Marketing Channel of Agricultural Products in the Study Area

Municipality / Barangay	Palay/ Rice	Corn	Root Crops	Vegetables	Coconut/ Copra	Livestock
Major Transporter	Local Dealer	Local Dealer	Farmers/ Local Dealers	Farmers Local Dealers	Dealers	Dealers
Camalig						
C-1 Quirangay	C-4	C-4	-	C-4	C-4	Legaspi, Daraga or Guinobatan Okshon market in Ligao
C-2 Salugan	-	C-4	C-4	C-4	C-4	
C-3 Gapo	C-4	C-4	C-4	C-4	C-4	
C-4 Poblacion	C-4	-	C-4	C-4	C-4	
C-5 Tinago	-	C-4	C-4	C-4	C-4	
C-6 Ilawod	C-4	C-4	C-4	C-4	C-4	
C-7 Libod	C-4	C-4	C-4	C-4	C-4	
C-8 Ligban	C-4	-	C-4	-	C-4	
C-9 Tagaytay	C-4	C-4	C-4	-	C-4	
C-10 Gotob	C-4	C-4	C-4	-	C-4	
C-11 Baligang	C-4	C-4	C-4	-	C-4	
C-12 Tagoytoy	-	C-4	C-4	-	C-4	
C-13 Taladong	C-4	C-4	C-4	-	C-4	
C-14 Binitayan	C-4	C-4	C-4	C-4	C-4	
C-15 Comun	C-4	C-4	C-4	C-4	C-4	
C-16 Bongabong	C-4	C-4	C-4	-	C-4	
C-17 Cotmon*	C-4 & DC	C-4 & DC	C-4 & DC	C-4 & DC	C-4 & DC	
C-18 Del Rosario	C-4 & DC	C-4 & DC	C-4 & DC	C-4 & DC	C-4 & DC	
C-19 Panoypoy	C-4 & DC	C-4 & DC	C-4 & DC	-	C-4 & DC	
C-20 Magogon	D-C	D-C	D-C	-	D-C	
Daraga						
D-1 Inarado	D-C	D-C	D-C	D-C	D-C	Legaspi, Daraga or Guinobatan Okshon market in Ligao
D-2 Gapo	D-C	D-C	D-C	D-C	D-C	
D-3 De La Paz	-	D-C	D-C	D-C	D-C	
D-4 Dinoronan	D-C	D-C	D-C	D-C	D-C	
D-5 Peña Francia	D-C	D-C	D-C	D-C	D-C	
D-6 Alobó	D-C	D-C	D-C	D-C	D-C	
D-7 Tabon-Tabon	D-C	D-C	D-C	D-C	D-C	
D-8 Gabawan	D-C	D-C	D-C	D-C	D-C	
D-9 Mabini	D-C	-	D-C	D-C	D-C	
D-10 Kinawitan	-	D-C	D-C	D-C	D-C	
D-11 Burgos	D-C	D-C	D-C	D-C	D-C	
D-12 Bascaran	D-C	-	D-C	D-C	D-C	
D-13 Talahib	D-C	D-C	D-C	-	D-C	
D-14 Namantao	D-C	D-C	D-C	D-C	D-C	
D-15 San Vicente Pequeño	D-C	D-C	D-C	D-C	D-C	
D-16 Maopi	D-C	D-C	D-C	D-C	D-C	
D-17 Anislag	D-C	D-C	D-C	D-C	D-C	
D-18 Canarem	D-C	D-C	-	D-C	D-C	
D-19 San Ramon	D-C	D-C	D-C	D-C	D-C	
D-20 Mayon	D-C	D-C	D-C	D-C	D-C	
D-21 San Rafael	-	D-C	D-C	-	D-C	
D-C Daraga/Poblacion						

Note: Marketing destination of agri-products, excluding inter-regional trading

Table F.3.18 Existing Rice Milling Facilities and Their Operations in the Study Area

Municipality / Study Area	Barangay	Name of Owner	Operation Hour (hours)		Milling Capacity (kg of rice/hr)			Milling Quantity (ton/rice)		
			1st C.	2nd C.	Installed	Actual		1st Crop	2nd Crop	Total
						1st C.	2nd C.			
Camalig										
1. C-4	Poblacion/Camalig	Nazel Marcelo	600	60	200	200	120	120.0	10.2	130.2
2. C-4	Poblacion/Camalig	Tanchuling Corp.			950					263.0
3. C-6	Ilawod	Santos Suffronio	300	60	950	950	600	285.0	36.0	321.0
4. C-6	Ilawod	Napili Antonio			650					179.9
5. C-7	Libod	Napili Glenn	270	162	200	180	180	48.6	29.2	77.8
6. C-11	Baligang	Mendoza Estrella	200	54	200	190	160	38.0	8.6	46.6
7. C-11	Baligang	Nunez Dominador			950					263.0
8. C-11	Baligang	Nieva Domingo			200					80.6
9. C-13	Taladong	Namia Ceren	200	75	950	800	600	160.0	45.0	205.0
10. C-15	Comun	Malto Marcial			200					80.6
11. C-17	Cotmon	Buena Rita			200					80.6
12. C-17	Cotmon	Go Antonio			650					179.9
13. C-18	Del Rosario	Monreal Apolinario			200					80.6
14. C-18	Del Rosario	Armenta Doroteo			200					80.6
Camalig Study Area (excluding Camalig Poblacion)										1,676.2
15.	Huluan	Napire Lourdes			200					80.6
16.	Turnpa	Paliza Vicente			200					80.6
17.	Bariw	Nuyles Silvino			200					80.6
18.	Bariw	Campos Apolinario			200					80.6
19.	Sumlang	Guiriba Welfredo			200					80.6
20.	Gapo	Morota Carlos			200					80.6
21.	Manawan	Nolasco Fernando			200					80.6
22.	Manawan	Lobrinó Nestor			200					80.6
23.	Parian	Non Wilson			200					80.6
24.	Taloto	Marfil Marilyn			200					80.6
Total Camalig Municipality (excluding Camalig Poblacion)										2,482.2
Daraga										
1. D-2	Gapo	Manzanader Hilario			200					80.6
2. D-7	Tabon-Tabon	Jacob Felix			350					152.1
3. D-12	Basaran	Mendivel Dioscoro			200					80.6
4. D-14	Namantao	Erlando Conda			350					152.1
5. D-17	Anistag	Manzanader Hilario			350					152.1
6. D-17	Anistag	Mallorca Soledad	400	120	200	130	130	52.0	15.6	67.6
Daraga Study Area										685.1
7.	Alcala	Gonzaga Carlos			350					152.1
8.	Busay	Maolinó Teresa			350					152.1
9.	Busay	Moron Eladio	360	120	350	360	240	129.6	28.8	158.4
10.	Busay	Loba Serafin			200					80.6
11.	Banadero	Gonzaga Carlos	640	144	350	185	186	119.0	26.8	145.8
12.	Lacag	Lovid Florentino			200					80.6
13.	Matnog	Loper Saturnino			200					80.6
14.	Poblacion/Daraga	Lcrete Antonio			350					152.1
15.	Poblacion/Daraga	Costo Pedro			350					152.1
16.	Poblacion/Daraga	Gonzaga Linao			200					80.6
17.	Poblacion/Daraga	B. Dy Conception			350					152.1
Total Daraga Municipality										2,072.2
Study Area Total										2,361.3

Source : NFA Albay Province, Daraga and Camalig Municipality Offices

Note :

1. Milling cost covers electricity, fuel, labor and other O&M costs.
2. Existing mills are classified as kiskisan and semi-cono.
3. Milling recovery rate is estimated at 52 to 70% by mills and seasons.
4. Production of rice bran is estimated at 10% of paddy weight.
5. Price of rice bran is Peso 6.0/kg at the market and Peso 3.5/kg at NFA.
6. Annual operation days of rice mills is estimated at 58 - 105 days.

☐ : Rice mills surveyed

Table F.3.19 Sampling Data on Rice Mill Operation (1/2)

Camalig

I. Milling Capacity

	Capacity (kg of milled rice/hr)	Operation Practices			Milling Quantity (ton of rice)	
		Days	Hours/day	Total Hours	Estimation	Answer
C-4 Poblacion Camalig						
1st Crop	200	75	8	600	120.0	220.3
2nd Crop	170	30	2	60	10.2	61.2
					130.2	
C-6 Ilawod						
1st Crop	950	60	5	300	285.0	-
2nd Crop	600	20	3	60	36.0	-
					321.0	
C-7 Libod						
1st Crop	180	45	6	270	48.6	-
2nd Crop	180	27	6	162	29.2	-
					77.8	
C-11 Baligang						
1st Crop	190	40	5	200	38.0	-
2nd Crop	160	18	3	54	8.6	-
					46.6	
C-13 Taladong						
1st Crop	800	50	4	200	100.0	-
2nd Crop	600	30	2.5	75	45.0	-
					205.0	

II. Milling Cost

	Fuel, Repair Others	Manpower	Total (Pesos)	Quantity Milled Rice (ton)	Unit Cost (Pesos/kg)	Custom Milling Charge (Pesos/kg)	Price
							Rice Mill
C-4 Poblacion Camalig							5,000
1st Crop	5,000	2,700	5,230	120.0	0.04	0.55	1946
2nd Crop	425	230	3,125	10.2	0.31	0.55	
C-6 Ilawod							184,000
1st Crop	8,400	2,700	8,741	285.0	0.03	0.60	1992
2nd Crop	8,480	341	11,180	36.0	0.31	0.60	
C-7 Libod							110,000
1st Crop	8,300	2,250	9,652	48.6	0.20	0.55	?
2nd Crop	10,400	1,352	12,650	29.2	0.43	0.55	
C-11 Baligang							3,090
1st Crop	6,500	2,250	7,009	38.0	0.18	0.50	1960
2nd Crop	2,300	509	4,550	8.6	0.53	0.50	
C-13 Taladong							?
1st Crop	4,100	2,250	6,350	160.0	0.04	0.60	?
2nd Crop	3,100	633	3,733	45.0	0.08	0.60	

III. Milling Quality / Source of Rice

	Milling Recovery Rate (%)	Share of/1 Broken Rice (%)	Source of Rice	Destination of Rice	Activity
C-4 Poblacion Camalig					
1st Crop	58	12	Camalig 100%	Camalig 100%	Custom Milling
2nd Crop	52	12	Camalig 100%	Camalig 100%	Only
C-6 Ilawod					
1st Crop	69	10	Camalig 100%	Camalig 80% / Other Municipi.	Custom Milling
2nd Crop	55	5	Camalig 100%	Camalig 80% / other Municipi. :	Only
C-7 Libod					
1st Crop	70	10	Camalig 100%	Camalig 80% / Other Municipi.	Custom Milling
2nd Crop	65	5	Camalig 100%	Camalig 80% / other Municipi. :	Only
C-11 Baligang					
1st Crop	65	12	Camalig 100%	Camalig 100%	Custom Milling
2nd Crop	55	5	Camalig 100%	Camalig 100%	Only
C-13 Taladong					
1st Crop	68	10	Camalig 100%	Camalig 85% / Other Municipi.	Custom Milling
2nd Crop	55	5	Camalig 100%	Camalig 85% / Other Municipi.	Only

/? : Not including a partially broken rice

IV. Price Data

(Pesos/kg)	1st Crop	2nd Crop
Buying Paddy	7.0	6.0
Selling Rice	20.0	18.0

Table F.3.19 Sampling Data on Rice Mill Operation (2/2)

Daraga

I. Milling Capacity

	Capacity (kg of milled rice/hr)	Operation Practices			Milling Quantity (ton of rice)	
		Days	Hours/day	Total Hours	Estimation	Answer
D-17 Poblacion Camahig						
1st Crop	130	50	8	400	52.0	-
2nd Crop	130	24	5	120	15.6	-
					67.6	
Banadero						
1st Crop	186	80	8	640	119.0	-
2nd Crop	186	24	6	144	26.8	-
					145.8	
Busay						
1st Crop	360	60	6	360	129.6	-
2nd Crop	240	30	4	120	28.8	-
					158.4	

II. Milling Cost

	Fuel, Repair Others	Manpower	Total (Pesos)	Quantity Milled Rice (ton)	Unit Cost (Pesos/kg)	Custom Milling Charge (Pesos/kg)	Price
							Rice Mill
D-17 Poblacion Camahig							
1st Crop	2,000	3,744	8,123	52.0	0.16	0.71	27,000
2nd Crop	2,100	1,123	5,844	15.6	0.37	0.71	
Banadero							
1st Crop	11,250	8,570	13,198	119.0	0.11	0.71	45,000
2nd Crop	2,500	1,918	11,070	26.8	0.41	0.71	
Busay							
1st Crop	3,280	4,147	3,280	129.6	0.03	0.67	6,000
2nd Crop	1,360	938	5,507	28.8	0.19	0.67	

III. Milling Quality /Source of Rice

	Milling Recovery Rate (%)	Share of Broken Rice (%)	Source of Rice	Destination of Rice	Activity
D-17 Poblacion Camahig					
1st Crop	65		Daraga 100%	Daraga 100%	Custom Milling
2nd Crop	65		Daraga 100%	Daraga 100%	Only
Banadero					
1st Crop	62		Daraga 100%	Daraga 100%	Custom Milling
2nd Crop	62		Daraga 100%	Daraga 100%	Only
Busay					
1st Crop	60		Daraga 100%	Daraga 100%	Custom Milling
2nd Crop	60		Daraga 100%	Daraga 100%	Only

IV. Price Data

(Pesos/kg)	1st Crop	2nd Crop
Buying Paddy	7.0	6.0
Selling Rice	20.0	18.0

Table F.3.20 Abaca Handicraft Producers in Albay Province

(Unit: No. of Establishment)

Location / Municipality	Basket Hats Mats	Bags	Handmade Paper	Sinamay	Others	Total
Daraga	8	2	1	1	1	13
Camalig	7	2	-	-	-	9
Legaspi City	6	5	2	1	-	14
Tabaco	3	2	-	-	-	5
Others	8	3	-	-	1	12
Total	32	14	3	2	2	53

Source : FIDA

Table F.3.21 Fiber Processors in Albay Province

(Unit: No. of Establishment)

Location / Municipality	Coir	Pulp/ Paper	Handmade Paper	Handicraft	Others	Total
Daraga	1 (1)	1	-	9	-	12 (1)
Camalig	1	-	-	1	1	3
Legaspi City	1	-	2	2	1 (1)	6 (1)
Malinao	-	1	-	-	-	1
Ligao	1	-	-	1	-	2
Tabaco	1	-	-	1	1	3
Malilipot	-	-	-	3	-	3
Total	5	2	2	17	3	29 (2)

Source : FIDA

Note : (1) ; Number of cooperative

Table F.3.22 Local Exporters in Albay Province

(Unit: No. of Establishment)

Location / Municipality	Handicraft	Coir	Handmade Paper	Sinamay	Furniture	Artificial Flower	Total
Daraga	26	-	1	1	-	-	28
Camalig	2	1	-	-	-	-	3
Legaspi City	9	-	1	1	-	1	12
Tabaco	2	-	-	-	1	-	3
Others	7	-	-	-	2	-	9
Total	46	1	2	2	3	1	55

Source : FIDA, BOI

Table F.3.23 Retail Price of Agricultural Products in Legazpi Public Market, 1995

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Standard Deviation
Rice														
Fancy	16.10	16.36	16.62	16.88	16.67	17.08	17.07	22.65	25.73	25.80	25.26	27.56	20.32	4.62
Special	13.35	13.30	13.50	13.25	14.24	15.00	15.59	19.85	23.40	22.58	21.13	21.47	17.22	4.09
Ordinary	11.72	11.80	11.88	11.84	13.04	13.20	14.11	18.13	20.49	18.23	17.80	17.80	15.00	3.23
Corn														
Grain Yellow	7.46	7.57	8.10	9.58	11.48	12.32	10.63	10.53	10.10	10.14	10.18	10.38	9.87	1.49
Grits Yellow	8.49	8.61	9.22	10.90	13.06	14.02	12.10	11.98	11.49	11.54	11.59	11.99	11.25	1.70
Vegetables														
Carrots	32.85	30.70	24.45	40.75	14.67	14.83	34.09	31.41	28.86	28.80	40.38	41.19	30.25	8.91
Radish	10.09	8.76	9.38	14.18	14.69	15.62	15.24	18.06	16.87	17.97	18.88	12.67	14.37	3.48
White Potato	22.59	23.28	18.75	27.98	31.02	30.05	23.42	23.21	20.65	20.51	21.73	25.40	24.05	3.85
Camote Tops	9.55	6.35	6.55	8.88	12.89	11.08	5.53	6.07	5.40	6.40	4.41	4.48	7.30	2.70
Ampalaya	12.95	12.73	12.51	12.30	14.60	15.00	15.79	16.82	14.48	17.11	16.58	16.32	14.77	1.79
Cabbage Native	12.27	12.20	14.00	15.93	22.69	23.00	22.66	18.36	17.94	24.11	16.70	14.37	17.85	4.34
Cabbage Baguio	23.42	23.28	20.25	23.78	26.28	28.78	31.27	26.78	24.57	30.64	36.15	31.10	27.19	4.51
Pechay Native	3.77	3.91	4.31	6.60	26.76	25.08	12.80	11.41	6.68	12.06	14.49	25.48	12.78	8.64
Pechay Baguio	18.38	17.68	17.90	22.88	26.76	26.53	33.14	28.22	25.89	29.40	49.48	48.92	28.77	10.69
Eggplant	10.64	11.09	11.54	12.00	11.96	12.00	11.11	12.5	12.67	13.34	14.01	26.21	13.26	4.19
Onion Red	33.69	29.13	20.13	22.40	24.69	25.52	26.80	22.80	25.85	24.82	27.78	37.31	26.74	4.82
Onion White	28.59	20.03	18.90	21.20	21.13	25.00	22.95	24.83	24.87	24.33	28.00	34.77	24.55	4.38
Mango Green	20.59	21.28	21.80	23.58	26.71	25.85	23.98	27.00	30.31	34.22	34.48	34.25	27.00	5.18
Kangkong	4.49	2.23	1.68	0.54	2.20	2.30	0.34	0.37	0.34	0.40	1.28	1.35	1.46	1.24
Chayote	10.30	8.85	8.28	16.33	18.80	19.00	14.12	11.55	8.51	11.42	18.80	16.01	13.50	4.19
Upo	10.07	9.79	9.78	10.15	9.84	10.00	12.52	8.35	5.67	11.36	16.26	29.92	11.93	6.17
Squash	10.00	9.81	9.62	9.43	9.22	8.52	9.27	9.43	6.80	8.61	11.15	17.26	9.93	2.53
Tomato Ripe	18.97	18.13	16.05	15.25	10.64	11.00	26.20	27.64	26.80	40.78	54.76	59.31	27.13	16.32
Bell Pepper Baguio	92.90	93.16	49.70	97.37	105.67	106.00	113.29	116.58	108.24	144.25	174.05	161.85	113.59	33.40
Condiments														
Garlic White	22.85	22.70	22.20	17.08	18.20	19.00	23.70	23.36	23.63	23.93	24.73	24.68	22.17	2.60
Garlic	119.01	121.37	117.95	143.57	153.67	155.00	145.12	149.05	164.39	191.72	219.05	214.65	157.88	34.46
Black Pepper	113.12	112.63	116.73	118.21	117.50	118.30	117.86	130.13	155.16	184.97	214.77	223.09	143.54	41.17
Root Crops														
Cassava	8.44	7.37	6.62	8.25	12.67	12.00	16.65	17.03	16.84	12.82	8.79	9.85	11.44	3.81
Camote	8.41	6.66	6.50	6.67	12.89	12.00	11.26	11.27	11.43	8.38	5.33	4.80	8.80	2.84
Gabi Cebu	8.08	8.15	8.05	12.55	12.00	12.00	13.23	17.82	23.82	23.66	20.97	21.00	15.11	6.05
Gabi Tagalog	9.20	10.39	10.44	12.00	11.47	11.50	14.07	18.07	23.72	23.11	20.30	20.26	15.38	5.36
Fruits														
Bungulan Ripe	1.20	1.30	1.16	1.07	1.72	1.50	1.02	1.04	1.04	1.57	2.09	3.21	1.49	0.63
Lakatan Ripe	2.29	2.27	2.24	1.24	1.08	1.05	1.20	1.22	1.23	1.98	2.27	3.17	1.77	0.69
Latundan Ripe	1.58	1.44	1.14	1.04	0.71	0.75	1.05	1.05	1.05	1.77	1.98	2.99	1.38	0.64
Saba Ripe	1.09	1.13	1.08	1.07	1.03	1.03	1.03	1.01	1.00	1.84	2.04	2.56	1.33	0.52
Papaya Hawaiian	20.20	18.46	17.56	11.58	18.02	19.01	21.96	22.93	22.26	22.41	22.55	29.08	20.50	4.19
Pineapple Formosa	8.52	7.64	7.37	8.49	8.25	8.00	8.58	8.67	9.09	9.85	10.60	8.21	8.61	0.90
Nuts														
Coconut Matured	4.82	4.45	4.65	5.14	5.28	5.30	5.20	5.27	5.26	4.69	4.78	4.81	4.97	0.30
Peanut with Shell	33.13	33.25	32.70	33.45	34.00	35.00	33.44	34.16	33.75	33.73	45.92	42.40	35.41	4.19
Meat														
Beef Pure Meat	116.47	113.71	116.67	119.93	118.38	119.00	118.67	118.28	118.26	117.14	116.38	116.25	117.43	1.66
Beef with Bone	94.47	94.79	93.48	100.19	107.71	107.80	95.97	98.45	99.35	95.59	95.73	97.14	98.47	4.77
Pork Pure Meat	77.64	80.63	77.50	81.63	84.17	82.50	87.09	89.29	88.14	82.33	80.62	81.21	82.73	3.80
Pork with Bones	63.81	66.25	66.25	70.00	69.59	69.00	74.56	76.56	75.06	72.91	70.75	66.37	70.09	4.04
Dressed Chicken, Broiler	77.45	71.95	74.03	70.89	71.47	72.35	71.73	75.15	73.00	74.45	76.97	77.97	73.95	2.47
Dressed Chicken, Native	88.42	86.50	84.10	82.08	84.03	85.00	84.06	85.52	82.45	82.31	85.36	86.61	84.70	1.93
Eggs														
Chicken Egg/Medium	2.56	2.55	2.56	2.71	2.57	2.55	2.64	2.69	2.66	2.69	2.72	2.83	2.64	0.07
Chicken Egg/Large	2.71	2.76	2.74	2.77	2.77	2.60	2.76	2.74	2.75	2.76	2.77	2.93	2.76	0.07
Chicken Egg/Small	2.18	2.19	2.16	2.36	2.30	2.35	2.22	2.26	2.13	2.2	2.27	2.94	2.30	0.22

Note : Bold figures are estimation.
Source : BAS, Albay Province

Table E.3.24 Present Farm Economy in the Study Area

Item	Lowland Rice Based Farmers							
	Owner Operator				Tenant			
	Small	Medium	Large	Average	Small	Medium	Large	Average
Sampling Number	8	6	4		19	1	8	
Average Operating Size (ha)	0.25	0.77	4.33	1.30 *	0.40	0.71	3.34	1.30 *
I. Income	38,156	47,104	94,386	59,882	31,170	42,259	91,118	54,851
Farm Income	7,067	14,384	69,819	30,423	5,760	12,702	49,610	22,691
Crop	3,600	11,088	62,352	25,680	5,760	10,224	48,096	21,360
Livestock	3,467	3,296	7,467	4,743	0	2,478	1,514	1,331
Non-Farm Income	31,089	32,720	24,567	29,459	25,410	29,557	41,508	32,160
Handicraft	0	552	0	184	3,399	2,896	2,171	2,822
Occasional Employment	9,353	7,015	4,676	7,015	0	3,289	2,971	2,087
Permanent Employment	19,976	14,982	9,988	14,982	13,802	14,472	21,051	16,442
Loans	1,760	1,320	2,560	1,880	4,980	3,750	10,223	6,318
Trade	0	2,664	0	888	0	2,500	2,875	1,792
Others	0	6,187	7,343	4,510	3,229	2,650	2,217	2,699
II. Expenditure	35,074	42,371	85,970	54,471	29,996	40,498	88,462	52,985
Farm expenses	4,967	6,439	9,807	7,071	4,840	7,964	17,238	10,014
Handicraft	0	196	0	65	0	0	549	183
Living Expenditure	28,347	33,071	73,603	45,007	24,460	28,823	65,011	39,431
Trading	0	1,345	0	448	0	1,836	1,575	1,137
Loan Payment	1,760	1,320	2,560	1,880	696	1,875	4,089	2,220
III. Net Reserve (I - II)	3,082	4,733	8,416	5,411	1,174	1,761	2,656	1,866

Item	Upland Coconut Based Farmers							
	Owner Operator				Tenant			
	Small	Medium	Large	Average	Small	Medium	Large	Average
Sampling Number	6	7	27		2	1	11	
Average Operating Size (ha)	0.18	0.85	3.16	2.30 *	0.20	0.83	3.00	2.40 *
I. Income	33,447	34,934	63,192	43,858	26,505	33,837	59,118	39,821
Farm Income	6,222	10,396	33,952	17,024	3,250	9,913	25,597	12,920
Crop	2,722	7,948	27,441	12,704	2,250	6,780	21,997	10,342
Livestock	4,000	2,448	6,511	4,320	1,000	3,133	3,600	2,578
Non-Farm Income	26,725	24,538	29,240	26,834	23,255	23,924	33,521	26,901
Handicraft	800	1,600	1,336	1,245	665	1,850	740	1,085
Occasional Employment	10,355	9,363	10,412	10,043	10,180	8,560	11,281	10,007
Permanent Employment	10,650	8,212	9,827	9,563	7,838	7,400	18,400	11,213
Loans	1,920	2,343	2,712	2,325	1,038	2,077	3,100	2,072
Trade	0	0	1,788	596	700	1,102	0	601
Others	3,000	3,020	3,165	3,062	2,834	2,935	0	1,923
II. Expenditure	32,203	32,901	58,105	41,070	25,979	33,151	58,226	39,119
Farm expenses	3,910	4,120	10,128	6,053	2,045	3,576	10,749	5,457
Handicraft	27	0	133	53	0	160	0	53
Living Expenditure	26,538	27,110	44,786	32,811	22,959	26,954	44,997	31,637
Trading	0	0	859	296	0	800	0	267
Loan Payment	1,728	1,674	2,169	1,857	975	1,661	2,480	1,705
III. Net Reserve (I - II)	1,244	2,030	5,087	2,788	526	686	892	702

Note: * Weighted average.

