

PN-AAN-250

ISN=30016

IRRI Saturday Seminar
28 October 1978
Agricultural Economics Department

RICE FARMERS AND LANDLESS RURAL WORKERS:
Perspectives from the Household Level

Antonio J. Ledesma*

I INTRODUCTION

Since the mid-60's, rice farming areas in the Philippines have undergone perceptible changes, particularly as a result of two innovations -- the modern rice technology and agrarian reform policies of the government. The avowed goal of the first innovation was to increase rice production. The principal objective of the second was to improve tenure arrangements towards a more equitable distribution of income and land resources for the actual tillers of the soil. Increased productivity and equity -- through technological and institutional innovations -- were thus seen as interrelated dimensions for the integral development of rice-growing areas (Fig. 1).^{1/}

In 1972, the Philippines' agrarian reform program was extended and accelerated to cover all tenanted rice and corn areas throughout the country. Share tenancy was officially abolished. Operation Land Transfer (OLT) was initiated to distribute Certificates of Land Transfer (CLT) to eligible rice and corn share tenants, making them amortizing owners. Concurrently, Operation Leasehold (LHO) was undertaken to fix leasehold status for share tenants of small landlords exempt from the scope of land transfer -- i.e., landowners who own seven hectares or less of rice and corn lands. Not included, however, within the scope of agrarian reform was another stratum of peasant society, the landless rural workers, who thus comprise a "non-tenure" group in reform areas.

Underlying this official view was the assumption that rural communities were relatively homogeneous groupings or, at most, two-class societies divided between landlords and tenants. In addition, researchers have usually focused on well-defined groups such as rice farmers (to the exclusion of landless workers), or, on the other hand, landless workers on plantation economies (to the exclusion of tenanted rice areas).

*Research Fellow, Agricultural Economics Department, IRRI, and Ph.D. candidate in Development Studies, Land Tenure Center, University of Wisconsin-Madison.

The author wishes to thank Dr. David King, his dissertation adviser, and the staff members of the Agricultural Economics Department, IRRI, for their valuable comments and suggestions. Department Paper No. 78-19.

In an effort to complement more extensive studies, the present investigation attempts a more holistic approach in assessing the impact of both technological and institutional changes on various peasant groups within the same rice-growing village. In particular, three peasant subclasses are compared -- amortizing owners, lessees, and landless rural workers. These groups can be viewed as constituting the three bottom strata of rural society -- who all work on the land in varying degrees but have very different legal/moral claims and aspirations for eventual ownership of the land under the present agrarian reform program and may have been affected in divergent ways by the modern rice technology.

II OBJECTIVES AND METHODOLOGY

Since this is an exploratory study, that is perhaps more problem-seeking than problem-solving, the principal objective of the researcher's fieldwork was:

- (i) Social dynamics: To investigate the actual interactions of amortizing owners, lessees, and landless workers with one another; and to examine varying levels of dependence or interdependence;

In addition, other interrelated objectives were kept in mind:

- (ii) Equity issue: To compare the socio-economic profiles of the three peasant subclasses within the same localities; and to examine their perceptions of relative burdens and benefits under agrarian reform and the modern rice technology;
- (iii) Productivity/employment issue: To examine the responses of peasant subclasses to the new rice technology and to government support services such as irrigation, credit, and cooperatives; and to assess the impact of all this on employment opportunities among the various peasant subclasses; and
- (iv) Agrarian reform policies: To assess the continuing impact of Operation Land Transfer and Operation Leasehold on peasant subclasses, and to indicate some long-term implications of the current agrarian reform program.

Two villages were purposively selected for the study, one as a focal point for intensive study, and the other as a basis for comparison. The following norms for selection were used:

- (i) The villages would be located in two leading provinces in terms of rice production and agrarian reform implementation -- in this case, Iloilo and Nueva Ecija.

- (ii) They are within the scope of infrastructure projects (e.g., irrigation, farm-to-market roads) and development programs (e.g., Samahang Nayon, Masagana-99 Loans).
- (iii) Each village would have an adequate representation of the three major peasant subclasses under study. This means that amortizing owners, lessees, and landless workers should each constitute at least 10% of the total barrio census of households.

Because of its need for both qualitative and quantitative data, the investigation employed various research instruments:

- (1) Informant interviews of key respondents in the barrio;
- (2) Complete household surveys of each barrio for tenure classification and socio-economic indicators;
- (3) In-depth interviews of a random sample of rice farmers and landless workers;
- (4) In Iloilo, daily record-keeping for six months by 18 purposively-selected households to gather data on labor/time allocation and household income and expenses; and
- (5) Case studies of a landless worker's nuclear family and of a rice farmer's extended family.

The following report is based mostly on data gathered from nos. (2) and (4), supplemented with information from nos. (1), (3), and (5) (Fig. 2).^{2/}

III SETTING

The principal study village is Barangay Abangay in the Municipality of Dingle, Iloilo Province. The other village studied for comparative purposes is Barangay Rajal Sur in the Municipality of Sta. Rosa, Nueva Ecija Province (Fig. 3).

Abangay is the largest barrio in Dingle with 253 households (as of 1977). It is traversed by the provincial highway connecting it with the towns proper of Dingle (5 kms. to the north) and Pototan (3 kms. to the south). The main irrigation canal of the Jalaur River Irrigation System, in operation since 1957, lies parallel to the highway and provides the agricultural lifeline to practically all of Abangay's ricefields (Fig. 4).

Because of its first-class irrigated ricelands and its accessibility to market towns (including Iloilo City 37 kms. away), Abangay can be considered as being in a "best possible situation" for

rural development. It was among the first areas during the late 60's to adopt the high-yielding varieties of rice and consequently the seed-water-fertilizer technology in rice production. Furthermore, the barrio was included within the Pototan-Dingle pilot area for Operation Land Transfer in 1972-73. Its public school grounds became the site for the distribution of the first Certificates of Land Transfer in the area in May 1973 -- an event still clearly remembered by many tenants in the barrio.

Although it is a smaller barrio in population and has a more recent history of settlement, Barangay Rajal Sur shares many of the characteristics of Abangay -- e.g., access to an irrigation lateral canal, a farm-to-market road, and to a certain extent a higher level of peasant organizations. Likewise, Rajal Sur has a sizeable representation of the three peasant subclasses under study.

IV PERSPECTIVES

A. Tenure Differentiation

Agrarian reform means tenure change. In terms of dominant tenure,^{3/} Table 1 presents the classification of each household head in Abangay and Rajal Sur.

There are no big or small landlords resident in the two barrios, and only 2% in each barrio are owner-cultivators.

A third of all the household heads in each barrio are considered amortizing owners.^{4/} In Abangay, all amortizing owners have received Certificates of Land Transfer only, and have not actually started amortization payments for the land. In Rajal Sur, on the other hand, more than half of all amortizing owners have started the schedule of amortization payments for their lands.

Lessees are subdivided into those with written and with oral contracts. In general, lessees pay a fixed rental for the use of the land -- usually 25% of the average gross harvest of the land. Under the agrarian reform program, tenants not covered by Operation Land Transfer are supposed to be covered by Operation Leasehold, which entails the formalization of written lease contracts between landlord and tenant. A number of lessees, however, have not yet entered into written contracts -- 15 in Abangay and 8 in Rajal Sur.

The picture is further complicated in Abangay by the fact that Operation Land Transfer was hurriedly implemented in this pilot area in early 1973 with the original premise of zero retention for landlords.

Thus, several lessees have received Certificates of Land Transfer only to be invalidated later because these tenants have later been found to belong under the Department of Agrarian Reform's classification to Category VI landowners -- i.e., owning seven hectares or less. From the small farmers' own perceptions, the most tangible effect of agrarian reform in Abangay has been the shift from 50-50 share tenancy to the paying of fixed rentals, either as lessees under Operation Leasehold or as recipients of Certificates of Land Transfer under Operation Land Transfer. Indeed, although CLT-recipients in Abangay have a notional knowledge from DAR personnel that their fixed rentals are considered partial payments for the land, very few have actually received or kept receipts of their lease payments over the past four years.

Although officially abolished, share tenancy is not functionally dead either in Abangay or in Rajal Sur. The classical 50-50 sharing of expenses and the harvest is still practised in 10 cases in Abangay and 6 cases in Rajal Sur. In both barrios, there are also instances of sub-tenancy arrangements, usually involving the same kind of sharecropping on a 50-50 basis.

