

FARMERS OF THE RIVER BASIN'S LAND CONSOLIDATION PROJECT AREA:
NOWHERE TO GO BUT UP--AND IN NO GREAT HURRY TO GET THERE

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CONTENTS REVISED

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ABSTRACT. In February 1974, SSRU personnel interviewed 475 household heads living on five landed estates in the municipalities of Bula, Minalabac, and Pili, Camarines Sur. Prompting the survey was the need for information about residents of what was to become the nation's first land-consolidation project area. Of the estimated 625 households located there, 85 percent are farmers working riceland parcels that average less than two hectares in size. Fewer than half can raise two crops a year; further, even the average wet-season, irrigated harvest compares unfavorably with the corresponding figure for the entire Bicol River Basin. The average weekly income is about ₱33, while expenses run about three times that amount: dissavings is the modal pattern. Despite their obvious poverty, four out of five of the project-area's residents currently express disinterest in any land-consolidation scheme that would entail their moving to a new site. Reasons that might account for this reluctance are explored. In view of the findings, it is concluded that for the area's residents, there is "nowhere to go but up," and land consolidation may provide the needed ladder. Suggestions are made for reducing the people's resistance to the government's plan in this regard.

To prepare for what would be the nation's first full-dress experiment in land consolidation, planners of the Bicol River Basin Development Program needed information. The line agencies involved--notably the Department of Agrarian

This research report is based mainly on findings made in the SSRU's Small Study 6 (February 1974). A technical summary of SS6 is found in SSRU Research Activity Summary, No. 11, and is available from the SSRU on request. The authors are the SSRU's operations chief and director, respectively.

Reform, but also the National Irrigation Administration and the Department of Local Governments and Community Development--felt the same need. For while their fieldmen were familiar with the project site and knew many of the residents there, they now required a much more detailed understanding of both the land and the people.

Technicians of both the line agencies and the Program Office of the Bicol River Basin Council set about gathering the physical data that were required. They would later be joined by land-consolidation experts from Taiwan, brought in as consultants on the project.¹ Meanwhile the BRBDP's Social Survey Research Unit had also been asked to help, and complied by collecting certain socioeconomic information about the people who lived and farmed in the project area. Coordinating the efforts of all were the project manager and assistant manager, Engr. Herminio C. Echiverri, Jr., and Pedro C. Arbisco, respectively, both of the Bicol River Basin Development Program.

Presently the geographical focus of all these activities is a contiguous riceland area comprising three estates in the municipalities of Bula and Minalabac, Camarines Sur. In Bula there is just one estate, the Lirag landed estate, but its 934 hectares are spread over three barrios--San Isidro, San Agustin, and San Ramon. In Minalabac, there are another two estates covering about 1,637 hectares: Hernandez (1,430 has.) and Silverio (207 has.). The study area defined for the SSRU by the Program Office of the Bicol River Basin Council, includes two additional estates, Sabino and Alvarez. Both are in Minalabac, but a portion of the latter is also found in Barrio San Agustin, municipality of Pili.

The land-consolidation pilot project will affect directly the residents of Lirag, Hernandez, and Silverio estates (called the DAR-BRBC Pilot Land

¹The consultants, who arrived at the work site January 4, 1975, and stayed about one month, were Kuo-Chun Wang and Ching-Huo Chang, both of the Provincial Land Bureau, and James C. C. Chan of the Land Reform Training Institute, Taoyuan, Taiwan.

Consolidation Project Area, or PLCPA).² The scheme is basically an attempt to rationalize farms and farming over a contiguous stretch of farmland, measuring in this case about 2,571 hectares. The scattered landholdings of individual owners are to be brought together into parcels that adjoin one another. Further, all such reunited holdings are in turn to be joined with the adjacent holdings of other owners to form larger units capable of being worked under a single, unified management. Also included is the consolidation of resources, such as farm implements and labor, with the ultimate goal of helping the farmer become "a more dignified individual in the society where he lives" (Echiverri 1974).

It is expected that through the land-consolidation scheme presently fragmented or irregularly shaped farm plots will be adjusted, centralized, or expanded according to fixed plans, so that farm operations and management may be facilitated. Further, the irrigation, drainage, and communication networks in the area are to be improved. Finally, it is hoped that land consolidation will accelerate community development and promote public welfare, leading to modernization of the entire area. Land consolidation is thus ultimately aimed at (a) raising the family farm income through increased farm production and reduced agricultural production costs; and (b) improving the livelihood of farmers through the development of existing farm structures and the optimization of land use at minimum cost.

THE SSRU SURVEY

To establish the approximate population of the LCPA, their household and farm characteristics, and their current level of living, the SSRU was asked to design a suitable research instrument and administer it to a representative sample of the project area's household heads. In the course of doing this, the SSRU was also to make a complete count of the dwelling units located in the LCPA.

²In this report we use the acronym LCPA to refer to the five estates that comprise the SSRU study area, and PLCPA to refer to the three estates included in the DAR-BREC pilot area (Lirag, Hernandez, and Silverio).

Table RSO6.01. LCPA dwelling-unit population (N) and the SS6 sample (n) drawn from it, by municipality and barrio/estate and by location of DU (Land Consolidation Project Area, Camarines Sur, February 1974)^a

Municipality and barrio/estate	Homelot		Farmlot		Total	
	N	n	N	n	N	n
a. Bula (Lirag landed estate)						
B. San Isidro	17	15	133	102	150	117
B. San Agustin	32	24	19	14	51	38
B. San Ramon	28	20	68	50	96	70
Subtotal	77	59	220	166	297	225
b. Minalabac and Pili						
Hernandez estate	0	0	175	128 ^b	175	128
Sabino estate	0	0	24	19	24	19
Alvarez estate	0	0	54	41 ^c	54	41
Silverio estate	29 ^d	29	46	33	75	62
Subtotal	29	29	299	221	328	250
c. Total	106	88	519	387	625	475

^aFor practical purposes, a DU may be taken as containing just one household.

^bIncludes two DUs which are said to be temporary residences, the permanent residences being off the estate.

^cIncludes five DUs which are reportedly temporary, the permanent residences being off the estate.

^dAll these homelots are in Barrio Mataoroc, Minalabac.

The study area, consisting of the five landed estates mentioned earlier, was first mapped and blocked (February 11-14, 1974).³ This yielded the dwelling-unit count shown in Table RSO6.01, under the columns headed by a capital letter N (symbol for the total number in a population). In order to get a household (HH) sample of sufficient size to assure that the sample findings would be as close as specified to the corresponding population parameters, we randomly chose the number of dwelling units, or DUs, which appear in the same table under columns headed by a lower-case letter n (symbol for the size of a sample drawn from population N).⁴

The DU sample (n) drawn for study was 475, which is 76 percent of all DUs in the LCPA (N = 625). Put another way, $N = 1.3157n$. Because the sample had been randomly selected, and the relation in size between it and the population was known, we could approximate certain population parameters (within 5 percent, plus or minus) by multiplying sample findings by known sampling factors. To give one example, since the factor for total figures is 1.3157, we can derive the total number of HH residents in the LCPA by multiplying the number of residents in the sample by 1.3157 ($N = 1.3157 \times 3008 = 3958$; see Table RSO6.02, section f).⁵ The population is therefore somewhere between 3260 and 4156 (reliability, 0.95).

The 21-page interview schedule administered to sample HH heads was so constructed as to elicit background information, household data, and selected facts about community problems and participation. However, the principal focus was the current status of HH income and expenditures, and of farm

³For an explanation of how mapping and blocking are performed, see Lynch et al. 1974: 4:24-41.

⁴For farm HHs and overall findings, the permissible sampling error was 5 percent; for nonfarm HHs, 10 percent; reliability level throughout, 0.95.

⁵In very few cases was there more than one HH in a DU (when there was, the HH head to be interviewed was chosen randomly). For practical purposes, "DU residents" and "HH members" are interchangeable categories in this study.

operations (especially costs and returns, and credit).⁶ Interviewing was completed in the period February 18 to March 2, 1974, and specific reports submitted to the Plans and Programs and Social Infrastructure Departments, BRBDP, beginning April 29. What follows is a revision of the summary report prepared for SSRU Research Report Series, No. 6.

SURVEY FINDINGS

The most important information gathered about the residents of the LGPA may be presented under four major headings, namely, (a) the respondent population, (b) HH income and expenditures, (c) farm production and farming characteristics, and (d) opinions, attitudes, and aspirations. After each of these topics has been discussed, appropriate conclusions will be drawn.

Survey Respondents

1. Almost every HH head interviewed in the study was (a) a rice farmer (85 percent), (b) male (95 percent), and (c) married or widowed (91 and 7 percent, respectively). For the differences in farm-nonfarm distribution by estate, see Table RSO6.02, section a.

⁶The blocks and items of the schedule are as follows: Block 1 (Background Data), items 1-15; Block 2 (Occupation/Farm Status and Farm Data), items 16-23; Block 3 (Organizational Participation), items 24-27; Block 4 (Household Data and Expenditures), items 28a and b; Block 5 (Inventory of Farm Animals and Farm Investments), items 29-30; Block 6 (Production and Disposal), items 31-33; Block 7 (Sale of Palay/Rice), items 34-36; Block 8 (Farm Operations), items 37-52; Block 9 (Financing), items 52-59; Block 10 (Problems and Solutions), items 60-64; Block 11 (Irrigation Information), items 65-78; Block 12 (Extension Activity), items 79-82; Block 13 (Community Problems), items 83-87; Block 14 (Interview Situation), 6 unnumbered items.