Table F 4.1 Selection of Suitable Crops in the Study Area (1/2)

Master List/First Screening

Crop	Growing Period (days)	Climate Requirement			Level of Damage by Typhoon	Adaptability to the Climate	Suitability to Partial Shading	Overall Rank
		Temperature	Water requirement (mm per season)	Remarks				
1. Upland rice	130	20 to 35	> 750		Minimized by selecting planting season	A	B	B
2. Corn	105	20 to 32	610	Sensitive to lack of water at silking and grain fill	do	B	B	B
3. Sorghum	85	25 to 35	500	Need a dry season during maturity	do	N	N	N
4. Mungbean	70	20 to 30	410	Do not grows well under heavy rain	do	B	B	B
5. String bean	90	20 to 30	400	Tolerate water logging to some extent	do	B	A	B
6. Soybean	90	22 to 30	530	Grows best in humid area, but no excess moisture	do	B	B	B
7. Cowpea	100	20 to 30	530	Excess moisture may cause poor germination	do	B	B	B
8. Peanut	80	24 to 33	600	Excess moisture may cause poor germination	do	B	B	B
9. Tomato	45	24 to 28	460	Sentive to wet soils and excessive rain	do	C	C	C
10. Cabbage	75	max 30	frequent supply	Affected by excess water	do	C	C	C
11. Onion (Bulb)	60	18 to 25	frequent supply	Requires a dry period prior to harvest	do	N	N	N
12. Onion (Leaf)	75	18 to 25			do	B	N	N
13. Garlic	145	15 to 28		Harvest must coincide with the dry season	do	C	N	N
14. Lettuce	45 to 80	15 to 30		Affected by heavy rainfall	do	C	N	N
15. Pechay	140	22 to 30		Mild climate is required	do	B	B	B
16. Asparagus	140	24 to 28		Excess of water cause severe damages	do	B	C	C
17. Mushroom	70		(Volvaria species)	Shaded condition. On bed made of crop straw's		A	A	A
18. Kang kong	90				do	A	C	C
19. Watercress	80 to 140				do	A	C	C
20. Eggplant	80	25 to 35		Sensitive to excess water. Need big ridges	do	B	B	B
21. Okra	Biennial	20 to 30		Excessive moisture will affect roots	do	B	B	B
22. Sweet pepper	130	16 to 35			do	A	B	B
23. Chili	130	16 to 35			do	A	B	B
24. Bittergourd	50 to 70	24 to 32		No much affected even in rainy condition	do	B	B	B
25. Squash	70 to 90	20 to 30		Low humidity is required	do	B	C	C
26. Pumpkin	85 to 115	20 to 30			do	C	C	C
27. Cucuniber	60 to 80	18 to 30		Low humidity is required	do	B	C	C
28. Chayote	Biennial	25 to 33			do	A	B	B
29. Carrot	70 to 90	20 to 30			do	C	N	N
30. Radish	90	20 to 30			do	C	N	N
31. Irish potato	120	16 to 23	100 mm/month	Excessive rainfall affects production	do	N	N	N
32. Sweet potato	150	22 to 35	600 to 1200		do	A	B	B
33. Cassava	300	20 to 35	1000 to 1200	Well distributed rainfall	Medium level of damage	B	B	B
34. Yam	300	22 to 32	> 600		Medium to low damage	B	B	B
35. Taro	300	22 to 32	> 1000		Medium to low damage	B	C	C
36. Ginger	300	25 to 35	> 2000 well distrib	One dry month prior to harvest is required	Medium to low damage	A	A	A
37. Musk melon	70	18 to 35				C	N	N
38. Water melon	90	18 to 35		Long warm and dry weather are required		C	N	N
39. Papaya	Biennial		> 1200 mm	Well distributed rain(fall)	Medium to High level of damage	B	B	B
40. Orange	Perennial				Medium to High level of damage	B	C	C
41. Lemon	Perennial				Medium to High level of damage	B	C	C
42. Grape fruit	Perennial				Medium to High level of damage	B	C	C
43. Grape	Perennial				Medium to High level of damage	N	N	N
44. Mango	Perennial				Medium to High level of damage	C	B	C
45. Mangosteen	Perennial				Medium to High level of damage	B	C	C
46. Chico	Perennial				Medium to High level of damage	C	C	C
47. Guava	Perennial				Resistant to strong winds	A	B	B
48. Jack fruit	Perennial				Medium to High level of damage	B	B	C
49. Pineapple	Biennial	24 to 30	1000 to 1200	Well distributed rain(fall)	Low level of damages	A	A	A
50. Banana	Perennial				High level of damages	C	B	C
51. Abaca	Perennial				High level of damages, but can recover quickly	B	A	B
52. Coffee	Perennial	13 to 26	2000	Well distributed rainfall	Medium, can be protected with wind breaks	B	A	B
53. Cocoa	Perennial		1000 to 2000	Well distributed rainfall	Medium, can be protected with wind breaks	B	A	B
54. Black pepper	Perennial		> 1500	Well distributed rainfall	Medium, can be protected with wind breaks	B	A	B
Agro-forestry and Pasture Species								
Pili	Perennial				Resistant to strong winds	B	B	B
Anahaw	Perennial				Resistant, low damages	A	A	A
Bamboo	Perennial				Medium to High level of damage	A	B	B
Pasture					Low damage	A	A	A

Sources: Philippines Recommendations for Irrigation Water Management, PCARRD, Technical Bulletin series No. 50

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Handbook of Tropical Vegetables Cultivation, AICAF, Japan

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Note: A = Highly Suitable; B = Moderately Suitable

C = Marginally Suitable; N = Not Suitable

Table F 4.1 Selection of Suitable Crops in the Study Area (2/2)

Second Screening

Crop	Soil Type	pH	Land Requirement		Remarks	Suitability
			Risk of Soil Erosion	Based on Land Properties		
1. Upland rice	Clay loam to clayey; High water retention	5 to 7	Require conservation measures for sloping lands			B
2. Corn	Sandy loam & Clay loam; Well drained	5.3 to 7.3	Require conservation measures for sloping lands		High depletion of soil nutrients	B
3. Mungbean	Sandy clay, clay loam; Well drained.	5.8 to 6.5	Require conservation measures for sloping lands		The crop helps to improve soil fertility	B
4. String bean	Sandy or clay loam; well drained	5.5 to 6	do		The crop helps to improve soil fertility	B
5. Soybean	Sandy loam & Clay loam; Well drained	6 to 6.5	do		The crop helps to improve soil fertility	B
6. Cowpea	Sandy clay, clay loam; Well drained.	5.5 to 6.5	do		The crop helps to improve soil fertility	B
7. Peanut	Sandy loam is best, clay loam is marginal	5.8 to 6.5	do		The crop helps to improve soil fertility	C
8. Eggplant	Loam, well drained best, can be on clay	5.5 to 6.8	Require conservation measures for sloping land			B
9. Okra	Most soil types, but Well drained	6 to 6.5	do			B
10. Sweet pepper	Sandy loam to Clay loam; Well drained	5.5 to 7	do			B
11. Chili	Most soil types, but Well drained	5.5 to 6	do			B
12. Bittergourd	High O. M. Good water retention					B
13. Chayote	Grow well in many type of soils		Do not increase the risk of erosion			B
14. Sweet potato	Sandy loam & silt loam; No heavy clay	5.6 to 6.6	High risk of erosion in sloping lands			C
15. Cassava	Sandy loam to Clay loam	5.8 to 7	Appropriate soil conservation practice in sloping land			C
16. Yam	Loam & Clay loam; Clay is marginal	5.5 to 7.5	do			C
17. Taro	Loam & Clay loam; Clay is marginal	5.5 to 7.5				B
18. Ginger	Sandy loam to Clay loam, depths 3% well drained					B
19. Papaya	Well drained; high organic matter	5.8 to 7	Require conservation measures for sloping land			B
20. Mango			After grown, the crop will protect sloping lands			B
21. Guava			After grown, the crop will protect sloping lands			A
22. Jack fruit			After grown, the crop will protect sloping lands			B
23. Pineapple	Well drained	4.5 to 5.5				C
24. Abaca	Clay loam; Well drained	6.5	After grown, the crop will protect sloping lands			B
25. Coffee	Well drained, deep	4.5 to 5.6	After grown, the crop will protect sloping lands			C
26. Cocoa			After grown, the crop will protect sloping lands			B
27. Black pepper	Any soil if well drained					B
Agro-forestry and Pasture						
Pili			After grown, the crop will protect sloping lands			B
Anahaw			After grown, the crop will protect sloping lands			A
Bambao			After grown, the crop will protect sloping lands			A
Pasture			After grown, it will protect sloping lands			A

A = Highly suitable; B = Moderately suitable; C = Marginally suitable; N = No suitable

Third Screening

Crop	Labor Requirement (Man day/ha)	Material Input (Peso/ha)	Estimated total Cost (Peso/ha)	Estimated Net Income (Peso/ha/year)	Marketability	Contribution to Agro industry	Remark
1. Upland Rice	70	4,000	7,100	5,700	Good		
2. Corn	54	3,000	10,000	2,000	Good	Good	
3. Soybean	69	6,000	15,000	3,000	Moderate	Good	
4. Mungbean	80	7,200	14,500	2,500	Good		
5. Okra	181	8,000	30,900	8,000	Limited	Low	
6. Chili	81	9,000	21,600	10,000	Good	Medium	
7. Eggplant	100	8,000	22,000	50,000	Moderate	None	
8. Chayote					Moderate	None	
9. Sweet potato	60	4,200	11,000	29,000	Limited	Medium	
10. Cassava	55	5,000	11,600	24,000	Limited	Medium	
11. Ginger	201	50,000	75,000	43,000	Moderate	High	Cost of planting material is
12. Papaya	110 first year 170 second year	8,300 first Year 7,300 second Year	17,000 first year 22,600 second year	22,000 for year 2 & 3	Good	Medium	
13. Pineapple	260	65,000	104,000	56,000	Moderate	Medium	Cost of planting material is
14. Abaca	128 first year; 230 from third year	22,000 first year 12,000 from third year	33,000 first year 32,000 from second year	16,000 from year 3	Very good	Very high	Up to 50 years continue production
15. Coffee	57 first year 69 from seventh year	8,000 first year 6,000 from seventh year	13,000 first year; 6,000 second year 11,000 from seventh year	7,000 at the 4th year increasing up to 34,000 at the 7th year	Good	High	
16. Black Pepper	68 first year 45 second year	32,000 first year 9,000 for year 2	38,000 first year; 8,000 from year 3	2,000 at the year 4; 47,000 at the year 8	Moderate	Low	
17. Stringbean	104	20,000	36,000	6,000	Moderate	None	
18. Cowpea	51	7,355	19,200	28,500	Moderate	None	
Agro-forestry and Pasture Species							
Pili	It is recommendable to plant at small scale because the long period required until the beginning of production				Good	High	
Anahaw	40	1,300	1,800	20,000	Good	High	
Bambao					Good	High	No data on cost and benefit
Pasture	(Several species that can grow well under coconut)						

Sources: Quantity of inputs from Crop Production Guides, BIP; Prices: BAS and Study Team survey, as of October to December, 1995

Table F.4.2 Corn Area and Corn Farmers' Organizations by Barangay

Municipality/ Barangay	Total Area (ha)	Corn Area (ha)	Number of Corn Farmers	Existing Corn Farmers Organization
Camalig				
C-1 Quirangay	651	3	4	
C-2 Salugan	105	7	6	
C-3 Gapo	88	1	12	
C-4 Poblacion	36	0	0	
C-5 Tinago	65	40	25	
C-6 Hawod	187	3	6	
C-7 Libod	327	1	1	
C-8 Lighan	91	0	0	
C-9 Tagaytay	387	2	4	
C-10 Gotob	91	2	3	
C-11 Baligang	347	31	30	
C-12 Tagoytoy	127	20	24	
C-13 Taladong	203	9	15	
C-14 Binitayan	69	2	8	
C-15 Comun	157	7	14	
C-16 Bongabong	316	9	18	
C-17 Cotmon	595	12	17	
C-18 Del Rosario	246	3	12	
C-19 Panoypoy	455	5	7	
C-20 Magogon	240	43	45	YES
Total	4,783	200	251	
Daraga				
D-1 Inarado	682	1	1	
D-2 Gapo	389	2	2	
D-3 De La Paz	73	1	2	
D-4 Dinoronan	61	2	2	
D-5 Peña Francia	194	10	8	
D-6 Alobo	161	100	51	
D-7 Tabon-Tabon	208	2	2	
D-8 Gabawan	93	3	5	
D-9 Mabini	124	0	0	
D-10 Kinawitan	79	2	2	
D-11 Burgos	149	3	2	
D-12 Bascaran	424	0	0	
D-13 Talahib	432	1	2	
D-14 Namantao	363	10	10	
D-15 San Vicente Pequeño	64	5	5	
D-16 Maopi	253	0	0	
D-17 Anislag	659	0	0	
D-18 Canarom	247	15	15	
D-19 San Ramon	785	198	200	
D-20 Mayon	357	75	85	
D-21 San Rafael	33	10	25	
Total	5,827	440	419	
Study Area Total	10,610	640	670	

Source: MAS; MPDO; Study Team

Table F 4.3 Coconut Area and Farmers' Organizations by Barangay

Municipality/ Barangay	Total Area (ha)	Coconut Area (ha)	Coconut Area As % of total	Number of Coconut Farmers	Existence of SCFO	No. of Members in the SCFO	Institution Accrediting the SCFO	No. of Farmers Beneficiary of SCFDP
Cantablig								
C-1 Quirangay	651	408	63	163	YES	40	X	5
C-2 Salugan	105	76	73	42				2
C-3 Gapp	88	50	57	23				
C-4 Poblacion	36	0	0	0				
C-5 Tinago	65	55	84	30				
C-6 Ilawod	187	77	41	44				
C-7 Libod	327	80	24	26				2
C-8 Ligban	91	45	50	23				
C-9 Tagaytay	387	234	60	130				4
C-10 Gorob	91	37	41	18				
C-11 Baligang	347	211	61	159	YES	67	PCA	37
C-12 Tagoytoy	127	90	69	72				
C-13 Taladong	203	158	78	140	YES	43	CDA	23
C-14 Binitayan	69	43	59	23				
C-15 Comun	157	85	54	55				
C-16 Bongabong	316	218	69	117				13
C-17 Corton	595	417	70	218				
C-18 Del Rosario	246	212	86	139				
C-19 Panoyoy	455	421	93	183				
C-20 Magogon	240	191	80	104	YES	33	CDA	39
Total	4,783	3,108	65	1,709		183		125
Danaga								
D-1 Inarado	682	482	71	219	YES	34	CDA	22
D-2 Gapp	389	220	57	110				18
D-3 De La Paz	73	62	85	33				
D-4 Dinoronan	61	30	49	16				24
D-5 Peña Francia	194	124	64	65	YES	33	PCA	20
D-6 Aloba	161	100	62	53				
D-7 Tabon-Tabon	208	113	54	59	YES	39		27
D-8 Gabawan	93	46	49	44	YES	37	PCA	1
D-9 Mabini	124	89	72	47	YES	34	X	14
D-10 Kinawitan	79	63	80	33				
D-11 Burgos	149	84	56	44				
D-12 Bascaran	424	289	68	120	YES	31	PCA	25
D-13 Talahib	432	370	86	176	YES	32	CDA	13
D-14 Namanao	163	279	77	127				
D-15 San Vicente Pequeho	64	12	19	5				
D-16 Maop	253	199	79	105	YES	28	X	6
D-17 Anislag	659	442	67	210				4
D-18 Canarom	247	190	77	100				
D-19 San Ramon	785	534	68	243	YES	39	X	21
D-20 Mayon	357	216	61	103	YES	30		17
D-21 San Rafael	33	28	86	15				
Total	5,827	3,972	68	1,927		337		212
Study Area Total	10,610	7,080	66.7	3,636		520		337

Sources: PCA; MPDO; Study Team

Note: X indicates SCFO that have not completed their organization.

Table F.5.1 Results on Household Classification Survey

	Camalig Diversion		Dam No.2			Upland Corn		Upland Coconut		
	Tagaytay	%	Inarado	Alobo	Total	%	Magogon	%	S. Ramon	%
Sampling Number										
Owner	30	28.6	30	21	51	32.2	51	42.5	38	40.8
Non-Cultivator	5	4.8	7	3	10	6.4	0	0	11	11.8
Cultivator	25	23.8	23	18	41	26.3	51	42.5	27	29.0
Tenant	59	56.2	45	24	72	50.2	43	35.9	43	51.6
Lessee	11	10.5	6	3	9	5.8	5	4.2	7	7.5
Share-Cropper	48	45.7	39	31	70	44.9	38	31.7	41	44.1
Care-Taker/Landless	16	15.2	18	8	26	16.6	26	21.6	7	7.6
Sub-total	105	100.0	93	63	156	100.0	120	100.0	93	100.0
Non-Farm Household	13	11.0	3	5	8	4.9	7	5.5	4	4.1
Total	118	100.0	96	68	164	100.0	127	100.0	97	100.0
Total Household No. (Model Project Area)	1,033				961		127		257	
Share of Sampling to Total Household No. (%)	11.4				17.1		100.0		37.7	

Table F.5.2 Sampling Design for Farmer Interview Survey

Model Area/Barangay	No. of Farm H.hold	Distri- bution (%)	Non- Cultivator	Land Owner				Lessee/Share- Cropper				Care-taker/ Landless	Total
				Cultivator									
				Small	Median	Large	Total	Small	Median	Large	Total		
Camalig Diversion				25%	50%	25%	100%	25%	50%	25%	100%		
		Operation Size(tha)			Bl. 0.24	0.38	Qv. 1.0		Bl. 0.24	0.38	Qv. 1.0		
C-6 Ilawod	450	49.0	3	5	10	5	20	12	23	11	46	12	81
C-7 Libod	69	7.5	1	1	1	1	3	2	3	2	7	2	13
C-8 Ligban	91	9.9	1	1	2	1	4	2	5	2	9	2	16
C-9 Tagaytay	223	24.3	2	2	6	2	10	5	12	6	23	6	41
C-10 Gotub	85	9.3	1	1	1	1	3	2	4	2	8	3	15
Total	918	100.0	8	10	20	10	40	23	47	23	93	25	166
Dam No. 2				0.24	0.35	Qv. 1.0		0.24	0.35	Qv. 1.0			
C-14 Binisayan	68	7.4	1	1	1	1	3	2	3	1	6	2	12
C-15 Conun	112	12.2	1	1	3	1	5	3	5	2	10	3	19
C-17 Comon	265	29.0	3	3	7	3	13	6	12	6	24	8	48
D-1 Inarado	309	33.8	3	3	7	4	14	7	14	8	29	9	55
D-6 Alobo	74	8.1	1	1	2	1	4	1	4	2	7	2	14
D-7 Tabon-Tabon	32	3.5	1	1	1	0	2	1	1	1	3	1	7
D-11 Burgos	55	6.0	1	1	1	1	3	1	3	1	5	2	11
Total	915	100.0	11	11	22	11	44	21	42	21	84	27	166
Magogon				Bl. 0.4	1.00	Qv. 2.0		Bl. 0.4	1.00	Qv. 2.0			
	120	100.0	0	2	5	2	9	2	4	2	8	5	22
San Ramon				Bl. 0.4	1.15	Qv. 2.0		Bl. 0.4	1.15	Qv. 2.0			
	257	100.0	5	3	7	3	13	6	12	6	24	4	46
Total	2,210		24	26	54	26	106	52	105	52	209	61	400

Table E.5.3 Demography of Model Project Areas in 1995

(1) Canabig Division Area

Model Area/Barangay Block No.		No. of Household			Population		
		Total	Non-Farm	Farm	Total	Non-Farm	Farm
C-6 Ilawod (5 Blocks in total)	0.89	506	56	450	2,682	295	2,387
C-6-1	0.89	98	11	87	519	57	462
C-6-2	0.89	96	11	85	509	56	453
C-6-3	0.89	68	7	61	360	30	330
C-6-4	0.89	162	18	144	859	94	765
C-6-5	0.89	82	9	73	435	48	387
Block total		506	56	450	2,682	295	2,387
C-7 Libod (7 Blocks in total)	0.89	433	48	385	2,600	286	2,314
C-7-4	0.89	36	4	32	216	24	192
C-7-5	0.89	42	5	37	252	28	224
Block total		78	9	69	468	52	416
C-8 Tigban (3 Blocks in total)	0.89	125	14	111	636	70	566
C-8-1	0.89	40	4	36	204	22	182
C-8-2	0.89	62	7	55	315	35	280
Block total		102	11	91	519	57	462
C-9 Tagaytay (7 Blocks in total)	0.89	398	44	354	2,408	232	2,176
C-9-1	0.89	47	5	42	249	27	222
C-9-2	0.89	39	4	35	206	23	183
C-9-3	0.89	87	10	77	461	51	410
C-9-4	0.89	78	9	69	413	45	368
Block total		251	28	223	1,329	136	1,193
C-10 Gotob (7 Blocks in total)	0.89	96	11	85	491	54	437
C-10-1	0.89	12	1	11	61	7	54
C-10-2	0.89	19	3	16	97	11	86
C-10-3	0.89	14	2	12	72	8	64
C-10-4	0.89	11	1	10	56	6	50
C-10-5	0.89	13	1	12	66	7	59
C-10-6	0.89	13	1	12	66	7	59
C-10-7	0.89	14	2	12	73	8	65
Block total		96	11	85	491	54	437
Related Barangay Total		1,558	173	1,385	8,517	937	7,580
Related Block Total		1,033	115	918	5,489	604	4,885

(2) Upland Model Areas

Model Area/Barangay Block No.		No. of Household			Population		
		Total	Non-Farm	Farm	Total	Non-Farm	Farm
Upland Corn Model							
C-20 Magagon (3 Blocks in total)	0.945	127	7	120	496	27	469
C-20-1	0.945	46	3	43	180	10	170
C-20-2	0.945	33	2	31	129	7	122
C-20-3	0.945	48	2	46	187	10	177
Block total		127	7	120	496	27	469
Upland Coconut Model							
D-19 San Ramo (6 Blocks in total)	0.959	257	11	246	1,337	55	1,282
D-19-1	0.959	50	2	48	260	11	249
D-19-2	0.959	43	2	41	224	9	215
D-19-3	0.959	41	2	39	213	9	204
D-19-4	0.959	39	2	37	255	10	245
D-19-5	0.959	44	2	42	229	9	220
D-19-6	0.959	30	1	29	156	7	149
Block total		257	11	246	1,337	55	1,282

(2) Dum No 2 Area

Model Area/Barangay Block No.		No. of Household			Population		
		Total	Non-Farm	Farm	Total	Non-Farm	Farm
C-14 Binuyan (5 Blocks in total)	0.951	95	5	90	418	20	398
C-14-1	0.951	30	1	29	132	6	126
C-14-2	0.951	26	1	25	114	6	108
C-14-3	0.951	15	1	14	66	3	63
Block total		71	3	68	312	15	297
C-15 Comon (4 Blocks in total)	0.951	224	11	213	1,085	58	1,027
C-15-1	0.951	67	3	64	354	17	337
C-15-2	0.951	50	2	48	265	13	252
Block total		117	5	112	619	30	589
C-17 Comon (6 Blocks in total)	0.951	439	22	417	2,285	102	2,183
C-17-1	0.951	119	6	113	619	30	589
C-17-2	0.951	87	4	83	453	22	431
C-17-3	0.951	73	4	69	380	19	361
Block total		279	14	265	1,452	71	1,381
D-1 Inarado (7 Blocks in total)	0.951	325	16	309	1,503	74	1,429
D-1-1	0.951	52	3	49	240	12	228
D-1-2	0.951	47	2	45	217	11	206
D-1-3	0.951	53	3	50	245	12	233
D-1-4	0.951	47	2	45	217	11	206
D-1-5	0.951	47	2	45	217	11	206
D-1-6	0.951	37	2	35	171	8	163
D-1-7	0.951	42	2	40	196	9	187
Block total		325	16	309	1,503	74	1,429
D-6 Abaso (4 Blocks in total)	0.951	100	5	95	559	27	532
D-6-1	0.951	32	2	30	179	9	170
D-6-2	0.951	17	1	16	95	5	90
D-6-3	0.951	29	1	28	162	8	154
Block total		78	4	74	436	22	414
D-7 Tabon-Tal (7 Blocks in total)	0.951	259	13	246	1,322	65	1,257
D-7-7	0.951	24	2	22	124	9	115
D-11 Burgos (7 Blocks in total)	0.951	162	8	154	811	41	770
D-11-1	0.951	28	1	27	145	7	138
D-11-2	0.951	29	1	28	151	7	144
Block total		57	2	55	296	14	282
Related Barangay Total		1,664	80	1,584	8,113	397	7,716
Related Block Total		961	46	915	4,792	235	4,557

Note: 1.1. Area in 1995

(3) 4 Model Project Areas

	No. of Household			Population		
	Total	Non-Farm	Farm	Total	Non-Farm	Farm
Ground Total						
Related Barangay Total	3,546	271	3,275	18,463	1,416	17,047
Related Block Total	2,378	179	2,199	12,114	921	11,193

Table F.5.4 Owner Distribution of Agricultural Land in Model Project Area (1/4)

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Owner		Area Distribution		No. of Owner		Area Distribution		No. of Owner		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
Camalig Diversion Model Project Area												
					Median		0.38					
Below 0.249	333	28.2	50	4.7	254	35.6	38	8.2	111	25.2	17	4.0
0.250 - 0.499	292	24.8	107	10.1	183	25.7	66	14.4	98	22.2	37	8.7
0.500 - 0.999	269	22.8	191	17.9	151	21.2	103	22.3	107	24.3	75	17.7
1.000 - 1.499	115	9.8	139	13.1	60	8.4	73	15.7	53	12.0	63	14.9
1.500 - 1.999	55	4.7	95	8.9	24	3.4	47	10.1	22	5.0	38	9.0
2.000 - 2.999	56	4.7	135	12.7	23	3.2	55	11.9	26	5.9	62	14.5
3.000 - 4.999	39	3.3	152	14.3	14	2.0	52	11.3	13	2.9	50	11.7
5.000 - 6.999	9	0.8	53	5.0	1	0.1	6	1.4	6	1.4	35	8.1
7.000 - 9.999	4	0.3	34	3.2	0	0.0	0	0.0	3	0.7	26	6.0
10.000 and over	7	0.6	108	10.1	3	0.4	24	5.1	2	0.5	23	5.4
Total	1,179	100.0	1,064	100.0	713	100.0	464	100.0	441	100.0	422	100.0
C-6 Ilwaco												
					Median		0.59					
Below 0.249	32	17.8	4,6235	2.6	25	24.5	3,2766	3.6	9	15.3	1,0770	2.0
0.250 - 0.499	45	25.0	16,3739	9.1	23	22.5	7,7128	8.6	17	28.8	6,7563	12.3
0.500 - 0.999	49	27.2	37,0990	20.7	29	28.4	21,2551	23.6	16	27.1	12,1361	22.1
1.000 - 1.499	24	13.3	28,2172	15.8	17	16.7	20,0236	22.2	7	11.9	8,2653	15.1
1.500 - 1.999	11	6.1	19,3892	10.8	3	2.9	10,1346	11.2	4	6.8	7,0119	12.8
2.000 - 2.999	9	5.0	21,1528	11.8	1	1.0	2,5143	2.8	4	6.8	10,1505	18.5
3.000 - 4.999	7	3.9	26,0950	14.6	2	2.0	7,0295	0	1	1.7	3,2432	5.9
5.000 - 6.999	2	1.1	12,8687	7.2	1	1.0	6,4640	7.2	1	1.7	6,1721	11.3
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	1	0.6	13,2666	7.4	1	1.0	11,7190	0	0	0	0	0
Total	180	100.0	179,0859	100.0	102	100.0	90,1295	100.0	59	100.0	54,8124	100.0
C-7 Libod												
					Median		0.38					
Below 0.249	121	29.7	18,1505	5.5	117	33.8	18,0309	7.9	20	36.4	2,3970	3.6
0.250 - 0.499	112	27.5	40,6387	12.2	97	28.0	34,8974	15.3	6	10.9	1,9359	2.9
0.500 - 0.999	89	21.9	61,6908	18.6	74	21.4	49,3590	21.6	15	27.3	10,5920	15.8
1.000 - 1.499	27	6.6	32,8752	9.9	23	6.6	28,4060	12.4	2	3.6	2,1278	3.2
1.500 - 1.999	21	5.2	36,1448	10.9	9	2.6	15,7137	6.9	4	7.3	7,3592	11.0
2.000 - 2.999	21	5.2	50,3304	15.1	15	4.3	35,5543	15.5	4	7.3	9,4901	14.1
3.000 - 4.999	11	2.7	43,4201	13.1	9	2.6	34,8265	15.2	1	1.8	4,2570	6.3
5.000 - 6.999	2	0.5	11,1057	3.3	0	0	0	0	1	1.8	5,8761	8.7
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	3	0.7	38,0803	11.5	2	0.6	11,8944	5.2	2	3.6	23,1210	34.4
Total	407	100.0	332,4365	100.0	346	100.0	228,6822	100.0	55	100.0	67,1594	100.0
C-8 Liguan												
					Median		0.24					
Below 0.249	42	33.3	5,7900	6.8	23	51.1	3,4451	20.8	26	30.6	3,8982	6.4
0.250 - 0.499	32	25.4	11,4704	13.5	11	24.4	3,8263	23.1	20	23.5	7,2716	11.9
0.500 - 0.999	24	19.0	16,4440	19.3	8	17.8	5,2225	31.5	17	20.0	11,9422	19.6
1.000 - 1.499	16	12.7	20,6457	24.2	2	4.4	2,1144	12.8	12	14.1	15,0042	24.6
1.500 - 1.999	3	2.4	5,2852	6.2	1	2.2	1,9517	11.8	4	4.7	7,0200	11.5
2.000 - 2.999	6	4.8	14,8622	17.4	0	0	0	0	5	5.9	12,7130	20.8
3.000 - 4.999	3	2.4	10,7409	12.6	0	0	0	0	1	1.2	3,1980	5.2
5.000 - 6.999	0	0	0	0	0	0	0	0	0	0	0	0
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	126	100.0	85,2384	100.0	45	100.0	16,5600	100.0	85	100.0	61,0472	100.0
C-9 Tagaytay												
					Median		0.32					
Below 0.249	97	29.2	14,9671	4.0	65	40.6	9,5471	9.5	29	17.8	4,9194	2.6
0.250 - 0.499	68	20.5	25,8305	6.9	36	22.5	13,1950	13.1	32	19.6	12,2557	6.5
0.500 - 0.999	73	22.0	51,4954	13.8	25	15.6	16,8559	16.8	47	28.8	32,4289	17.1
1.000 - 1.499	39	11.7	46,2454	12.4	15	9.4	18,3139	18.2	24	14.7	28,0880	14.8
1.500 - 1.999	15	4.5	25,8935	6.9	10	6.3	17,4150	17.3	8	4.9	13,4106	7.1
2.000 - 2.999	14	4.2	33,9372	9.1	6	3.8	14,6610	14.6	8	4.9	18,6083	9.8
3.000 - 4.999	14	4.2	54,7509	14.7	3	1.9	10,4917	10.4	8	4.9	30,9940	16.4
5.000 - 6.999	5	1.5	28,9360	7.8	0	0	0	0	4	2.5	22,6518	12.0
7.000 - 9.999	4	1.2	34,4092	9.2	0	0	0	0	3	1.8	25,7692	13.6
10.000 and over	3	0.9	56,4165	15.1	0	0	0	0	0	0	0	0
Total	332	100.0	372,9117	100.0	160	100.0	100,4796	100.0	163	100.0	189,1559	100.0

Table F.5.4 Owner Distribution of Agricultural Land in Model Project Area (2/4)