In Rajal Sur, two other tenure arrangements that are fairly close to conditions of share tenancy have been discerned. The first case involves three instances of permanently-hired landless workers (kasugpon) who practically manage farms for either resident or absentee tenants. The second type comprises mortgage arrangements (sangla) wherein the mortgagee operates the farm as long as the mortgaging tenant has not yet paid back the amount of money borrowed.

Because they have no clearcut rights to own or operate the land, landless rural workers are not covered by Operation Land Transfer or Operation Leasehold under agrarian reform. In Abangay, these landless workers work either on rice farms without a regular wage (89) or on sugarlands with a regular wage (8). All in all, they comprise 43% of the total number of farming households.

In Rajal Sur, 29% of all farming households are classified as landless workers -- 4 as permanently-hired farmhands (kasugpon) over at least one crop season, and 40 as casual workers for various operations in rice farming, particularly harvesting and threshing.

In addition to the farming families, 10-11% of households in both barrios are not engaged in farming as their principal source of livelihood.

Generally, there is more diversity of tenure arrangements in Rajal Sur than in Abangay, coupled with a more pronounced difference between the 30 amortizing owners who have actually started amortization payments and the 32 "permanent" lessees. Abangay on the other hand has perhaps less heterogeneity among its small farmers, but a sharper distinction between small farmers and landless workers under the sagod system (see Section 3).

B. Land Fragmentation

Tenure differentiation may be a consequence of population pressure as well as continuing land fragmentation. Despite agrarian reform restrictions to further subdivisions of landholdings, several tenant-farmers have continued to fragment their lands -- usually when children marry and form independent households. At times too, a small parcel may be borrowed by a relative for one crop season or for an indefinite period. In several instances in Rajal Sur, fragmentation may take place in the form of sub-tenancy or mortgage arrangements pertaining to a part of a farmer's total farm area.

To be sure, land fragmentation and land accumulation are not recent phenomena. Rather they constitute a continuing process indicative of population growth relative to the availability of effective crop area. In Abangay, where there is no customary right of primogeniture and where most or all of the children, male or female, may expect some help from their parents, the continued parcelization of landholdings among children is about the only form of providing a stable source of livelihood, no matter how small or uneconomic the farm unit may be.

To illustrate the process, Fig. 5 indicates the inheritance pattern of landholdings in one tenant-farmer's family over four generations in Abangay. During the period of the 20's and 30's, land for tenancy purposes was still relatively plentiful in Abangay. In addition to the 3.5 hectares that his father had been tilling as a share tenant for one of the bigger haciendas in Abangay, Martin Pelayo was able to acquire another 3.5 hectares from the same hacienda. At the height of his farming career, Martin had three carabaos and was tilling seven hectares -- making him one of the larger tenant-farmers in the barrio. Over the next two decades, however, by the time he had parcelled out his land to three of his children, a nephew, and a faithful farmhand (timbang), the average farm size of his heirs was drastically reduced to 1.4 hectares. In the 60's and 70's, two farm areas have been further split up among five operators, with four of the plots comprising only half a hectare or less. It is important to note that in this latest round of fragmentation, only two holders of Certificates of Land Transfer are recognized by the Department of Agrarian Reform -- one for 1.5 hectares and the other for 1.0 hectare. De jure, fragmentation stops at this point. De facto, it continues.

On the village-wide level, diminishing farm sizes is indicated in Table 2. In Abangay, average farm size in 1977 was 1.26 hectares as compared to 1.34 has. in 1971, 1.45 has. in 1962, and 1.51 has. before 1954. Although farmholdings in Rajal Sur (Nueva Ecija) are larger in general, a similar process of diminution in average farm size has occurred -- from 2.99 has. before 1954 to 2.31 has. in 1977.

Across tenure groups in each barrio, amortizing owners today generally have a larger average farm size than lessees, who in turn have larger farms than share tenants. Owner-cultivators have the smallest average farm size in Abangay, but the largest in Rajal Sur.

Retrospect

Despite the physical diminution of the land, effective crop area may have actually been increased with the introduction of irrigation, shorter-maturing varieties, and, in Abangay, the adoption of triple cropping in one year by several farmers. Thus, for instance, Martin Pelayo's eldest son, who gets three harvests a year from his 2.5 hectares, has in effect 7.5 hectares planted to rice in one year -- greater than Martin's seven hectares of single-cropped rice a generation ago. Furthermore, yields in Abangay have increased. Farmers regard 60-80 cavans (44 kg) as normal yields today in contrast to the 30-40 cavans their fathers used to harvest before the war. For the three crop seasons prior to the barrio survey, average yields per hectare in Abangay were as follows:

Table 2a. Average yield per hectare by season and tenure, Abangay, Iloilo 1976-77 (in cavans of 44 kg.).

S e a s o n	Lessee	Amortizing owner
Wet '76	81.4 (20) ^a	73.1 (75)
Dry '76-'77	65.9 (21)	61.9 (72)
Third '77	52.6 (5)	58.1 (15)

^a

Numbers in parentheses indicate number of observations.

Thus, in one sense, increased productivity through the new rice technology has offset the involutory effects of land fragmentation. But, in another sense, the same technology may have heightened indirectly the process of tenure differentiation. Increasing production has placed a higher premium on the land making landlords, particularly the smaller ones, more reluctant to part with their landholdings. Thus, the seven-hectare retention limit was granted by the government to accommodate the interests of small landlords of 24 hectares or less. As a result of this concession, Operation Leasehold was established to cover "permanent" lessees as a distinct group from amortizing owners. Likewise, landless workers, as another differentiated group have found it more viable to concentrate on irrigated, first-class rice lands because of the increased productivity and employment opportunities on the farm.^{5/}

Thus, land fragmentation may have been offset for the time being by the increased productivity made possible by the new rice technology, but tenure differentiation has been sharpened on the other hand. This can further be seen in the sagod system and labor allocation of landless workers and rice farmers.

C. The Sagod System

Land fragmentation may be seen in terms of physical division of a farm area; in this sense, it affects the scale of farming for tenant-operators -- e.g., in their calculations of costs of inputs and expected returns from the harvest.

In another sense, however, land fragmentation may also be seen in terms of how particular plots (or sub-plots) within a single farm are reserved by certain individuals or groups for specific operations. In this latter sense, fragmentation directly affects landless workers and their allocation of time and labor on rice farms.

Under a new labor arrangement, called the sagod system, which was initiated only since 1973 in Abangay, landless workers (or other small farmers) contract to do the weeding on designated plots without immediate remuneration provided they are given the exclusive right to harvest the crop on their weeded portions. The payment for the weeding and harvesting comes from the percentage share of the harvest -- usually 1/6th if cleaned, and 1/7th if not cleaned.^{6/}

From the landless workers' point of view, there are certain advantages to the sagod system: (i) it removes competition from other landless workers who traditionally would race with each other in harvesting as much of the crop as possible; (ii) it likewise prevents potential harvesters from other barrios from joining the new labor arrangements since they cannot be present all the time to do the additional tasks of weeding ; (iii) it provides landless families with a more stable source of income throughout the year, particularly with increased yields from the new rice varieties and the introduction of triple cropping by many farmers; and (iv) it provides a certain security of tenure for landless families who contract to do sagod operations for the same farmers on a more regular basis -- so much so that they begin to consider the areas they care for as their plots.

The Sumagaysay family, for instance, with three grown-up children, have been able to undertake sagod operations on nine different plots during the 1977 wet season. This number was increased to 15 plots during the following dry season (Fig. 6). In terms of shares in the harvest, the weeding cum harvesting activities earned 35 sacks of palay during the wet season, and another 34 sacks during the dry season. ^{7/}

Despite its many advantages, however, the sagod system is regarded with ambivalent reactions by many landless workers. Its largest drawback to them is the non-payment of cash wages at the time for weeding -- in contrast to the earlier practice. Weeding operations are also made much more difficult when the rice farmer practices broadcasting of seeds rather than spaced-out transplanting of rice seedlings. In such cases, the rice farmer may not even apply weedicides in order to cut down further on costs.