This schedule was developed with the assistance of the Plans and Programs and Social Infrastructure Departments of the BRBDP. PPD personnel also trained SSRU interviewers in the eliciting and recording of farm-management data.

Table RS06.02. SS6 respondents (HH heads) classified by selected characteristics, crossclassified by estate (Land consolidation project area, Camarines Sur, February 1974)^a

Characteristic	Estate ^b					Total		
	LIR (225)	HER (128)	SAB (19)	ALV (41)	SIL (62)	%	n	N ^c
a. Occupation								
Farmer	88%	76%	68%	95%	95%	85%	402	529
Nonfarmer	12	24	32	5	5	15	73	96
b. Age (in years)								
15 - 24	8%	8%	5%	2%	3%	6%	28	37
25 - 34	24	32	32	39	23	28	133	175
35 - 44	29	23	21	24	29	27	128	168
45 - 54	16	17	5	17	21	18	86	113
55 and over	21	20	37	17	24	21	100	132
c. No. of living children (married Rs only)^b								
0 - 2	20%	22%	21%	23%	18%	21%	98	129
3 - 6	47	52	47	49	50	49	227	300
7 - 10	30	22	26	26	29	27	126	166
11 - 14	3	4	5	2	3	3	14	18
d. Educational attainment								
None	9%	12%	21%	17%	5%	11%	52	68
Some elem.	57	62	42	56	55	57	270	355
Elem. grad./some HS	30	21	37	17	35	28	133	175
HS grad., some col.	3	5	0	10	5	4	19	25
Col. graduate	*	0	0	0	0	*	1	2

^a"Land classification project area" will be written in subsequent tables as "LCPA."

^bThese abbreviations are used for estate names: LIR - Lirag; HER - Hernandez; SAB - Sabino; ALV - Alvarez; SIL - Silverio. Figures in parentheses are sample sizes. All Rs are married except 10 (4 in LIR, 4 in HER, 2 in ALV).

^cThe sampling factor (x), for use in the formula, $N = x(n)$, is as follows: for Lirag estate, 1.320; for Hernandez, 1.367; Sabino, 1.263; Alvarez, 1.317; Silverio, 1.210; overall, 1.316 (1.3157).

Table RS06.02. (cont'd)

Characteristic	Estate ^b					Total		
	LIR (225)	HER (128)	SAB (19)	ALV (41)	STL (62)	%	n	N ^c
e. House materials								
Strong - good ^d	2%	-	-	-	3%	2%	8	11
Strong - poor	7	4%	-	2%	3	5	24	32
Mixed - good	12	5	16%	17	13	11	51	67
Mixed - poor	15	11	5	10	19	13	64	84
Light - good	29	34	32	49	36	33	156	205
Light - poor	35	47	47	22	26	36	172	226
f. Household population measures (R is included)^c								
Sample HHs (n)	225	128	19	41	62	-	475	-
All HHs (N)	297	175	24	54	75	-	-	625
Total HH population								
Sample HHs	1441	787	109	242	429	-	3008	-
All HHs (est.)	1904	1077	138	319	520	-	-	3958
HH population 10 years old and over								
Sample HHs	954	498	75	159	294	-	1980	-
All HHs (est.)	1260	682	95	210	358	-	-	2605
HH population 15-64 years old								
Sample HHs	732	399	60	127	223	-	1541	-
All HHs (est.)	968	546	76	167	270	-	-	2027
Average HH size	6.41	6.15	5.74	5.90	6.92	-	6.33	-
Average no./HH over 10	4.28	3.84	3.84	3.87	4.77	-	4.17	-
Dependency ratio	97	97	82	71	92	-	-	75

^dThe terms "good" and "poor" refer to the houses' state of repair at the time of interview (February 1974). Roughly speaking, the first three categories (totaling 18 percent) may be considered upper class; the last three (the other 82 percent), lower class. See the text, paragraph 4.

2. The median age of these HH heads is about 41 years; their median educational attainment, about 4.1 years of grade school. Only 4 percent have finished high school (Table RSO6.02, section b and d).
3. The 465 married or widowed HH heads have an average of about four living children, but the range is from no children at all to 14 (ibid., section c).
4. Using house materials and state of repair as indicators of socioeconomic status, we conclude that the respondents (and the LCPA in general) are composed of households of which only 18 percent can be considered upper class; the rest (82 percent) are of the lower socioeconomic class. See Table RSO6.02, section e and note d.⁷

Household Income and Expenditures⁸

5. The estimated total HH population for the five landed estates of the LCPA is 3978, with an average HH size of 6.34 (S.D., 2.65). Variation between estates is marked in this regard, ranging from 5.74 in Sabino to 6.92 in Silverio (Table RSO6.02, section f).

⁷ On grounds of an earlier study by Lynch (1959) and a special study of 886 data by Illo (1974), one is entitled to predict socioeconomic status from house materials and state of repair. See also Illo and Lynch (1974: 8-9). However, this procedure does not place HHs with the accuracy one would like. A more satisfactory level-of-living scale for Bicol River Basin HHs is in preparation at the SSRU, and will be published in a forthcoming Research Report.

⁸ This section is based in large part on a preliminary analysis of HH income and expenditures by Jeanne Frances I. Illo (1974), SSRU Naga District manager.

Income of farm households is derived by getting the value of the operator's share, i.e., the share of the farmer in harvests during the 12 months immediately preceding the interview date, and multiplying this by the price at which he was able to sell his produce (in case a sale was made) or by multiplying his share by the computed average (mean) price for the estate and the relevant crop season.

Where the household received income from sources other than the farm (weekly nonfarm or off-farm income), this amount was added to the computed

Table RS06.03. LCPA households, by reported weekly income class and by estate (LCPA, Camarines Sur, February 1974)

Income class (pesos)	Estate					Total		
	LIR	HER	SAB	ALV	SIL	%	n	NA
0 - 49	80%	80%	68%	90%	65%	78%	371	489
50 - 99	13	14	26	10	24	15	72	95
100 - 149	5	3	5	0	6	4	20	26
150 - 199	2	1	0	0	2	1	6	8
200 - 249	0	1	0	0	3	1	4	5
250 - 299	0	1	0	0	0	*	1	1
Total n ^b	224	128	19	41	62	474	474	-
Excluded ^b	1	0	0	0	0	1	1	1
Total N	297	175	24	54	75	-	-	625

^aSee note c, Table RS06.02.

^bOne Lirag-estate HH with 25 members was excluded from the analysis, because its inclusion would have distorted average income and spending figures.

- Of the total population, two-thirds (2605) are over 10 years of age and therefore technically considered potential members of the labor force. The average number per HH is 4.17, but once more the variation is considerable: from 3.84 in Sabino and Hernandez to 4.77 in Silverio (ibid.).
- For every 100 individuals in the so-called productive years (15-64), there are 95 in the pre- and post-productive categories (under 10 and 65 and over). This Dependency Ratio differs somewhat from estate to-estate, ranging from 82 in Sabino to 97 in Lirag and Hernandez (ibid.).

weekly farm income (total value of operator's share divided by 52) to arrive at the total household or family income.

Expenses are also in weekly terms, and they include only those incurred by the household for its own maintenance and do not cover expenses in connection with farming activities.

Table RS06.04. Mean weekly household income, expenses, and dissavings, by estate (LCPA, Camarines Sur, February 1974)

Item	Estate					Overall mean
	LIR	HER	SAB	ALV	SIL	
Income (in pesos)	31.35	33.63	30.89	21.88	45.32	32.96
Expenses (in pesos)	98.28	88.01	104.84	88.98	123.89	98.32
Food	(P) 69.86 (%) (72%)	63.90 (73%)	68.21 (65%)	64.61 (73%)	78.63 (64%)	68.88 (70%)
HH operating expenses	(P) 7.18 (%) (7)	8.51 (10)	9.63 (9)	8.56 (10)	11.40 (9)	8.31 (8)
Clothing	(P) 5.76 (%) (6)	4.85 (5)	5.37 (5)	4.78 (5)	9.21 (7)	5.86 (6)
Education	(P) 6.17 (%) (6)	3.23 (4)	11.37 (11)	4.12 (5)	12.08 (10)	6.18 (6)
Medical care	(P) 3.71 (%) (4)	2.86 (3)	4.42 (4)	2.88 (3)	4.15 (3)	3.50 (4)
Others	(P) 5.60 (%) (6)	4.66 (5)	5.84 (6)	4.03 (4)	8.42 (7)	5.59 (6)
Dissavings	(P) 66.93	54.38	73.95	67.10	78.57	65.36
Total n	224	128	19	41	62	474
Excluded ^a	1	0	0	0	0	1
Total N	297	175	24	54	75	625

^aSee note b, Table RS06.03.