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Owner		Area Distribution		No. of Owner		Area Distribution		No. of Owner		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
(Conti. Camahg Diversion Model Project Area)												
C-10 Gotob 0.32												
Below 0.249	41	30.6	6.4586	6.8	24	40.0	3.6955	12.9	27	34.2	4.7343	8.7
0.250 - 0.499	35	26.1	12.7982	13.5	16	26.7	5.8966	20.6	23	29.1	8.8032	16.1
0.500 - 0.999	34	25.4	24.0219	25.4	15	25.0	10.6579	37.3	12	15.2	8.3155	15.2
1.000 - 1.499	9	6.7	11.5011	12.1	3	5.0	3.9593	13.8	8	10.1	9.9490	18.2
1.500 - 1.999	5	3.7	8.4695	8.9	1	1.7	1.6538	5.8	2	2.5	3.4030	6.2
2.000 - 2.999	6	4.5	14.5727	15.4	1	1.7	2.7403	9.6	5	6.3	11.0383	20.2
3.000 - 4.999	4	3.0	16.9127	17.9	0	0	0	0	2	2.5	8.2885	15.2
5.000 - 6.999	0	0	0	0	0	0	0	0	0	0	0	0
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	134	100.0	94.7377	100.0	60	100.0	28.6039	100.0	79	100.0	54.5318	100.0
Dam No. 2 Model Project Area Median Scale 0.35												
Below 0.249	473	27.7	70	4.4	337	35.5	49	9.9	202	22.0	29	2.8
0.250 - 0.499	443	25.9	161	10.1	302	31.7	109	21.8	201	21.8	72	7.0
0.500 - 0.999	383	22.3	274	17.4	187	19.6	133	26.6	225	24.4	157	15.3
1.000 - 1.499	181	10.5	218	13.7	79	8.3	94	18.8	114	12.4	136	13.3
1.500 - 1.999	69	4.0	120	7.5	19	2.0	32	6.4	58	6.3	99	9.7
2.000 - 2.999	88	5.1	215	13.5	20	2.1	48	9.7	55	6.0	133	13.0
3.000 - 4.999	51	3.0	194	12.2	7	0.7	29	5.8	40	4.4	151	14.8
5.000 - 6.999	11	0.6	65	4.1	1	0.1	5	1.0	8	0.9	47	4.6
7.000 - 9.999	6	0.3	52	3.3	0	0.0	0	0.0	7	0.8	59	5.8
10.000 and over	11	0.6	219	13.8	0	0.0	0	0.0	9	1.0	142	13.7
Total	1,716	100.0	1,587	100.0	952	100.0	499	100.0	919	100.0	1,026	100.0
C-14 Binitayan 0.29												
Below 0.249	45	42.1	6.1068	9.1	21	46.7	3.5890	22.9	27	41.5	3.1040	6.6
0.250 - 0.499	28	26.2	9.9333	14.9	14	31.1	4.7578	30.4	14	21.5	4.6383	9.8
0.500 - 0.999	14	13.1	8.6304	12.9	8	17.8	5.1816	33.1	10	15.4	6.0623	12.8
1.000 - 1.499	9	8.4	10.1271	15.1	2	4.4	2.1408	13.7	4	6.2	4.7624	10.1
1.500 - 1.999	3	2.8	4.7418	7.1	0	0	0	0	3	4.6	5.0413	10.7
2.000 - 2.999	5	4.7	12.2878	18.4	0	0	0	0	5	7.7	12.2477	25.9
3.000 - 4.999	1	0.9	3.0189	4.5	0	0	0	0	0	0	0	0
5.000 - 6.999	2	1.9	12.0225	18.0	0	0	0	0	2	3.1	11.3835	24.1
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	107	100.0	66.8586	100.0	45	100.0	15.6692	100.0	65	100.0	47.2395	100.0
C-15 Conua 0.25												
Below 0.249	66	35.1	9.2244	6.0	51	52.0	6.7726	14.9	21	19.8	3.1211	2.9
0.250 - 0.499	48	25.5	17.5159	11.4	27	27.6	9.5045	20.9	22	20.8	7.9867	7.3
0.500 - 0.999	31	16.5	22.4721	14.6	10	10.2	7.6588	16.8	29	27.4	19.8921	18.3
1.000 - 1.499	16	8.5	19.1827	12.5	5	5.1	6.2649	13.8	16	15.1	18.7798	17.3
1.500 - 1.999	6	3.2	10.7036	7.0	2	2.0	3.5899	7.9	5	4.7	8.6797	8.0
2.000 - 2.999	13	6.9	31.7985	20.7	1	1.0	2.1985	4.8	7	6.6	16.5929	15.3
3.000 - 4.999	5	2.7	18.5580	12.1	1	1.0	4.3180	9.5	4	3.8	14.7054	13.5
5.000 - 6.999	1	0.5	5.3333	3.5	1	1.0	5.1483	11.3	0	0.0	0.0000	0.0
7.000 - 9.999	1	0.5	8.0953	5.3	0	0.0	0	0.0	1	0.9	8.1897	7.5
10.000 and over	1	0.5	10.6348	6.9	0	0.0	0	0.0	1	0.9	10.7575	9.9
Total	188	100.0	153.5186	100.0	98	100.0	45.4555	100.0	106	100.0	108.7039	100.0
C-17 Cotmon 0.34												
Below 0.249	103	21.4	16.0191	2.8	81	35.7	12.0496	10.3	44	14.0	5.7955	1.3
0.250 - 0.499	131	27.2	47.9339	8.3	69	30.4	24.6152	21.1	73	23.2	25.8269	6.0
0.500 - 0.999	104	21.6	73.8875	12.8	49	21.6	35.2735	30.2	74	23.5	52.0285	12.1
1.000 - 1.499	63	13.1	75.0387	13.0	17	7.5	19.8174	17.0	51	16.2	58.8180	13.7
1.500 - 1.999	27	5.6	46.2993	8.1	6	2.6	9.8506	8.4	24	7.6	40.6712	9.5
2.000 - 2.999	24	5.0	59.0667	10.3	3	1.3	6.9207	5.9	20	6.3	48.5271	11.3
3.000 - 4.999	16	3.3	58.4204	10.2	2	0.9	8.3671	7.2	17	5.4	60.3667	14.1
5.000 - 6.999	5	1.0	29.5739	5.1	0	0	0	0	4	1.3	23.5784	5.5
7.000 - 9.999	2	0.4	17.6528	3.1	0	0	0	0	3	1.0	27.1987	6.3
10.000 and over	7	1.5	151.1349	26.3	0	0	0	0	5	1.6	86.6015	20.2
Total	482	100.0	575.0272	100.0	227	100.0	116.8941	100.0	315	100.0	429.4125	100.0

Table F.5.4 Owner Distribution of Agricultural Land in Model Project Area (3/4)

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Owner		Area Distribution		No. of Owner		Area Distribution		No. of Owner		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
(Centi. Dam No 2 Model Project Area)												
D-1 Inarado	0.39											
Below 0.249	61	26.6	9.9942	5.4	35	24.5	6.2195	7.7	40	31.0	6.2472	6.1
0.250 - 0.499	53	23.1	19.2218	10.4	61	42.7	22.1485	27.6	27	20.9	9.9322	9.7
0.500 - 0.999	64	27.9	46.6714	25.2	24	16.8	18.5368	23.1	31	24.0	20.7179	20.2
1.000 - 1.499	23	10.0	27.9045	15.1	15	10.5	17.5891	21.9	14	10.9	17.5965	17.1
1.500 - 1.999	6	2.6	10.7004	5.8	3	2.1	4.6752	5.8	8	6.2	14.3353	13.9
2.000 - 2.999	14	6.1	32.5636	17.6	5	3.5	11.1308	13.9	4	3.1	10.5416	10.3
3.000 - 4.999	6	2.6	21.9235	11.9	0	0	0	0	4	3.1	15.3796	15.0
5.000 - 6.999	1	0.4	6.1918	3.3	0	0	0	0	0	0	0	0
7.000 - 9.999	1	0.4	9.7275	5.3	0	0	0	0	1	0.8	8.0156	7.8
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	229	100.0	184.8977	100.0	143	100.0	80.2999	100.0	129	100.0	102.7689	100.0
D-6 Alobo	0.36											
Below 0.249	103	29.9	15.6454	6.5	96	34.5	13.8303	9.2	20	22.7	4.0251	4.8
0.250 - 0.499	92	26.7	33.4347	13.9	81	29.1	29.5287	19.7	14	15.9	4.9856	6.0
0.500 - 0.999	82	23.8	58.6652	24.4	64	23.0	44.3393	29.6	28	31.8	20.0086	24.0
1.000 - 1.499	30	8.7	35.9041	14.9	22	7.9	26.4803	17.7	10	11.4	12.6235	15.1
1.500 - 1.999	12	3.5	21.32	8.9	5	1.8	8.6491	5.8	6	6.8	10.5065	12.6
2.000 - 2.999	17	4.9	42.3716	17.6	8	2.9	20.1931	13.5	8	9.1	19.2971	23.1
3.000 - 4.999	7	2.0	25.754	10.7	2	0.7	6.6754	4.5	1	1.1	4.8832	5.8
5.000 - 6.999	0	0	0	0	0	0	0	0	0	0	0	0
7.000 - 9.999	1	0.3	7.1721	3.0	0	0	0	0	1	1.1	7.1721	8.6
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	344	100.0	240.2671	100.0	278	100.0	149.6962	100.0	88	100.0	83.5017	100.0
D-7 Tabon-Tabon	0.34											
Below 0.249	81	32.1	10.0458	6.0	47	35.6	5.9845	8.4	42	30.0	5.1868	5.5
0.250 - 0.499	71	28.2	25.0471	14.9	42	31.8	14.9207	21.0	45	32.1	16.0077	17.0
0.500 - 0.999	57	22.6	40.9004	24.3	25	18.9	17.0508	24.0	33	23.6	23.2485	24.7
1.000 - 1.499	21	8.3	25.7944	15.3	12	9.1	14.6063	20.5	6	4.3	7.3758	7.8
1.500 - 1.999	5	2.0	8.8938	5.3	2	1.5	3.5063	4.9	2	1.4	3.4395	3.7
2.000 - 2.999	9	3.6	22.3514	13.3	2	1.5	5.6223	7.9	7	5.0	16.4406	17.5
3.000 - 4.999	7	2.8	28.6542	17.0	2	1.5	9.3901	13.2	4	2.9	15.8908	16.9
5.000 - 6.999	1	0.4	6.4386	3.8	0	0	0	0	1	0.7	6.4127	6.8
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	252	100.0	168.1257	100.0	132	100.0	71.0810	100.0	140	100.0	94.0024	100.0
D-11 Burgos	0.53											
Below 0.249	14	12.3	2.6068	1.3	6	20.7	0.9312	4.7	8	10.5	1.6177	1.0
0.250 - 0.499	20	17.5	7.8122	3.9	8	27.6	3.2508	16.6	6	7.9	2.3952	1.5
0.500 - 0.999	31	27.2	22.7605	11.5	7	24.1	4.8151	24.5	20	26.3	14.9707	9.3
1.000 - 1.499	19	16.7	23.7640	12.0	6	20.7	6.9471	35.4	13	17.1	16.2900	10.2
1.500 - 1.999	10	8.8	16.9645	8.6	1	3.4	1.5296	7.8	10	13.2	16.5834	10.4
2.000 - 2.999	6	5.3	14.2072	7.2	1	3.4	2.1520	11.0	4	5.3	9.6160	6.0
3.000 - 4.999	9	7.9	37.2021	18.8	0	0	0	0	10	13.2	40.2442	25.1
5.000 - 6.999	1	0.9	5.6439	2.8	0	0	0	0	1	1.3	5.5188	3.4
7.000 - 9.999	1	0.9	9.7673	4.9	0	0	0	0	1	1.3	8.6747	5.4
10.000 and over	3	2.6	57.5202	29.0	0	0	0	0	3	3.9	44.2826	27.6
Total	114	100.0	198.2437	100.0	29	100.0	19.6258	100.0	76	100.0	160.1983	100.0

Table F.5.4 Owner Distribution of Agricultural Land in Model Project Area (4/4)

Holding Range (ha)	Total Agricultural Land				Paddy Land				Coconut Land			
	No. of Owner		Area Distribution		No. of Owner		Area Distribution		No. of Owner		Area Distribution	
	No.	%	ha	%	No.	%	ha	%	No.	%	ha	%
Magogon Upland Model Project Area/C-20 Magogon											Median Scale	1.00
Below 0.249	7	4.7	0.9503	0.4	5	38.5	0.1302	1.8	6	4.4	0.9253	0.4
0.250 - 0.499	19	12.8	8.0463	3.5	3	23.1	1.1244	15.2	10	7.3	3.8913	1.9
0.500 - 0.999	40	26.8	29.9379	13.1	3	23.1	2.2185	30.1	46	33.6	33.0011	16.0
1.000 - 1.499	23	15.4	27.2166	11.9	1	7.7	1.4209	19.3	19	13.9	21.7994	10.6
1.500 - 1.999	23	15.4	38.0795	16.6	0	0	0	0	23	16.8	37.5799	18.2
2.000 - 2.999	17	11.4	41.7208	18.2	1	7.7	2.4868	33.7	14	10.2	34.2260	16.6
3.000 - 4.999	15	10.1	56.3195	24.6	0	0	0	0	16	11.7	59.2739	28.8
5.000 - 6.999	5	3.4	26.5152	11.6	0	0	0	0	3	2.2	15.4157	7.5
7.000 - 9.999	0	0	0	0	0	0	0	0	0	0	0	0
10.000 and over	0	0	0	0	0	0	0	0	0	0	0	0
Total	149	100.0	228.7861	100.0	13	100.0	7.3803	100.0	137	100.0	206.1126	100.0
San Ramon Upland Model Project Area/D-19 San Ramon											Median Scale	1.15
Below 0.249	20	6.4	3.4683	0.4	0	0	0	0	20	6.5	3.4683	0.4
0.250 - 0.499	46	14.7	16.3779	2.0	1	25.0	0.3943	10.4	45	14.6	15.9831	2.0
0.500 - 0.999	75	24.0	51.8972	6.4	2	50.0	1.7976	47.3	74	24.0	50.9940	6.5
1.000 - 1.499	52	16.6	64.6433	8.0	0	0	0	0	53	17.2	65.7983	8.4
1.500 - 1.999	29	9.3	50.1574	6.2	1	25.0	1.6096	42.3	26	8.4	41.4712	5.7
2.000 - 2.999	32	10.2	77.2486	9.6	0	0	0	0	31	10.1	75.1427	9.6
3.000 - 4.999	31	9.9	120.4821	14.9	0	0	0	0	33	10.7	129.7663	16.5
5.000 - 6.999	12	3.8	71.8404	8.9	0	0	0	0	11	3.6	63.2008	8.1
7.000 - 9.999	5	1.6	41.9115	5.2	0	0	0	0	6	1.9	51.6349	6.6
10.000 and over	11	3.5	309.1863	38.3	0	0	0	0	9	2.9	284.4542	36.2
Total	313	100.0	807.2180	100.0	4	100.0	3.8020	100.0	308	100.0	784.9138	100.0

Table F.5.5 Family Based Owner Distribution of Agricultural Land in the Model Project Area (1/2)

Camalig Diversion Dam Area					Dam No. 2 Area				
Holding Range	Paddy Land				Holding Range	Paddy Land			
	No. of Owner	%	Area Distribution			No. of Owner	%	Area Distribution	
(ha)	No.	%	ha	%	(ha)	No.	%	ha	%
Total Camalig Diversion					Total Dam No.2				
Below 0.249	107	27.8	15	3.3	Below 0.249	129	24.9	20	3.9
0.250 - 0.499	78	20.3	28	5.9	0.250 - 0.499	138	26.5	50	10.1
0.500 - 0.999	80	20.8	57	12.3	0.500 - 0.999	112	21.5	79	15.7
1.000 - 1.499	35	9.1	43	9.2	1.000 - 1.499	51	9.8	62	12.5
1.500 - 1.999	19	4.9	33	7.1	1.500 - 1.999	30	5.8	50	10.1
2.000 - 2.999	23	6.0	57	12.3	2.000 - 2.999	22	4.2	51	10.2
3.000 - 4.999	28	7.3	104	22.5	3.000 - 4.999	24	4.6	90	18.0
5.000 - 6.999	9	2.3	54	11.6	5.000 - 6.999	10	1.9	63	12.6
7.000 - 9.999	1	0.3	8	1.7	7.000 - 9.999	3	0.6	23	4.6
10.000 and over	5	1.3	65	14.1	10.000 and over	1	0.2	11	2.2
Total	385	100.0	461	100.0	Total	520	100.0	499	100.0
C-6 Hawed					C-14 Binitayan				
Below 0.249	14	21.5	1.6976	1.9	Below 0.249	5	20.0	0.6785	4.3
0.250 - 0.499	13	20.0	4.2842	4.8	0.250 - 0.499	10	40.0	3.5051	22.4
0.500 - 0.999	17	26.2	13.1603	14.6	0.500 - 0.999	5	20.0	3.2324	20.6
1.000 - 1.499	8	12.3	10.1064	11.2	1.000 - 1.499	2	8.0	2.1828	13.9
1.500 - 1.999	2	3.1	3.3944	3.8	1.500 - 1.999	1	4.0	1.5339	9.8
2.000 - 2.999	5	7.7	12.2966	13.6	2.000 - 2.999	2	8.0	4.5365	29.0
3.000 - 4.999	2	3.1	6.2260	0	3.000 - 4.999	0	0	0	0
5.000 - 6.999	2	3.1	12.4814	13.8	5.000 - 6.999	0	0	0	0
7.000 - 9.999	0	0	0	0	7.000 - 9.999	0	0	0	0
10.000 and over	2	3.1	26.4826	0	10.000 and over	0	0	0	0
Total	65	100.0	90.1295	100.0	Total	25	100.0	15.6692	100.0
C-7 Libod					C-15 Comon				
Below 0.249	43	26.7	6.2914	2.8	Below 0.249	21	35.0	3.1335	6.9
0.250 - 0.499	28	17.4	9.8414	4.3	0.250 - 0.499	17	28.3	6.2011	13.6
0.500 - 0.999	33	20.5	22.7338	9.9	0.500 - 0.999	13	21.7	9.8858	21.7
1.000 - 1.499	11	6.8	13.4562	5.9	1.000 - 1.499	2	3.3	2.5441	5.6
1.500 - 1.999	14	8.7	24.1514	10.6	1.500 - 1.999	3	5.0	5.0119	11.0
2.000 - 2.999	7	4.3	17.4031	7.6	2.000 - 2.999	1	1.7	2.0875	4.6
3.000 - 4.999	15	9.3	54.5922	23.9	3.000 - 4.999	1	1.7	3.1571	6.9
5.000 - 6.999	7	0	41.3732	0	5.000 - 6.999	2	3.3	13.4345	29.7
7.000 - 9.999	0	0	0	0	7.000 - 9.999	0	0	0	0
10.000 and over	3	1.9	38.8395	17.0	10.000 and over	0	0	0	0
Total	161	100.0	228.6822	100.0	Total	60	100.0	45.4555	100.0
C-8 Ligban					C-17 Cotmon				
Below 0.249	9	32.1	1.4087	8.5	Below 0.249	30	27.1	4.6403	4.0
0.250 - 0.499	10	35.7	3.6232	21.9	0.250 - 0.499	25	22.5	8.8603	7.6
0.500 - 0.999	4	14.3	2.8104	17.0	0.500 - 0.999	21	18.9	14.5560	12.5
1.000 - 1.499	3	10.7	3.7805	22.8	1.000 - 1.499	12	10.8	14.5871	12.5
1.500 - 1.999	0	0	0	0	1.500 - 1.999	9	8.1	15.5511	13.3
2.000 - 2.999	2	7.2	4.9372	29.8	2.000 - 2.999	3	2.7	6.9402	5.9
3.000 - 4.999	0	0	0	0	3.000 - 4.999	7	6.3	25.0412	21.3
5.000 - 6.999	0	0	0	0	5.000 - 6.999	3	2.7	18.9311	16.2
7.000 - 9.999	0	0	0	0	7.000 - 9.999	1	0.9	7.7868	6.7
10.000 and over	0	0	0	0	10.000 and over	0	0	0	0
Total	28	100.0	16.5600	100.0	Total	111	100.0	116.8941	100.0
C-9 Tagaytay					D-1 Inarado				
Below 0.249	28	29.5	4.0164	4.0	Below 0.249	19	22.4	3.2621	4.1
0.250 - 0.499	19	20.0	6.7339	6.7	0.250 - 0.499	25	29.3	9.7924	12.2
0.500 - 0.999	19	20.0	13.1307	13.1	0.500 - 0.999	16	18.8	12.0544	15.0
1.000 - 1.499	10	10.5	11.5423	11.5	1.000 - 1.499	11	12.9	13.1375	16.4
1.500 - 1.999	3	3.2	5.6222	5.6	1.500 - 1.999	4	4.7	6.7578	8.4
2.000 - 2.999	6	6.3	14.8616	14.8	2.000 - 2.999	6	7.1	13.8151	17.1
3.000 - 4.999	9	9.5	36.8305	36.7	3.000 - 4.999	2	2.4	7.4471	9.3
5.000 - 6.999	0	0	0	0	5.000 - 6.999	1	1.2	6.3061	7.9
7.000 - 9.999	1	1.0	7.742	7.6	7.000 - 9.999	1	1.2	7.7274	9.6
10.000 and over	0	0	0	0	10.000 and over	0	0	0	0
Total	95	100.0	100.4796	100.0	Total	85	100.0	89.2999	100.0

Table F.5.5 Family Based Owner Distribution of Agricultural Land in the Model Project Area (2/2)

Cont. Canalig Diversion					Cont. Dam No 2				
Holding Range (ha)	Paddy Land				Holding Range (ha)	Paddy Land			
	No. of Owner		Area Distribution			No. of Owner		Area Distribution	
	No.	%	ha	%		No.	%	ha	%
C-10 Getob					D-6 Alebo				
	0.32								
Below 0.249	13	36.1	1.9861	6.9	Below 0.249	37	26.1	5.6102	3.7
0.250 - 0.499	8	22.2	3.0371	10.6	0.250 - 0.499	31	21.8	11.1414	7.4
0.500 - 0.999	7	19.4	5.1702	18.1	0.500 - 0.999	38	26.9	25.5241	17.1
1.000 - 1.499	3	8.3	4.0715	14.2	1.000 - 1.499	11	7.7	13.8066	9.2
1.500 - 1.999	0	0	0	0	1.500 - 1.999	5	3.5	8.4717	5.7
2.000 - 2.999	3	8.3	7.7093	27.0	2.000 - 2.999	5	3.5	11.5343	7.7
3.000 - 4.999	2	5.7	6.6297	23.2	3.000 - 4.999	10	7.0	37.1882	24.8
5.000 - 6.999	0	0	0	0	5.000 - 6.999	3	2.1	17.775	11.9
7.000 - 9.999	0	0	0	0	7.000 - 9.999	1	0.7	7.4613	5.0
10.000 and over	0	0	0	0	10.000 and over	1	0.7	11.1834	7.5
Total	36	100.0	28.6039	100.0	Total	142	100.0	149.6962	100.0
C-20 Magogon/Upland Model Area (Corn)					D-7 Tabon-Tabon				
Holding Range (ha)	Total Agricultural Land				Holding Range (ha)	Total Agricultural Land			
	No. of Owner		Area Distribution			No. of Owner		Area Distribution	
	No.	%	ha	%		No.	%	ha	%
Below 0.249	2	2.7	0.2881	0.1	Below 0.249	16	21.6	1.9702	2.8
0.250 - 0.499	9	12.2	3.9518	1.7	0.250 - 0.499	21	28.3	7.1536	10.0
0.500 - 0.999	12	16.2	8.5381	3.7	0.500 - 0.999	15	20.3	9.9979	14.1
1.000 - 1.499	6	8.1	8.1934	3.6	1.000 - 1.499	7	9.5	9.0683	12.8
1.500 - 1.999	6	8.1	10.0727	4.4	1.500 - 1.999	6	8.1	9.5033	13.4
2.000 - 2.999	11	14.9	26.8197	11.7	2.000 - 2.999	4	5.4	10.0214	14.1
3.000 - 4.999	17	22.9	68.3054	30.0	3.000 - 4.999	4	5.4	17.0184	23.9
5.000 - 6.999	5	6.8	28.6752	12.5	5.000 - 6.999	1	1.4	6.3479	8.9
7.000 - 9.999	2	2.7	17.4229	7.6	7.000 - 9.999	0	0	0	0
10.000 and over	4	5.4	56.5188	24.7	10.000 and over	0	0	0	0
Total	74	100.0	228.7861	100.0	Total	74	100.0	71.0810	100.0
D-11 Burgos									
Below 0.249	1	4.3	0.2427	1.2					
0.250 - 0.499	9	39.2	3.5324	18.0					
0.500 - 0.999	4	17.4	3.272	16.7					
1.000 - 1.499	6	26.1	6.9471	35.4					
1.500 - 1.999	2	8.7	3.4796	17.7					
2.000 - 2.999	1	4.3	2.1520	11.0					
3.000 - 4.999	0	0	0	0					
5.000 - 6.999	0	0	0	0					
7.000 - 9.999	0	0	0	0					
10.000 and over	0	0	0	0					
Total	23	100.0	19.6258	100.0					
D-19 San Ramon / Upland Model Area (Coconut)									
Holding Range (ha)	Total Agricultural Land								
	No. of Owner		Area Distribution						
	No.	%	ha	%					
Below 0.249	6	4.8	0.9065	0.1					
0.250 - 0.499	8	6.3	3.0009	0.4					
0.500 - 0.999	22	17.5	16.0697	2.0					
1.000 - 1.499	14	11.1	17.5921	2.2					
1.500 - 1.999	13	10.3	23.1440	2.9					
2.000 - 2.999	12	9.5	30.6627	3.8					
3.000 - 4.999	17	13.5	67.2347	8.3					
5.000 - 6.999	6	4.8	35.9897	4.5					
7.000 - 9.999	9	7.1	78.0998	9.7					
10.000 and over	19	15.1	534.5179	66.1					
Total	126	100.0	807.2180	100.0					

Table F 5.6 Present Agriculture Production in Lowland Model Project Areas

Item	Physical Area (ha)	Planted Area (ha)	Harvested Area (ha)	Yield (ton/ha)	Production (ton)
I. Camalig Diversion Model Area					
<u>Rainfed Paddy</u>			<u>201</u>		<u>387</u>
1st Cropping Season	130	130	114	2.1	239
2nd Cropping Season	130	115	87	1.7	148
II. Dam No. 2 Model Area					
<u>Irrigated Paddy</u>	<u>62</u>	<u>62</u>	<u>48</u>		<u>152</u>
1st Cropping Season	31	31	26	3.3	86
2nd Cropping Season	31	31	22	3.0	66
<u>Rainfed Paddy</u>	<u>728</u>	<u>704</u>	<u>550</u>		<u>1,060</u>
1st Cropping Season	364	364	313	2.1	657
2nd Cropping Season	364	340	237	1.7	403
Annual paddy production					<u>1,212</u>
<u>Upland crop (corn)</u>	<u>16</u>	<u>16</u>	<u>16</u>		<u>22</u>
1st Cropping Season	8	8	8	1.5	12
2nd Cropping Season	8	8	8	1.2	10

Table F.5.7 Main Occupation of Household Heads and Wives

(1) Household Heads (Unit: No. of Respondents)

Item	Camalig Diversion Area										Dam No 2 Area													
	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)						
		S	M	L	Total	S	M	L	Total		S	M	L	Total	S	M	L	Total						
Sampling Number	8	10	20	10	40	23	47	23	93	25	166	100	11	11	22	11	44	21	42	21	84	27	166	100
Full time farmer		5	15	7	27	17	44	18	79	23	129	78		11	2	9	22	16	18	34	25	81	49	
Part time farmer/part time labor		5	4	2	11	5	1	5	11		22	13		18		18		36		36		54	32	
Full time handicraft			1	1	2				2		2	4		2	2	4		5	3	3	11	2	17	9
Others	8										8	5		11		2	2		3		3		16	10

Item	Maguigon Area										San Ramon Area													
	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)						
		S	M	L	Total	S	M	L	Total		S	M	L	Total	S	M	L	Total						
Sampling Number	0	2	5	2	9	2	4	2	8	5	22	100	5	3	7	3	13	6	12	6	24	4	46	100
Full time farmer		2	5	2	9	1	4	2	7		16	73		3	6	3	12	6	6	6	18	4	34	74
Part time farmer/part time labor										2	2	9										0	0	
Full time handicraft						1			1		2	14		1		1		6		6		7	15	
Others										1	4		5									5	11	

Note: Owner NC; Owner Non-cultivator S; Small M; Median L; Large

(2) Wives (Unit: No. of Respondents)

Item	Camalig Diversion Area										Dam No 2 Area													
	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)						
		S	M	L	Total	S	M	L	Total		S	M	L	Total	S	M	L	Total						
Sampling Number	8	10	20	10	40	23	47	23	93	25	166	100	11	11	22	11	44	21	42	21	84	27	166	100
Full time housewife		1			1	3			3		4	2										1	1	
Full time farming	4		3	4	7		5	12	17		28	17		8	4	12		6	15	11	32	11	55	33
Housewife/Part time farming			2	3	5					23	28	17		5	7	12		9	10		19	8	39	23
Housewife/Part time handicraft		1	2		3	1	2	11	14		17	10		5	7	4	16	6	7	10	23	8	47	28
Sari-sari store keeping	4			3	3				3	2	12	7		10		2	2		10		10		22	13
No response		8	13		21	16	40		56		77	47		1		1	2						2	2

Item	Maguigon Area										San Ramon Area													
	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)	Owner NC	Owner Cultivator			Lessee/Share Cropper			Care-Taker	Total (%)						
		S	M	L	Total	S	M	L	Total		S	M	L	Total	S	M	L	Total						
Sampling Number	0	2	5	2	9	2	4	2	8	5	22	100	5	3	7	3	13	6	12	6	24	4	46	100
Full time housewife		1	3		4	1	2	1	4	2	10	44		1	1	2		1	1	2	3	7	15	
Full time farming										1	1	5		2	1	1		1	2		3	1	8	17
Housewife/Part time farming											0	0		1		1		1	3		2	6	7	15
Housewife/Part time handicraft		1	2	1	4	1	2	1	4	1	9	41		3	1	4	2	7	1	5	3	9	19	42
Sari-sari store keeping										1	1	5			1	1		2	1		3	4	9	
No response				1	1					1	5							1		1		1	2	

Note: Owner NC; Owner Non-cultivator S; Small M; Median L; Large

Table E.5.8 Present Farm Economy in the Model Project Areas (1/2)

Item	Camalg Diversion Area										
	Owner		Owner Cultivator				Lessee/Share Cropper				Care-Taker
	Non-Cultivator	Small	Medium	Large	Average	Small	Medium	Large	Average		
Sampling Number	8	10	20	10		23	47	23		25	
Average Operating Size (ha)	0.78	0.85	1.96	5.07	2.50 *	0.75	1.37	1.88	1.30 *	1.47	
Lowland	0.78	0.35	0.48	1.65	0.70	0.25	0.55	1.38	0.70	0.81	
Upland	0	0.50	1.48	3.42	1.70	0.50	0.82	0.50	0.70	0.63	
I. Income	31,470	31,990	38,190	52,420	41,918	33,580	37,830	43,740	38,241	39,930	
Farm Income	13,800	13,980	17,800	35,000	21,445	11,370	21,270	21,700	18,804	18,850	
Crop Sales	7,830	4,530	11,000	30,230	14,190	4,730	15,640	16,540	13,161	14,220	
Livestock Sales	2,470	4,880	4,350	2,480	4,015	3,120	3,430	3,130	3,279	0	
Farm Labor	3,500	4,420	2,320	290	2,338	3,100	1,940	860	1,960	1,450	
Others	0	150	130	2,000	603	420	260	670	401	3,180	
Non-Farm Income	17,670	18,010	20,390	24,420	20,803	22,210	16,560	22,540	19,436	21,080	
Handicraft	3,410	5,310	4,360	3,390	4,355	4,380	3,140	4,650	3,820	1,820	
City Labor	9,130	8,000	12,660	16,120	12,360	12,560	6,070	9,420	8,504	12,460	
Loans	2,000	0	540	0	270	90	830	1,030	697	80	
Others	3,130	4,700	2,830	4,910	3,818	5,180	6,520	7,410	6,416	6,720	
II. Expenditure	27,980	29,060	35,420	53,870	38,443	32,330	34,330	39,510	35,119	38,970	
Farming Expenses	6,890	6,090	7,740	13,330	8,725	4,670	7,280	11,360	7,644	2,560	
Living Expenses											
Food	15,150	16,970	20,350	28,520	21,548	19,030	20,350	20,010	19,940	25,950	
Clothing	1,530	1,550	1,670	3,000	1,973	2,820	1,900	2,850	2,370	2,580	
Education	2,720	2,790	3,010	5,020	3,458	3,660	2,810	3,170	3,109	4,970	
Medical	750	840	1,260	1,170	1,133	840	860	860	855	1,300	
Others	940	820	820	2,830	1,323	1,210	1,000	1,230	1,109	1,530	
Loan Repayment	0	0	570	0	285	110	130	0	93	80	
III. Net Reserve (I - II)	3,490	2,930	2,770	5,550	3,505	1,250	3,500	4,230	3,122	960	

Item	Dam No. 2 Area										
	Owner		Owner Cultivator				Lessee/Share Cropper				Care-Taker
	Non-Cultivator	Small	Medium	Large	Average	Small	Medium	Large	Average		
Sampling Number	11	11	22	11		21	42	21		27	
Average Operating Size (ha)	0.61	1.16	2.23	3.51	2.30 *	0.55	1.61	4.19	2.00 *	1.40	
Lowland	0.48	0.18	0.61	1.38	0.70	0.20	0.55	1.50	0.70	0.68	
Upland	0.13	0.98	1.62	2.13	1.60	0.35	1.06	2.69	1.30	0.72	
I. Income	23,790	26,020	34,240	42,690	34,298	30,910	39,430	51,750	40,378	41,760	
Farm Income	12,270	15,820	15,950	22,750	18,120	15,230	19,620	29,030	20,875	20,820	
Crop Sales	5,510	7,820	7,290	14,380	9,195	7,710	13,440	23,950	14,635	15,180	
Livestock Sales	3,240	1,360	5,800	6,730	4,923	4,360	4,480	4,220	4,385	4,030	
Farm Labor	3,520	6,380	2,860	1,230	3,333	2,390	1,700	710	1,625	1,620	
Others	0	270	1,000	410	670	770	0	150	230	60	
Non-Farm Income	11,520	10,190	12,290	19,240	16,178	15,680	19,810	22,710	19,503	20,870	
Handicraft	2,810	6,060	7,380	4,770	6,398	1,230	6,830	3,950	4,710	4,870	
City Labor	4,940	0	1,660	5,550	2,218	5,210	7,840	12,070	8,240	5,880	
Loans	110	180	1,050	0	570	0	0	0	0	1,560	
Others	3,660	3,950	7,200	9,620	6,993	9,240	5,140	6,690	6,553	8,560	
II. Expenditure	21,760	24,180	32,690	37,500	31,265	29,790	36,500	48,890	37,920	40,850	
Farming Expenses	2,700	3,030	5,640	8,050	5,590	6,960	7,740	11,130	8,393	15,060	
Living Expenses											
Food	13,360	14,780	18,480	20,770	18,128	15,140	19,370	24,640	19,630	16,950	
Clothing	1,510	880	1,410	1,480	1,295	1,330	1,800	2,760	1,923	2,450	
Education	3,320	4,110	5,190	5,330	4,955	2,190	4,610	6,660	4,518	3,140	
Medical	520	690	680	610	665	1,300	730	1,560	1,080	1,560	
Others	350	690	880	1,260	928	2,870	1,250	2,140	1,878	1,480	
Loan Repayment	0	0	410	0	205	0	1,000	0	500	210	
III. Net Reserve (I - II)	2,030	1,840	1,550	5,190	2,533	1,120	2,930	2,860	2,458	910	

Note: * Weighted average.