From the point of view of rice farmers, a major reason for dividing their farms into sagod plots is to eliminate labor costs for weeding operations. It is also an effective way of limiting the number of harvesters on a single field — in contrast to the earlier practice when a considerable amount of grain losses would occur due to the keen competition among harvesters on the actual day of harvesting.

Figure 7 shows how Andres Sereno, a tenant-farmer of two hectares, has divided his farm into sagod plots and sub-plots among his relatives and neighbors. Levees around a plot may provide the most convenient boundaries for designating an area for sagod operations. However, in some instances, sub-plots are further created by means of stick markers or by counting the number of rows of rice plants in order to accommodate more relatives and friends under the sagod system. All in all, nineteen persons, including the operator himself, have been given sagod responsibilities with exclusive harvesting rights on designated portions in Andres Sereno's farm -- a form of further land fragmentation for specific farming operations.

D. Labor Allocation and Alternative Farming Methods

Labor allocation on rice farms in Abangay is influenced to a large extent by the sagod system. Table 3 indicates the proportion of family to hired labor for different rice farming operations, as averaged from the daily records of nine tenant-farmers.

In general, rice farmers and their families do most of the work during the initial phase of land and seedbed preparation. Likewise, the rice farmer himself usually takes care of fertilizing, spraying, and water control.

However, three other major farming operations, which take up two-thirds of the total hours of farmwork, are left for the most part to hired labor. These operations are transplanting, weeding, and harvesting with threshing. All in all, hired labor, which is provided mostly by landless workers in Abangay, constitutes 60% of the total labor on the nine rice farms under study.

The percentage contribution of hired labor on rice farms would actually be higher were it not for some innovations that have already been adopted by half of the nine record-keeping rice farmers. It is important to note that these innovations, from the point of view of rice farmers, have been introduced precisely because they are either time-saving, cost-saving, or both. From the landless workers' point of view, however, some of these innovations have tended to displace their labor and consequently to limit their opportunities for additional income.

Table 4 provides a comparison of alternative techniques in major farming operations together with their estimated labor requirements and farm expenses.

Carabao plowing has traditionally been done by the rice farmer himself. Hence, any substitution by hand tractors generally represents a saving on the operator's own labor. However, the operator shoulders a greater cash outlay for tractor plowing by an additional ₱157 per hectare.

The other three operations directly affect the landless worker's employment and income opportunities. If a rice farmer adopts broadcasting (sab-og) instead of transplanting, 25.5 mandays and an estimated ₱136 per hectare are saved by him, but correspondingly lost by hired labor or landless workers.

A comparison of weeding operations remunerated by cash wages with the same operations under the sagod system shows clearcut advantages to rice farmers and corresponding disadvantages to landless workers. Labor requirements remain the same (19 mandays per hectare on the average), but the ₱114 worth of cash wages are no longer given to hired laborers under the sagod system.

A further complication to sagod operations has been the introduction of portable mechanical threshers in Abangay since the wet season of 1977. Because weeder-harvesters are also responsible for threshing and cleaning the palay in order to earn the 1/6th share of the harvest, they are expected to shoulder the costs if their harvested palay is threshed mechanically. The usual charge in Abangay is one-third of the harvester's 1/6th share. Thus, for every three sacks that a landless worker would have earned had he done all sagod operations, he would now have to hand over one sack to the machine owner if a mechanical thresher had been utilized. ^{8/}

To be sure, the decision to use a mechanical thresher is theoretically left to the one who harvests the crop. Yet it is not uncommon for tenant-farmers to have their preference for mechanical threshing followed, particularly during the rainy season when any delays in threshing could spoil the palay and lower its selling price in the market. The wishes of tenant-farmers are also not easily set aside since they may or may not hire the landless worker again under the sagod system for the next crop.

On the positive side, mechanical threshing has enabled some landless workers to do more harvesting operations on other plots with the time they have saved (since mechanical threshing is more than eight times faster than foot threshing). The machine also relieves landless workers of the relatively tedious task of foot threshing, particularly when the rice variety is considered tough (maawot) -- such as the current IR-36 variety in Abangay.

Among landless workers, labor allocations by source in the family (i.e., household head or household members) reveals some interesting patterns. Figure 8 compares three landless worker households in the distribution of their working hours on rice farms.

In general, household heads with pre-school and schooling children contribute a higher percentage of the total household's labor. As the children begin to help out in the farmwork, the household head may be working less hours relatively and absolutely.

Comparing landless worker households with those of rice farmers, the following table indicates their labor allocation on rice farms:

Table 3a. Working hours spent per week on rice farms among 8 landless worker and 9 rice farmer households, Abangay, Iloilo, dry season, 1977-78.

S o u r c e	(1) Landless worker	(2) Rice farmer	(3) Ratio (1)÷(2)
Household head	23.7	16.1	1.47
Household members	39.0	9.4	4.15
Entire household	62.7	25.5	2.46

On the average, household heads among landless workers work 1.5 times more on rice farms than their rice farmer counterparts in Abangay. Household members among landless workers work even four times more than their counterparts among rice farmers. This suggests that children of rice farmers have more opportunities to finish their schooling, some reaching the high school and college levels. On the other hand, children of landless workers, such as those of the Sumagaysay family, are more pressed to work in the fields, and to forego schooling for the time being or even completely.

Retrospect

How did the sagod system get started in Abangay and why did it arise in the first place? No one in the barrio really knows for sure. Some say it started in a neighboring barrio; others allude to certain individuals; still others time it with a particular crisis period when rice farmers were short on cash and the first offers for sagod weeding for free were made by some landless workers. Indeed, rice farmers (mangunguma) always maintain that it was the landless workers (mamumugon) who first asked for sagod weeding cum harvesting rather than the other way around.

At any rate, sagod arrangements have come to stay. "If you refuse the conditions," a landless worker remarked, "ten others are willing to take your place." Some landless workers recognize the irreversibility of the process. Two grown-up children of a landless worker in Abangay wanted to introduce the sagod system in Dumangas, a nearby municipality; but they were advised against it by their mother who foresaw the wider implications. Another landless worker did get to initiate the sagod terms in another barrio; but his plot was harvested the night before he came to harvest -- presumably by disgruntled parties in the other barrio. Finally, a business-minded landowner wanted to introduce similar sagod arrangements for his 10-hectare rice farm in Pototan; the landless workers in the area refused, and at the time of harvest, his fields were boycotted by them.

It is thus a standing paradox in Abangay that landless workers both want and don't want the sagod system. They want the sagod rights to an exclusive area for harvesting -- as a form of security in the face of increasing competition from other landless workers. But they do not want to do the weeding "for free."^{9/} With the increased productivity of rice farms in Abangay, landless workers may actually be getting more in harvest shares under the customary 1/6th sharing arrangement than in earlier years. But under the sagod system, considering the number of mandays spent on the farm, their real wage rates have decreased and an artificial gap in income earnings has been created during the weeding period.^{10/}

In this sense, the new rice technology may be neutral to scale, but not to tenure. Divisible amounts of seeds and inputs may equally benefit both large and small farmers, but divisible sagod plots and sub-plots place the burden of labor on the "non-tenure" group, the landless workers. In the case of mechanical threshers displacing their labor, the new technology may even be creating a "trickle-up" effect -- with the thresher operator capturing one-third of the weeder-harvester's share, although he did none of the "free" weeding.

Thus, because decisions over farming technology are left mostly with rice farmers, whereas more of the actual farmwork is being done by landless workers in Abangay, tenant-tillers have for the most part become tenant-operators, while landless workers have become the actual tillers, or the "farmers' laborers." (cf. Wickham, et. al. 1974.)

It is in this light that the original word, magsagod in Hiligaynon, the local language in Abangay, takes on its full spectrum of meanings: to feed, to nurture, to take care of - and to work for.

E. Household Income and Expenses

Cash and palay flows for both landless workers and tenant-farmers follow closely the cycle of rice planting operations in Abangay. Different patterns however are discernible.

Generally, landless workers have more frequent but lower income peaks depending on the availability of a harvest or occasional farm jobs that are still paid with cash wages. The income and expense record of the Cahuya household (Fig. 9) could well typify the life-situation of landless workers. Weekly expenses do not go much higher than the family's rice requirement level (₱35.70), except on two occasions when these are accompanied or preceded by the two highest income peaks for the recorded period. Income levels are closely related with the household's harvesting operations and with the sale of a pig by the last week of October. The livestock sale is indeed timely for the Cahuya household because the succeeding six weeks from October to mid-November are the lean period when the dry season crop has been planted but no income from harvesting is yet forthcoming. Thus, household expenditures also tend to approach the rice requirement or subsistence level.