8. Of the LCPA HHs, 78 percent belong to the lowest income class (P0-49 per week) while only 6 percent report weekly incomes of P100 or more; none goes as high as P300 per week (Table RS06.03).
9. The overall mean weekly income reported by LCPA HHs is P32.96. The range of means by estate is P23.44, from P21.88 in Alvarez to P45.32 in Silverio (Table RS06.04); the range by HH size is P66.76, from P21.53 in HHs of 1-3 members to P88.29 in HHs of 13-15 members (Table RS06.05); the range of means by income class is P238.45, from P16.55 in the lowest income class

Table RS06.05. Mean weekly household income, expenses and dissavings by household size (LCPA, Camarines Sur, February 1974)

Item	Household size					Overall mean	
	1-3	4-6	7-9	10-12	13-15	₱	%
Income (in pesos)	21.53	27.62	34.38	57.02	88.29	32.96	-
Expenses (in pesos)	62.46	79.40	111.84	165.12	203.14	98.32	100%
Food	74%	71%	70%	67%	68%	68.88	70%
HH operating expenses	9	10	9	5	3	8.31	8
Clothing	6	5	6	7	7	5.86	6
Education	2	4	7	12	12	6.18	6
Medical care	4	4	3	3	5	3.50	4
Others	5	6	5	6	5	5.59	6
Dissavings (in pesos)	40.93	51.78	77.46	108.10	114.85	65.36	-
Total n	57	211	150	49	7	-	474 ^a

^aSee note b, Table RS06.03.

to P255.00 in the highest (Table RS06.06).

10. Income correlates positively (0.01 level) with both HH size and the number of HH members who are potential members of the work force, that is, 10 years of age or older. Of the two, the labor-force measure has the higher correlation coefficient ($r = .31$ vs. $r = .25$ for HH size).⁹ The linearity of the two trends can also be compared in Table RS06.06, where the labor force measure shows a slight irregularity.

⁹The difference between the two coefficients is significant at the 0.05 level using the one-tailed test; using the two-tailed test, it is not significant. A coefficient of correlation (r) is a value indicating to what extent two measures are related, to what extent variations in one accompany variations in the other. The coefficient may vary from a value of 1.00, which means perfect positive correlation; through zero, which means complete independence; to -1.00, meaning perfect negative correlation.

Table RS06.06. Mean weekly household income, expenses, and savings (dis-savings, with mean HH size and mean number of HH members 10 years and over, by income class (LCPA, Camarines Sur, February 1974)

Item	Income class (in pesos)						Overall mean
	0-49	50-99	100-149	150-199	200-249	250-299	
Income (in pesos)	16.55	81.27	120.70	160.50	231.25	255.00	32.96
Expenses (in pesos)	87.52	123.08	157.90	214.16	129.00	304.00	98.32
Food	72%	68%	62%	52%	74%	39%	70%
HH operating expenses	9	8	8	7	8	5	8
Clothing	6	6	6	6	8	2	6
Education	4	8	15	27	2	46	6
Medical care	4	4	3	1	3	1	4
Others	5	6	6	7	5	7	6
Savings (dissavings)(P)	(70.97)	(41.81)	(37.20)	(53.66)	(102.25)	(49.00)	(65.36)
Mean HH size	6.19	6.23	8.15	7.66	9.75	11.00	6.34
Mean no. of HH members 10 yrs. and older	3.85	4.94	5.80	6.33	7.50	9.00	4.17
Total n	371	72	20	6	4	1	474
Excluded ^a	1	0	0	0	0	0	1

^aSee note b, Table RS06.03.

11. The overall mean weekly expenditures reported by LCPA HHs is P98.32. The range of means by estate is P35.88, from P88.01 in Hernandez to P123.89 in Silverio (Table RS06.04); the range by HH size is P140.68, from P62.46 in HHs of 1-3 members to P203.14 in HHs of 13-15 members (Table RS06.05); the range of means by income class is P216.48, from P87.52 in the lowest income class to P304.00 in the highest (Table RS06.06).

12. Regardless of HH size, food regularly accounts for more than two-thirds (68-74 percent) of family expenses. There is, however, an inverse relationship (known as Engel's Law) between the food budget and total income: as income increases, the percentage spent for food decreases. The linear trend is in our data not continuous throughout; it is interrupted by households belonging to the income bracket P200-249 (see Table RS06.06).

HH operating expenses, which amount on the average to P8.31 per week, may also be a declining function of income (ibid.).

Moreover, expenses for both food and for HH operations show a similar inverse relationship to HH size (Table RS06.05).

13. Along with HH size and income, the number of HH members 10 years of age and older may also be examined for its effect on HH expenditures.

Regressing HH expenses on HH income, HH size, and potential work force, we ask the question, "By how much will family (or HH) expenses be changed by a unit change in each of these three variables?"

For the entire study area, an increase in family size by one will bring about an expansion in HH expenses by P11.33; adding one worker will up expenses by P12.78; one peso more of income means P0.65 more in expenses. ¹⁰ The three variables correlate positively with HH expenses. While HH size and potential work force account separately for about 21 percent of the variation in HH expenses, HH income explains only about 13 percent of the variation. There is also an observed slight difference in the degree

¹⁰ A change in expenses (or consumption) caused by a unit change in income is known as the marginal propensity to consume (or spend). This may be interpreted as follows. A one-peso increase in income will cause a change in the same direction in expenses by 65 centavos. There is, then, an implied saving of 35 centavos per additional one peso earned. It is assumed here that all the three factors are linearly related to expenses.

The authors are grateful for the comments of Remigio D. Torres (see note 11) and others, who pointed out various aspects of an earlier draft of this section that needed clarification.

of relationship between expenses and each of the dependent variables, as well as in the computed marginal propensity to consume among the estates. The estimates of correlation and regression coefficients, by estate, are given in the following table.

Estate	Correlation coefficient (r) :				FE = mFY + b ¹		
	FE:FS ²	FE:Fs	FE:FY	mpc (m)	b	n	
Lirag	: 0.41	: 0.44	: 0.38	: 0.74	: 75.08	: 224	
Hernandez	: 0.58	: 0.52	: 0.34	: 0.40	: 74.56	: 128	
Sabino	: 0.73	: 0.72	: 0.75	: 2.04	: 41.65	: 19	
Alvarez	: 0.52	: 0.60	: 0.13	: 0.39	: 80.41	: 41	
Silverio	: 0.51	: 0.51	: 0.33	: 0.49	: 101.22	: 62	
TOTAL	: 0.46	: 0.47	: 0.36	: 0.65	: 76.89	: 474	

¹The regression coefficient, m, refers to the change in expenditures which will be caused by a one-peso change in income. It is also known as the marginal propensity to consume (or spend). The constant factor, b, may be interpreted as some minimum level of spending observed in the area without taking into account family size. All correlations are significant at least at the 0.05 level.

²Abbreviations used: FE = Family expenses; FS = Total family size; Fs = Potential work force of the family; FY = Family Income.

Taken together, how well do the three factors explain the variations in family expenditures?

Using a subsample of 50 HHs chosen at random from the 474 sample HHs, we discover that 52 percent of the variation in family expenses of these HHs can be accounted for by income, family size, and work force, taken together.

14. Overall mean weekly dissavings reported by LCPA HHs is P65.36. The range of means by estate is P24.19, from P54.38 in Hernandez to P78.57 in Silverio (Table RS06.04); the range by HH size is P73.93, from P40.93 in

Table RSO6.08. Mean measures of riceland areas and harvests including and excluding per hectare yields of less than 16 cavans for DRY season, by estate and by kind of riceland (LCPA, Camarines Sur, February 1974)

Characteristic and estate	Irrigated						Rainfed					
	INCL less than 16 cavans			EXCL less than 16 cavans			INCL less than 16 cavans			EXCL less than 16 cavans		
	Mean	S.D. ^a	n ^b	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.	n
a. <u>Total area planted to rice</u> (in hectares)												
Lirag	1.91	1.33	93	1.53	1.31	47	1.75	1.16	8	2.00	1.22	6
Hernandez	1.66	.81	20	1.55	.81	16	.65	.23	4	.53	.05	3
Sabino	2.25	.35	2	2.50	-	1	1.00	-	1	-	-	-
Alvarez	.90	.49	16	.90	.48	12	.40	-	1	-	-	-
Silverio	2.50	1.16	14	2.45	1.15	10	1.15	.49	2	.80	-	1
Total	1.82	1.22	145	1.58	1.18	86	1.27	.97	16	1.44	1.16	10
b. <u>Gross harvest per hectare</u> (in cavans of palay)												
Lirag	24.59	25.14	93	43.81	21.67	47	33.48	23.45	8	41.91	20.34	6
Hernandez	42.14	35.40	20	51.34	33.59	16	24.19	16.48	4	30.51	12.96	3
Sabino	12.57	5.40	2	16.40	-	1	11.40	-	1	-	-	-
Alvarez	30.54	19.32	16	38.61	14.81	12	14.38	-	1	-	-	-
Silverio	37.57	29.25	14	49.94	25.07	10	12.58	14.02	2	22.50	-	1
Total	28.76	27.07	145	44.88	23.97	86	25.98	20.66	16	36.55	17.90	10

^aStandard Deviation

^bSample size

Table RSO6.09. Mean measures of riceland areas and harvests including and excluding per hectare yields of less than 16 cavans for WET season, by estate and by kind of riceland (LCPA, Camarines Sur, February 1974)