Table F.5.8 Present Farm Economy in the Model Project Areas (2/2)

Item	Magogon Area									
	Owner	Owner Cultivator				Lessee/Share Cropper				Care-Taker
	Non-Cultivator	Small	Medium	Large	Average	Small	Medium	Large	Average	
Sampling Number	0	2	5	2		2	4	2		5
Average Operating Size (ha)	0	0.45	1.25	4.00	1.70 *	0.58	1.59	4.88	2.20 *	3.75
Lowland	0	0.25	0.25	0.50	0.30	0.00	0.25	0.13	0.20	0.63
Upland	0	0.20	1.00	3.50	1.40	0.58	1.34	4.75	2.00	3.13
I. Income	0	34,240	25,520	27,220	66,280	40,730	36,670	43,240	39,340	40,110
Farm Income	0	24,360	64,830	42,270	50,820	35,720	28,440	20,840	28,370	34,150
Crop Sales	0	0	600	3,600	1,130	0	7,010	6,500	5,130	4,000
Livestock Sales	0	20,260	60,130	32,670	45,170	28,450	15,000	6,210	16,170	22,300
Farm Labor	0	2,500	3,400	0	2,440	0	5,750	3,750	3,810	4,100
Others	0	1,600	700	6,000	2,060	7,280	680	4,380	3,260	3,750
Non-Farm Income	0	9,880	10,760	35,000	15,960	5,000	8,230	22,400	10,970	5,960
Handicraft	0	0	0	0	0	0	0	0	0	0
City Labor	0	9,880	10,760	10,000	10,400	2,500	8,230	19,900	9,720	3,300
Loans	0	0	0	25,000	5,560	2,500	0	2,500	1,250	700
Others	0	0	0	0	0	0	0	0	0	1,960
II. Expenditure	0	30,060	20,520	69,030	61,230	37,500	32,050	36,720	34,590	37,320
Farming Expenses	0	10,960	15,230	21,980	15,780	3,260	4,080	4,630	4,010	0
Living Expenses	0	15,880	32,280	25,000	27,020	19,070	22,690	24,500	22,240	27,250
Food	0	1,000	2,800	5,780	3,060	2,750	1,130	1,500	1,630	2,500
Clothing	0	1,200	17,200	14,500	13,040	11,000	2,980	5,100	5,520	6,380
Medical	0	350	1,600	650	1,110	750	480	500	550	450
Others	0	670	830	1,120	860	670	690	490	640	740
Loan Repayment	0	0	650	0	360	0	0	0	0	0
III Net Reserve (I - II)	0	4,180	5,000	8,240	5,550	3,230	4,620	6,520	4,750	2,790

Item	San Ramon									
	Owner	Owner Cultivator				Lessee/Share Cropper				Care-Taker
	Non-Cultivator	Small	Medium	Large	Average	Small	Medium	Large	Average	
Sampling Number	5	3	7	3		6	12	6		4
Average Operating Size (ha)	3.31	1.08	1.48	2.17	1.55 *	0.58	1.98	4.00	2.20 *	1.56
Lowland	0.50	0.50	0.25	0	0.25	0.25	1.00	0.38	0.66	0
Upland	2.81	0.58	1.23	2.17	1.30	0.58	0.98	3.63	1.54	1.56
I. Income	38,450	38,650	47,640	45,070	44,970	59,130	60,240	57,790	59,370	40,930
Farm Income	24,010	29,060	39,300	30,420	34,880	47,090	42,360	34,440	41,570	33,030
Crop Sales	0	2,000	540	7,530	2,490	930	2,870	4,870	2,890	450
Livestock Sales	16,620	22,120	34,630	16,460	27,550	33,120	31,010	16,860	28,000	22,890
Farm Labor	1,600	3,670	1,370	4,330	2,580	8,000	3,930	5,100	5,240	6,250
Others	5,790	1,270	2,760	2,100	2,260	5,040	4,550	7,610	5,440	3,440
Non-Farm Income	14,440	9,590	8,340	14,650	10,090	12,040	17,880	23,350	17,800	7,900
Handicraft	0	0	0	1,670	390	0	600	500	430	0
City Labor	6,400	7,590	7,410	12,980	8,740	10,860	6,920	15,350	10,010	6,850
Loans	7,440	2,000	0	0	460	580	10,070	7,500	7,060	1,050
Others	600	0	930	0	500	600	290	0	300	0
II. Expenditure	31,640	33,800	43,440	37,250	40,020	26,350	24,500	20,900	24,070	37,940
Farming Expenses	6,860	10,930	5,450	7,020	7,080	12,300	12,310	8,440	11,340	2,440
Living Expenses	14,510	16,670	24,810	24,670	22,900	29,270	26,270	28,430	27,560	20,350
Food	1,880	1,170	2,640	1,050	1,930	1,830	2,090	3,330	2,340	1,000
Clothing	7,900	4,960	8,830	4,010	6,820	11,410	11,730	9,440	11,080	12,460
Medical	180	300	440	180	350	610	340	310	400	650
Others	310	770	1,270	320	940	650	1,760	620	1,200	1,010
Loan Repayment	0	0	0	0	0	280	0	330	150	0
III Net Reserve (I - II)	6,810	3,850	4,200	7,820	4,950	2,780	5,740	6,890	5,300	2,990

Note: * Weighted average.

Table F 5.9 Anticipated Crop Production in Camalig Lowland Model Project Area

Item	Physical Area (ha)	Planted Area (ha)	Harvested Area (ha)	Yield (ton/ha)	Production (ton)
<u>Irrigated Paddy</u>					<u>1,365</u>
1st Cropping Season	130	130	130	5.5	715
2nd Cropping Season	130	130	130	5.0	650
<u>Mungbean</u>	-	45	45	1.2	<u>54</u>

Table F 5.10 Anticipated Crop Production in Dam No. 2 Lowland Model Project Area

<u>Irrigated Paddy</u>	<u>380</u>	<u>380</u>	<u>380</u>		<u>1,995</u>
1st Cropping Season	190	190	190	5.5	1,045
2nd Cropping Season	190	190	190	5.0	950
<u>Rainfed Paddy</u>	<u>410</u>	<u>390</u>	<u>390</u>		<u>1,096</u>
1st Cropping Season	205	205	205	3.0	615
2nd Cropping Season	205	185	185	2.6	481
<u>Total Paddy Production</u>					<u>3,091</u>
<u>Mungbean</u>	-	<u>135</u>	<u>135</u>	<u>1.2</u>	<u>162</u>

Table F.5.11 Requirement of Production and Marketing Center for
Camalig Diversion Lowland Model Project

Item	Unit	1st Cropping	2nd Cropping	Total
Area	ha	130	130	260
Paddy Production	ton	715	650	1,365
1. Target Paddy Quantity				
ISF and AF	ton	16.25	16.25	32.5
Custom milling (20% of the production)	ton	143.0	130.0	273.0
sub-total	ton	159.3	146.3	305.5
2. Milling Capacity				
Working days	day	60	60	120
Operation hours	hours/day	5	5	-
Seasonal Operation hours	hours	300	300	600
Capacity required	ton/hour	0.53	0.49	0.51
Installed Capacity				<u>0.60</u>
Floor area required	m ²		(5 m x 10 m)	<u>50</u>
3. Warehousing Capacity				
(1) Paddy				
Basic (ISF and AF)	ton	16.25	16.25	32.5
Marketing services (10% of total production)	ton	71.5	65.0	136.5
sub-total	ton	87.8	81.3	-
Storage capacity required	ton			87.8
(0.08m ³ /50 kg)	m ³	(87,800 kg / 50 kg * 0.08 m ³)		140
Floor area required	m ²	(140 m ³ / 3 m x 200%)		<u>93</u>
(2) Farm Inputs and others	m ²		(5 m x 5 m)	<u>25</u>
(3) Office floor area	m ²		(5 m x 5 m)	<u>25</u>
Total floor area	m ²			<u>143</u>
4. Dryer				
(1) Sun-drying floor				
Harvesting period	days	45	45	90
Quantity dried per season	ton	159.25	146.25	305.5
Quantity dried per day	ton	3.5	3.3	-
Days required for drying	days	2	2	-
Unit space required for drying	m ² /ton	80	80	-
Space required	m ²	560	530	-
Drying space required	m ²			560
(2) Semi-mechanical dryer				
Unit				1
m ²			(2.5 m x 4 m)	10
5. Hand-tractor (6 HP)				
Area covered (20% of the area)	ha	26.0	26.0	52.0
Working days	day	45	45	90
Operation hours	hours/day	6	6	-
Seasonal Operation hours	hours	270	270	540
Required hours per ha	hours	15	15	15
Number required	ton/hour	1.4	1.4	1.4
Number procured	No.			2
6. Thresher (6 HP)				
Products threshed (20% of the area)	ton	143.0	130.0	273.0
Working days	day	45	45	90
Operation hours	hours/day	6	6	-
Seasonal Operation hours	hours	270	270	540
Threshing capacity per machine	ton/hour	0.3	0.3	0.3
Number required	ton/hour	1.8	1.6	1.7
Number procured	No.			2

Table F.5.12 Operation Plan, Camalig Diversion Production and Marketing Center

Item	Unit	1st Cropping	2nd Cropping	Total
A Project Area and Production				
1) Area	ha	130.0	130.0	260.0
2) Paddy Production	ton	715.0	650.0	1,365.0
3) Paddy for Milling	ton	159.3	146.3	305.6
4) Area for cultivation (Hand Tractor)	ha	26.0	26.0	52.0
5) Paddy for threshing (Thresher)	ton	143.0	130.0	273.0
B. Annual Operation Cost				
		<u>Unit Price</u>	<u>Quantity</u>	<u>Amount</u>
1) Dryer (Semi-mechanical and drying floor)				
Labor	day	90	270 (3 persons x 90 days)	24,300
Machinery / Drying Floor				38,290
Fixed				26,940
Valuable				11,350
Others (5% of the above cost)				3,130
Total Cost				65,720
Cost per kg				0.22
2) Rice Mill				
Labor	day	90	240 (2 persons x 120 days)	21,600
Machinery				43,410
Fixed				17,800
Valuable				25,610
Others (5% of the above cost)				3,250
Total Cost				68,260
Cost per kg				0.22
3) Building				
Labor	day	90	120 (1 persons x 120 days)	10,800
Building O&M				80,410
Fixed				67,670
Valuable				12,770
Others (5% of the above cost)				4,560
Total Cost				95,800
Cost per kg				0.31
4) Hand Tractor (2)				
Labor	day	90	360 (2 persons x 90 days x 2 machines)	32,400
Machinery				18,920
Fixed				8,020
Valuable				10,900
Others (5% of the above cost)				2,570
Total Cost				53,890
Cost per ha				1,040
5) Thresher (2)				
Labor	day	90	360 (2 persons x 90 days x 2 machines)	32,400
Machinery				17,420
Fixed				5,700
Valuable				11,720
Others (5% of the above cost)				2,490
Total Cost				52,310
Cost per kg				0.19

Note: Machinery O&M cost were estimated as follows:

		Semi-Mechanical Dryer	Rice Mill	Hand Tractor	Thresher	Sun drying Floor	Building
Machinery and Engine Cost	Peso	50,000	50,000	13,500	7,000	140,000	638,400
Machine			(0.6 ton/hour)	(15 hours/ha)	(0.3 ton/hour)	(P250 x 500m ²)	(P3,800 x 143m ²)
Engine/ha		18,000	50,000	9,000	9,000		(P1,900 x 50m ²)
				(6 HP)	(6 HP)		
Life of machine	Year	10	10	10	10	50	50
Salvage value		6,800	10,000	2,250	1,600	14,000	63,840
Depreciating	Peso/year	6,120	9,000	2,030	1,410	2,520	11,490
Capital interest	Peso/year	5,980	8,800	1,980	1,410	12,320	56,180
Spare parts / Repair	Peso/year	3,400	5,000	1,130	800	2,800	12,770
Lubricants	Peso/year	670	2,690	560	660	0	0
Fuel	Peso/year	4,490	17,920	3,760	4,400	0	0
		(1 lit. x 560 hrs*)	(4 lit. x 560 hrs*)	(1 lit. x 470 hrs)	(1 lit. x 550 hrs)		
Total annual cost		20,650	43,410	9,460	8,710	17,640	80,440

*: The engine for hand tractor and thresher can be commonly used. A half of engine cost is indicated.

*: Actual Operation Hour

Dryer	305.6 ton/3.0 ton per 5 hours x 1.1 =	(hour)	560
Rice Mill	305.6 ton/0.6 ton x 1.1 =		560
Hand Tractor	52 ha x 15 hrs/2 machinery x 1.2 =		470
Thresher	273 ton/0.3 ton/2 machinery x 1.2 =		550

Table F.5.13 Requirement of Production and Marketing Center for
Dam No.2 Lowland Model Project

Item	Unit	1st Cropping	2nd Cropping	Total
Area	ha	395	375	770
Irrigated		190	190	380
Rainfed		205	185	390
Paddy Production	ton	1,660	1,431	3,091
1. Target Paddy Quantity				
ISF and AF	ton	23.8	23.8	47.6
Custom milling (20% of the production)	ton	332.0	286.2	618.2
sub-total	ton	355.8	310.0	665.8
2. Milling Capacity				
Working days	day	90	90	180
Operation hours	hours/day	5	5	-
Seasonal Operation hours	hours	450	450	900
Capacity required	ton/hour	0.79	0.69	0.74
Installed Capacity				1.00
Floor area required	m ²		(5 m x 10 m)	50
3. Warehousing Capacity				
(1) Paddy				
Basic (ISF and AF)	ton	23.8	23.8	47.6
Marketing services (10% of total production)	ton	166.0	143.1	309.1
sub-total	ton	189.8	166.9	-
Storage capacity required	ton			189.8
(0.08m ³ /50 kg)	m ³	(189,800 kg / 50 kg x 0.08 m ³)		304
Floor area required	m ²	(304 m ³ / 3 m x 200%)		230
(2) Farm Inputs and others	m ²		(5 m x 5 m)	25
(3) Office floor area	m ²		(5 m x 5 m)	25
Total floor area	m ²			280
4. Dryer				
(1) Sun-drying floor				
Harvesting period	days	45	45	90
Quantity dried per season	ton	355.8	310	665.8
Quantity dried per day	ton	7.9	6.9	-
Days required for drying	days	2	2	-
Unit space required for drying	m ² /ton	80	80	-
Space required	m ²	1,260	1,100	-
Drying space required	m ²			1,260
(2) Semi-mechanical dryer				
	Unit			1
	m ²		(2.5 m x 4 m)	10
5. Hand-tractor (6 HP)				
Area covered (20% of the area)	ha	79.0	75.0	154.0
Working days	day	45	45	90
Operation hours	hours/day	6	6	-
Seasonal Operation hours	hours	270	270	540
Required hours per ha	hours	15	15	15
Number required	ton/hour	4.4	4.2	4.3
Procured Number	No.			5
6. Thresher (6 HP)				
Products threshed (20% of the area)	ton	332.0	286.2	618.2
Working days	day	45	45	90
Operation hours	hours/day	6	6	-
Seasonal Operation hours	hours	270	270	540
Threshing capacity per machine	ton/hour	0.3	0.3	0.3
Number required	ton/hour	4.1	3.5	3.8
Procured Number	No.			5

Table F.5.14 Operation Plan, Dam No.2 Production and Marketing Center

Item	Unit			
A Project Area and Production				
		<u>1st Cropping</u>	<u>2nd Cropping</u>	<u>Total</u>
1) Area	ha	395.0	375.0	770.0
2) Paddy Production	ton	1,660.0	1,431.0	3,091.0
3) Paddy for Milling	ton	355.8	310.0	665.8
4) Area for cultivation (Hand Tractor)	ha	79.0	75.0	154.0
5) Paddy for threshing (Thresher)	ton	332.0	286.2	618.2
B. Annual Operation Cost				
		<u>Unit Price</u>	<u>Quantity</u>	<u>Amount</u>
1) Dryer (Semi-mechanical and drying floor)				
Labor	day	90	540 (3 persons x 90 days x 2 shifts)	48,600
Machinery				69,560
Fixed				48,140
Valuable				21,420
Others (5% of the above cost)				5,910
Total Cost				124,070
Cost per kg				0.19
2) Rice Mill				
Labor	day	90	360 (2 persons x 180 days)	32,400
Machinery				84,860
Fixed				29,550
Valuable				55,310
Others (5% of the above cost)				5,860
Total Cost				123,120
Cost per kg				0.18
3) Building				
Labor	day	90	120 (1 persons x 120 days)	10,800
Building O&M				146,030
Fixed				122,850
Valuable				23,180
Others (5% of the above cost)				7,840
Total Cost				164,670
Cost per kg				0.25
4) Hand Tractor (5)				
Labor	day	90	900 (2 persons x 90 days x 5 machines)	81,000
Machinery				51,000
Fixed				20,050
Valuable				30,950
Others (5% of the above cost)				6,600
Total Cost				138,600
Cost per ha				900
5) Thresher (5)				
Labor	day	90	900 (2 persons x 90 days x 5 machines)	81,000
Machinery				40,800
Fixed				14,250
Valuable				26,550
Others (5% of the above cost)				6,090
Total Cost				127,890
Cost per kg				0.21

Note: Machinery O&M cost were estimated as follows:

		Semi-Mechanical Dryer	Rice Mill	Hand Tractor	Thresher	Sun drying Floor	Building
Machinery and Engine Cost	Peso						
Machine		50,000	83,000 (1.0 ton/hour)	13,500 (15 hours/ha)	7,000 (0.3 ton/hour)	310,000 (P250 x 1,360m ²)	1,150,000 (P3,800 x 280m ²) (P1,900 x 50m ²)
Engine /a		18,000	83,000	9,000 (6 HP)	9,000 (6 HP)		
Life of machine	Year	10	10	10	10	50	50
Salvage value		6,800	16,600	2,250	1,600	34,000	115,900
Depreciating	Peso/year	6,120	14,940	2,030	1,440	6,120	20,860
Capital interest	Peso/year	5,980	14,610	1,980	1,410	29,920	101,990
Spare parts	Peso/year	3,400	8,300	1,130	800	6,800	23,180
Lubricants	Peso/year	1,460	6,130	660	590	0	0
Fuel	Peso/year	9,760	40,880	4,400	3,920	0	0
		(1 lit. x 1,220 hrs*)	(7 lit. x 730 hrs)	(1 lit. x 550 hrs*)	(1 lit. x 490 hrs*)		
Total annual cost		26,320	84,860	10,200	8,160	42,840	146,030

/a: The engine for hand tractor and thresher will be jointly used. A half of engine cost is indicated.

*: Actual Operation Hour

Dryer	665.8 ton/3.0 ton per 5 hours x 1.1 =	(hour)	1,220
Rice Mill	665.8 ton/1.0 ton x 1.1 =		730
Hand Tractor	154 ha x 15 hrs/5 machinery x 1.2 =		550
Thresher	618.2 ton/0.3 ton/5 machinery x 1.2 =		490

Table F 6.1 Present Land Use in Upland Model Project Areas

Unit: ha

Land use	Magogon area	San Ramon area
Paddy Field	5	21
Coconut land	190	534
Upland crop (open area)	20	130
Fallow land (grass / shrub)	17	84
Residential & others	8	16
Total	240	785

Source: MAS, PCA, MPDO, JICA

Table F.6.2 Present Land Transfer Program in San Ramon Model Area

Lot 17140 (Not Yet Distributed)			Lot 16271 (Distributed)		
Lot No.	Area (ha)	Claimant	Lot No.	Area (ha)	Claimant
17140-			16271-		
1	0.0035	Landless	1	0.9998	Landless
2	0.0148	Road	2	2.9997	Tenant
3	3.0000	Tenant	3	0.9998	Landless
4	1.0000	Landless	4	1.9998	Tenant family
5	1.0000	Landless	5	1.9998	Tenant family
6	1.0000	Landless	6	1.3545	Landless
7	1.0000	Landless	7	2.9997	Tenant
8	1.0000	Landless	8	0.9998	Landless
9	1.0000	Landless	9	1.9998	Tenant family
10	1.0000	Landless	10	0.9998	Landless
11	1.0000	Landless	11	0.9998	Landless
12	2.2220	Tenant	12	1.9998	Reserved
13	3.0000	Tenant	13	0.9998	Landless
14	3.0000	Tenant	14	1.9998	Reserved
15	1.0000	Landless	15	0.9998	Landless
16	1.0000	Landless	16	1.9998	Reserved
17	1.0000	Landless	17	1.9998	Tenant family
18	1.2332	Landless	18	1.9998	Tenant family
19	1.0000	Landless	19	0.9998	Landless
20	1.0340	Landless	20	0.9998	Landless
21	1.0000	Landless	21	1.4998	Tenant family
22	1.0000	Landless	22	1.9998	Reserved
23	1.0000	Landless	23	0.9998	Landless
24	2.0000	Tenant family	24	2.3788	Tenant
25	1.0000	Landless	25	2.0089	Tenant
26	3.0000	Tenant	26	1.8563	Tenant family
27	1.1784	Landless	27	0.9998	Landless
28	1.5783	PNR			
Total	37.2642		Total	44.0937	
	No.	Area(ha)		No.	Area(ha)
Original tenants	5	14.2220	Original tenants	4	10.3871
Tenant family	1	2.0000	Tenant family	7	13.3551
Landless	20	19.4491	Landless	12	12.3523
Others	2	1.5931	Reserved (Government)	4	7.9992
Total	28	37.2642	Total	27	44.0937

Table F 6.3 Present Agriculture Production in the Upland Project Model Areas

Area / Crop	Area Harvested (ha)	Average Yield (ton/ha)	Total Production (ton)
I. Magogon area			
Coconut	190	1.0	<u>190</u>
Corn			<u>99</u>
1st Season			
In Open land	23	1.5	35
Inter-crop with coconut	19	1.2	23
2nd Season			
In Open land	23	1.0	23
Inter-crop with coconut	19	1.0	19
Paddy			<u>19</u>
1st Season	5	2.1	11
2nd Season	5	1.7	9
II. San Ramon area			
Coconut	534	1.0	<u>534</u>
Corn			<u>484</u>
1st Season			
In Open land	147	1.5	220
Inter-crop with coconut	53	1.2	64
2nd Season			
In Open land	147	1.0	147
Inter-crop with coconut	53	1.0	53
Paddy			<u>80</u>
1st Season	21	2.1	44
2nd Season	21	1.7	36

Table F 6.4 Plan for Annual Planting Area in Magogon Model Project

Coconut planting and Production				Coffee planting and production	
Year	Planting Area (ha)	Fertilizing Areas (ha)	Production (tons)	Planting Area (ha)	Production (tons)
1	0	0	186	0	0
2	0	0	186	0	0
3	9	27	184	1	0
4	9.5	27	211	9	0.25
5	9.5	28	236	9	2.75
6	9.5	28	285	9	7.5
7	9.5	28	340	9	14
8	<u>47</u>	<u>138</u>	445	<u>37</u>	23
9			490		27
10			535		35
11			580		42
12			630		47
13			651		55

Coffee planting and production			Number of Seedlings Required		
Year	Planting Area (ha)	Production (tons)	Coconut	Coffee	Pili
1	0	0	0	0	0
2	0	0	0	0	0
3	1	0	1,125	130	30
4	9	0	1,188	1,170	270
5	9	0	1,188	1,170	270
6	9	0	1,188	1,170	270
7	9	0	1,188	1,170	270
8	<u>37</u>	1	<u>5,877</u>	<u>4,810</u>	<u>1,110</u>
9		3			
10		6			
11		17			
12		35			
13		55			
14		62			
15		74			

Table F 6.5 Plan for Annual Planting Area in San Ramon Model Project

Coconut planting and Production				Abaca Planting and Production	
Year	Planting Area (ha)	Fertilizing Areas (ha)	Production (tons)	Planting Area (ha)	Production (tons)
1	0	0	534	0	0
2	0	0	534	0	0
3	12	34	529	5	0
4	29.5	91	565	27	4
5	29.5	91	605	28	8
6	29.5	91	790	89	22
7	29.5	91	960	89	67
8	<u>130</u>	<u>398</u>	1,210	89	146
9			1,630	90	292
10			1,780	90	534
11			1,450	<u>507</u>	822
12			1,625		1,126
13			1,850		1,318

Pili planting and production			Number of Seedlings Required		
Year	Planting Area (ha)	Production (tons)	Abaca	Coconut	Pili
1	0	0	0	0	0
2	0	0	0	0	0
3	5	0	12,500	1,500	150
4	5	0	67,500	3,688	150
5	4	0	70,000	3,688	120
6	35	0	222,500	3,688	1,050
7	35	0	222,500	3,688	1,050
8	35	0	222,500	<u>16,252</u>	1,050
9	35	0.8	222,500		1,050
10	36	1.6	222,500		1,080
11	<u>190</u>	2.8	<u>1,262,500</u>		<u>5,700</u>
12		8			
13		21			
14		43			
15		79			
16		128			
17		243			
18		298			
19		341			
20		380			

Table F 6.6 Anticipated Crop Production in Upland Model Project Areas

I. Magogon Model Area

Crop	Harvested Area (ha/year)	Average Yield (tons/ha)	Total Production (tons)
Coconut	185	3.5	648
Corn	108	2.8	308
Coffee	37	1.5	55
Pili	37	2	74
Mungbean	54	1.2	65
Paddy rice	10	2.8	28

II San Ramon Model Area

Crop	Harvested Area (ha)	Average Yield (tons/ha)	Total Production (tons)
Coconut	529	3.5	1,850
Abaca			
In open land (with shade trees)	190	2.6	494
Inter-cropping with coconut	317	2.6	824
Total	<u>507</u>		<u>1,318</u>
Pili (as shade tree)	190	2	380
Eggplant	15	7	105
Paddy			
1st season	21	3.5	74
2nd season	21	3	63