Although the six-week period represents practically zero earnings for the Cahuyas, their work hours on rice farms are still almost on the same level as other income-earning weeks. However, practically all of the farming activities for this period are spent in weeding under the sagod system -- with no wages, but a guaranteed share in a future harvest one or two months away. In effect, sagod operations may have provided more steady employment and levelled off a landless worker's labor hours on rice farms; but it has created a sharp gap in income earnings during the interim months of planting care and control.

In contrast to this pattern for landless workers, rice farmers ordinarily experience one very high income peak at harvest time which enables them to provide for the family's rice requirements for the next four to five months and with proper budgeting, to pay for any production loans incurred during the season. In addition to this farm income, rice farmers also earn income from other sources -- notably livestock raising, farmwork on other rice farms, and, among the more enterprising farmers, capital investments in farm machinery such as hand tractors or portable threshers.^{11/}

Table 5 compares the monthly income and expenses of landless workers and rice farmers, as based on their daily records. Four groupings of households have been made -- those belonging to: (i) young landless workers, 36 years of age or less; (ii) older landless workers of more than 36 years of age; (iii) small farmers of one hectare or less; and (iv) large farmers of more than one hectare.

Because young landless workers have smaller household size and younger children, they have the least income and expenses compared with the other groups. Older landless workers on the other hand tend to have higher incomes from rice farming activities than the younger households, particularly because of the help of grown-up children in the fields.

Based on their gross income, rice farmers, both small and large, earn three to four times more income than landless workers. However, production expenses -- principally for farming and installment payments on machine investments -- take up 60% of the rice farmer's gross income. The remaining 40% go mostly for the household's consumption expenses.

On a per capita basis, monthly consumption expenses for the four groups are as shown in the table below:

Table 6. Per capita consumption expenses per month and percentage of these spent for rice, 16 households, Abangay, Iloilo, dry season, 1977-78.

Household category	Per capita consumption expenses per month	Percentage spent for rice
Young landless worker	₱43.10	55%
Older landless worker	46.50	51
Small farmer	54.10	44
Large farmer	65.30	36

Considering that the average monthly rice requirement per person is 0.56 sack of palay (44 kgs.) or the equivalent of ₱23.80, the consumption figures indicate the corresponding percentages of the individual's consumption expenses that go for rice.

F. Credit Practices

Although in aggregate terms, all four peasant groups were able to match total expenditures with total income for the dry season period (Table 5), this does not mean that households have available cash and palay all the time.

Indeed, a separate recording of credit practices by each cooperating household reveals the frequency and kinds of loans made by different households.

As with income peaks and troughs, landless workers tend to borrow smaller amounts more frequently for consumption purposes, whereas rice farmers borrow less frequently but in bigger amounts for production purposes.

A crucial difference between the two groups is the rice farmers' access to institutional credit sources, in contrast to landless workers who rely mostly on relatives or close friends. Table 7 indicates the major credit source of various tenure groups for the wet season of 1977. Institutional credit sources such as the rural banks of Dingle and Pototan, the FACOMA (Farmers' Cooperative Marketing Association) in Dingle, and the recently-organized Compact Farm in Abangay provided the major loans for 57% of amortizing owners and 51% of lessees. On the other hand, landless workers for the most part (83%) had to rely on their relatives for loans. They were virtually excluded from access to institutional banking sources because they had no collateral, nor productive resources such as a farm. Thus they were not even identified nor included in any credit schemes such as the Masagana-99 program.

One side-benefit of the sagod system in Abangay has been the readiness of friends or even village sari-sari stores to extend credit to landless worker families on the basis of their expected income from sagod plots. In this sense, sagod plots provide a form of guarantee for loans extended to landless workers.

Another salient feature in credit practices among some landless workers, particularly the older households, is the occasional intersecting of several or even all of the four directions in credit practices -- i.e., (i) the household borrows cash or palay; (ii) it pays for this loan; (iii) the household lends to others; and (iv) it is paid back by these others. Figure 10 contrasts the credit patterns of two landless worker households. The first record belongs to a younger household, characterized by many short-term consumption loans. The second record belongs to an older household with grown-up children, characterized by all four directions in credit practices (see especially Week 43). Indeed, by the end of the six-month recording period, this family has lent out more consumption loans to others than it has borrowed from others.

The fact that a household also lends out small or even relatively large items to others does not necessarily indicate its economic viability. Other social considerations may be involved -- e.g., families may share what little they have as a form of shared poverty and also as a form of security in the face of future emergencies. Savings may likewise take the form of stored palay rather than cash earnings in the house, for, as is the common experience of many households, it is easier and safer to keep surplus income in kind than in cash.

G. Profile of Peasant Subclasses

In terms of percentage representation in the total barrio population, amortizing owners, permanent lessees, and landless workers constitute the three major peasant subclasses in Abangay and Rajal Sur today.

"Peasant subclasses" is a term that connotes both the similarities and differences among amortizing owners, lessees, and landless workers. As peasants, all groups are composed of small farming households who directly till or operate the land in some way as their major source of livelihood, and have been engaged in subsistence farming with varying degrees of market orientation. On the other hand, the differences in tenure status, whether legal or actual -- in terms of rights to the land, rights to the harvest, rights to infrastructure services, and even rights to be organized and recognized by government -- may have formed subdivisions among the peasant class and brought about a stratification of the peasantry.

Some of these differences among subclasses are fairly discernible. Landless workers as a group are relatively younger than amortizing owners and lessees (Table 8). Forty-one percent of all landless workers in Abangay and 34% in Rajal Sur are in their 20s, a manifestation of the fact

that many landless workers are recently-married children of rice farmers or other landless workers. On the other end of the age spectrum, in Abangay there are more than twice as many amortizing owners and lessees than landless workers in their 40s and 50s.

In terms of educational level, however, landless workers as a group may be slightly better off than amortizing owners and lessees (Table 9). Forty percent of landless workers have reached the Grade 5-6 level in both barrios. In Abangay, 18% of landless workers have reached levels beyond Grade 6 as compared to 15% for amortizing owners and 25% for lessees. In Rajal Sur, however, the corresponding percentages for the post-elementary levels are 12% of amortizing owners, 3% of lessees and 7% of landless workers.

Some socio-economic indicators help point out the differences in the life situations of amortizing owners, lessees, and landless workers. These refer to type of housing, source of drinking water, and ownership of household and farm items (Tables 10-13). Generally, amortizing owners and lessees enjoy a more favorable situation than landless workers, even if the general standard of living in the two barrios is still considerably low compared to urban levels. Thus, for instance two-thirds of houses in Abangay and more than half of houses in Rajal Sur are still constructed out of light materials -- bamboo, nipa, wood.^{12/} Among these were houses of a proportionately greater number of landless workers -- 87% in Abangay, and 86% in Rajal Sur.

Likewise, 56% of landless workers in Abangay still depend on public pumps or open wells as their source for drinking water. In Rajal Sur, 86% of landless workers rely on a public or another family's pump (Table 11).

In terms of selected durable items kept in the house, amortizing owners, lessees, and landless workers in both barrios tend to rank consistently one after the other, with amortizing owners having more of each item, lessees in-between, and landless workers owning the least (Table 12). The same pattern is evident in the ownership of farm implements and power sources. Except for sickles, bolos, and, to a lesser extent, mats for drying the palay, landless workers generally do not have any other farm items (Table 13).

A final measure of the disparities between amortizing owners and lessees on the one hand and landless workers on the other is their access to credit (Table 14). Most landless workers, in general; rely on their relatives for their credit needs, while roughly two-thirds of rice farmers (amortizing owners and lessees) have borrowed from rural banks or government credit institutions over the past five years.

V EMERGING ISSUES IN AGRARIAN REFORM AND RURAL DEVELOPMENT

In focusing on the dynamic relationships between landless workers and rice farmers, and among various peasant subclasses as a result of land tenure changes, several key issues begin to arise. These touch upon the other related objectives of this study pertaining to equity, productivity/employment, and agrarian reform policies.