Characteristic and estate	Irrigated						Rainfed					
	INCL less than 16 cavans			EXCL less than 16 cavans			INCL less than 16 cavans			EXCL less than 16 cavans		
	Mean	S.D. ^a	n ^b	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.	n
a. Total area planted to rice (in hectares)												
Lirag	1.99	1.31	170	1.97	1.33	134	1.02	1.06	14	.77	.39	12
Hernandez	1.59	.89	34	1.58	.88	31	1.98	1.39	57	1.78	1.33	42
Sabino	2.70	1.03	5	2.70	1.03	5	1.32	1.33	8	1.26	1.62	5
Alvarez	1.36	.83	30	1.35	.82	28	1.04	.90	9	1.06	.98	7
Silverio	2.20	1.06	53	2.35	1.05	39	.65	.49	5	.71	.54	4
Total	1.93	1.20	292	1.98	1.22	237	1.57	1.28	93	1.43	1.23	70
b. Gross harvest per hectare (in cavans of palay)												
Lirag	31.26	19.84	170	37.08	18.03	134	26.42	10.97	14	29.05	9.36	12
Hernandez	40.73	20.89	34	44.11	18.52	31	26.15	15.26	57	32.70	12.06	42
Sabino	35.91	14.98	5	35.91	14.98	5	19.71	12.01	8	26.25	10.28	5
Alvarez	38.27	15.53	30	40.34	13.88	28	26.98	13.56	9	31.55	11.64	7
Silverio	29.29	16.35	53	35.56	14.58	39	22.34	9.48	5	24.49	9.43	4
Total	32.74	19.23	292	38.18	17.14	237	25.51	13.91	93	31.03	11.34	70

^aStandard Deviation

^bSample size

Table RSO6.10. Mean measures of riceland areas and harvests for DRY season, by estate, kind of riceland, and tenure status (LCPA, Camarines Sur, February 1974)

Characteristic and estate	Irrigated						Rainfed					
	AO ^a		Lessee		ST ^b		AO ^a		Lessee		ST ^b	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
a. Total area planted to rice (in hectares)												
Lirag	2.36	65	-	0	.93	24	2.50	5	.50	2	.50	1
Hernandez	1.97	9	1.56	8	1.03	3	.60	1	.66	3	-	-
Sabino	-	0	2.25	2	-	0	-	0	-	0	1.00	1
Alvarez	.80	6	.96	8	1.00	2	-	0	.40	1	-	-
Silverio	3.03	7	4.30	1	1.30	5	-	0	-	-	1.15	2
Total	2.25	87	1.52	19	1.00	34	2.18	6	.56	6	.95	4
b. Gross harvest per hectare (in cavans of palay)												
Lirag	19.84	65	-	0	32.28	24	38.98	5	37.00	2	2.00	1
Hernandez	39.03	9	46.48	8	39.88	3	31.67	1	21.70	3	-	0
Sabino	--	0	12.57	2	-	0	-	0	-	0	11.40	1
Alvarez	23.90	6	33.60	8	38.24	2	-	0	14.38	1	-	0
Silverio	37.44	7	56.65	1	25.51	5	-	0	--	0	12.58	2
Total	23.53	87	38.02	19	32.30	34	37.26	6	25.58	6	9.64	4

^aAO - amortizing owner

^bST - share tenant

Table RSO6.11. Mean measures of riceland areas and harvests for WET season, by estate, kind of riceland, and tenure status (LCPA, Camarines Sur, February 1974)

Characteristic and estate	Irrigated						Rainfed					
	AO ^a		Lessee		ST ^b		AO ^a		Lessee		ST ^b	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
a. <u>Total area planted to rice</u> (in hectares)												
Lirag	2.44	114	-	0	.94	40	1.90	4	.50	1	.60	8
Hernandez	1.78	19	1.49	11	.97	4	2.27	15	1.85	26	1.59	15
Sabino	-	0	2.66	3	2.75	2	-	0	2.75	2	.85	6
Alvarez	.90	7	1.54	18	1.30	4	1.50	1	1.01	6	.90	2
Silverio	2.43	32	2.45	4	1.66	15	-	0	-	0	.68	4
Total	2.31	172	1.72	36	1.14	65	2.14	20	1.72	35	1.09	35
b. <u>Gross harvest per hectare</u> (in cavans of palay)												
Lirag	28.97	114	-	0	36.36	40	26.20	4	19.00	1	27.87	8
Hernandez	38.85	19	42.02	11	46.16	4	25.62	15	29.26	26	22.53	15
Sabino	-	0	41.21	3	27.83	2	-	0	26.51	2	17.45	6
Alvarez	42.09	7	37.56	18	39.33	4	12.00	1	29.72	6	26.25	2
Silverio	29.58	32	27.14	4	25.94	15	-	0	-	0	23.93	4
Total	30.71	172	38.07	36	34.47	65	22.90	20	28.89	35	23.25	35

^aAO - amortizing owner

^bST - share tenant

HHs of 1-3 members to P114.86 in HHs of 13-15 members (Table RSO6.05); the range of means by income class is P70.97, from P70.97 in the lowest income class to no dissavings in the P200-249 class (Table RSO6.06).

15. Savings are rarely reported. In the Lirag, Sabino, and Alvarez estates only dissavings occurred. In the total sample of 474 HHs, in fact, there were only eight cases of "solvent" HHs (six in Hernandez estate and two in Silverio). From the distribution of these HHs by income class, it appears that savings can begin only when the HH income is at least P200 per week, or P800 per month.

Farming Characteristics and Farm Production

Farming characteristics

16. Of the LCPA HH heads, 85 percent are farmers (Table RSO6.02), and have been so an average of 20 years, 15 of these years in the same estate as now. Ninety-six percent plant rice in the wet season, 57 percent in the dry.
17. During the wet season, 76 percent of those planting rice work irrigated land, and 24 percent, rained.¹¹ The number of farms and the percentage irrigated are as follows: Lirag, 184 (92 percent irrigated); Hernandez, 91 (37 percent); Sabino, 13 (38 percent); Alvarez, 39 (77 percent); and Silverio, 58 (91 percent).
18. During the dry season, 90 percent work irrigated riceland, and 10 percent, rained. The number of farms and the percentage irrigated: Lirag, 101 (92 percent); Hernandez, 24 (83 percent); Sabino, 3 (67 percent); Alvarez, 17 (94 percent); and Silverio, 16 (88 percent).

¹¹ Reported here and in Tables RSO6.08-11 are the data for irrigated and rained farms only. Farms with insufficient data on land type were eliminated from the analysis.

Table RSO6.12. Proportion of rice farmers using selected farm inputs, by crop season and estate (LCPA, Camarines Sur, February 1974)

Characteristic	Dry season						Wet season					
	LIR ^a	HER	SAB	ALV	SIL	Total	LIR	HER	SAB	ALV	SIL	Total
a. Farmers using fertilizers												
Prop.	.64	.72	.33	.60	.69	.65	.77	.64	.46	.72	.78	.73
Total n ^b	120	29	3	20	16	188	186	91	13	39	58	387
b. Farmers using insecticides												
Prop.	.75	.93	.67	.75	.81	.78	.85	.87	.62	.85	.98	.86
Total n	120	29	3	20	16	188	186	91	13	39	58	387
c. Farmers using weedicides												
Prop.	.69	.86	.67	.85	.69	.73	.72	.87	.69	.95	.91	.80
Total n	120	29	3	20	16	188	186	91	13	39	58	387
d. Farmers using tractor												
Prop.	.18	.48	-	-	.19	.20	.18	.27	-	-	.14	.17
Total n	120	29	3	20	16	188	186	91	13	39	58	387

^aSymbols for estates are as follows: LIR - Lirag estate; HER - Hernandez estate; SAB - Sabino estate; ALV - Alvarez estate; SIL - Silverio estate.

^bBy "Total n" is meant the number of respondents in the particular sample.

19. On the average:

- a. The size of the parcel planted to rice is 1.78 hectares in the dry season (1.82 for irrigated; 1.27 for rainfed), and 1.85 in the wet (1.93 for irrigated; 1.57 for rainfed). See Tables RS06.08-09.
- b. For the dry season, the mean gross harvest per hectare is 28.76 cavans of palay for irrigated land, and 25.98 cavans for rainfed (n.s.; Table RS06.08). For the wet season it is 32.74 for irrigated, and 25.51 for rainfed (0.01; Table RS06.09).

During the dry season, those who harvested less than 16 cavans per hectare were 40 percent of the total number of farmers included in the analysis; the range by estate is 46 percent, from 21 percent in Hernandez to 67 percent in Sabino. During the wet season, they were only 20 percent, ranging from 10 percent in Alvarez to 26 percent in Silverio.

- c. Mean productivity levels change significantly when relatively low per-hectare yields of less than 16 cavans are excluded. For the dry season, the mean gross harvest per hectare is 44.88 cavans of palay for irrigated land, and 36.55 cavans for rainfed. For the wet season it is 38.18 for irrigated, and 31.03 for rainfed (Tables RS06.08-09).
- d. In all but 8 percent of cases, farmer's parcel is in the barrio, municipality, and estate where he lives.