Table E.6.7 Requirement of Nucleus Facilities for Magogon Upland Model Project

Item		Unit	1st Cropping	2nd Cropping	Total
Area	Corn		54	54	108
	Coffee		37	37	74
	Paddy		5	5	10
Production	Corn		156.3	156.3	312.6
	Coffee		27.75	27.75	55.5
	Paddy		15.0	13.0	28.0
1. Target Quantity Procured					
	Corn (60% of the production)	ton	93.8	93.8	187.6
	Coffee (90% of the production)	ton	25.0	25.0	50.0
	Paddy (90% of the production)		13.5	11.7	25.2
	Paddy (Panoytoy, Maopit)		22.5	20.0	42.5 *
	sub-total	ton	154.8	150.5	305.2
2. Capacity of Corn Shelter					
	Working days	day	45	45	90
	Operation hours	hours/day	5	5	-
	Seasonal Operation hours	hours	225	225	450
	Capacity required	ton/hour	0.42	0.42	0.42
	Installed Capacity				0.5
3. Capacity of Coffee Dehuller					
	Working days	day	45	45	90
	Operation hours	hours/day	5	5	-
	Seasonal Operation hours	hours	225	225	450
	Capacity required	ton/hour	0.11	0.11	0.11
	Installed Capacity				0.2
4. Capacity of Feed Mill					
	Working days	day	45	45	90
	Operation hours	hours/day	5	5	-
	Seasonal Operation hours	hours	225	225	450
	Capacity required	ton/hour	0.42	0.42	0.42
	Installed Capacity				0.5
	Floor area required	m ²		(5 m x 10 m)	50
5. Capacity of Rice Mill					
	Working days	day	45	45	90
	Operation hours	hours/day	4	4	-
	Seasonal Operation hours	hours	180	180	360
	Capacity required	ton/hour	0.20	0.18	-
	Installed Capacity				0.2
	Floor area required				With feed mill
6. Warehousing Capacity					
(1) Products/Corn and Coffee					
	Quantity to be stored	ton	118.8	118.8	237.5
	Storage capacity required	ton			118.8
	(0.08m ³ /50 kg)	m ³	(118.8/0.08)	(118.8/0.08)	190
	Floor area required	m ²		(190 m ³ / 3 m x 160%)	113
(2) Farm Inputs and others					
	Floor area	m ²		(5 m x 5 m)	25
(3) Office floor area					
	Total floor area	m ²		(5 m x 5 m)	25
					163
7. Dryer					
(1) Sun-drying floor					
	Harvesting period	days	60	60	120
	Quantity dried per season	ton	154.8	150.5	-
	Quantity dried per day	ton	2.6	2.5	-
	Days required for drying	days	2	2	-
	Unit space required for drying	m ² /ton	80	80	-
	Space required	m ²	420	400	-
	Drying space required	m ²			420
(2) Semi-mechanical dryer					
	Unit				1
	Floor area	m ²		(2.5 m x 4 m)	10
8. Poultry Cage					
	Bird capacity	birds			5,000
	Floor area	m ²		(51.85 x 9.15 m)	47.4
	Facilities				
	Lighting	No.			
	Incandescent bulb			(50 W)	72
	Flourescent lamp			(20 W)	16
	Fan (0.5 HP)	No.			3
	Water supply system	No./pot			100
9. Handicraft Sub-Center					
	Floor area	m ²		(5 x 10 m)	50
	Facilities	No.			
	Weaving loom				4
	Sewing machine				1
	Heavy-duty sew-master				1
	Working table				1

Note: * : 50% of the paddy production in Panoytoy and Maopit

Table F.6.8 Operation Plan, Post-Harvest Facilities, Magogon Upland Model Project

Item	Unit	1st Cropping	2nd Cropping	Total
A Processing Plan	ton			
1) Corn Grain		93.8	93.8	187.6
2) Feed		93.8	93.8	187.6
3) Coffee		25.0	25.0	50.0
4) Paddy		36.0	31.7	67.7
Total		248.6	241.3	492.9
B. Annual Processing Cost		Unit Price	Quantity	Amount
1) Dryer (Semi-mechanical and drying floor)				
Labor	day	90	240 (2 persons x 120 days)	21,600
Machinery				35,750
Fixed				22,170
Valuable				13,580
Others (5% of the above cost)				2,870
Total Cost				60,220
Cost per kg				0.12
2) Corn Grain				
Labor	day	90	90 (1 persons x 90 days)	8,100
Machinery				12,660
Fixed				6,940
Valuable				5,720
Others (5% of the above cost)				1,040
Total Cost				21,800
Cost per kg				0.12
3) Feed				
Labor	day	90	90 (1 persons x 90 days)	8,100
Machinery				14,940
Fixed				8,720
Valuable				6,220
Others (5% of the above cost)				1,150
Total Cost				24,190
Cost per kg				0.13
4) Paddy				
Labor	day	90	90 (1 persons x 90 days)	8,100
Machinery				10,010
Fixed				5,160
Valuable				4,850
Others (5% of the above cost)				210
Total Cost				19,020
Cost per kg				0.28
5) Coffee				
Labor	day	90	90 (1 persons x 90 days)	8,100
Machinery				12,750
Fixed				8,720
Valuable				5,030
Others (5% of the above cost)				1,020
Total Cost				22,940
Cost per kg				0.46
6) Building				
Labor	day	90	120 (1 persons x 120 days)	10,800
Building O&M				90,020
Fixed				25,730
Valuable				14,290
Others (5% of the above cost)				5,040
Total Cost				105,860
Cost per kg (corn grain, feed, coffee, & paddy)				0.21

Note: Facility O&M cost were estimated as follows:

		Semi-Mechanical Dryer	Corn Sheller	Feed Mill	Rice Mill	Coffee Dehuller	Sun-drying Floor	Building
Facility Cost	Peso							
Machine / Facility		50,000	30,000	40,000	20,000	40,000	95,000	714,400
Engine /a		18,000	9,000	9,000	9,000	9,000		(P1,900 x 50m ²)
Life of machine	Year	10	10	10	10	10	50	50
Salvage value		6,000	3,000	4,900	2,900	4,900	9,500	71,440
Depreciation	Peso/year	6,420	3,510	4,410	2,610	4,410	1,710	12,860
Capital interest	Peso/year	5,980	3,430	4,310	2,350	4,310	8,360	62,470
Spare parts	Peso/year	3,300	1,950	2,450	1,450	2,450	1,900	14,290
Lubricants	Peso/year	1,080	490	490	480	340	0	0
Fuel	Peso/year	7,200	3,280	3,280	2,960	2,240	0	0
		(1 lit. x 900 hrs*)	(1 lit. x 410 hrs*)	(1 lit. x 410 hrs*)	(1 lit. x 370 hrs*)	(1 lit. x 280 hrs*)		
Total annual cost		23,780	12,660	14,940	10,010	13,750	11,970	90,020

/a: One engine for corn sheller and feed mill and another for rice mill and coffee de-huller will be introduced. The engine cost of individual machine is shared by the processing quantity.

* Actual Operation Hour	(hour)
Dryer	492.9 ton/3.0 ton per 3 hours x 1.1 = 900
Corn Sheller	187.6 ton/0.5 x 1.1 = 410
Feed Mill	187.6 ton/0.5 x 1.1 = 410
Rice Mill	67.7 ton/0.2 ton x 1.1 = 370
Coffee Dehuller	50.0 ton/0.2 x 1.1 = 280

Table F.6.9 Requirement of Nucleus Facilities for San Ramon Upland Model Project (1/2)

(1) Production Farm (Lot 16271)

Item	No.	Area (ha)
Nursery		1.0
Abaca seedbed		0.3 (net)
Shade trees/fruits		0.7 (gross)
Demonstration area		4.0
Under coconut		3.0
Open land (with upland crops)		1.0
Total		5.0

I. Building		Area (m ²)
1. Organic Fertilizer House		65.0
Processing space	5 x 8	40.0
Storage space	5 x 5	25.0
2. Stripping House		80.0
Stripping space	5 x 8	40.0
Drying space	5 x 8	40.0
3. Fiber Classification and Warehouse		90.0
Classification space	5 x 8	40.0
Storage space	5 x 10	50.0
4. Handicraft Center		230.0
Processing space		
Weaving loom	12 1 x 2 x 12 x 150%	5 x 8 40.0
Sewing machine	4 2 x 2 x 4 x 150%	5 x 4 20.0
Heavy-duty sewmaster	1 2 x 2 x 1 x 150%	5 x 2 10.0
Working table	2 2 x 3 x 2 x 150%	5 x 4 20.0
sub-total		90.0
Warehouse	5 x 10	50.0
Training hall	5 x 10	50.0
Office	5 x 8	40.0
5. Workshop	5 x 5	25.0

II. Equipment	No.	Capacity	Unit Price (P)
1. Soil Improvement			
Coconut husk crusher	2	63 kg/hour	55,000
Shovels	12	(For mixture)	300
Containers (Jute sacks)	100	(For mixing fertilizer)	12
Decarbonizer	1	(For making rice charcoal)	12,000
Hand Tractor (with attachment)	1	10 HP	70,000
2. Stripping			
Defibering machine (DM)	1	12.5 kg/hour	100,000
Spindle stripping (SS)	8	10.0 kg/hour	20,000
Engine for DM	1	4.5 HP	17,000
for SS	1	23.0 HP	59,000
Stripping knives	8	(Attached to SS)	650
3. Fiber Classification and Storage			
Bamboo pole	6		50
Handbaling device	4		400
Weighting scale	1		10,000
4. Handicraft Center			
Weaving loom	12		400
Sewing machine	4		6,700
Heavy-duty sewing machine	1		27,500
Working table	2		2,000
Chair	35		150
Cabinet	1		2,500
Shelf	1		1,500
5. Workshop			
Hand-tractor with attachment	1	10 HP	70,000
6. Plastic bags			
	20,000	(5 x 8 inches)	0.25

Table E.6.9 Requirement of Nucleus Facilities for San Ramon Upland Model Project (2/2)

(2) Nucleus Farm (Lot 17140)

Item	No.		
			<u>Area (ha)</u>
Nucleus Nursery			0.3
Abaca seedbed			0.1 (net)
Shade trees/fruits			0.2 (gross)
Nucleus Demonstration Area			1.1
Under coconut			0.4
Open land (with upland crops)			0.7
Total			1.4
<u>I. Building</u>			<u>Area (m²)</u>
1. Stripping House			40.0
Stripping space	5 x 4		20.0
Drying space	5 x 4		20.0
2. Fiber Classification and Warehouse			90.0
Classification space	5 x 8		40.0
Storage space	5 x 10		50.0
3. Handicraft Sub-Center			65.0
Processing space	5 x 5		25.0
Warehouse	5 x 4		20.0
Office	5 x 4		20.0
<u>II. Equipment</u>	<u>No.</u>	<u>Capacity</u>	<u>Unit Price (P)</u>
1. Stripping			
Defibering machine (DM)	1	12.5 kg/hour	100,000
Spindle stripping (SS)	4	10.0 kg/hour	20,000
Engine for DM	1	4.5 HP	17,000
for SS	1	12.0 HP	25,000
Stripping knives	2	(Attached to SS)	650
2. Fiber Classification and Storage			
Bamboo pole	6		50
Handbaling device	4		400
Weighting scale	1		10,000
3. Handicraft Sub-Center			
Weaving loom	4		400
Sewing machine	1		6,700
Heavy-duty sewing machine	1		27,500
Working table	1		2,000
Chair	10		150
Cabinet	1		2,500
Shelf	1		1,500
4. Plastic bags	20,000	(5 x 8 inches)	0.25

Table F.6.10 Operation Plan, Organic Fertilizer House, San Ramon Upland Model Project

Production Farm Only				
Item	Unit			
A. Machinery and Equipment				
	No.	Unit Price	Quantity	Amount
1) Coconut Husk Crasher (Unit Capacity)		55,000 (63 kg/hour)	2 (0.5 ton/day) (10 ton/month)	110,000
2) Shovels		300	12	3,600
3) Containers (Jute Sacks)		12	100	1,200
4) Decarbonizer		12,000	1	12,000
5) Hand Tractor (10HP)		70,000	1	70,000
B. Operation and Monthly Production				
			Daily Operation (hours)	Monthly Production
1) Coco Peat/Dust	ton		8	20.0
2) Charcoal	ton		8	2.0
3) Organic Fertilizer	ton		8	20.0
C. Monthly Production Cost				
		Unit Price	Quantity	Amount
1) Coco Peat/Dust				
Coconut Husk /l	No.	0.07	50,000	3,500
Labor	day	90	40	3,600
Coconut Husk Crasher	No.	2,690	2	5,380
Others (5% of the above cost)				620
Total Cost				13,100
Cost per ton				660
2) Charcoal				
Coconut shell	kg	0.14	4,000	560
Labor	day	90	10	900
Decarbonizer	No.	200	1	200
Others (5% of the above cost)				80
Total Cost				1,740
Cost per ton				870
3) Transportation/Hand Tractor				
Labor	day	90	40	3,600
Hand Tractor	No.	1,960	1	1,960
Total Cost				5,560
Cost per ton of Orga. Fertilizer (production of 20 ton)				280
4) Organic Fertilizer				
Raw Materials				
- Coco Peat/Dust	ton	660	18	11,880
- Charcoal	ton	870	2	1,740
- EM I				400
- Others				1,400
Labor	day	90	40	3,600
Transportation/Hand Tractor				5,560
Others (5% of the above cost)				1,230
Total Cost				25,810
Cost per ton				1,290
D. Monthly Building O&M Cost				
Labor (1 persons)	day	90	20	1,800
Building O&M				1,680
Others (5% of the above cost)				170
Total Cost				3,650
Cost per ton of Orga. Fertilizer (production of 20 ton)				180

Note: /l Twenty (20) ton of peat is produced from 25 ton of coconut husk (80% of recovery rate).
One husk is estimated at 0.5 kg.
Required number of husk is estimated at around 50,000 (25,000 kg/0.5 kg).

Machinery O&M cost were estimated as follows:

		Coconut Crasher	Decarbonizer	Hand Tractor	Building
Unit Price	Peso	55,000	12,000	35,000*	123,500
Life of machine	Year	10	10	10	50
Salvage value		5,500	1,200	3,500	12,350
Depreciation	Peso/year	4,950	1,080	3,150	2,220
Capital interest	Peso/year	4,840	1,060	3,080	10,870
Spare parts/Repair	Peso/year	4,800	240	8,400	2,470
Lubricants	Peso/year	2,300	0	1,150	
Fuel / Electricity	Peso/year	15,360	0	7,680	4,610
Total annual cost		32,250	2,380	23,460	20,170
Total monthly cost		2,690	200	1,960	1,680

* Hand tractor will be utilized for preparation of organic fertilizer and production and processing of abaca.
A half of hand tractor price (P. 35,000 out of P 70,000) is counted.

Table F.6.11 Operation Plan, Abaca Stripping, Classification and Storage,
San Ramon Upland Model Project (1/2)

(1) Production Farm

Item	Unit			
A. Machinery and Equipment				
1) Defibering machine (DM)	No.	<u>Unit Price</u>	<u>Quantity</u>	<u>Amount</u>
		100,000	1	100,000
Unit Capacity		12.5 kg/hour	100 kg/day	2.0 ton/month
2) Spindle Stripping (SS)		20,000	8	160,000
Unit Capacity		10.0 kg/hour	80 kg/day	1.6 ton/month
3) Engine				
For DM (4.5 HP)		17,000	1	17,000
For SS (23 HP)		59,000	1	59,000
4) Stripping knives (Attached to SS)		650	8	5,200
B. Operation and Monthly Production				
1) Abaca Fiber	kg		<u>Daily Operation (hours)</u>	<u>Monthly Production</u>
From DM			8	2,000
From SS			8	12,800
C. Monthly Processing Cost				
1) Abaca fiber from DM		<u>Unit Price</u>	<u>Quantity</u>	<u>Amount</u>
Labor (2 persons)	day	90	40	3,600
Machinery and Engine				4,010
Others (5% of the above cost)				380
Total Cost				7,990
Cost per kg				4.0
2) Abaca fiber from SS				
Labor (1 person/SS)	day	90.00	160	14,400
Machinery and Engine				8,870
Others (5% of the above cost)				1,160
Total Cost				24,430
Cost per kg				1.9
D. Monthly Transportation Cost				
Labor (1 persons)	day	90	20	1,800
Machinery and Engine				3,060
Others (5% of the above cost)				240
Total Cost				5,100
Cost per kg of fiber (production of 14,800 kg)				0.34
E. Monthly Building O&M Cost				
Labor (1 persons)	day	90	20	1,800
Building O&M				4,630
Others (5% of the above cost)				320
Total Cost				6,750
Cost per kg of fiber (production of 14,800 kg)				0.46

Note : Facility O&M cost were estimated as follows :

		Defibering Machine (DM)	Spindle Stripping (SS)	Hand Tractor * (Incl. attachment)	Building (Stripping & Fiber Classification)
Facility Cost	Peso				395,000
Machinery and Engine Cost	Peso				(P1,900 x 80m ²) (P2,700 x 90m ²)
Machine		100,000	160,000	20,000	
Engine (Per machine)		17,000	59,000	15,000	
Life of machine	Year	10	10	10	50
Salvage value		11,700	21,900	3,500	39,500
Depreciation	Peso/year	10,530	19,710	3,150	7,110
Capital interest	Peso/year	10,300	19,270	3,080	34,760
Spare parts/Repair	Peso/year	9,600	18,000	8,400	7,900
Lubricants	Peso/year	2,300	6,450	14,400	
Fuel / Electricity	Peso/year	15,360	43,010	7,680	5,840
Total annual cost		48,090	106,440	36,710	55,610
Total monthly cost		4,010	8,870	3,060	4,630

* Hand tractor will be utilized for preparation of organic fertilizer and production and processing of abaca.
A half of hand tractor price (P 35,000 out of P 70,000) is counted.

Table F.6.11 Operation Plan, Abaca Stripping, Classification and Storage,
San Ramon Upland Model Project (2/2)

(2) Nucleus Farm

Item	Unit			
A. Machinery and Equipment				
1) Defibering machine (DM)	No.	Unit Price	Quantity	Amount
		100,000	1	100,000
Unit Capacity		12.5 kg/hour	100 kg/day	2.0 ton/month
2) Spindle Stripping (SS)		20,000	4	80,000
Unit Capacity		10.0 kg/hour	80 kg/day	1.6 ton/month
3) Engine				
For DM (4.5 HP)		17,000	1	17,000
For SS (12 HP)		25,000	1	25,000
4) Stripping knives (Attached to SS)		650	2	1,300
B. Operation and Monthly Production				
			Daily Operation (hours)	Monthly Production
1) Abaca Fiber	kg			
From DM			8	2,000
From SS			8	6,400
C. Monthly Processing Cost				
		Unit Price	Quantity	Amount
1) Abaca fiber from DM				
Labor (2 persons)	day	90	40	3,600
Machinery and Engine				4,220
Others (5% of the above cost)				390
Total Cost				8,210
Cost per kg				4.1
2) Abaca fiber from SS				
Labor (1 person/SS)	day	90.00	40	3,600
Machinery and Engine				9,840
Others (5% of the above cost)				670
Total Cost				14,110
Cost per kg				2.2
D. Monthly Building O&M Cost				
Labor (1 persons)	day	90	20	1,800
Building O&M				3,840
Others (5% of the above cost)				280
Total Cost				5,920
Cost per kg of fiber (production of 14,800 kg)				0.70

Note : Machinery O&M cost were estimated as follows :

		Defibering Machine (DM)	Spindle Stripping (SS)	Building (Stripping & Fiber Classification)
Facility Cost	Peso			319,000
Machinery and Engine Cost	Peso			(P1,900 x 40m ²)
Machine		100,000	80,000	(P2,700 x 90m ²)
Engine (Per machine)		17,000	25,000	
Life of machine	Year	10	10	50
Salvage value		11,700	10,500	31,900
Depreciation	Peso/year	10,530	9,450	5,740
Capital interest	Peso/year	10,300	9,240	28,070
Spare parts	Peso/year	9,600	18,000	6,380
Lubricants	Peso/year	4,800	38,400	
Fuel	Peso/year	15,360	43,010	5,840
Total annual cost		50,590	118,100	46,030
Total monthly cost		4,220	9,840	3,840

Table F.6.12 Operation Plan, Handicraft Center and Sub-Center (1/2)

(1) Handicraft Center, Production Farm

Item	Unit			
A. Facilities	No.	Unit Price	Quantity	Amount
1) Weaving loom		400	12	4,800
2) Sewing machine		6,700	4	26,800
3) Heavy-duty sewing machine		27,500	1	27,500
B. Operation and Monthly Production	Unit	Production	No. of Person/Machine	Monthly Production
Monthly Operation Hours:	160 hours			
1) Sinamay	m	2.67 m/loom/hour	6 looms	2,560
	kg	0.067 kg/loom/hour	6 persons	64
2) Abaca Bag (Twines)	piece	1 piece/person/hour	4 S. machine	640
	kg	0.25 kg/person/hour	10 persons	(380)
3) Abaca Placemat (Baklad)	piece	11 piece/person/hour	1 H S machine	2,560
	kg	0.067 kg/loom/hour	6 looms	(64)
C. Monthly Production Cost		Unit Price	Quantity	Amount
1) Sinamay				
Raw materials				
- Abaca fiber	kg	29	70	2,030
- Others				200
Labor	day	90	120 (6 persons x 20 days)	10,800
Sub-total				13,030
2) Abaca Bag				
Raw materials				
• Twines				31,400
- Abaca fiber	kg	29	420	12,180
- Others				1,220
Labor	day	90	200 (5 persons x 20 days)	18,000
• Others				9,420
Labor	day	90	80 (4 persons x 20 days)	7,200
Sub-total				48,020
3) Abaca Placemat				
Raw materials				
• Baklad				13,030
- Abaca fiber	kg	29	70	2,030
- Others				200
Labor	day	90	120 (6 persons x 20 days)	10,800
• Others				3,910
Labor	day	90	20 (1 persons x 20 days)	1,800
Sub-total				18,740
4) Facility O&M Cost	No.	Unit Price	Quantity	Amount
- Weaving loom		10	12	120
- Sewing machine		1,070	4	4,280
- Heavy-duty sewing machine		1,590	1	1,590
- Building and other equipment				9,800
Sub-total				15,790
Monthly Total Cost				95,580
D. Monthly Sales Amount		Unit Price	Quantity	Amount
1) Sinamay	m	13.25	2,560	33,920
2) Abaca Bag	piece	130	640	83,200
3) Abaca Placemat	piece	30	2,560	76,800
Monthly Sales Amount				193,920
E. Monthly Profit				98,340

Note: Facility O&M cost were estimated as follows:

		Weaving loom	Sewing machine	Heavy-duty sewing machine	Building
Unit Price	Peso	400	6,700	27,500	874,000
					(P3,800 x 230 m ²)
Life of machine	Year	5	10	10	50
Salvage value		0	670	2,750	87,400
Depreciation	Peso/year	80	600	2,480	15,730
Capital interest	Peso/year	30	590	2,420	76,910
Miscellaneous (2% of unit cost)	Peso/year	10	130	550	17,480
Electricity	Peso/year	0	11,500	13,590	7,530
Total annual cost		120	12,820	19,040	117,650
Total monthly cost		10	1,070	1,590	9,800

* : Repair cost

Table F.6.12 Operation Plan, Handicraft Center and Sub-Center (2/2)

(2) Handicraft Sub-Center, San Ramon Nucleus Farm, Magogon Nucleus Facilities

Item	Unit			
A. Facilities				
	No.	Unit Price	Quantity	Amount
1) Weaving loom		400	4	1,600
2) Sewing machine		6,700	1	6,700
3) Heavy-duty sewing machine		27,500	1	27,500
B. Operation and Monthly Production				
		Unit Production	No. of Person/Machine	Monthly Production
<u>Monthly Operation Hours:</u> 160 hours				
1) Sinamay	m	2.67 m/loom/hour	2 looms	850
	kg	0.067 kg/loom/hour	2	21
2) Abaca Bag (Twines)	piece	1 piece/person/hour	1 S. machine	160
	kg	0.25 kg/person/hour	3 persons	(100)
3) Abaca Placemat (Baklad)	piece	11 piece/person/hour	1 H.S machine	840
	kg	0.067 kg/loom/hour	2 looms	(21)
C. Monthly Production Cost				
		Unit Price	Quantity	Amount
1) Sinamay				
Raw materials				
- Abaca fiber	kg	29	20	580
- Others				60
Labor	day	90	40 (2 persons x 20 days)	3,600
Sub-total				4,240
2) Abaca Bag				
Raw materials				
- Twines				8,910
- Abaca fiber	kg	29	110	3,190
- Others				320
- Labor	day	90	60 (3 persons x 20 days)	5,400
- Others				2,670
Labor	day	90	20 (1 person x 20 days)	1,800
Sub-total				13,380
3) Abaca Placemat				
Raw materials				
- Baklad				4,240
- Abaca fiber	kg	29	20	580
- Others				60
- Labor	day	90	40 (2 persons x 20 days)	3,600
- Others				1,270
Labor	day	90	20 (1 person x 20 days)	1,800
Sub-total				7,310
4) Facility O&M Cost				
	No.	Unit Price	Quantity	Amount
- Weaving loom		10	4	40
- Sewing machine		1,070	1	1,070
- Heavy-duty sewing machine		1,590	1	1,590
- Building and other equipment				2,770*
Sub-total				5,470
Monthly Total Cost				
				30,400
D. Monthly Sales Amount				
		Unit Price	Quantity	Amount
1) Sinamay	m	13.25	850	11,263
2) Abaca Bag	piece	130	160	20,800
3) Abaca Placemat	piece	30	840	25,200
Monthly Sales Amount				57,263
E. Monthly Profit				
				26,863

0.9

Note: * ; Based on the Building O&M Cost per per m2 of Handicraft Center.

Table F 6.13 Financial Crop Budget, Coconut Replanting and Fertilization

(1) Present/Without Project Condition

Item	Unit	Unit Price	Qty	Amount (Pesos/ha)
A) Gross Income				
Unit Yield	ton	10,500	1.0	10,500
B) Production Cost				810
1) Farm Inputs				
- Seedlings	Plants	6.7	0	0
- Fertilizers	N kg	17.2	0	0
	P kg	15.7	0	0
	K kg	10.0	0	0
- Organic Fertilizers	ton	2,000	0	0
- Insecticides	lit	522.0	0.1	52
2) Labor Cost (hired)	man-day	90.0	8	720
3) Miscellaneous (5%)				39
C) Net Income				9,690

Note: Coconut trees mostly of age ranging from 35 to 65 years old

(2) With Project Condition

Item	Unit	Unit Price	1st Year		2nd Year		3rd Year		4th Year	
			Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)
A) Gross Income										
Unit Yield	ton	10,500	0.6	6,300	0.8	8,400	1.0	10,500	1.5	15,750
B) Production Cost				3,270		3,040		3,440		3,640
1) Farm Inputs										
- Seedlings	Plants	6.7	125	838	10	67				
- Fertilizers	N kg	17.2	10	172	15	258	20	344	25	430
	P kg	15.7	0	0	0	0	5	79	5	79
	K kg	10.0	30	300	35	350	45	450	50	500
- Organic Fertilizers	ton	2,000	0.2	400	0.5	1,000	0.5	1,000	0.5	1,000
- Insecticides	lit	522.0	0.1	52	0.1	52	0.1	52	0.2	104
2) Labor Cost (hired)	man-day	90.0	15	1,350	13	1,170	15	1,350	15	1,350
3) Miscellaneous (5%)				156		145		164		173
C) Net Income				3,030		5,360		7,060		12,110

Item	Unit	Unit Price	5th Year		6th Year		7th Year		8th - 60th Year	
			Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)
A) Gross Income										
Unit Yield	ton	10,500	2.0	21,000	2.3	24,150	3.0	31,500	3.5	36,750
B) Production Cost				4,080		4,400		4,690		5,020
1) Farm Inputs										
- Fertilizers	N kg	17.2	30	516	30	516	30	516	30	516
	P kg	15.7	5	79	5	79	5	79	8	126
	K kg	10.0	75	750	80	800	90	900	90	900
- Organic Fertilizer	ton	2,000	0.5	1,000	0.5	1,000	0.5	1,000	0.5	1,000
- Insecticides	lit	522.0	0.2	104	0.5	261	0.5	261	0.5	261
2) Labor Cost (hired)	man-day	90.0	16	1,440	17	1,530	19	1,710	22	1,980
3) Miscellaneous (5%)				194		209		223		239
C) Net Income				16,920		19,750		26,810		31,730

Table F 6.14 Financial Crop Budget, Coffee Production in Magogon Model Project Area

Item	Unit	Unit Price	1st Year		2nd Year		3rd Year		4th Year	
			Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)
A) Gross Income										
Unit Yield	ton	26,100	0	0	0.25	6,530	0.5	13,050	0.7	18,270
B) Production Cost				8,730		4,780		5,100		5,950
1) Farm Inputs										
- Seedlings	Plants	2.8	1,100	3,080	100	280				
- Fertilizers	N kg	17.2	45	774	50	860	50	860	60	1,032
	P kg	15.7	20	314	20	314	25	393	25	393
	K kg	10.0	20	200	20	200	25	250	25	250
- Organic Fertilizers	ton	2,000.0	0.5	1,000	0.5	1,000	0.5	1,000	0.5	1,000
- Insecticides	lit	522.0	0.3	157	0.5	261	1	522	1	522
2) Labor Cost (hired)	man-day	90.0	31	2,790	15	1,350	15	1,350	20	1,800
3) Machinery Cost										
- Dehuller	ton	960.0	0	0	0.30	288	0.50	480	0.70	672
4) Miscellaneous (5%)				416		228		243		283
C) Net Income				-8,730		1,750		7,950		12,320

Item	Unit	Unit Price	5th Year		6th Year		7th Year		8th - 20 Year	
			Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)	Qty	Amount (Pesos/ha)
A) Gross Income										
Unit Yield	ton	26,100	0.85	22,190	1.00	26,100	1.2	31,320	1.5	39,150
B) Production Cost				6,330		6,660		7,470		8,280
1) Farm Inputs										
- Fertilizers	N kg	17.2	65	1,118	70	1,204	75	1,290	80	1,376
	P kg	15.7	30	471	30	471	35	550	40	628
	K kg	10.0	30	300	30	300	35	350	40	400
Organic Fertilizer	ton	2,000.0	0.5	1,000	0.5	1,000	0.5	1,000	0.5	1,000
- Insecticides	lit	522.0	1	522	1	522	1	522	1	522
2) Labor Cost (hired)	man-day	90.0	20	1,800	21	1,890	25	2,250	28	2,520
3) Machinery Cost										
- Dehuller	ton	960.0	0.85	816	1.00	960	1.20	1,152	1.50	1,440
5) Miscellaneous (5%)				301		317		356		394
C) Net Income				15,860		19,440		23,850		30,870

Note: From the 8th year the cost and benefit are assumed same.