Although solutions may not be readily available, it is well to elaborate on these emerging issues in agrarian reform and rural development, if only to pinpoint areas for further investigation. Implications of this study are therefore couched in the form of questions:

(i) How are landless rural workers to be regarded in the light of the "land to the tiller" principle? A basic objective of the Philippines' agrarian reform program since its inception in 1963 has been the creation of an independent peasant class of owner-cultivators. Yet, in a village like Abangay, agrarian reform beneficiaries may be spending less hours in actual rice farming operations than another group of landless workers.

If "land to the tiller" is actually premised on a more basic principle, i.e., security of tenure, landless workers still find themselves as the most marginalized group in rural society -- bypassed by the major thrusts of agrarian reform,^{13/} and increasingly dependent on rice tenant-farmers for employment opportunities. In this sense, the sagod system has indeed provided a modicum of security and perhaps even an incipient right to sagod plots cared for on a more regular basis. Yet, on the whole, landless workers find themselves with few other alternatives -- much in the same way that share tenants of yesterday (and today) became dependent on their landlords.

(ii) How are "permanent" lessees to be reconciled with agrarian reform's original model of "owner-operated family-size farms"? On the average, lessees have smaller landholdings than amortizing owners, but attain higher yields. With already smaller landholdings, lessees' hopes for eventual ownership of the land are much dimmer or practically nil with the current exemption of small landlords from the scope of Operation Land Transfer.

On the other hand, lessees do find a definite improvement in their security of tenure and in the fixing of land rentals. Along with amortizing owners, several lessees in Abangay have begun to experiment with more intensive rice cultivation. Several have engaged in continuous cropping to attain three harvests in a single year -- usually in the months of February, June, and October. There have also been attempts to introduce intensive rice culture methods, currently being disseminated by a demonstration farm and training center of the Department of Agrarian Reform in Dumangas. Plans for the initial pilot farm in Abangay, however,

had to be shelved in mid-1977 because, although the tenant-farmer was willing to cooperate, his landlord was not. The reason given: lessees' fixed rentals are based on discrete crop seasons, whereas there is no precedent yet in Iloilo for fixing rentals on intensive rice culture areas with their staggered periods for harvesting.

(iii) Can amortizing owners really become full owners of their farms? Although "deemed owners" of the land under Presidential Decree No. 27, recipients of Certificates of Land Transfer in Abangay are de facto still paying fixed rentals, not amortization payments based on a 15-year schedule from the Land Bank.

In addition to incomplete tenure change, amortizing owners confront other problems, such as procurement of production loans (in the face of further restrictions in the Masagana-99 credit program) and how to keep up with installment payments for farm machinery. The better-off rice farmers also seem to have other more tangible interests than landless workers, such as better housing and higher education for their children.

In the meantime, agrarian reform beneficiaries are practicing some old but also some new institutionalized patterns of behavior on rice farms -- such as continued land fragmentation to a point of diminishing returns; the sagod system (a form of sub-tenancy or sharecropping arrangement with landless workers); and increasing adoption of labor-displacing in addition to yield-increasing technology.

(iv) Finally, how should rural development itself be carried out in a context of increasing stratification of the peasantry? (Fig. 13) Even if productivity levels were sufficiently increased with the new rice technology and under agrarian reform conditions, to what extent could the objective of greater equity be realized? Figures 11-12, indicating different Lorenz curves on the distribution of landholdings if various tenure groups were included (or excluded), provide one measure of equity regarding the present and projected situations in both study villages.^{14/}

Lorenz curve A compares all landholders who are actual cultivators, whether tenants or owners, with a Gini ratio of 0.299 in Abangay (Fig. 11). However, if one extends the definition of "farmwork" to include landless workers (even if they have no holdings), Lorenz curve B produces a more inequitable Gini ratio of 0.499. From the prospective of ownership, Lorenz curve C with a Gini ratio of 0.527 indicates a highly inequitable distribution among the present 45 landowners (40 landlords and 5 owner-cultivators) in Abangay. If one assumes that all eligible recipients of Certificates of Land Transfer become the new owners under agrarian reform, Lorenz curve D swings back towards the diagonal line of equality with a Gini ratio of 0.300, which closely approximates Lorenz curve A.

In Rajal Sur, however, there is a noticeable difference between Lorenz curves A and D, with Gini ratios of 0.243 and 0.334. This indicates that the permanent lessees in the Nueva Ecija barrio are replaced in Lorenz curve D by exempt small landlords with relatively larger landholdings than the small landlords in the Iloilo barrio.

Because of its limited geographical scope, the conclusions of this study may not be applicable to other areas. Furthermore, because it stresses the functional relationship among specified peasant groups rather than a more extensive sample of observations, it should perhaps be regarded simply as a presentation of perspectives of agrarian change from the household level.

On the other hand, because the village sites selected approximate the "best possible situation" for rural development, and the households studied are in many aspects considered even more advanced than their neighbors, one would not expect that conditions in less favored areas could be better off. Rather, a further question is raised:

Is this the goal towards which other villages are heading? If so, how avoid second-generation problems such as the working relationships between landless workers and rice farmers? If not the goal, what then becomes the paradigm for rural development?

NOTES

1/ In addition, two other dimensions closely related to the first two have been stressed in current views on rural development. These refer to: access to public services such as extension, credit and marketing; and the catalytic role of peasant organizations. This report, however, will focus mostly on the impact of the agrarian reform program together with the new rice technology on the study villages. All persons' names in the narrative have been changed.

2/ In Iloilo, the complete household survey was conducted in August 1977 by the writer together with local barrio assistants: Sonia Belleza, Edna Penuela, Evangeline Severo, and Fely Calanao. The first 3 also monitored the six months of daily record-keeping by 18 cooperators. In Nueva Ecija, the same household survey was conducted in September 1977 with the help of Amelia Generalla, Thelma Bernardo, Herminia del Rosario, and Anita Villaroso. Ms. Generalla has also been in charge of processing the data for computer analysis, and has been invaluable during the tabulation phase of the research.

3/ In cases of tenure combinations, "dominant tenure" is defined as the tenure that provides the major source of income for the individual and his family.

4/ "Amortizing owners" is the official term used by the Department (now Ministry) of Agrarian Reform to designate rice and corn tenants who have been "deemed owners" of the land under P.D. 27. In its wider sense, it refers to all CLT-recipients. In its narrow sense, it refers to those who have actually started amortization payments based on the agreed price of the land. These payments would be paid over the next 15 years. In the absence of land valuation proceedings, a CLT-recipient's lease rentals since October 1972 would be considered partial payments for the land, according to DAR sources.

5/ Some landless workers have also indicated their disapproval of the agrarian reform program not only because it excludes them from its scope but also because it removes from them any further hope of replacing present-day tenants on farmlands. In earlier years, when eviction of tenants was common, landless workers stood to benefit by becoming the new tenants.

6/ This is similar to the gama system in Laguna province and the hilani system in some parts of the Bicol region. (Cf. Kikuchi et. al. 1977, and Barrameda 1977.)

7/ There was no income, however, from a third crop this year, because the National Irrigation Administration stopped the flow of water through the main canal for two months from mid-March to mid-May to allow for major improvements on the irrigation system. The stoppage of irrigation service, though announced well in advance, caused major disruptions in the economic situations of not a few rice farmers and landless workers, since it meant a gap of at least six months from the

last dry season harvest to the first harvest of the wet season -- an indication of how much households in Abangay had become dependent on the rhythm of almost continuous cropping in rice. For a fuller description of the Sumagaysay's life-situation, see the author's earlier case study (Ledesma 1977).

8/ Under such circumstances, it would seem that one third of the time spent in sagod weeding has not been remunerated at all, but instead has been forfeited in favor of the machine.

9/ In fact, some variations have begun to arise. In one instance, the Sumagaysay household contracted with a rice farmer to do transplanting instead of weeding under sagod -- because they consider transplanting a less onerous farm operation than weeding which requires a constant stooping position and usually is done twice. In another instance, the Sumagaysays shouldered more of the costs: in addition to weeding, they also bought out of their own income a half-liter of insecticide to be applied on a tenant-farmer's field.

10/ For this reason, some landless workers complain that rice farmers do not fully utilize the portion in their Masagana-99 loans allotted for labor costs, but instead use this for their own consumption needs -- at a time when landless workers themselves are in most need for consumption loans, precisely because they no longer earn immediate income from weeding operations.