20. Asked what they considered themselves to be at present, the farmer respondents replied with the answers shown in Table RS06.07.

Table RS06.13. Average cash and noncash costs (in pesos), value of production, and net returns per hectare for DRY season, by estate (LCPA, Camarines Sur, February 1974)

Estate	Cash costs	Noncash costs	Total costs	Tot. vol. of prod.	Net returns (av. loss)	Total n
Lirag	P339.93	P563.13	P 903.06	P 699.74	(P203.32)	120
Hernandez	320.30	840.55	1,160.85	1,134.40	(26.45)	29
Sabino	144.27	326.83	471.10	342.38	(128.72)	3
Alvarez	312.35	957.50	1,269.85	870.71	(399.14)	20
Silverio	287.35	603.32	890.67	1,010.03	(119.36)	16
Total	P326.37	P647.53	P 973.90	P 805.68	(P168.22)	188

Table RS06.14. Average cash and noncash costs (in pesos), value of production, and net returns per hectare for WET season, by estate (LCPA, Camarines Sur, February 1974)

Estate	Cash costs	Noncash costs	Total costs	Tot. vol. of prod.	Net returns (av. loss)	Total n
Lirag	P359.45	P711.65	P1,071.10	1,014.60	(P 56.50)	186
Hernandez	257.49	766.73	1,024.22	1,066.14	41.92	91
Sabino	158.96	958.40	1,117.36	1,020.17	(97.19)	13
Alvarez	299.63	913.76	1,213.40	1,183.06	(30.34)	39
Silverio	271.32	866.95	1,138.27	1,021.24	(117.03)	58
Total	P309.50	P776.53	P1,086.04	P1,044.88	(P 41.16)	387

Table RSO6.15. Average value of production, total costs, and net returns per hectare (in pesos), by tenure status and by crop season, ALL FARMS (LCPA, Camarines Sur, February 1974)

Tenure status	Dry season				Wet season			
	Tot. vol. of prod.	Total costs	Net Returns	Total	Tot. vol. of prod.	Total costs	Net Returns	Total
Amort. owner	739.81	₱1,038.65	(₱298.84)	103	₱1,020.79	₱1,165.15	(₱144.36)	193
Lessee	992.66	949.09	43.57	29	1,101.15	985.43	115.72	73
Share tenant	820.97	839.16	(18.19)	47	1,034.87	978.35	56.52	101

Table RSO6.16. Average value of production, total costs, and net returns per hectare (in pesos), by tenure status and by crop season, EXCLUDING FARMS WITH GROSS YIELD PER HECTARE OF LESS THAN 16 CAVANS OF PALAY (LCPA, Camarines Sur, February 1974)

Tenure status	Dry season				Wet season			
	Tot. vol. of prod.	Total costs	Net Returns	Total	Tot. vol. of prod.	Total costs	Net Returns	Total
Amort. owner	₱1,596.37	₱1,551.19	₱ 45.18	52	₱1,226.58	₱1,235.44	(₱ 8.86)	147
Lessee	1,214.02	997.51	216.51	22	1,191.47	1,019.46	172.01	64
Share tenant	1,328.62	1,112.42	201.39	27	1,284.18	1,112.42	171.76	75

Table RS06.07. SS6 farmer-respondents classified by estate and by self-reported tenure status (LCPA, Camarines Sur, February 1974)

Estate	Tenure status ^a						Total n	Nonfarmers
	OC/PO	AO	L	LST	ST	Others		
Lirag	5%	62%	1%	1%	27%	4%	196	29
Hernandez	0	38	40	1	20	1	95	33
Sabino	0	0	39	0	61	0	13	6
Alvarez	0	21	62	2	15	0	39	2
Silverio	2	54	6	2	34	2	59	3
Total	3%	49%	18%	1%	26%	2%	402	73

^aAbbreviations for tenure statuses are as follows: OC-PO - owner-cultivator/partowner; AO - amortizing owner; L - lessee; LST - lessee-share tenant; ST - share tenant; Others - combinations.

21. The average size of irrigated sample parcels planted to rice during the wet season by farmer-respondents of the Hernandez and Alvarez estates is significantly smaller than that of parcels cultivated by farmers in the other landed estates (but compare paragraph 23). Among farmers of different farm-tenure status, amortizing owners tend to have bigger parcels of riceland under cultivation (Table RS06.10-11).
22. The gross yield per hectare of the average lessee is significantly greater than that of the amortizing owner for both irrigated and rainfed lands during the wet season, and for irrigated land during the dry. The share tenant's gross harvest per hectare for irrigated land, dry season, is also significantly greater than the amortizing owner's. The comparative areas and yields are shown in Tables RS06.10-11.
- A slightly different set of relationships exist when the farms with relatively low yields are eliminated. The gross yields per hectare of the average lessee and the average share tenant are significantly greater than the amortizing owner's, but only for irrigated land, wet season.

Table RS06.17. Average cash and noncash costs, value of production, and net returns per hectare for DRY season, by estate, EXCLUDING FARMS WITH GROSS YIELD PER HECTARE OF LESS THAN 16 CAVANS OF PALAY (LCPA, Camarines Sur, February 1974)

Estate	Cash Costs	Noncash costs	Total costs	Tot. vol. of prod.	Net returns (av. loss)	Total n
Lirag	P359.90	P630.85	P 990.75	P1,000.85	P 10.10	59
Hernandez	362.08	932.40	1,294.48	1,427.18	132.70	22
Sabino	304.80	513.83	818.63	557.60	(261.03)	1
Alvarez	306.96	931.45	1,238.41	1,150.73	(87.68)	13
Silverio	338.62	665.28	1,003.90	1,385.61	381.71	11
Total	P351.13	P732.77	P1,083.90	P1,143.46	P 59.56	106

Table RS06.18. Average cash and noncash costs, value of production, and net returns per hectare for WET season by estate, EXCLUDING FARMS WITH GROSS YIELDS PER HECTARE OF LESS THAN 16 CAVANS OF PALAY (LCPA, Camarines Sur, February 1974)

Estate	Cash costs	Noncash costs	Total costs	Tot. vol. of prod.	Net returns (av. loss)	Total n
Lirag	P345.61	P 657.62	P1,003.23	P1,008.90	P 5.67	146
Hernandez	284.06	852.76	1,136.82	1,265.46	128.64	73
Sabino	176.40	1,171.33	1,348.34	1,249.92	(98.42)	10
Alvarez	296.89	947.77	1,244.66	1,278.04	33.38	35
Silverio	280.71	896.14	1,176.85	1,229.89	53.04	43
Total	P310.82	P 787.26	P1,098.08	P1,139.39	P 41.31	307

Table RSO6.19. Total and average loans reported by SS6 respondents, by source and purpose, and by estate (LCPA, Camarines Sur, February 1974)

Loan source and purpose	Estate					Total
	Lirag	Hernandez	Sabino	Alvarez	Silverio	
a. Public source						
<u>Production loan (in pesos)</u>						
Total amount	141,447.30	79,051.36	5,315.00	19,838.00	54,653.35	300,305.01
Av. amount	975.50	1,068.26	1,063.00	763.95	975.95	981.39
Sample (n)	145	74	5	26	56	306
<u>Nonproduction loan (in pesos)</u>						
Total amount	-	-	790.00	-	-	790.00
Av. amount	-	-	790.00	-	-	790.00
Sample (n)	-	-	1	-	-	1
<u>Public prod. and nonprod. loans combined (in pesos)</u>						
Total amount	141,447.30	79,051.36	6,105.00	19,838.00	54,653.35	301,095.01
Av. amount	975.50	1,068.26	1,017.00	763.00	975.95	980.76
Sample (n)	145	74	6	26	56	307
b. Private source						
<u>Production loan (in pesos)</u>						
Total amount	22,423.00	5,518.00	300.00	1,110.00	3,097.00	32,448.00
Av. amount	697.48	344.88	150.00	138.75	442.43	491.64
Sample (n)	33	16	2	8	7	66
<u>Nonproduction loan (in pesos)</u>						
Total amount	1,898.00	2,760.00	-	374.00	-	5,032.00
Av. amount	210.89	345.00	-	124.67	-	251.60
Sample (n)	9	8	-	3	-	20

Table RSO6.19. (cont'd)

Loan source and purpose	Estate					Total
	Lirag	Hernandez	Sabino	Alvarez	Silverio	
<u>Private prod. and nonprod. loans combined (in pesos)</u>						
Total amount	24,321.00	8,278.00	300.00	1,484.00	3,097.00	37,480.00
Av. amount	579.07	344.92	150.00	134.91	442.43	435.81
Sample (n)	42	24	2	11	7	86
c. <u>Public and private sources combined</u>						
<u>Production loan (in pesos)</u>						
Total amount	163,870.30	84,569.36	5,615.00	20,498.00	57,750.35	332,753.01
Av. amount	948.71	939.66	802.14	616.12	916.67	894.50
Sample (n)	178	90	7	34	63	372
<u>Nonproduction loan (in pesos)</u>						
Total amount	1,898.00	2,760.00	790.00	374.00	-	5,822.00
Av. amount	210.89	345.00	790.00	124.67	-	280.10
Sample (n)	9	8	1	3		21
<u>All prod. and nonprod. loans combined (in pesos)</u>						
Total amount	165,768.30	87,329.36	6,405.00	21,322.00	57,750.35	338,575.01
Av. amount	886.46	891.12	800.62	576.27	916.67	861.51
Sample (n)	187	98	8	37	63	393

On the other hand, the amortizing owners report significantly greater harvests on the average than the share tenants and the lessees for the rainfed land, wet and dry seasons, respectively.