Table F 6.15 Financial Crop Budget, Abaca Production in San Ramon Model Project Area

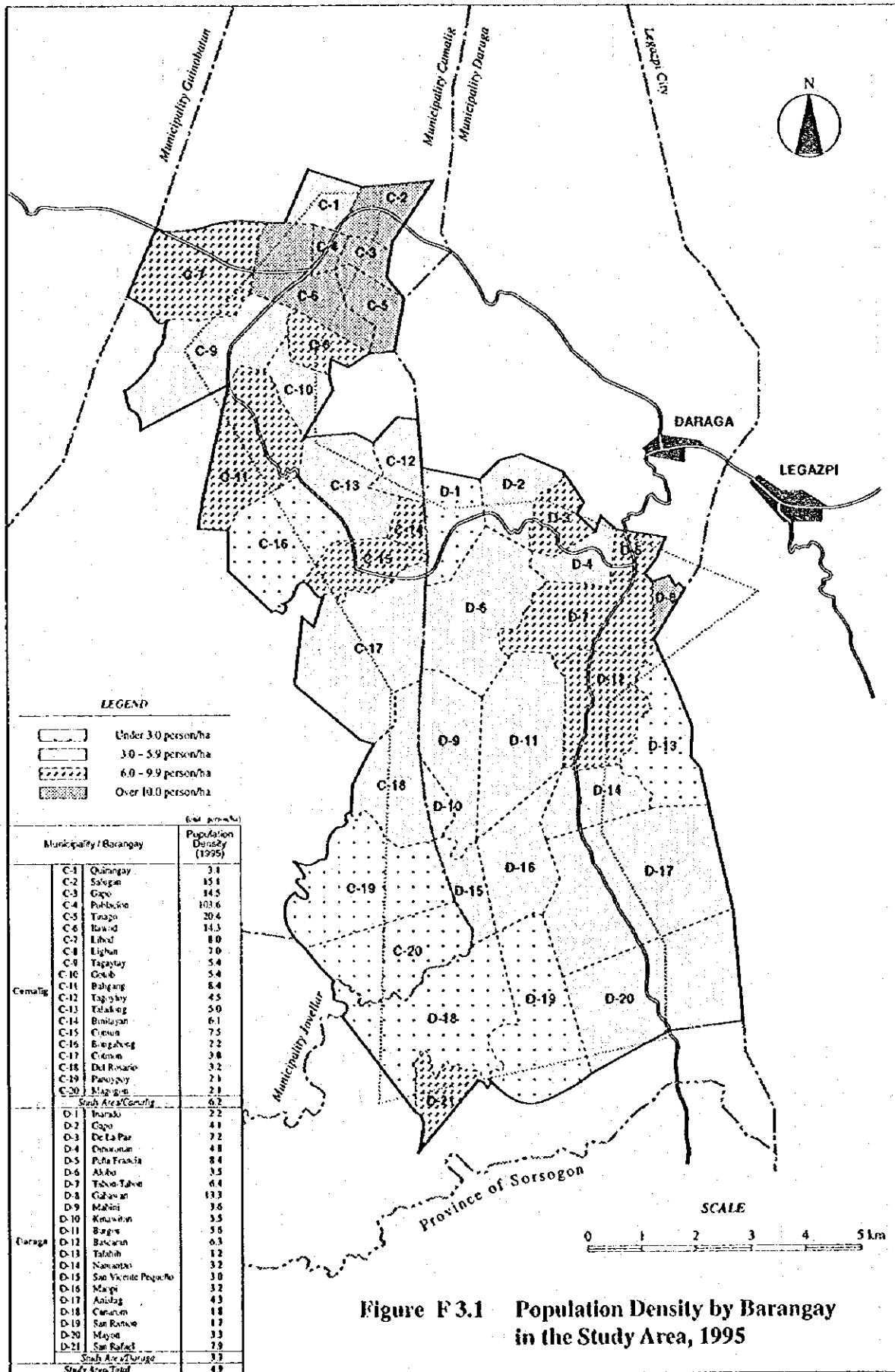
Item	Unit	Unit Price	1st Year		2nd Year		3rd Year	
			Q'ty	Amount (Pesos/ha)	Q'ty	Amount (Pesos/ha)	Q'ty	Amount (Pesos/ha)
A) Gross Income								
Unit Yield	ton	29,000	0	0	0.75	21,750	1.5	43,500
B) Production Cost			18,760		10,650		14,630	
1) Farm Inputs								
- Seedlings	Plants	4.1	2,500	10,250	120	492		
- Fertilizers	N kg	17.2	40	688	45	774	45	774
	P kg	15.7	15	236	15	236	15	236
	K kg	10.0	30	300	40	400	50	500
- Organic Fertilizers	ton	2,000.0	1	2,000	1	2,000	1	2,000
- Insecticides	lit	522.0	1	522	1	522	1	522
2) Labor Cost (hired)	man-day	90.0	43	3,870	31	2,790	45	4,050
3) Machinery Cost								
- Stripping	ton	3,900.0	0	0	0.75	2,925	1.50	5,850
4) Miscellaneous (5%)				893		507		697
C) Net Income			-18,760		11,100		28,870	
Benefit/Cost Ratio			-1.00		1.04		1.97	

Item	Unit	Unit Price	4th Year		5th - 15th Year	
			Q'ty	Amount (Pesos/ha)	Q'ty	Amount (Pesos/ha)
A) Gross Income						
Unit Yield	ton	29,000	2.30	66,700	2.60	75,400
B) Production Cost			18,750		20,540	
1) Farm Inputs						
- Fertilizers	N kg	17.2	50	860	50	860
	P kg	15.7	20	314	20	314
	K kg	10.0	60	600	60	600
Organic Fertilizer	ton	2,000.0	1	2,000	1	2,000
- Insecticides	lit	522.0	1	522	1	522
2) Labor Cost (hired)	man-day	90.0	51	4,590	57	5,130
3) Machinery Cost						
- Stripping	ton	3,900.0	2.30	8,970	2.60	10,140
5) Miscellaneous (5%)				893		978
C) Net Income			47,950		54,860	

Note: From the 5th up to 15th year, the cost and benefit are assumed same.

**THE FEASIBILITY STUDY ON
THE WESTERN LEGAZPI IRRIGATION AND
RURAL DEVELOPMENT PROJECT IN THE PHILIPPINES**

FIGURES



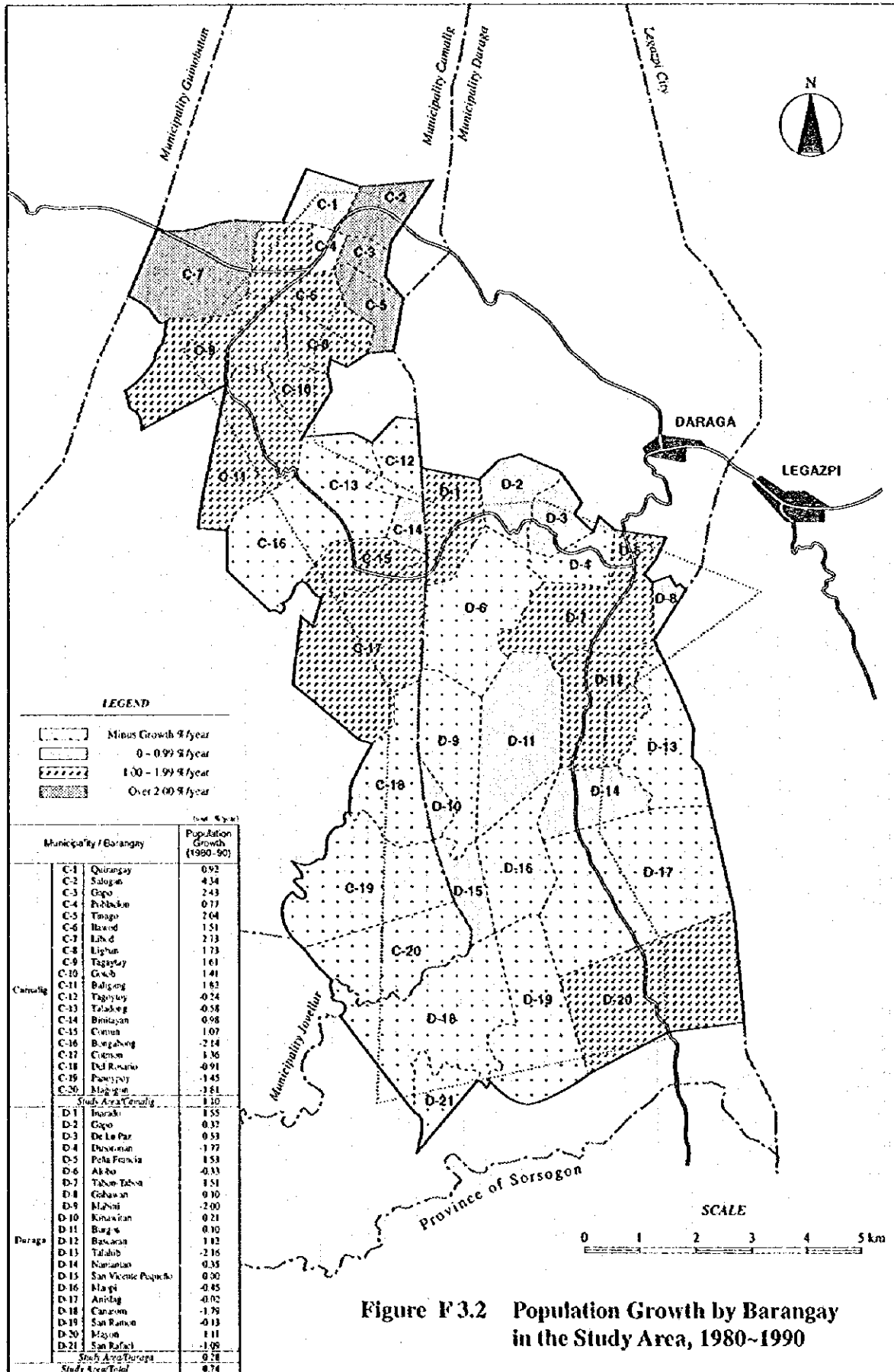


Figure F 3.2 Population Growth by Barangay in the Study Area, 1980-1990

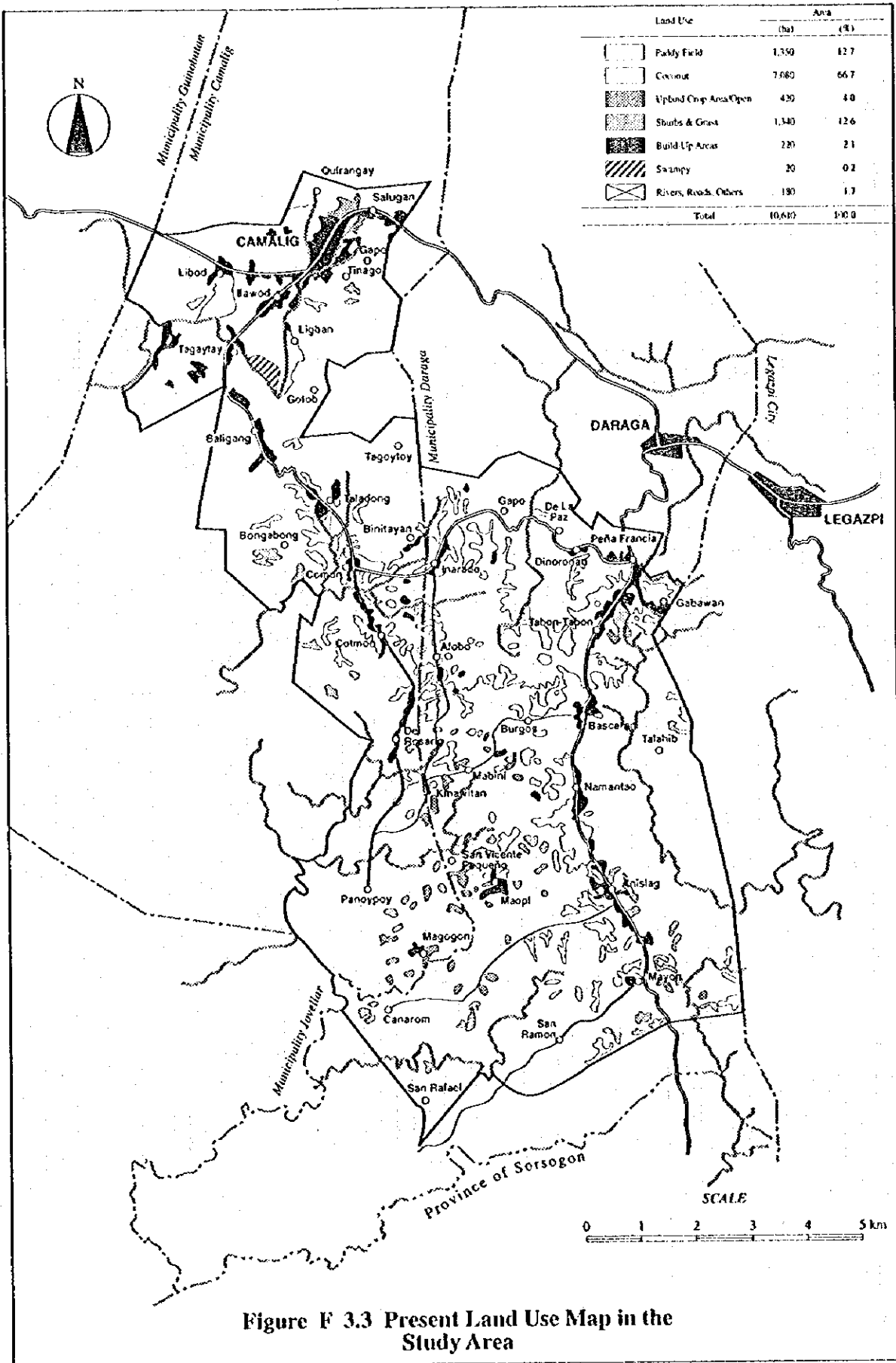


Figure F 3.3 Present Land Use Map in the Study Area

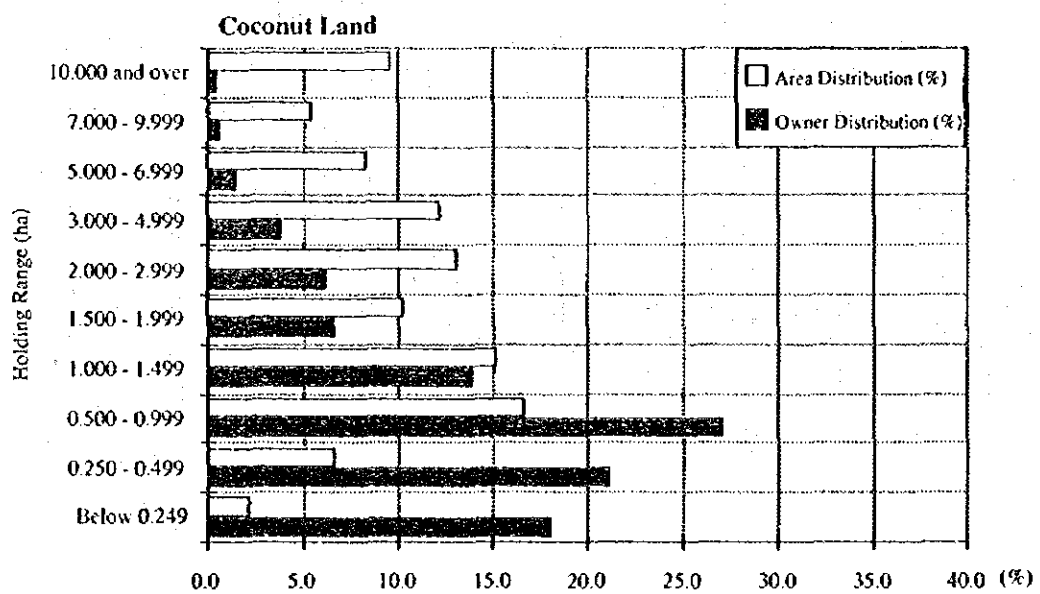
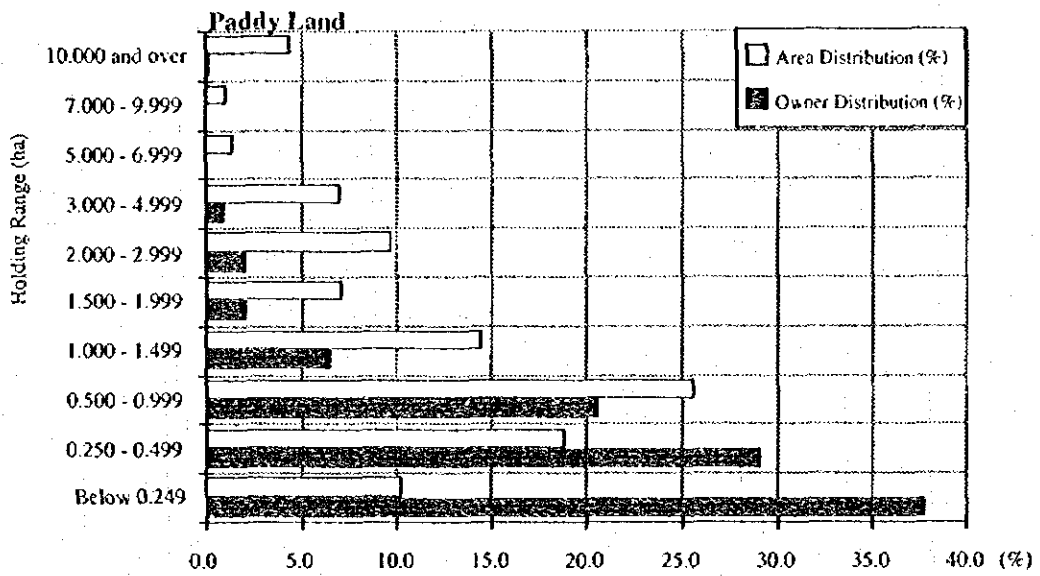
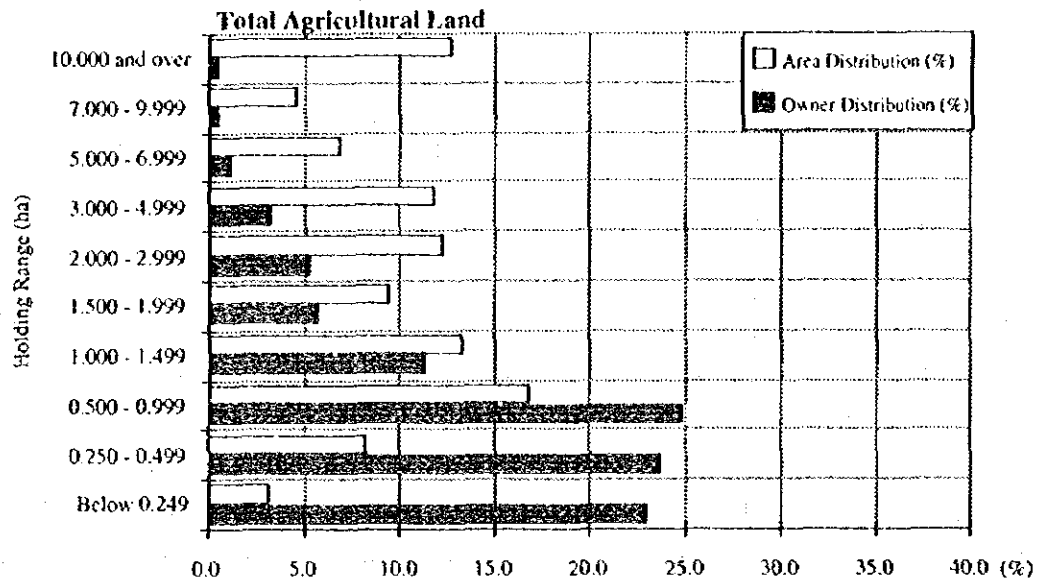
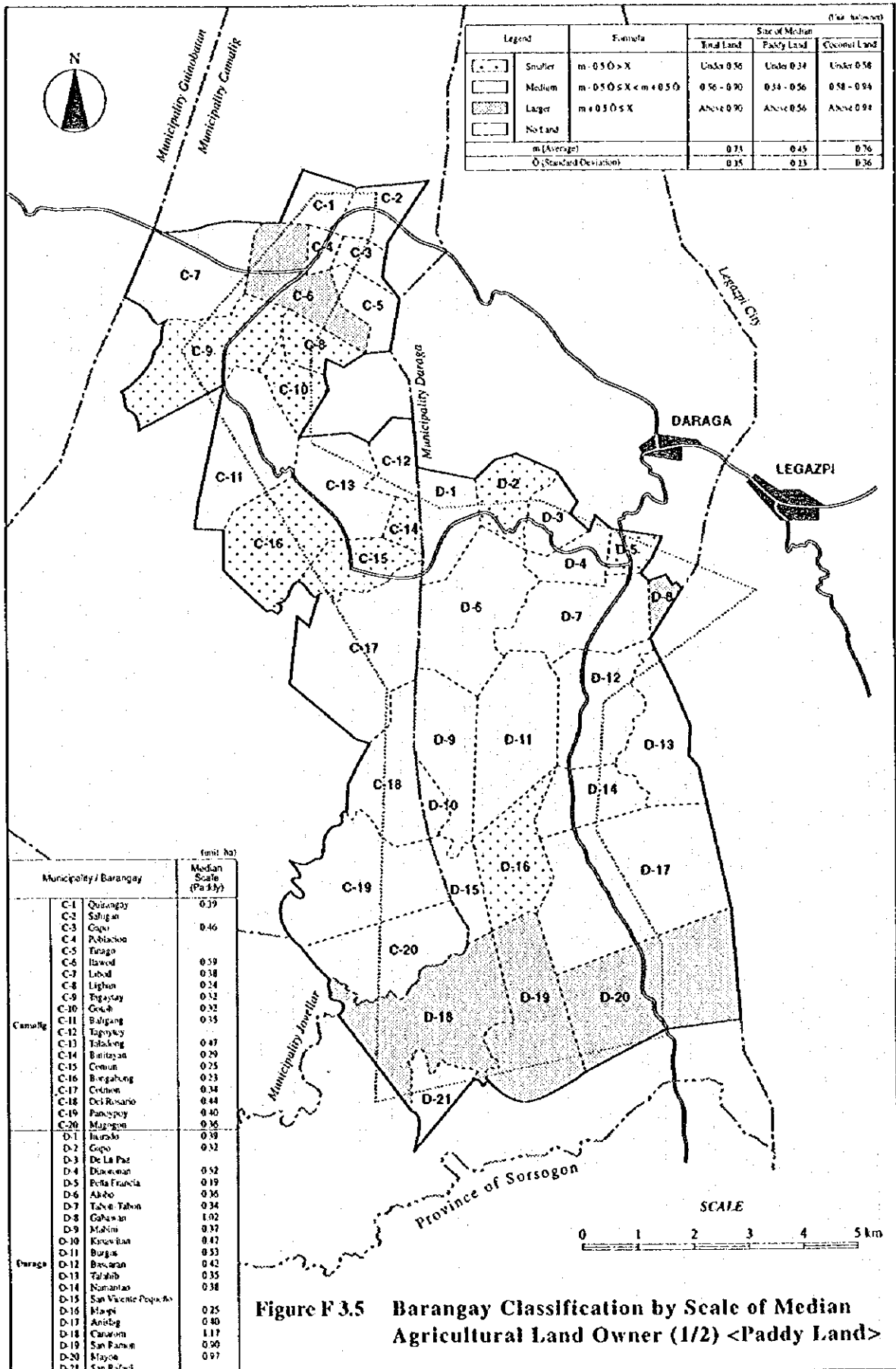
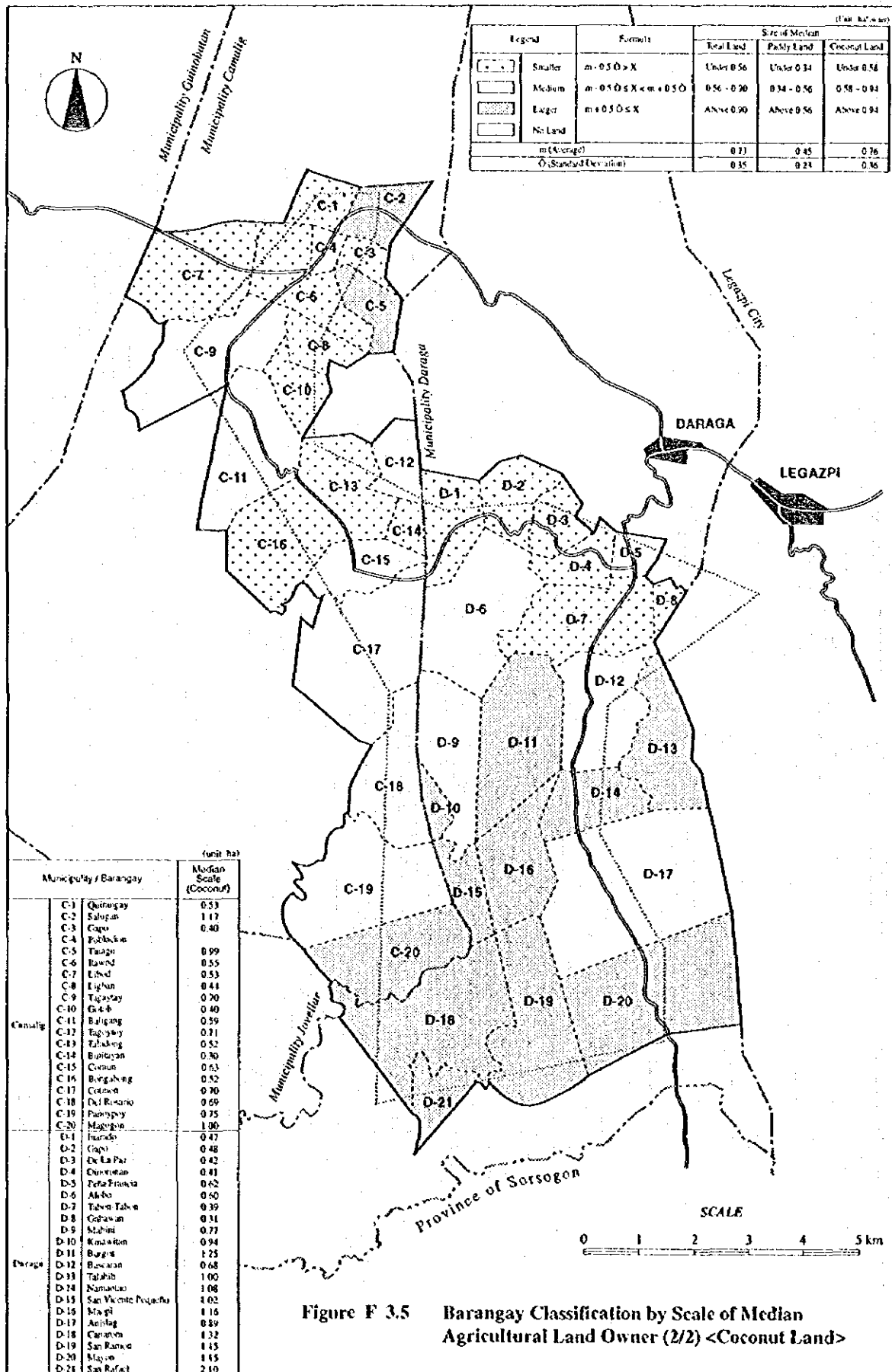
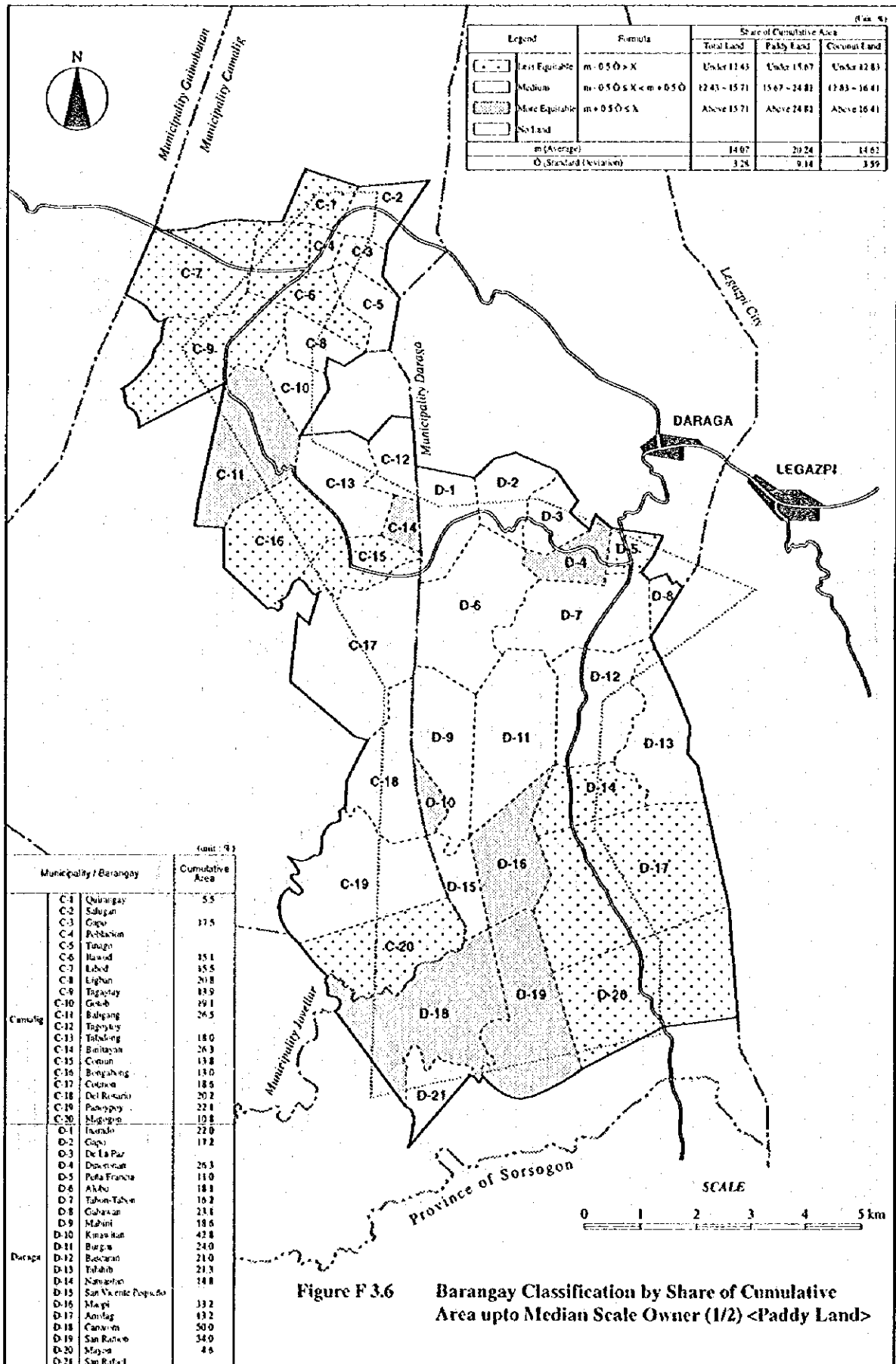