11/ Landless workers also engage in livestock and poultry raising but to a lesser degree because of less operating capital on hand. In several instances, they agree to fatten a rice farmer's pig or take care of his carabao with the understanding of splitting the benefits -- whether it be a litter of piglets or cash proceeds from a market sale. The term for this arrangement is also sagod, most likely a prototype of sagod activities on rice farms.

12/ On 13-14 November 1977, Typhoon Unding levelled more than 30 of these houses in Rajal Sur. The greater frequency of typhoons in Luzon is perhaps one reason why more houses in Rajal Sur are built with sturdier materials than those in Abargay.

13/ For the most part, landless workers do not even own their homelots, nor have a tenant's right to homelots. This adds a severe constraint to many landless workers in the cultivation of home gardens -- a vital source of supplemental food for their home diets.

14/ "Closely related to the question of farm size is the issue of tenure. It might be argued in the Philippine case, for example, where tenancy rates are extremely high, that the major inequity exists between landowner and tenant rather than between large and small farmers." (Barker and Herdt 1978:97)

REFERENCES

- Barker, R. and R.W. Herdt. 1978. "Equity implications of technology changes," in IRRI, Interpretive analysis of selected papers from Changes in Rice Farming in Selected Areas of Asia. Los Baños, Laguna. pp. 83-108.
- Barrameda, Jose, Jr. 1977. "A case study of a coconut tenant-farmer in the Bicol river basin." Paper presented at a national workshop on small farmer credit, sponsored by TBAC and FAO, Guinobatan, Albay, October.
- Estrella, Conrado. 1975. Agrarian Reform in the New Society. 3rd ed., n.p.
- Fegan, Brian. 1972. "Between the lord and the law: tenants' dilemmas." *Philippine Sociological Review* 20(1-2):113-27.
- Hayami, Yujiro. 1976. Anatomy of Peasant Economy. Agricultural Economics Department, IRRI, Los Baños, Laguna.
- Kikuchi, M., L. Maligalig-Bambo, and Y. Hayami. 1977. "Evolution of land tenure system in a Laguna village." Report No. 1, Project "Dynamics of Agrarian Change," IRRI, Los Baños, Laguna.
- Ledesma, Antonio J. 1977. "The Sumagaysay family: a case study of landless rural workers." *Land Tenure Center Newsletter* (Madison, Wisconsin), 55:14-30.
- Lynch, F., J. Illo, and J. Barrameda, Jr. 1976. Let my people lead: rationale and outline of a people-centered assistance program for the Bicol river basin. Social Survey Research Unit, Institute of Philippine Culture, Ateneo de Manila University, Quezon City.
- Sommers, Paul. 1978. "The traditional Filipino halo-halo garden." Paper presented at IRRI Thursday Seminar, Los Baños, Laguna, 17 August.
- Takahashi, Akira. 1970. Land and peasants in Central Luzon: socio-economic structure of a Philippine village. Honolulu, East-West Center, University of Hawaii Press.
- Umehara, Hiromitsu. 1974. A hacienda barrio in Central Luzon. Institute of Developing Economies, Tokyo.
- Wickham, G., E.B. Torres, and G.T. Castillo. 1974. The farmer's laborer: an exploratory study in Laguna, Philippines. U.P. College of Agriculture, Los Baños, Laguna.

Table 1. Tenure classification of households in Abangay (Iloilo) and Rajal Sur (Nueva Ecija), 1977.

Tenure	Bgy. Abangay		Bgy. Rajal Sur	
	No.	(%)	No.	(%)
OWNER-CULTIVATOR	5	2	3	2
AMORTIZING OWNER	83	33	58	34
- with amortization payment	(-)		(30)	
- with Certificate of Land Transfer only	(83)		(28)	
LESSEE	28	11	32	19
- with written contract	(13)		(24)	
- with oral contract	(15)		(8)	
SHARE TENANT	(10)	12	5	(6)
- sub-tenant	(2)		(4)	
- <u>kasugpon</u> with farm	(-)		(3)	
- mortgagee (<u>sangla</u>)	(-)		(3)	
LANDLESS WORKER	97	38	44	26
- with regular wage (kasugpon)			(4)	
- without regular wage	(89)		(40)	
- sugar workers	(8)		(-)	
NON-FARM	(27)	28	11	(13)
- retired	(1)		(3)	
TOTAL	253	100	169	100

Table 2 . Average farm size of 1977 tenure groups compared with their previous farm sizes (in hectares), Abangay, Iloilo.

Tenure groups	1972-77	1963-71	1954-62	Before 1954	Average no. of years farming
Owner cultivators	0.78 (5)	1.20 (3)	1.55 (2)	1.55 (2)	16.20 (5)
Amortizing owners	1.41 (83)	1.48 (78)	1.57 (44)	1.69 (27)	18.74 (83)
Lessees	0.92 (28)	0.84 (23)	0.90 (12)	0.78 (6)	14.00 (28)
Share tenants	1.12 (12)	1.44 (8)	1.63 (6)	1.43 (3)	11.50 (12)
Landless workers	- -	- -	- -	1.00 (1)	14.55 (92)
All tenure groups	1.26 (128)	1.34 (112)	1.45 (64)	1.51 (39)	15.94 (220)

NOTE: Figures in parentheses indicate number of valid observations.

Table 2a. Average farm size of 1977 tenure groups compared with their previous farm sizes (in hectares), Rajal Sur, Nueva Ecija.

Tenure groups	1972-77	1963-71	1954-62	Before 1954	Average no. of years farming
Owner cultivators	4.17 (3)	4.17 (3)	2.83 (3)	6.50 (1)	21.33 (3)
Amortizing owners	2.40 (58)	2.57 (42)	2.77 (32)	2.56 (15)	13.58 (58)
Lessees	2.29 (32)	2.84 (24)	3.28 (17)	3.30 (10)	13.03 (31)
Share tenants	1.64 (16)	2.00 (3)	2.50 (1)	- -	3.88 (16)
Landless workers	- -	2.30 (5)	1.50 (2)	- -	11.96 (44)
Non-farmers*	1.10 (3)	2.00 (1)	- -	- -	5.67 (3)
All tenure groups	2.31 (109)	2.67 (78)	2.88 (55)	2.99 (26)	12.01 (155)

*with combination

Note: Figures in parentheses indicate number of valid observations.

Table 3. Labor allocation by operation and by source on 9 rice farms, Abangay, Iloilo, dry season, 1977-78 (in hours per hectare).a/

Rice farming operation	Family ^{b/}		Hired		Total	
	Hours	(%) ^{c/}	Hours	(%) ^{c/}	Hours	(%) ^{f/}
Clearing, fixing bund	78.9	(91)	7.4	(9)	86.3	(12)
Plowing, harrowing, levelling	58.7	(73)	21.9	(27)	80.6	(11)
Seedbed preparation	13.3	(89)	1.7	(11)	15.0	(2)
Transplanting or broadcasting ^{d/}	19.8	(20)	80.7	(80)	100.5	(14)
Fertilizing, spraying, weed control	40.8	(86)	6.9	(14)	47.7	(7)
Weeding, replanting	42.7	(22)	149.4	(78)	192.1	(27)
Harvesting	12.9	(12)	95.1	(88)	108.0	(15)
Threshing, ^{e/} cleaning	8.1	(13)	56.1	(87)	64.2	(9)
Hauling	8.5	(45)	10.3	(55)	18.8	(3)
TOTAL	283.7	(40)	429.4	(60)	713.1	(100)

a/Source: Nine rice farmers' daily records in 10.8 hectares.

b/Includes 37 hours of exchange labor.

c/Percentages for "family" and "hired" are read crosswise.

d/Four farmers practiced broadcasting, while another one tried it on half of his field.

e/Four farmers utilized portable threshers.

f/Percentages of all operations are read downwards.

Table 4. Comparison of traditional and modern methods in rice farming operations, nine rice farms, Abangay, Iloilo, dry season, 1977-78 (per hectare).