23. Farmer-respondents from Hernandez and Alvarez estates report significantly greater gross yields per hectare for irrigated land, wet season, than do those from Lirag and Silverio estates (40.73 and 38.27 vs. 31.26 and 29.9 cavans per hectare, respectively; 0.05). See Table RSO6.09, section b. Excluding parcels with per-hectare yields of less than 16 cavans results in the same differences in productivity levels among the estates, i.e., Hernandez and Alvarez estate respondents report significantly greater yields than those from Lirag, Sabino, and Silverio estates.

Hernandez estate farmer-respondents similarly report greater yields for their irrigated land, dry season, than do farmers of Lirag, Sabino, and Alvarez estates (Table RSO6.08, section b). No statistically significant differences exist among the estates as to their gross yield per hectare on the rainfed land, wet season (Table RSO6.09). Relatively the same set of differences among the estates prevails even with the elimination of farms of low productivity, i.e., Hernandez and Silverio estates' farmer-respondents produce higher yields than those from the remaining estates for their irrigated land, dry season. On the rainfed land, wet season, Sabino and Silverio estates' farmer-respondents report the lowest yields per hectare.

24. Among the landed estates, and for both dry and wet season, Sabino generally has the smallest proportion of farmer-respondents who apply chemicals (Table RSO6.12, section a-c). Lirag estate similarly has a comparatively low proportion of farmers who apply insecticides and weedicides during the wet season (ibid.). As to tractor labor, only farmers from Lirag, Hernandez, and Silverio estates report its use during both dry and wet seasons (ibid., section d).

25. Asked whether they had any production-related problems, 85 percent said they had. Of these, 48 percent reported inadequate irrigation, 16 percent complained about the high costs of farm inputs like fertilizers and pesticides, 15 percent cited the frequent occurrence of floods and typhoons, and a number reported the presence of pests and a lack of farm equipment. Twenty-nine percent of respondents mentioning irrigation problems specified the insufficiency of the water supply, while 27 percent said that the prices of fuel and oil used in irrigation pumps were high.

Costs and returns (per hectare)

26. The average cost of operations for all rice farmers, all estates included (and combining data from both irrigated and rainfed parcels), is P973.90 for the dry season and P1,086.04 for the wet (Tables RSO6.13-14).
27. Cash costs account for 28 percent of dry-season costs and 34 percent of wet-season expenses. Included among these cash items are fertilizers, pesticides, paid labor, fuel, and oil. Noncash, or imputed, costs include unpaid labor, irrigation, shares, depreciation, and interest on capital investments.
28. The majority of farmers in all estates reported losses, the average production loss across all estates being P168.22 for the dry season, and P41.16 for the wet season. The pattern of losing more in the dry season than the wet is found on all estates except Hernandez (Tables RSO6.13-14). Landed estates where the majority of the farmers report some profit, at least for one cropping season, are Silverio and Hernandez estates (dry and wet season, respectively). Amortizing owners and share tenants, on the average, report production losses for the dry season, with owners showing a comparatively greater loss than tenants (P298.84 vs. P18.19, respectively). For the wet season, lessees and share tenants report an average production gain of P115.72 and P56.52, respectively, while amortizing owners still report losses amounting to P144.35 (Table RSO6.15).

30. To assess the effect of the relatively low yields per hectare on costs and returns, and to see what the costs-and-returns pattern would be for a normal harvest, it was suggested that farms reporting gross per-hectare yields of less than 16 cavans be eliminated from the sample.¹²

As is shown in Tables RSO6.17-18, farms report a profit of P59.56 on the average during the dry season, and P41.31 during the wet season. Only Sabino estate farms continue to report production losses for both dry and wet seasons, while amortizing owners report an average production loss of P8.86 for the wet season (Table RSO6.16).

Credit

31. The majority of the farmer-respondents (81 percent) said they had gotten a loan for both the latest cropping season and the season before that. In 78 percent of cases the loan was provided by a public lending institution, such as the Philippine National Bank, a Rural Bank, the Farmers' Cooperative Marketing Association (Facoma), or the Agricultural Credit Administration (ACA). Significantly, more amortizing owners than lessees or share tenants took out a loan.
32. The total value of the combined production and nonproduction loans received was P338,575.01. Of this amount, 98 percent were for production loans (provided as farm operating capital). The average size of loan (production and nonproduction combined) was P861.51; and the number of loans per farm, on the average, was 1.2 (Table RSO6.19).
33. Asked about the status of their loans, 36 percent said they had repaid it in full, 16 percent had made partial payments, 44 percent had not made any payments at all, while the rest did not reply (Table RSO6.20).

¹² This suggestion was made by Remigio D. Torres, of the department of agricultural economics, College of Agriculture, University of the Philippines System. Dr. Torres is a member of the BRBDP's Technical Assistance Group (TAG).

A significantly greater proportion of the loans repaid were loans borrowed from private or noninstitutional sources, e.g., relatives, landlords, other farmers and private individuals. However, the amount borrowed from private creditors was, on the average, only half the amount borrowed from public lending institutions (P435.81 vs. P980.76; Tables RSO6.19).

Table RSO6.20. 886 respondents classified by source of reported loan and by estate, crossclassified by present status of loan (LCPA, Camarines Sur, February 1974)

Loan source and estate	Loan status				Total n
	Fully paid	Partly paid	Not paid	DK/NA	
a. Public source					
Lirag	32%	11%	56%	0%	145
Hernandez	31	20	40	8	74
Sabino	17	33	17	33	6
Alvarez	27	35	38	0	26
Silverio	38	25	32	5	56
Subtotal	32%	18%	46%	3%	307
b. Private source					
Lirag	50%	5%	40%	4%	42
Hernandez	54	4	38	4	24
Sabino	0	0	0	100	2
Alvarez	54	27	18	0	11
Silverio	57	14	28	0	7
Subtotal	51%	8%	35%	6%	86
c. Both sources					
	36%	16%	44%	4%	393

Of the 40 percent who said they had problems related to financing, more than one out of four (26 percent) said they simply had difficulty

repaying their loans. Other problems mentioned by this subgroup were the untimely release of loans, the lack of capital, and the high rates of interest on loans.

Selected opinions about irrigation

35. Asked if they believed that submerging rice paddies during the growth period would control weeds, an overwhelming majority (91 percent) of the farmer-respondents said they did. Moreover, 89 percent said this was actually their practice.

More than half of these respondents (59 percent) said they had learned of this weed-control procedure by personal experience, while 19 percent referred to a technician as the source of the information.

Those who approved this practice were asked how long the rice paddies should be submerged. Twenty-nine percent said they submerged the paddies for about a week's time at intervals; 18 percent, for about 4-5 days; 10 percent, for more than a week; while the others (33 percent) mentioned varied lengths of time.

36. Asked if they thought they could cultivate their farms according to a specified cropping pattern if water were available, 90 percent said they could; 6 percent either did not know or were not sure; a few (4 percent) reported that it would depend on other factors.

37. Asked if they would be willing to pay a higher irrigation fee in return for a more adequate supply, 89 percent said they would be. Some (33 percent) supported their willingness with the reasoning that, after all, an improved water supply would mean a richer harvest and a better livelihood. Another 25 percent placed a condition on their willingness: provided sufficient water and an efficient distribution scheme were guaranteed.

Of the small percentage unwilling to pay a higher irrigation fee, 29 percent complained that the current rates were already very high, while

25 percent said they did not need any help with irrigation since they already had an adequate supply of water or owned their own pump.

Selected Aspirations and Attitudes

The majority of respondents (71 percent) said they would like to be either owner-cultivators or part-owners; 22 percent wanted to be amortizing owners; and much smaller percentages opted for the status of lessees, share tenants or others (Table RS06.21).

The desire to become landowners is strongly expressed by all kinds of respondents, but this aspiration is not so great among lessees and share tenants as it is among amortizing owners (60 and 63 vs. 77 percent; 0.01). Further, it is not so pronounced among those with an elementary schooling as it is among those with no formal education at all (70 vs. 84 percent; 0.05), nor so high among those of low socioeconomic status as it is among upper-class respondents (65 vs. 86 percent; 0.01).

Table RS06.21. 556 farmer-respondents classified by present tenure status, crossclassified by what they would like to be or become (LCPA, Camarines Sur, February 1974)

Present status	Percentage choosing to be/become						Total n
	OC ^a	AO	Lessee	LST	ST	Others	
Owner-cultivator, landowner, part- owner	92%	0%	0%	0%	0%	8%	12
Amortizing owner	77	21	0	0	1	1	197
Lessee	60	30	7	0	0	3	73
Lesse-share tenant	80	0	0	20	0	0	5
Share tenant	63	23	4	0	6	4	106
Others	78	11	0	0	0	11	9
Total	71%	22%	2%	0%	2%	2%	402
Nonfarmers	-	-	-	-	-	-	73

^a Abbreviations: OC - owner-cultivator; AO - amortizing owner; LST - lessee-share tenant; ST - share tenant.