Figure F.3.4 Agricultural Land Distribution by Holding Scale in the Study Area







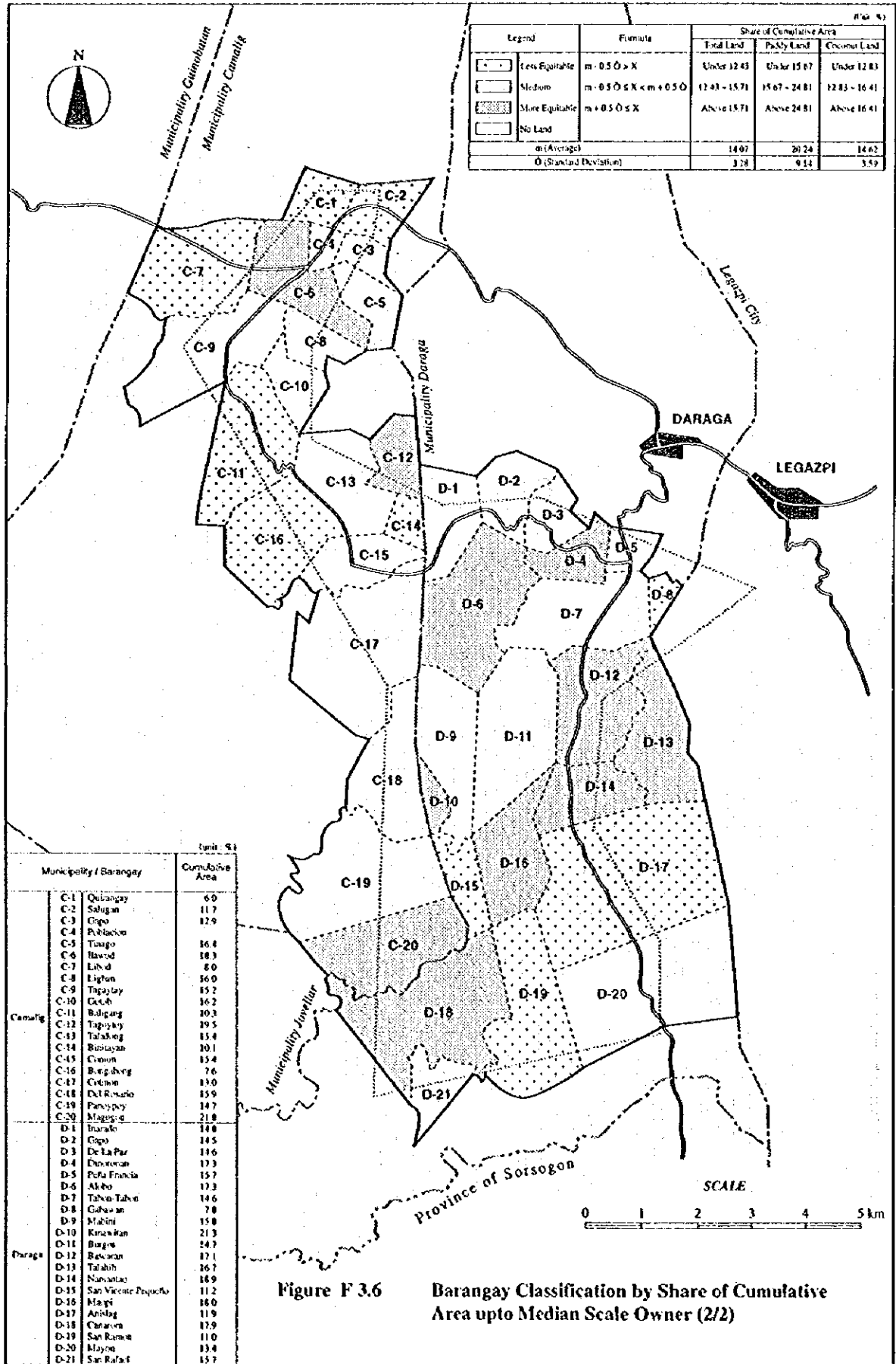
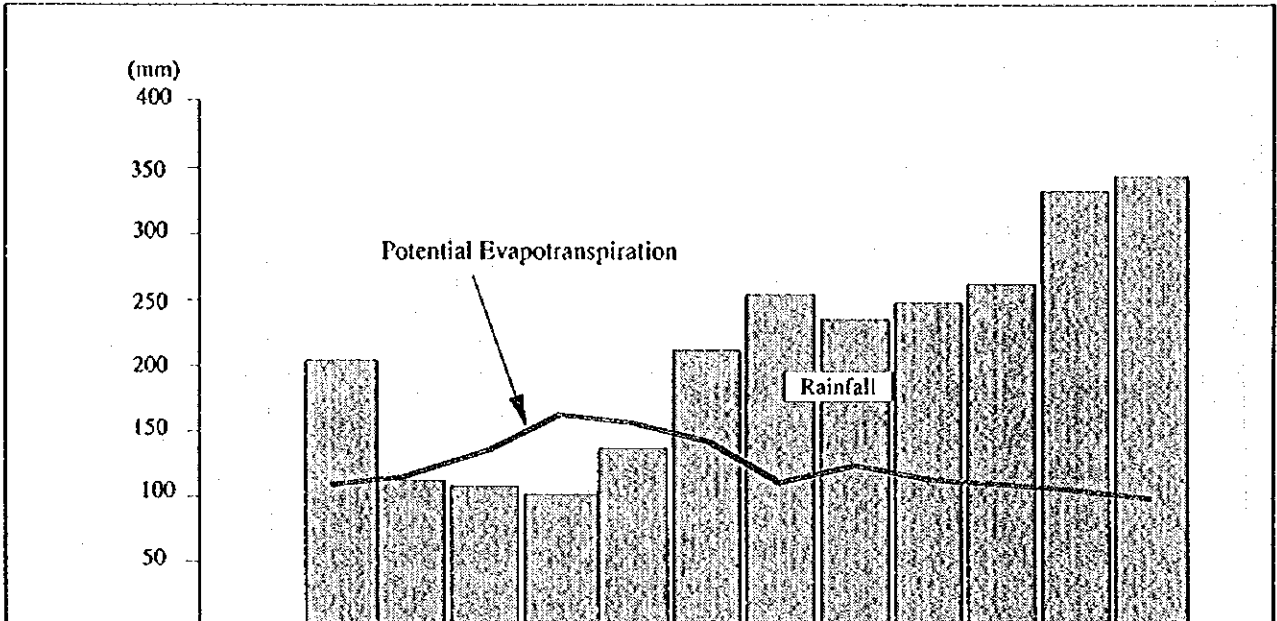


Figure F 3.6

Barangay Classification by Share of Cumulative Area upto Median Scale Owner (2/2)



Data from Legazpi	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Rainfall (mm)	203	113	114	109	137	215	251	229	249	269	331	348	2568
Potential Evapotranspiration	108	114	136	165	158	144	117	124	114	112	105	99	1498
Temperature (mean monthly)													
Maximum	28.4	29.1	30.1	31.3	32.3	32.2	31.7	31.6	31.5	31.0	30.1	29.1	30.7
Minimum	22.3	22.2	22.8	23.7	24.3	24.1	23.8	23.9	23.7	23.3	23.3	22.9	23.4
Mean	25.4	25.7	26.4	27.5	28.3	28.2	27.7	27.8	27.6	27.2	26.7	26.0	27.0
Relative humidity (%)	84	83	82	82	81	83	84	84	85	85	86	86	84.0
Cloudiness (Oktas)	5.8	5.5	5.1	4.9	5.1	5.8	6.3	6.4	6.3	6.0	6.0	5.9	5.8
Wind speed (m/sec)	3.6	3.4	3.3	3.1	2.8	2.7	2.8	3.0	2.5	2.4	3.0	3.3	3.0

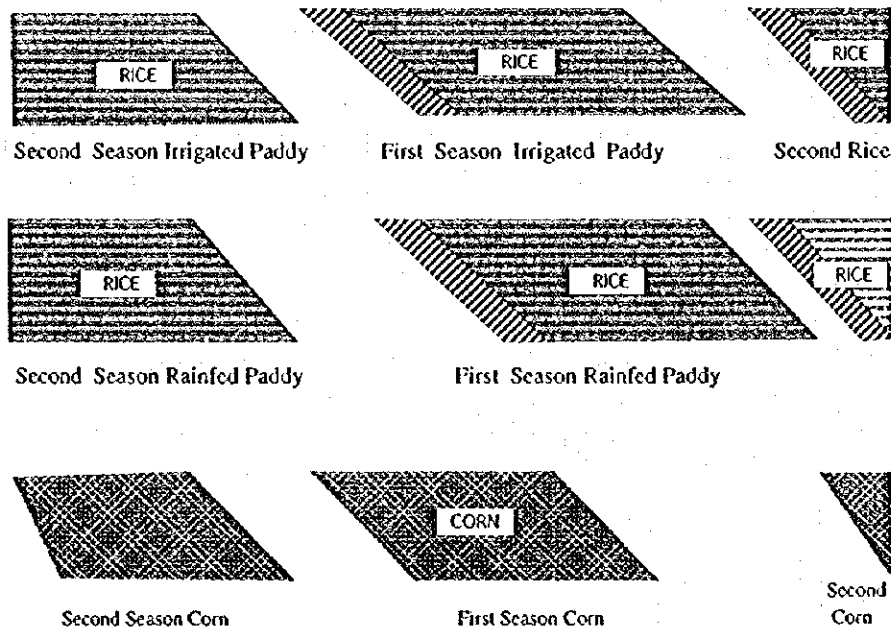


Figure F 3.7 Present Cropping Pattern of Rice and Corn

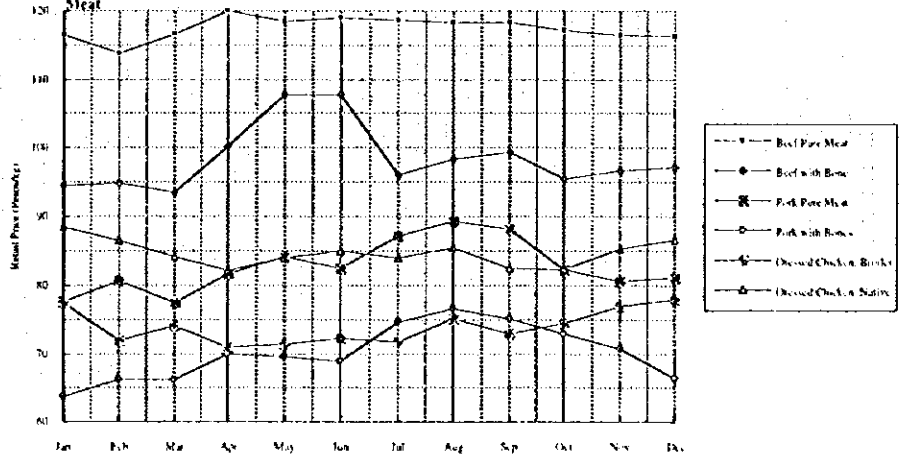
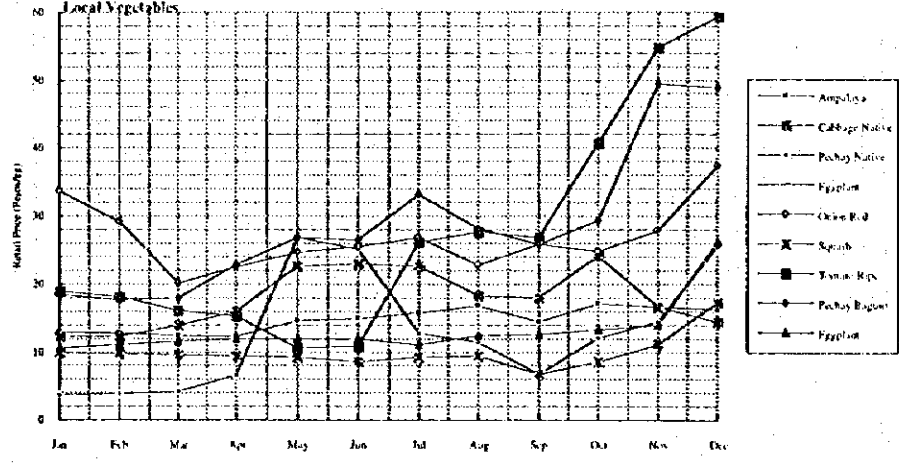
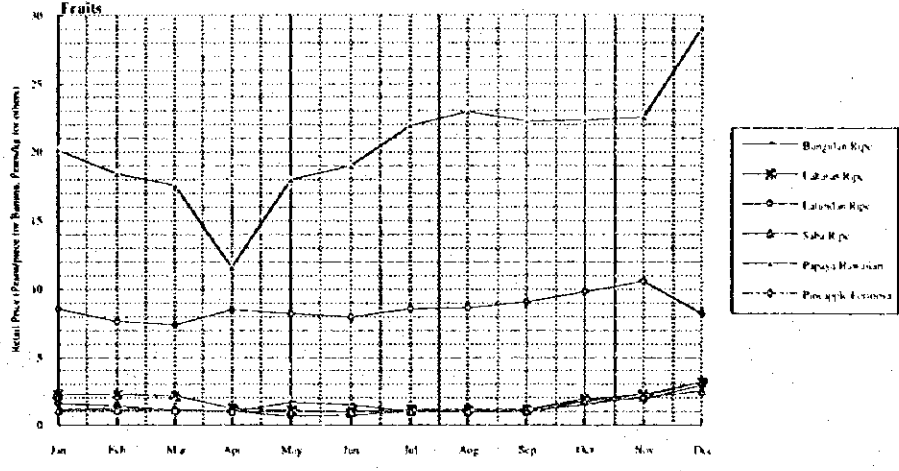
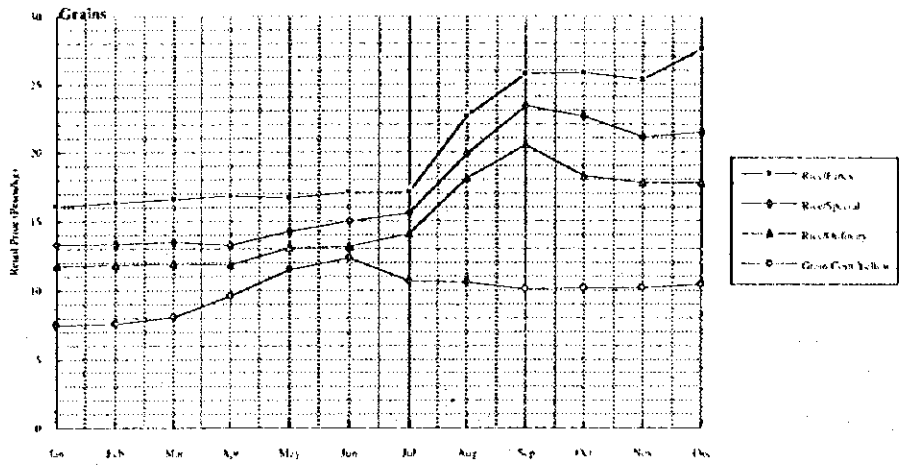


Figure F.3.8 Retail Price of Agricultural Products in Legazpi Public Market, 1995

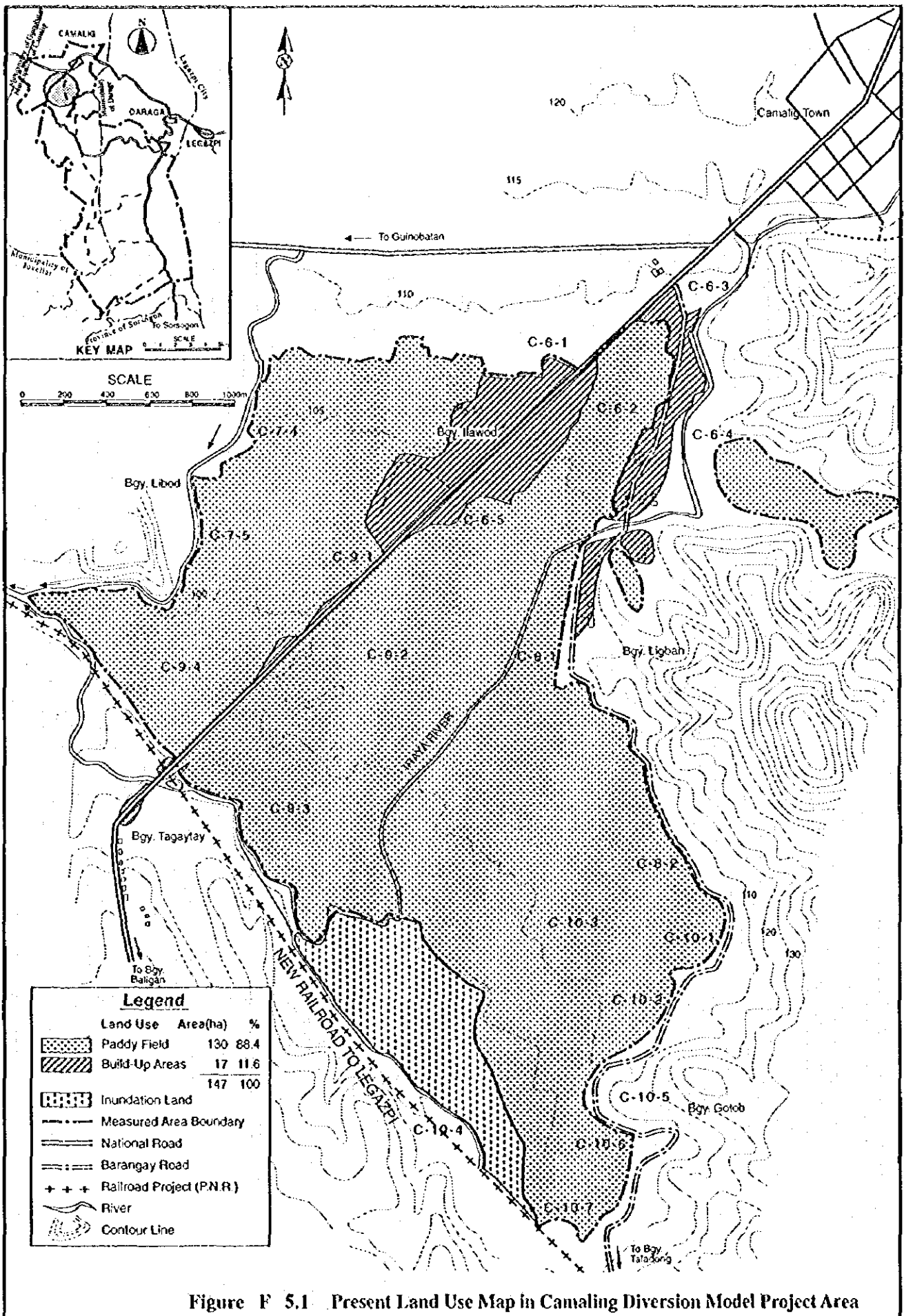
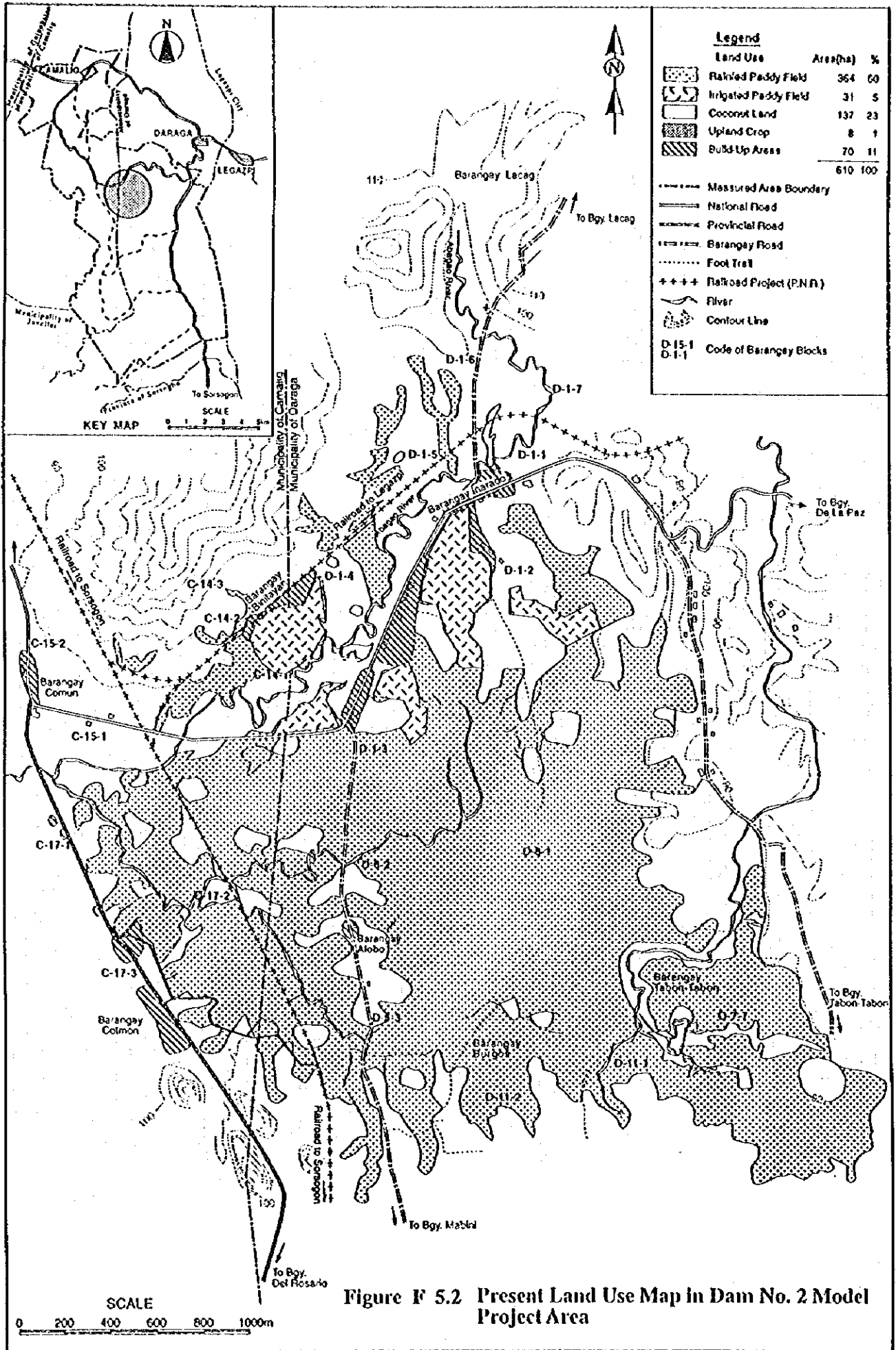
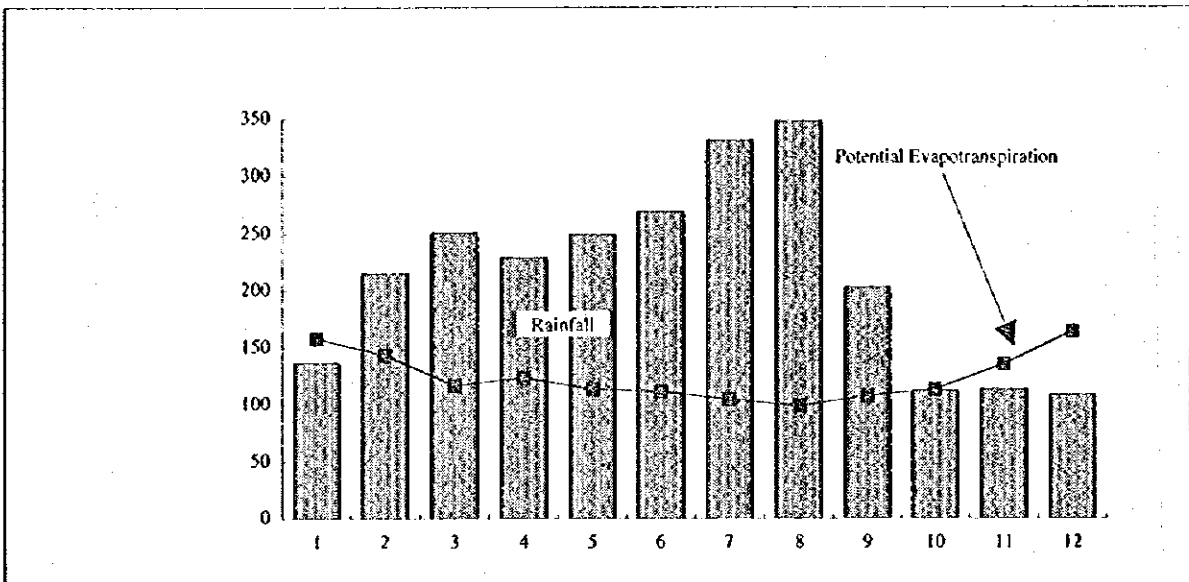


Figure F 5.1 Present Land Use Map in Camaling Diversion Model Project Area





Data from Legazpi	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Annual
Probable (80 %) Rainfall (mm)	137	215	251	229	249	269	331	348	203	113	114	109	2568
Potential Evapotranspiration	158	144	117	124	114	112	105	99	108	114	136	165	1496
Temperature (mean monthly)													
Maximum	32.3	32.2	31.7	31.6	31.5	31.0	30.1	29.1	28.4	29.1	30.1	31.3	30.7
Minimum	24.3	24.1	23.8	23.9	23.7	23.3	23.3	22.9	22.3	22.2	22.8	23.7	23.4
Mean	28.3	28.2	27.7	27.8	27.6	27.2	26.7	26.0	25.5	25.7	26.4	27.5	27.1
Relative humidity (%)	81	83	84	84	85	85	86	86	84	83	82	82	83.8
Cloudiness (Oktas)	5.1	5.8	6.3	6.4	6.3	6.0	6.0	5.9	5.8	5.5	5.1	4.9	5.8
Wind speed (m/sec)	2.8	2.7	2.8	3.0	2.5	2.4	3.0	3.3	3.6	3.4	3.3	3.1	3.0