		Mandays	Cost (₱)	Daily Wage Rate (₱)
1.	T: Carabao plowing	16.1	193	12-15
	M: Hand tractor	2.9	350	
	Difference (T-M)	13.2	-157	
2.	T: Transplanting	28.3	170	6
	M: Broadcasting	2.8	34	12
	Difference (T-M)	25.5	136	
3.	T: Weeding with wage	19.0	114	6
	M: Weeding under <u>sagod</u>	19.0	0	6
	Difference (T-M)	0	114	
4.	T: Foot threshing	11.5	Included in harvester's 1/6th share	
	M: Mechanical	3.1	One third of harvester's 1/6th share	
	Difference (T-M)	8.4		

Legend: T - "Traditional"
M - "Modern"

Table 5. Household monthly income and expenses of 8 Landless Workers and 8 Rice Farmers, Abangay (Iloilo), Dry season, 1977-78 (in pesos).

	Young LWs (N=3)	Older LWs (N=5)	Small farmers (N=4)	Large farmers (N=4)
Income	273	388	1018	1347
a) Rice farming ^a	223	280	596	924
b) Other sources ^a	50	108	422	423
Expenses	245	311	1015	1269
a) Consumption	244	307	392	457
b) Production	1	4	623	812
Surplus	28	77	3	78

^aIncludes income from machine investments

Table 7. Major source of credit for farming households and tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, wet season, 1977 (in %)

Major credit source	A B A N G A Y						R A J A L			S U R		
	Farming house- holds (N=215)	OC (N=5)	AO (N=83)	L (N=28)	ST (N=12)	LW (N=87)	Farming house- holds (N=147)	OC (N=3)	AO (N=58)	L (N=32)	ST (N=16)	LW (N=38)
Relative	50	40	25	32	33	83	31	33	21	13	56	50
Landlord	6	0	6	11	25	1	3	0	0	0	13	8
Private moneylender	6	20	5	0	8	8	8	0	3	22	13	0
Rural bank	18	40	36	18	8	1	7	33	10	9	0	0
FACOMA	2	0	5	4	0	0	0	0	0	0	0	0
Compact Farm	10	0	16	25	17	0	0	0	0	0	0	0
SN/CRB	1	0	0	4	0	0	37	33	66	44	13	0
Others	1	0	2	4	0	0	0	0	0	0	0	0
None	6	0	5	4	8	7	14	0	0	13	6	42
TOTAL	100	100	100	102	99	100	100	99	100	101	101	100

Legend: OC - Owner cultivator; AO - Amortizing owner; L - Lessee; ST - Share tenant; LW - Landless worker.

Table 8. Age composition of household heads in total population, and in three main tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977.

Age bracket	A B A N G A Y								R A J A L				S U R			
	Total population		Amortizing owner		Lessee		Landless worker		Total population		Amortizing owner		Lessee		Landless worker	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
< 20	0	0	0	0	0	0	0	0	3	2	0	0	1	3	2	4
20-29	57	23	7	8	7	25	40	41	43	25	10	17	4	13	15	34
30-39	53	21	16	19	6	21	18	19	58	34	17	29	11	34	17	39
40-49	62	25	26	31	7	25	16	17	26	15	11	19	6	19	6	14
50-59	45	18	20	24	6	21	12	12	22	13	13	22	6	19	2	4
60-69	36	14	14	17	2	7	11	11	17	10	7	12	4	13	2	4
TOTAL	253	101	83	99	28	99	97	100	169	99	58	99	32	100	44	99
Mean	43.0		47.2		41.9		38.2		43.0		42.4		42.8		35.4	

NOTE: Percentages may not total 100 due to rounding.

Table 9. Educational level of household heads by tenure, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977.

Educational level	A B A N G A Y								R A J A L			S U R				
	Total		OC	AO	L	ST	LW	NF	Total		OC	AO	L	ST	LW	NF
	No.	(%)	(N=5)	(N=83)	(N=28)	(N=12)	(N=97)	(N=28)	No.	(%)	(N=3)	(N=58)	(N=32)	(N=16)	(N=44)	(N=16)
	----- % -----								----- % -----							
No schooling	21	8	0	12	0	0	8	11	20	12	33	9	25	6	7	13
Grades 1-2	25	10	0	11	11	8	11	4	13	8	0	12	9	0	7	0
3-4	60	24	40	28	25	25	22	14	62	37	0	38	28	75	39	13
5-6	91	36	40	34	39	42	40	21	58	34	33	29	34	13	41	56
High school 1-2	22	9	0	11	7	8	8	7	5	3	0	3	3	0	2	6
3-4	21	8	20	2	11	17	9	14	7	4	33	5	0	0	2	13
College 1-2	6	2	0	2	7	0	1	4	4	2	0	3	0	6	2	0
3-4	7	3	0	0	0	0	0	25	0	0	0	0	0	0	0	0
TOTAL	253	(100)	(100)	(100)	(100)	(100)	(99)	(100)	169	(100)	(99)	(99)	(99)	(100)	(100)	(101)

Legend: OC - Owner cultivator; AO - Amortizing owner; L - Lessee; ST - Share tenant; LW - Landless worker; NF - Non-farm

Table 10. Type of house by percentage of total population and tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977 (in %).

Type of house	A B A N G A Y				R A J A L			S U R
	Total population (N=253)	AO (N=83)	L (N=28)	LW (N=97)	Total population (N=169)	AO (N=58)	L (N=32)	LW (N=44)
Permanent	8	8	14	2	21	41	16	7
Semi-permanent	27	39	25	11	25	31	41	7
Temporary	66	53	61	87	54	28	44	86
TOTAL	101	100	100	100	100	100	101	100

Legend: AO - Amortizing owner; L - Lessee; LW - Landless worker

Table 11. Drinking water source of households by percentage of total population and tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977 (in %).

Drinking water source	A B A N G A Y				R A J A L S U R			
	Total population (N=253)	AO (N=83)	L (N=28)	LW (N=97)	Total population (N=169)	AO (N=58)	L (N=32)	LW (N=44)
Piped water in house	10	6	18	3	0	0	0	0
Piped water outside house	22	21	14	21	0	0	0	0
Pump (private)	22	28	21	20	38	62	41	14
Pump (public or another family's)	36	36	36	42	62	38	59	86
Open well	11	10	11	14	0	0	0	0
TOTAL	101	101	100	100	100	100	100	100

Legend: AO - Amortizing owner; L - Lessee; LW - Landless worker

Table 12. Household items owned by total population and tenure groups in Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977 (in %).

Household items	A B A N G A Y				R A J A L			S U R
	Total population	AO	L	LW	Total population	AO	L	LW
	(N=253)	(N=83)	(N=28)	(N=97)	(N=169)	(N=58)	(N=32)	(N=44)
Sala set	41	59	43	19	31	50	41	7
Clothes closet	50	69	61	27	78	91	88	66
Radio	68	86	86	49	67	78	66	57
Book/magazine	31	39	39	13	30	45	34	16
Gas stove	7	6	7	0	21	24	28	18
Sewing machine	19	29	11	8	15	28	16	0
Refrigerator	2	0	7	0	1	3	0	0

Legend: AO - Amortizing owner; L - Lessee; LW - Landless worker

Table 13. Farm items owned by farming households and by tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1977, (by ratio of item/household).

Farm items	A B A N G A Y							R A J A L S U R						
	No. of items	Farm holds (N=223)	OC (N=5)	AO (N=83)	L (N=28)	ST (N=12)	LW (N=95)	No. of items	Farm holds (N=145)	OC (N=3)	AO (N=58)	L (N=32)	ST (N=16)	LW (N=36)
	----- by ratio -----							----- by ratio -----						
Sickle	408	1.83	2.0	1.86	1.75	1.92	1.81	266	1.83	1.33	2.05	1.81	1.63	1.64
Bolo	284	1.27	1.4	1.52	1.32	1.08	1.06	216	1.49	3.67	1.62	1.69	1.25	1.03
Mat for drying palay	249	1.12	1.4	1.41	1.5	1.08	0.74	118	0.81	0.33	0.86	0.97	0.81	0.64
Carabao	70	0.31	0.4	0.48	0.32	0.5	0.14	78	0.54	1.0	0.69	0.84	0.25	0.11
Animal plow	78	0.35	0.6	0.58	0.54	0.5	0.06	57	0.39	1.0	0.55	0.66	0.06	0
Rotary weeder	7	0.03	0.2	0.07	0	0	0	18	0.12	0.33	0.26	0.06	0	0
Sprayer	69	0.31	0.6	0.59	0.5	0.17	0.01	40	0.28	1.0	0.47	0.22	0.13	0.03
Hand tractor	8	0.04	0	0.07	0.04	0.08	0	30	0.21	0.33	0.41	0.16	0	0
Water pump	4	0.02	0	0.02	0	0.17	0	18	0.12	0.33	0.16	0.25	0	0
Blower	4	0.02	0.2	0.04	0	0	0	7	0.05	0	0.05	0.09	0	0.03
Thresher		0.01	0	0.02	0	0	0							

Legend: OC - Owner cultivator; AO - Amortizing owner; L - Lessee; ST - Share tenant; LW - Landless worker

Table 14. Credit sources approached by percentage of total population and tenure groups, Abangay, Iloilo and Rajal Sur, Nueva Ecija, 1972-77.