39. Asked to comment on which would be better for most farmers in the estate--"staying where they are, even though their living is not so good as it might be," or "allowing themselves to be relocated within the area, so that in the new place they might have better irrigation and flood control, and a bigger crop"--79 percent of respondents said that staying where they were was preferable. Only 17 percent preferred relocation. No significant differences occur among any groupings.

40. Asked if they themselves would be willing to be moved, 74 percent of respondents replied that they were not; 16 percent were willing, and 9 percent said "It depends."

Of those who were for staying where they were, 57 percent justified their reluctance to move on grounds of the satisfaction they felt with their present life in a place where their families had been living so long and had endured so much. Another 15 percent said that relocation was impractical, since they already owned a piece of land where they were, or because their jobs were found in the same place. Others (10 percent) hesitated to move because there might be no assurance of security in the future relocation site. The physical and financial difficulties involved in the relocation process were cited by 11 percent of respondents.

41. Among those relatively few (16 percent) who were willing to be relocated, 45 percent favored moving because they felt that improved irrigation should mean a bigger harvest and a better life; 45 percent just hoped that the move might mean a better future; while 13 percent cited the possibility of more peaceful conditions at the new site.

42. Of those who gave a conditional, or "It depends," answer, 77 percent said they would agree to be relocated provided they would really find a good life in their future homes. Other respondents (7 percent) said they would do whatever the government wished them to do, while an equal number (7 percent) would rather see the place first before finally deciding on the matter.

43. Asked if they had ever heard of the so-called Certificate of Land Transfer (CLT), over half (63 percent) of the rice-farmer respondents said they had.

This awareness is reported by a greater number of amortizing owners and lessees than share tenants (69 and 74 percent, respectively, vs. 51 percent; 0.05), and more often by high school and elementary graduates than by those with only some elementary schooling or no formal training at all (79 and 73 vs. 58 and 51 percent, respectively; 0.01).

Although awareness of the CLT seems to vary directly with socioeconomic status, the differences are not statistically significant. Lirag farmer-respondents are not so aware of it as those from Hernandez, Alvarez, and Silverio estates (48 vs. 75, 72, and 86 percent, respectively; 0.01).

Since most of the Lirag landed estate farmer-respondents are not covered by Operation Land Transfer and are not expected therefore to know much about it,¹³ the response of these farmers were temporarily eliminated and analysis limited to the four other estates. With this adjustment, the percentage of farmer-respondents who are aware of the CLT increases to 77 percent, with significantly more Silverio estate respondents aware of it than those from Hernandez and Alvarez (86 vs. 74 and 71 percent, respectively; 0.05).

44. The meaning of the CLT is variously understood. Many (37 percent) understand that, while they may have a CLT, they will not receive the land title until they have paid for their land in full. Some (19 percent) see the CLT as the sign that the cultivator is now an amortizing owner. But 22 percent think the CLT indicates ownership, with no obligation to make amortizing payments. Others either do not know what it is or give no answer (5 percent), while the rest of the respondents give varied other answers.

¹³ Information on this matter was given us by Mr. Remigio Angeles, Regional Information Officer, Department of Agrarian Reform.

Relatively the same pattern is observed even after excluding Lirag estate farmer-respondents from the analysis.

45. Asked if they had received a CLT, 32 percent said they had. Of those, almost half (47 percent) had earlier in the interview reported themselves as either lessees or share tenants. Of the 135 farmer-respondents who had reported themselves as amortizing owners, and had further expressed awareness of the CLT, 68 percent said they had not received it.

Significantly more farmer-respondents from Hernandez and Alvarez estates than from Lirag, Sabino, and Silverio estates had received the certificate (75 and 54 percent vs. 10, 0, and 2 percent, respectively; 0.01).

Discounting again the data for Lirag landed estate on grounds explained earlier, one notes a slightly better picture, i.e., 43 percent of the farmer-respondents from Hernandez, Sabino, Alvarez, and Silverio estates (in this case, $n = 159$) report having received the CLT.

46. On the other hand, 79 percent of those who had not received any CLT still expected it for a number of reasons, among them their belief that Samahang Nayon membership entitled them to it (28 percent); or the fact that they had made partial payments for their land (20 percent); or because they had heard from government personnel (14 percent) or from other private persons (7 percent) that CLTs were being distributed to farmers; or because they believed that receipt of a CLT is a matter of course simply because they are farmers (6 percent).

Expectations to receive the CLT are higher in Hernandez and Alvarez estates (94 and 92 percent, respectively) than in Lirag (70 percent), Sabino (71 percent), or Silverio (83 percent), but the only significant difference is between Hernandez and Alvarez, on the one hand, and Lirag on the other.

CONCLUSIONS

As a matter of principle, we write report conclusions only after the findings have been reviewed by those in a good position to interpret them. The effectiveness of this procedure was well demonstrated in the present case. Thanks to the genuine and very practical interest shown by almost all those who received an earlier version of this report, errors were corrected, ambiguities clarified, and new insights gained.¹⁴ Nonetheless, readers are still free to draw their own conclusions from the findings presented above. They should also be reminded that, for better or for worse, conditions in the LCPA may have changed appreciably in the months that have passed since the study was done (February 1974).

The major conclusions we wish to draw are four in number, namely:

1. As a group, the people of the study area are at least as poor as average rural Bicolanos, and certainly poorer than their Naga-district neighbors. They are close to the bottom of the socio-economic scale, in fact, so that any change is likely to be for the better. They have nowhere to go but up.
2. Despite their poverty--rather, because of it--they are reluctant to be involved in any change that may upset the precarious balance of forces by which they presently survive. They are in no hurry to move upward, and will generally opt for the status quo.

¹⁴ Among the many clarifications with which readers provided us were the distinction between the SSRU study-area and the DAR-BRBC pilot area (see page 2), the differences in agrarian-reform program goals by estate, and the development of the larger program itself. Participants in this prepublication dialogue included the following, whose names are listed in alphabetical order: Engr. Claudio Abriol, Causip team leader, Department of Agrarian Reform (DAR); Remigio Angeles, regional information officer, DAR; Pedro Arbisio, assistant project manager, DAR-BRBC PLCP; Conrado de la Cruz, Milaor team leader, DAR; Juan Echano, team leader, DAR; Engr. Herminio C. Echiverri, project manager, DAR-BRBC PLCP; Benjamin V. Gaon, deputy-director, BRBC-PPD; Mary R. Hollnsteiner, director, Institute of Philippine Culture; Dr. Virgilio V. Marco,

3. This reluctance to accept the land-consolidation plan without proof of its viability makes good sense both to them and to an impartial observer; fears will not be banished by fiat or decree. Instead, planners must deal with the people's apprehensions in an intelligent, respectful manner.
4. Given the negative attitude of farmers toward the land-consolidation scheme, it must be introduced with strategic care, lest it be rejected without trial, or, worse still, be accepted and then confirm the worst fears of the conservative.

Households of the LCPA are poor. The average HH of the LCPA is not only absolutely poor, but poor even relative to other residents of the Naga district in which the area is located. We compare the project area with the Naga district in terms of three crucial measures: HH income, agricultural productivity, and house materials.

We stated above (paragraph 9, page 11, and Table RS06.04) that the mean HH income of all LCPA residents was P32.96, with the highest average (P45.32) reported for Silverio estate. The corresponding Naga district figure (from the AP1 survey of April 1974) is P86.60, which means that LCPA HHs earn two and one-half times less than their Naga district neighbors. Again, the mean annual household income in the Bicol region in April 1974 was around P3500 (see note 4 in Barrameda et al. 1974: 11). The LCPA average is only P1714, less than one-half the regional figure and just a few pesos above the corresponding average reported for the depressed area of Balongay (ibid.).

BRBC-PPD; Aniceto B. Oliva, director, Research and Service Center, Ateneo de Naga; Atty. Salvador P. Pejo, regional director of the Department of Agrarian Reform and concurrently deputy director, Social Infrastructure Department, BRBDP; Atty. Oscar M. Ravanera, executive director, BRBDP; Reynaldo de Sagun, officer-in-charge, BRBC-PPD; Atty. Ernesto Tino, Pili team leader, DAR; and Dr. Remigio D. Torres, acting project director, UPLB-TAG-BRBC. While we profited from the comments of all, we must take sole responsibility for the conclusions we have drawn.

Furthermore, while about a third of Bicolano families earn over ₱3000 per year, the percentage managing to do this in Balongay is 23 (*ibid.*); in the LCPA, the percentage is even smaller (20 percent).

Its low agricultural productivity is further evidence of the LCPA's poverty (Tables RS06.08-09). Even when we exclude all LCPA harvests lower than 16 cavans per hectare, the averages still compare unfavorably with those of the Naga district reported in AP1. On rainfed land in the wet season, the LCPA does 'a little better than Naga, but otherwise it lags far behind. Here are the data.