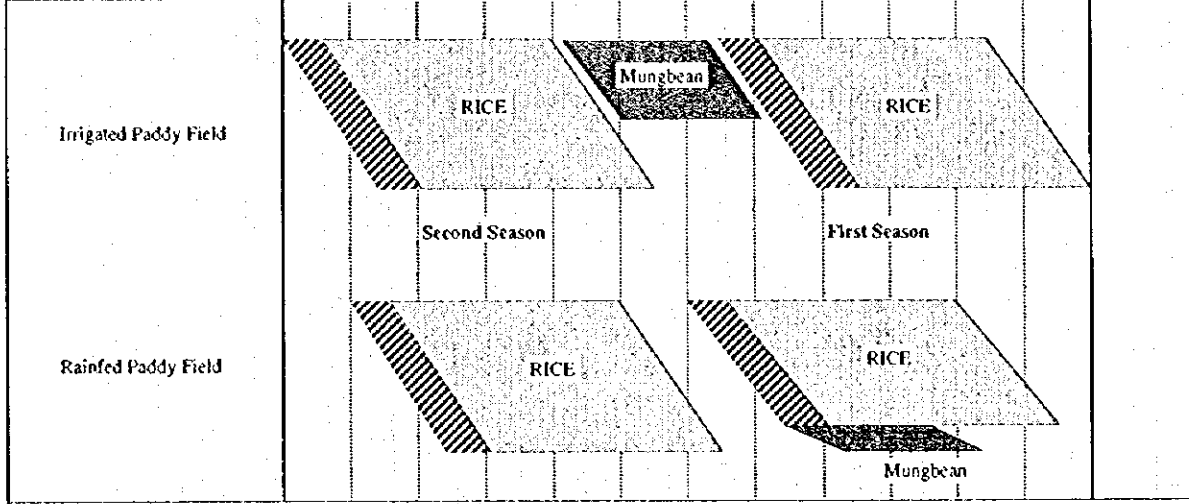


Figure F 5.3 Proposed Cropping Pattern in Lowland Model Project Area

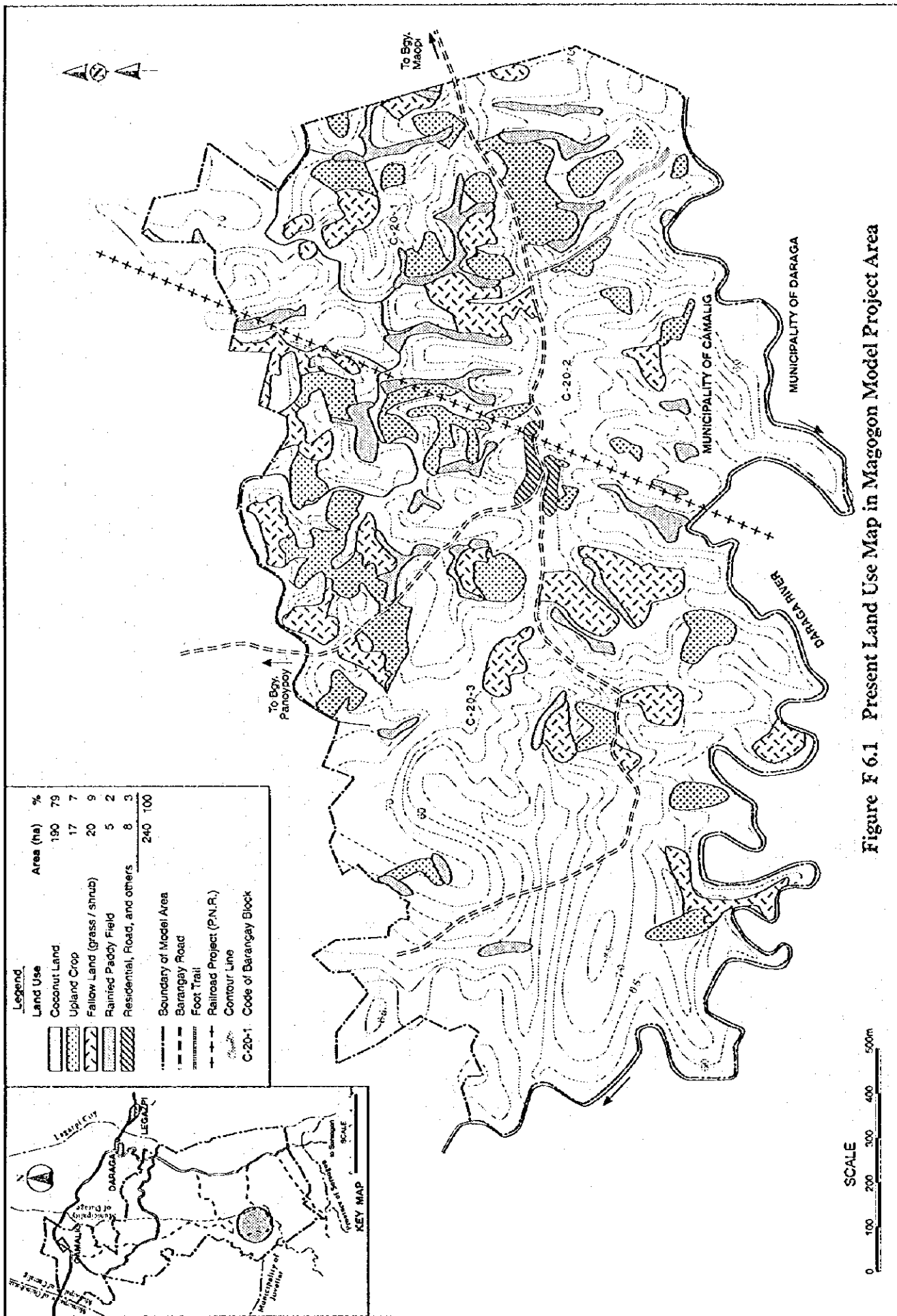
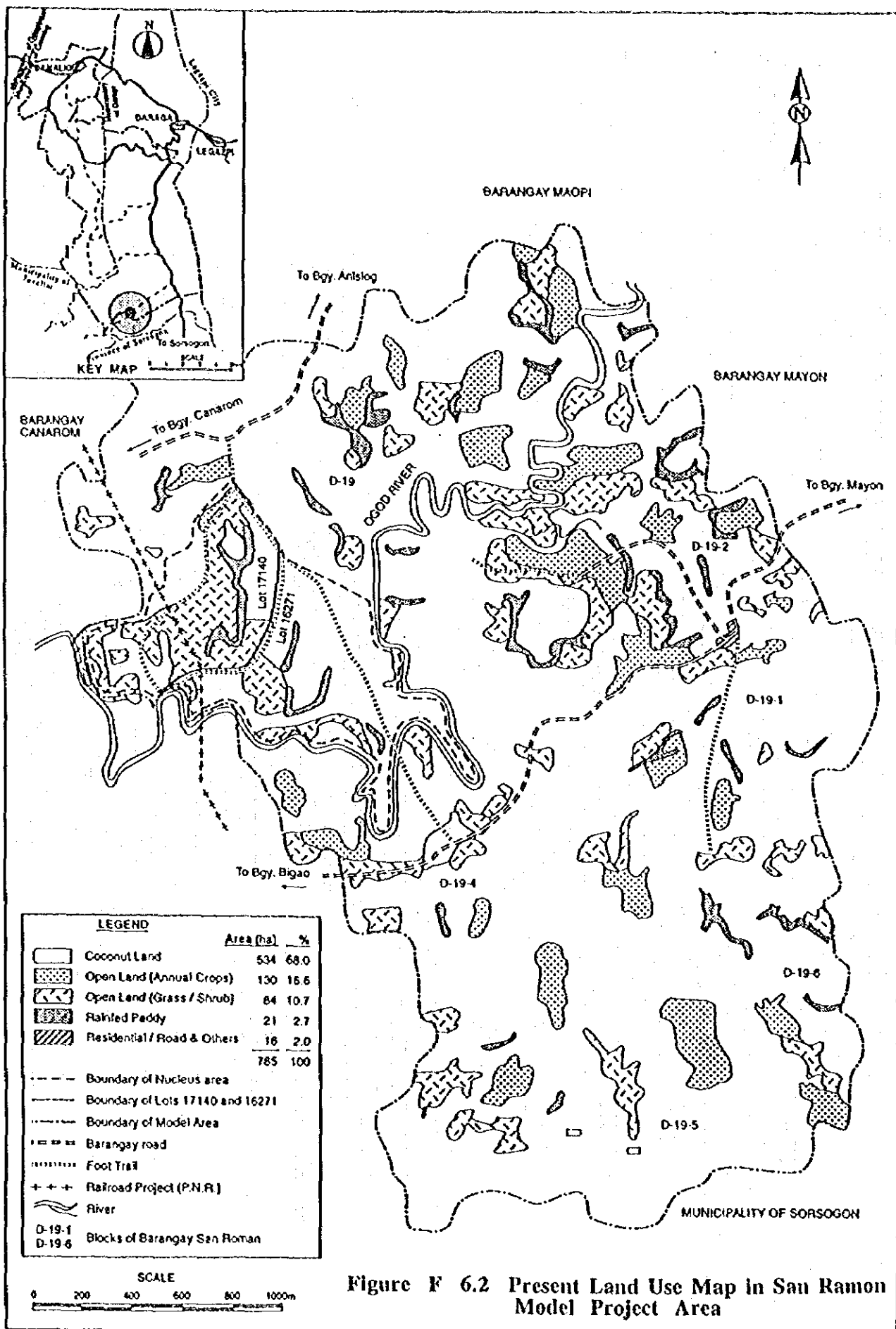


Figure F 6.1 Present Land Use Map in Magogon Model Project Area



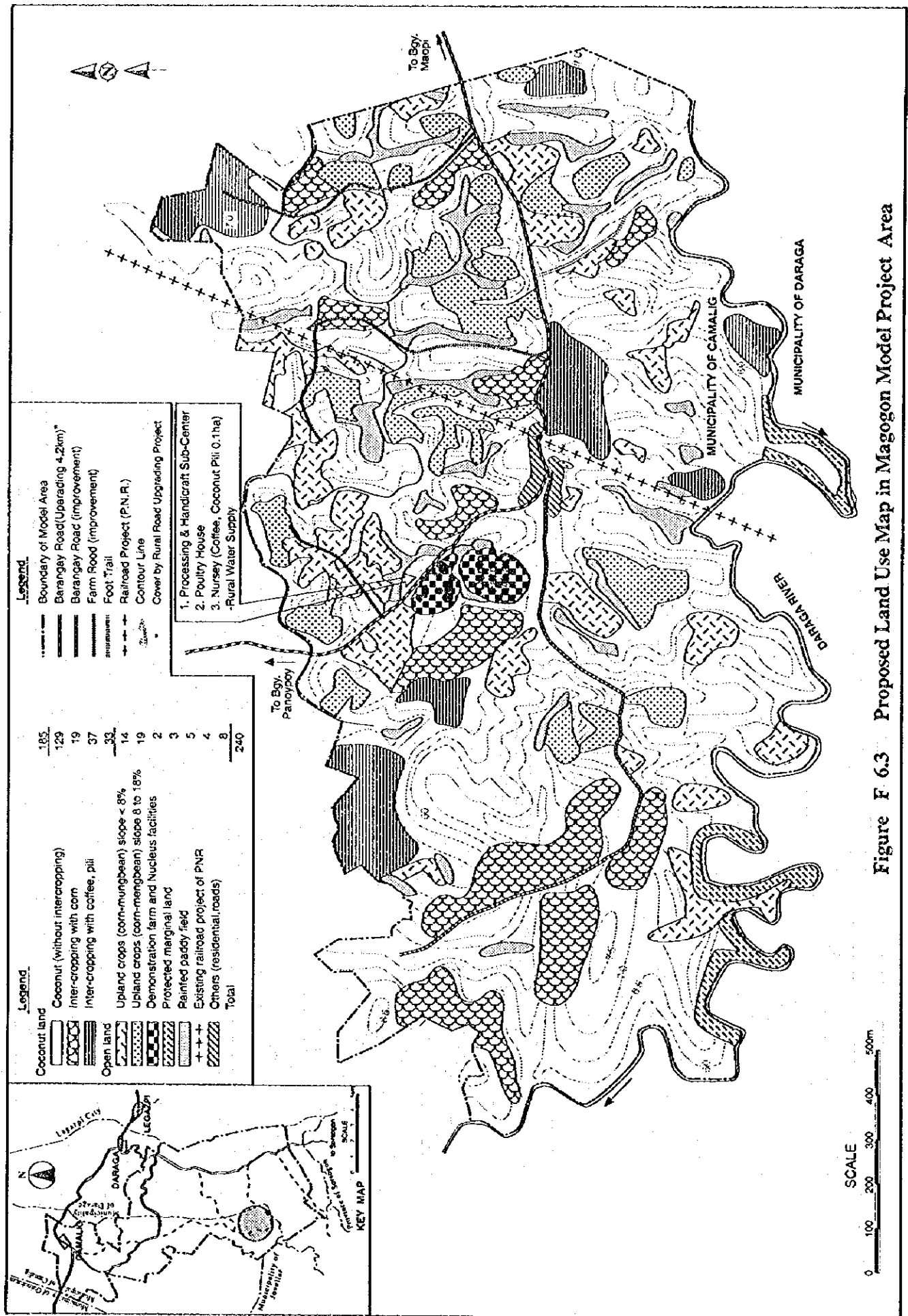
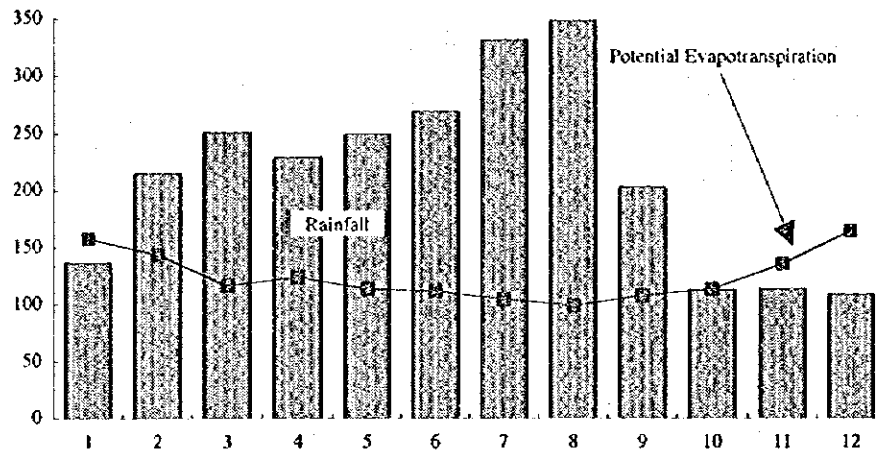


Figure F 6.3 Proposed Land Use Map in Magonon Model Project Area



Data from Legazpi	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Annual
Probable (80 %) Rainfall (mm)	137	215	251	229	249	269	331	348	203	113	114	109	2568
Potential Evapotranspiration	158	144	117	124	114	112	105	99	108	114	136	165	1496
Temperature (mean monthly)													
Maximum	32.3	32.2	31.7	31.6	31.5	31.0	30.1	29.1	28.4	29.1	30.1	31.3	30.7
Minimum	24.3	24.1	23.8	23.9	23.7	23.3	23.3	22.9	22.3	22.2	22.8	23.7	23.4
Mean	28.3	28.2	27.7	27.8	27.6	27.2	26.7	26.0	25.5	25.7	26.4	27.5	27.1
Relative humidity (%)	81	83	84	84	85	85	86	86	84	83	82	82	83.8
Cloudiness (Oktas)	5.1	5.8	6.3	6.4	6.3	6.0	6.0	5.9	5.8	5.5	5.1	4.9	5.8
Wind speed (m/sec)	2.8	2.7	2.8	3.0	2.5	2.4	3.0	3.3	3.6	3.4	3.3	3.1	3.0

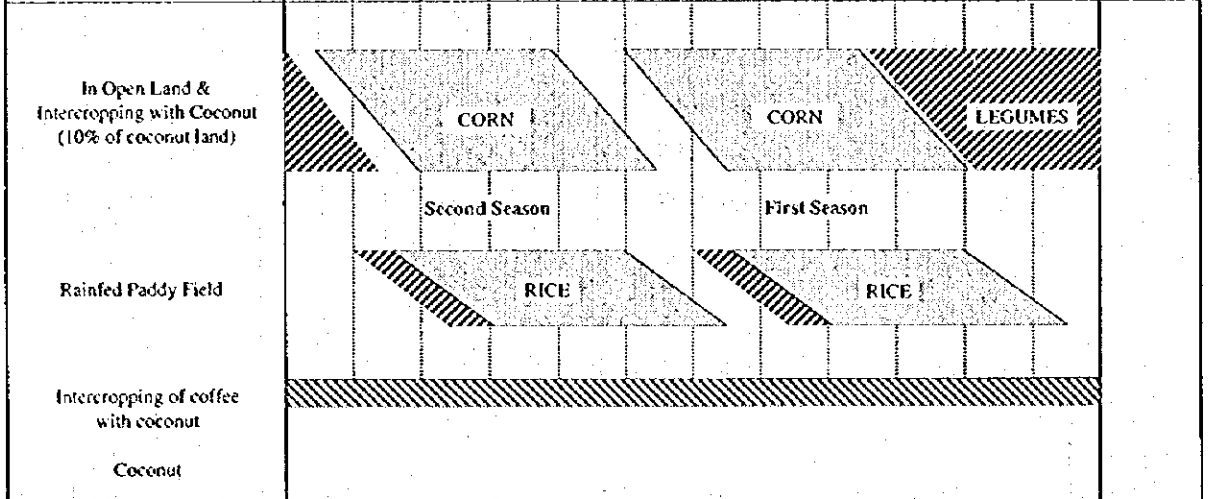


Figure F 6.4 Proposed Cropping Pattern in Magogon Model Project Area

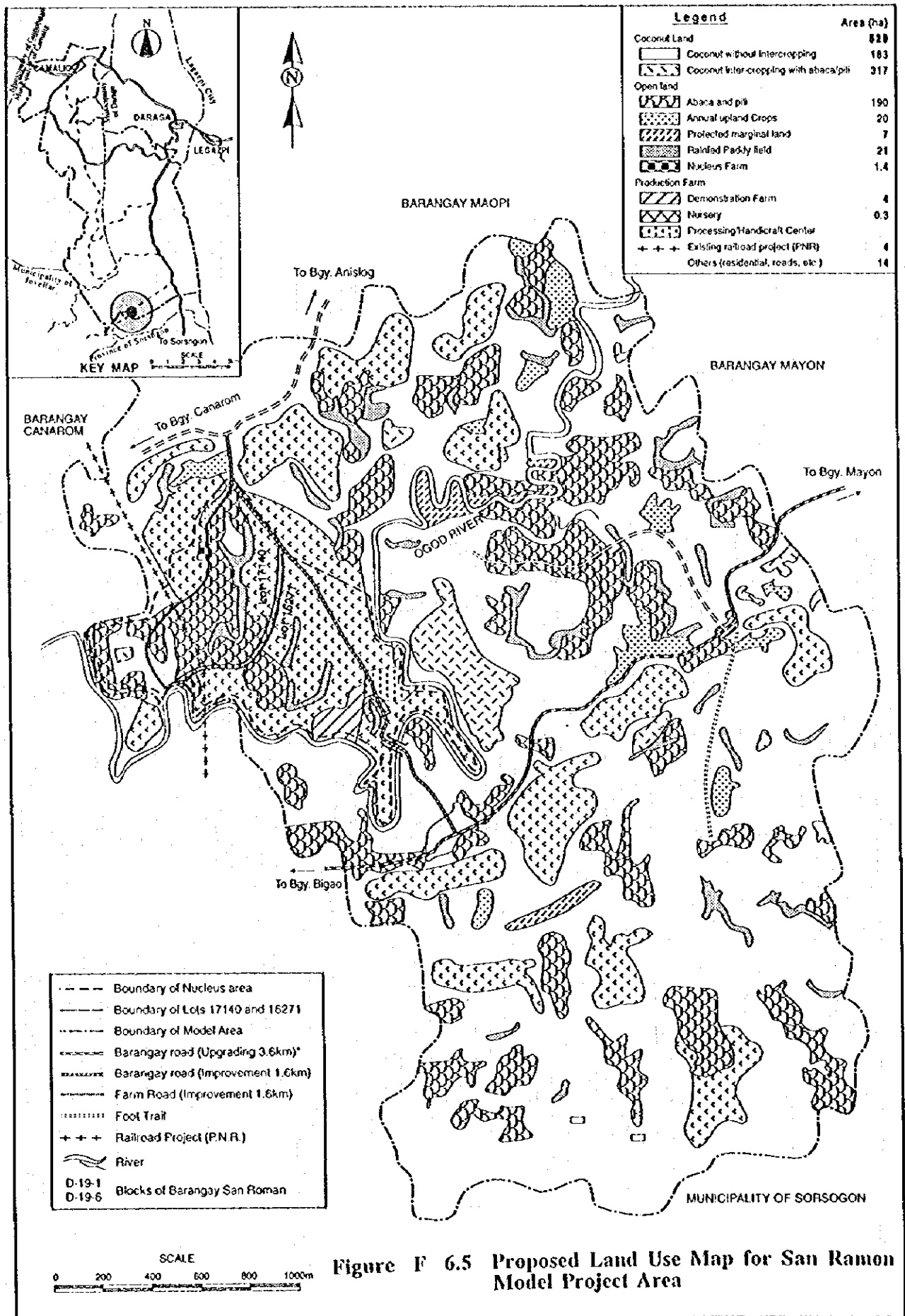


Figure F 6.5 Proposed Land Use Map for San Ramon Model Project Area

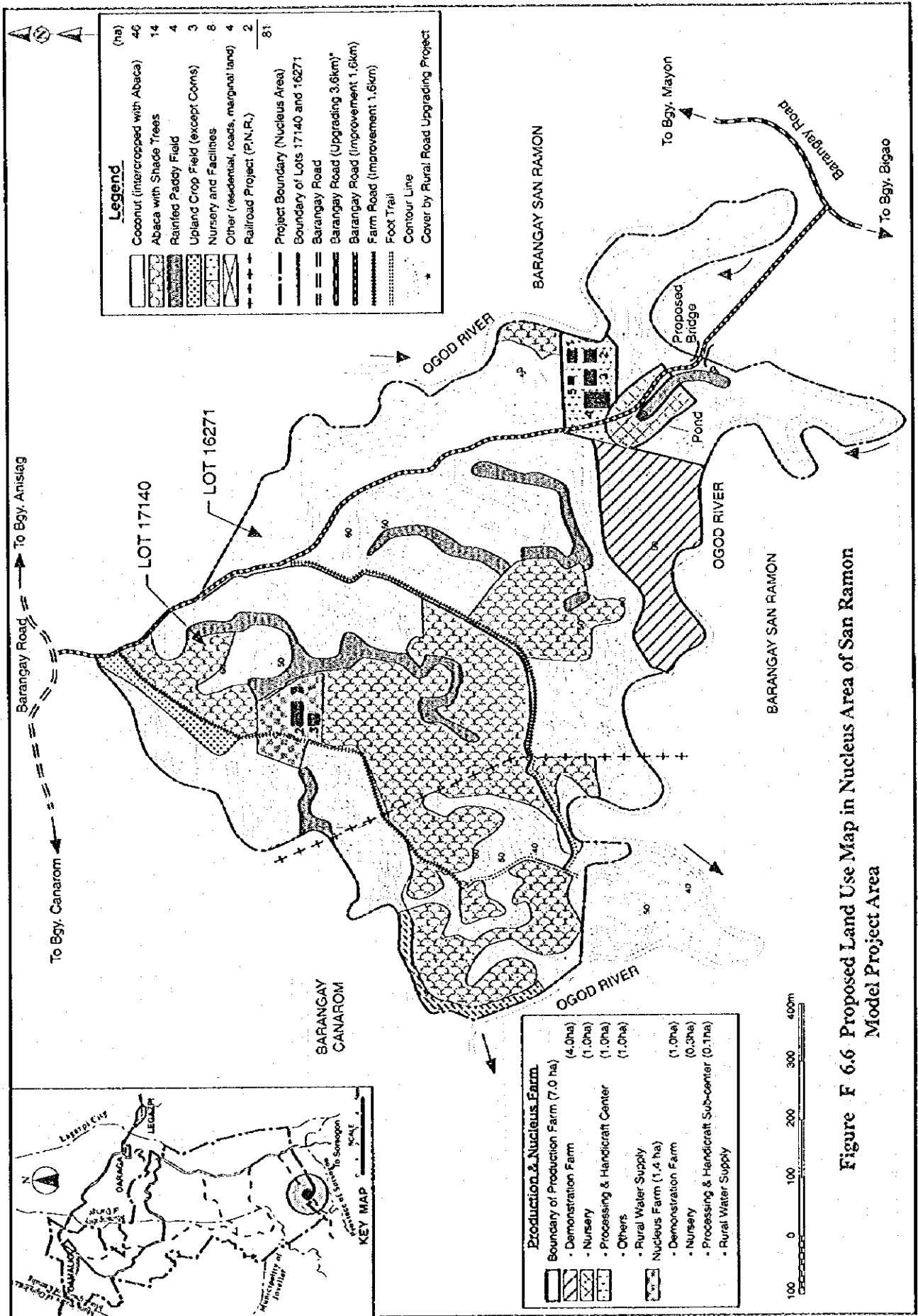
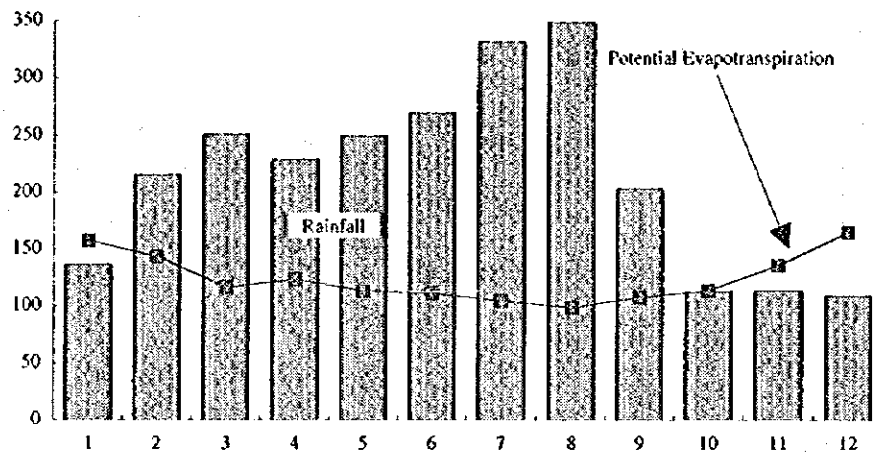


Figure F 6.6 Proposed Land Use Map in Nucleus Area of San Ramon Model Project Area



Data from Legazpi	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Annual
Probable (80 %) Rainfall (mm)	137	215	251	229	249	269	331	348	203	113	114	109	2568
Potential Evapotranspiration	158	144	117	124	114	112	105	99	108	114	136	165	1496
Temperature (mean monthly)													
Maximum	32.3	32.2	31.7	31.6	31.5	31.0	30.1	29.1	28.4	29.1	30.1	31.3	30.7
Minimum	24.3	24.1	23.8	23.9	23.7	23.3	23.3	22.9	22.3	22.2	22.8	23.7	23.4
Mean	28.3	28.2	27.7	27.8	27.6	27.2	26.7	26.0	25.5	25.7	26.4	27.5	27.1
Relative humidity (%)	81	83	84	84	85	85	86	86	84	83	82	82	83.8
Cloudiness (Oktas)	5.1	5.8	6.3	6.4	6.3	6.0	6.0	5.9	5.8	5.5	5.1	4.9	5.8
Wind speed (m/sec)	2.8	2.7	2.8	3.0	2.5	2.4	3.0	3.3	3.6	3.4	3.3	3.1	3.0

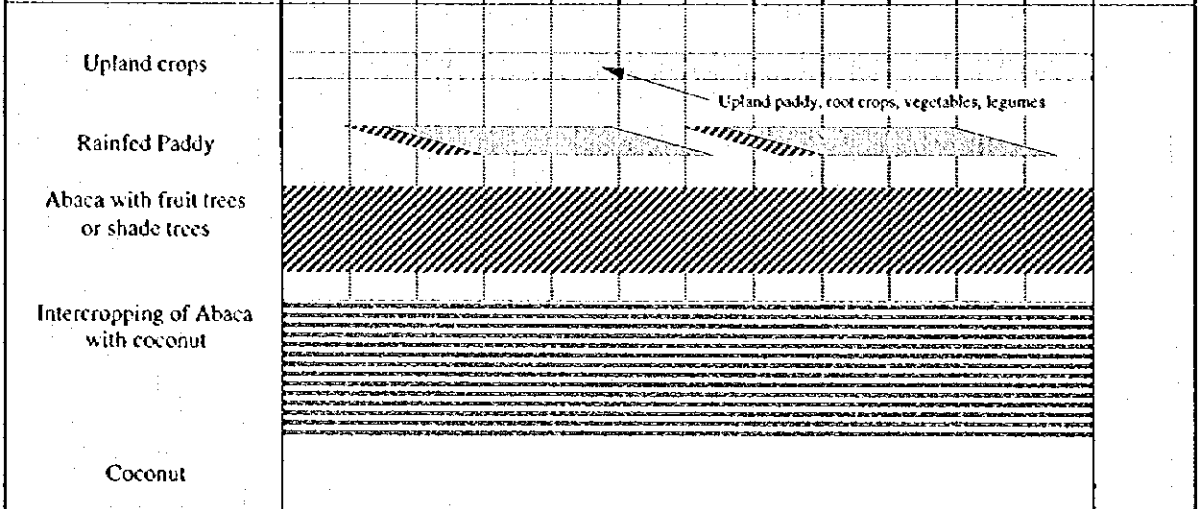
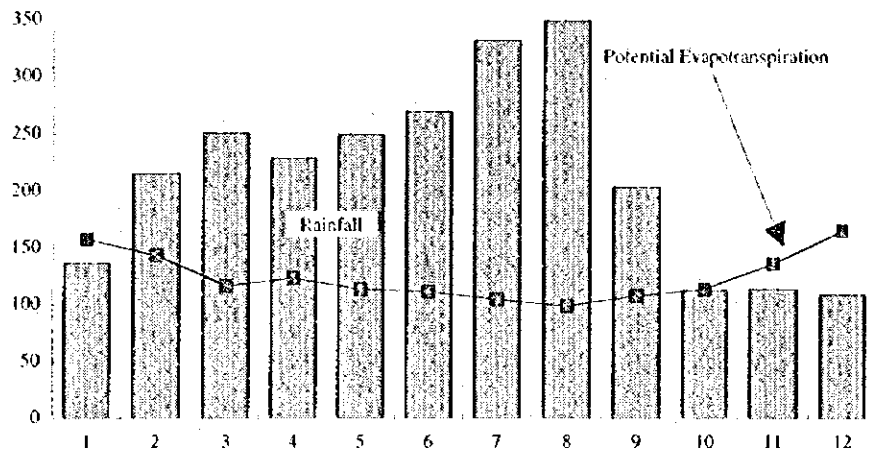


Figure F.6.7 Proposed Cropping Pattern in San Ramon Model Project Area



Data from Legazpi	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Annual
Probable (50 %) Rainfall (mm)	137	215	251	229	249	269	331	348	203	113	114	109	2568
Potential Evapotranspiration	158	144	117	124	114	112	105	99	103	114	136	165	1496
Temperature (mean monthly)													
Maximum	32.3	32.2	31.7	31.6	31.5	31.0	30.1	29.1	28.4	29.1	30.1	31.3	30.7
Minimum	24.3	24.1	23.8	23.9	23.7	23.3	23.3	22.9	22.3	22.2	22.8	23.7	23.4
Mean	28.3	28.2	27.7	27.8	27.6	27.2	26.7	26.0	25.5	25.7	26.4	27.5	27.1
Relative humidity (%)	81	83	84	84	85	85	86	86	84	83	82	82	83.8
Cloudiness (Okras)	5.1	5.8	6.3	6.4	6.3	6.0	6.0	5.9	5.8	5.5	5.1	4.9	5.8
Wind speed (m/sec)	2.8	2.7	2.8	3.0	2.5	2.4	3.0	3.3	3.6	3.4	3.3	3.1	3.0

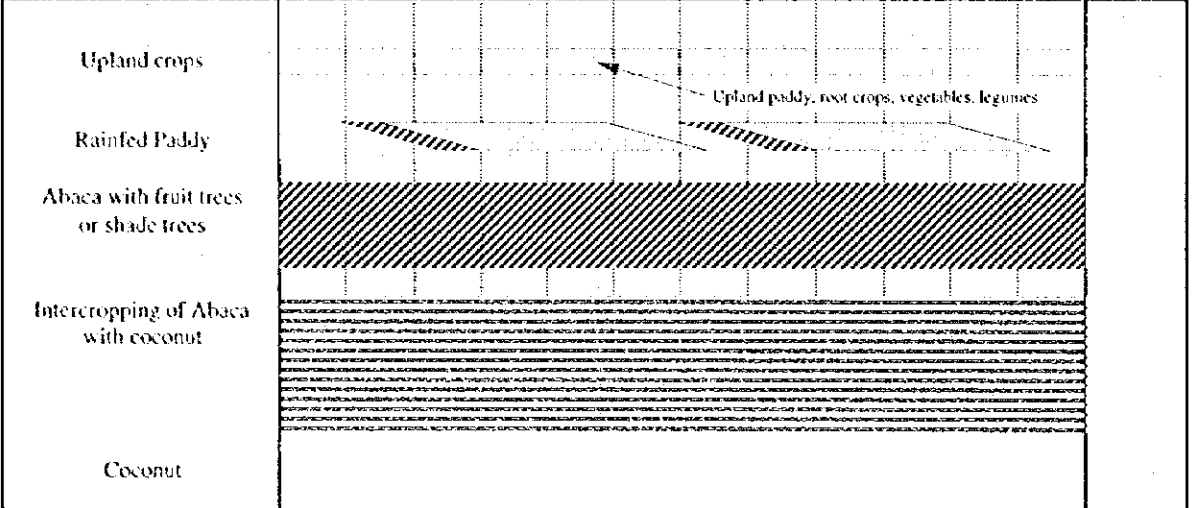


Figure F.6.7 Proposed Cropping Pattern in San Ramon Model Project Area