Riceland and area	Wet season		Dry season	
	Mean	n	Mean	n
Irrigated				
LCPA	38.18 ^a	237	44.88	86
Naga district	50.6	44	47.07	19
Rainfed				
LCPA	31.03	70	36.55	10
Naga district	25.66	34	47.48	5

^aAll productivity figures are mean cavans of palay per hectare. Further, all LCPA-Naga differences are significant at the 0.01 level except that shown for irrigated land-dry season (which is n.s.).

The materials of which a house is built, along with its present state of repair, may serve as a rough indicator of the occupants' level of living. From this viewpoint, once again, LCPA HHs show up as considerably poorer than Naga district HHs in general. Thus where 49 percent of Naga district houses are of light construction (usually bamboo and nipa), the figure is 69 percent for LCPA (Table RS06.02). At the other end of the scale, 20 percent of Naga district houses are of strong materials; the figure is 7 percent in the LCPA.

If we convert the materials-and-state-of-repair data into socioeconomic conclusions, we get the following comparison.

Level	Naga	All LCPA	LIR	HER	SIL	SAB	ALV
Upper-elite	15%	2%	2%	0%	3%	0%	0%
Upper marginal	23	16	19	9	16	16	19
Lower	67	82	79	91	81	84	81

Clearly, in terms of income, agricultural productivity, and house materials, the people of LCPA are poor cousins of their district coresidents.

LCPA residents are reluctant to go along with the land-consolidation project. Almost four-fifths of the project area's HH heads are convinced that for most of their fellow farmers the wise choice is "staying where they are, even though their living is not so good as it might be." Only one-fifth accept as preferable the farmers' "allowing themselves to be relocated within the area so that in the new place they might have better irrigation and flood control, and a bigger crop" (paragraph 39, page 35). Asked if they themselves were willing to be moved in this way three-fourths said they were not; only 16 percent said they were (paragraph 40, page 35).

These respondents, interviewed in February 1974, sound very much like certain nipa farmers who live some 25 kilometers downstream from them, at the mouth of the Bicol River. Interviewed in early December 1973, these Balongay HH heads were also clearly negative (61 percent said no) when asked how they felt about a plan to convert their nipa swamps into an allegedly much more profitable fishpond estate (Barrameda et al. 1974: 9).

Earlier still, in October 1973, SSRU personnel asked 600 rice farmers throughout the River Basin which they thought preferable, staying in a well-known community, despite economic hardship, or trying a new start elsewhere. An overwhelming 79 percent replied that they preferred staying right where they were, thank you, regardless of alternatives (Lynch 1973b: 11).

As we stated in the Balongay study, "poor but relatively secure people will not readily exchange a sure source of income, provided it be adequate for their perceived needs, for some other occupation [or worksite], just because it is said to be more lucrative" (Barrameda et al. 1974: 12). Security is more highly valued than marginal mobility.

In other words, the reluctance of the LCPA residents to accept change makes good sense. We can approach this third conclusion indirectly. There was a time when agrarian-reform specialists, and even some agricultural economists, argued for conversion from share tenancy to landownership on grounds of the increased productivity that would follow. Whatever strength that argument had in the past has been dissipated by two highly empirical studies of rice farming and tenancy in Nueva Ecija (Pahilanga-de los Reyes and Lynch 1972 and Mangahas et al. 1974). The findings clearly demonstrate that tenure change per se does not raise productivity, and that the effect of land tenure on gross harvests per hectare is neutral.¹⁵ As the second paper puts it (Mangahas et al. 1974: 109-10), "The sources of increased agricultural productivity are diffusion of new seeds, varieties, fertilizers, and so on. Changes in land tenure neither substitute for these nor make it any easier for them to come about."

There is a lesson for us here. Extension workers and those they represented had long been promising share tenants bigger crops if only they would become owner-cultivators. Share tenants were not impressed. Realizing that tenants were right and we were wrong in this matter, should we not be a little less sure of ourselves and of our schemes and programs? More important, should we not suspect that subsistence farmers may be on to other truths as well as about their environment, truths to which the specialists are often blind?

¹⁵Data on rice productivity by tenure, published in the summary volume of the 1960 Philippine Census of agriculture, also point to the same conclusion, namely, that average tenants raise at least as much palay per hectare as owner-cultivators do, and even more.

Speaking more generally, it is our belief that any widespread rural resistance to innovation springs from four equally common sources--a fear of upsetting the man-nature relationship by which generations past and present have survived; ignorance, or disbelief, of likely benefits; accurate knowledge of the local scene; and a folk tradition which remembers that this, or something like it, has been tried before, and found wanting. For just as the long-term resident of the Philippines gradually learns, the hard way, that rain on the unprotected head, or cold water on the overheated, exercised body, can have disastrous consequences, so the long-term field observer comes to appreciate and sympathize with the reluctance of poor farmers to take at face value the promises of even (or especially) the most highly-motivated extension workers.

To return to the case at hand, farmers are being asked to go along with a consolidation scheme which, as far as most of them are concerned, is of unproven worth. However rational it may be from the experts' viewpoint, many LCFA residents apparently see it as a threat. Since they have no room for risk--for theirs is a continual struggle for survival--they rightly feel they must stay away from such a dubious proposition. Further, in barrios where any newly created surplus (as locally defined) is fair game for needy relatives and friends, an assured and adequate income, however small, is more attractive than a possible, perhaps illusory move upward on the level-of-living scale.

Nor are they sold on the idea of becoming amortizing owners. Like other subsistence farmers, most LCFA residents are realists who participate in an effective, informal communications network, the so-called bamboo-wireless net. Through this medium they are well aware of what our own findings confirm, namely, that LCFA amortizing owners are currently worse off, financially, than both share tenants and lessees (paragraphs 22 and 28 and Tables RSO6.15-16). Further, they are obviously quite confused, as a group, about the meaning of the CLT and about the procedures by which one becomes an

amortizing owner (paragraphs 43-46). It is not surprising that those who consider themselves share tenants or lessees are much more interested in being landowners than they are in becoming amortizing owners (paragraph 38 and Table RSO6.21). These people do not deal in the normative, or the hoped for; they are in these matters empiricists.

The land-consolidation scheme must be strategically planned, accommodated not only to the existing natural resources, but to the human resources as well. Any successful innovation will start from where the people are, and not from where the innovators think they are, or would like them to be. Thus we know that LCPA farmers are, by and large, both poor and apprehensive. We also know that they are generally interested in becoming landowners. Compared with share tenants of Nueva Ecija in 1970, and the self-styled tenants of the River Basin in October 1973, those LCPA farmers who call themselves share tenants are far more interested in landownership. For while only 45 percent of Nueva Ecija tenants said they wanted to be owners (Pahilanga-de los Reyes and Lynch 1972: 46), and 65 percent of River Basin tenants, 63 percent of LCPA tenants aspire to be owner-cultivators and another 23 percent to be amortizing owners. A clear majority (86 percent), in other words, can be counted on to have this basic motivation. This is a great advantage for those who would help these farmers move toward ownership.

On the other hand, equally descriptive of where the people are is the fact that--presidential decrees to the contrary notwithstanding--about 44 percent of LCPA farmers consider themselves lessees or share tenants (Table RSO6.07). The bureaucrat who reads this finding will be tempted to quote one or more documents by virtue of which share tenancy no longer exists in the Philippines. Well and good, but we would hope that, this official position restated, the bureaucrat would then ask himself why so many farmers--hard-headed empiricists that they are--insist on reporting themselves as throw-back members of a legally extinct species. To answer that question would be to clarify where it is the people are, and where the planning must start.

To make any other assumption is to run the risk of sponsoring a technically-perfect catastrophe.

SUGGESTIONS

More concretely, in view of the above findings and conclusions, some suggestions may be offered.

First, let the fieldworkers of the LCOPA, particularly the B&E and DAR technicians, forget for the moment what the people should be or should feel, and ask themselves what they actually are, and why. Pooling their knowledge, at one or more meetings, perhaps, let them openly construct among themselves, with official approval and encouragement, a realistic portrait of the people with whom they deal, and reflect on the practical consequences of its characteristic features.

Second, there is obviously need for a renewed effort at transmitting to the people information regarding agrarian reform (including the procedures involved) and the land-consolidation scheme. Armed with a new appreciation of the people's view, let planners and managers examine carefully what they intend to say, however; let them apply the basic norm that farmers use when they hear or read a government statement: Is this empirically true, or is it really just a wish or an untried plan?

Third, farmers must be reinforced as they participate in the activities and procedures related to agrarian reform and land consolidation. They must experience, as rewards for their cooperation, a more efficient handling of agrarian problems, crop loans, irrigation and flood control, and other benefits they have been promised.

Fourth, we suggest that land consolidation begin, where possible, with those who have expressed a willingness to be involved in it. These farmers will presumably be most enthusiastic about the plan and hence should constitute the best group to man those model farms which will be set up to demonstrate the effectiveness of the scheme.

Beyond these practical suggestions, and of infinitely more importance in the long run, is our plea that planners and managers take constant account of the people's view. Average farmers of the LCPA are poor, fearful, and proof against the wishful thinking to which so many zealous field personnel are prone. If they resist a plan, they have good reason to do so. Let their apprehensions be studied, understood, and reckoned with. And where necessary, let social and psychological considerations modify even those aspects of planning which seem technically beyond reproach. The plan, after all, is for the people; not the people for the plan.

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