Credit sources	A B A N G A Y					R A J A L			S U R	
	Farm population	AO	L	ST	LW	Farm population	AO	L	ST	LW
	(N=219)	(N=83)	(N=28)	(N=12)	(N=91)	(N=153)	(N=58)	(N=32)	(N=16)	(N=44)
Relative	79	65	71	83	95	69	64	63	94	75
Landlord	18	24	36	50	3	10	9	3	25	9
Private moneylender	47	46	46	33	48	29	28	50	31	18
Rural bank	35	68	50	25	1	46	67	72	38	0
FACOMA	18	35	32	0	1	12	22	13	0	2
Compact Farm	14	27	21	17	0	1	2	0	0	0
SN/CRB	6	11	7	8	0	56	90	75	38	2

Legend: AO - Amortizing owner; L - Lessee; ST - Share tenant; LW - Landless worker

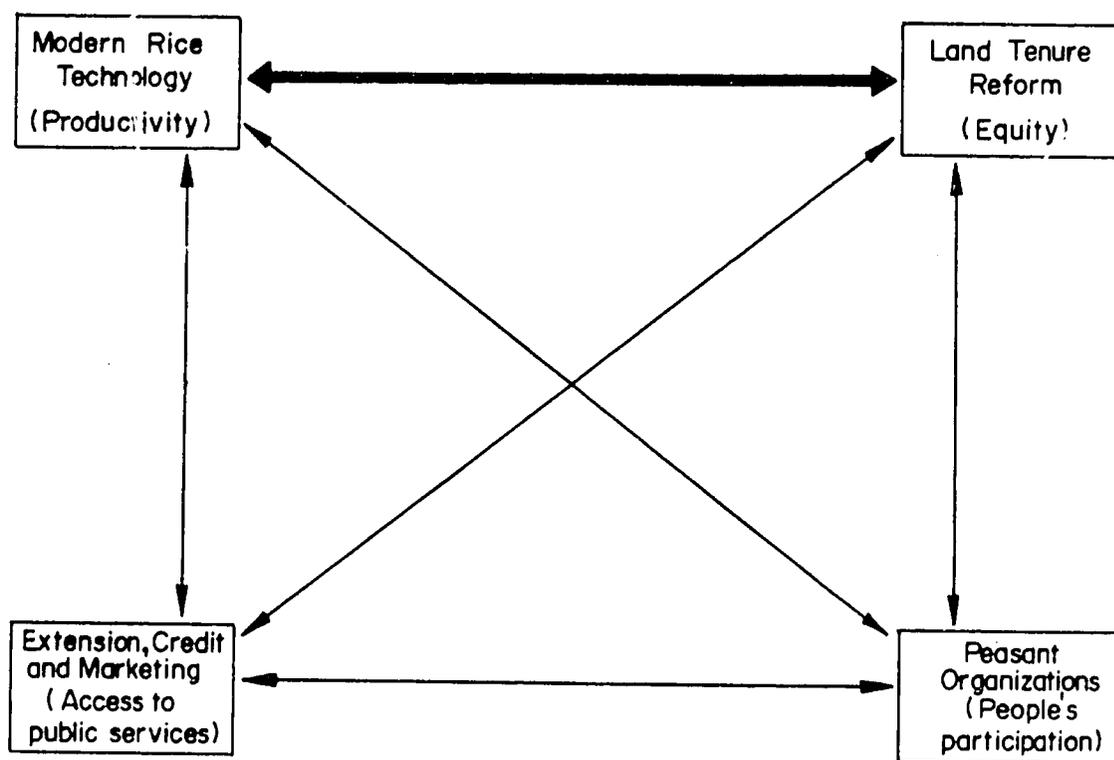


FIG. 1. A FRAMEWORK FOR RURAL DEVELOPMENT

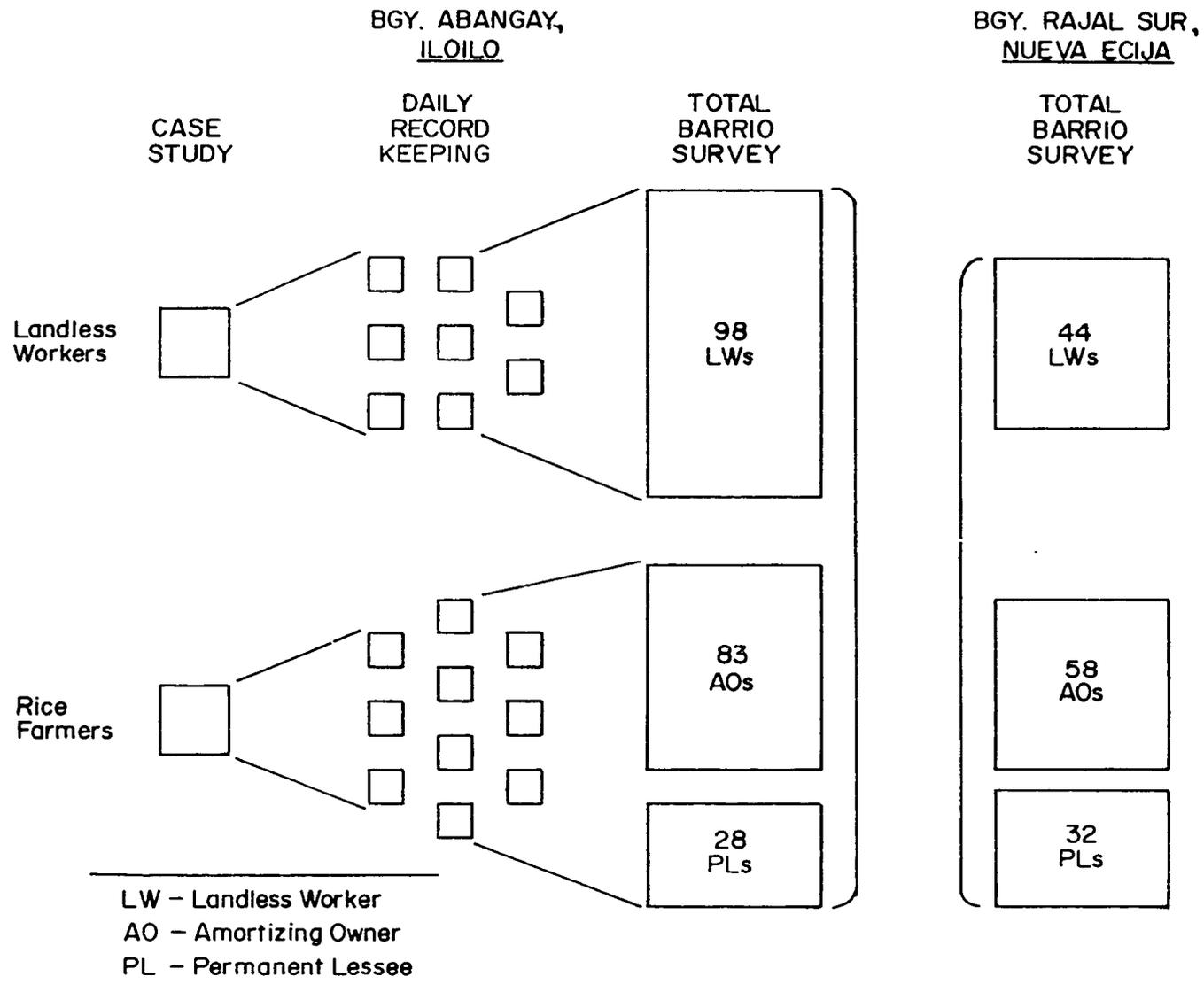


Fig. 2. Research methodology for household and village level study.

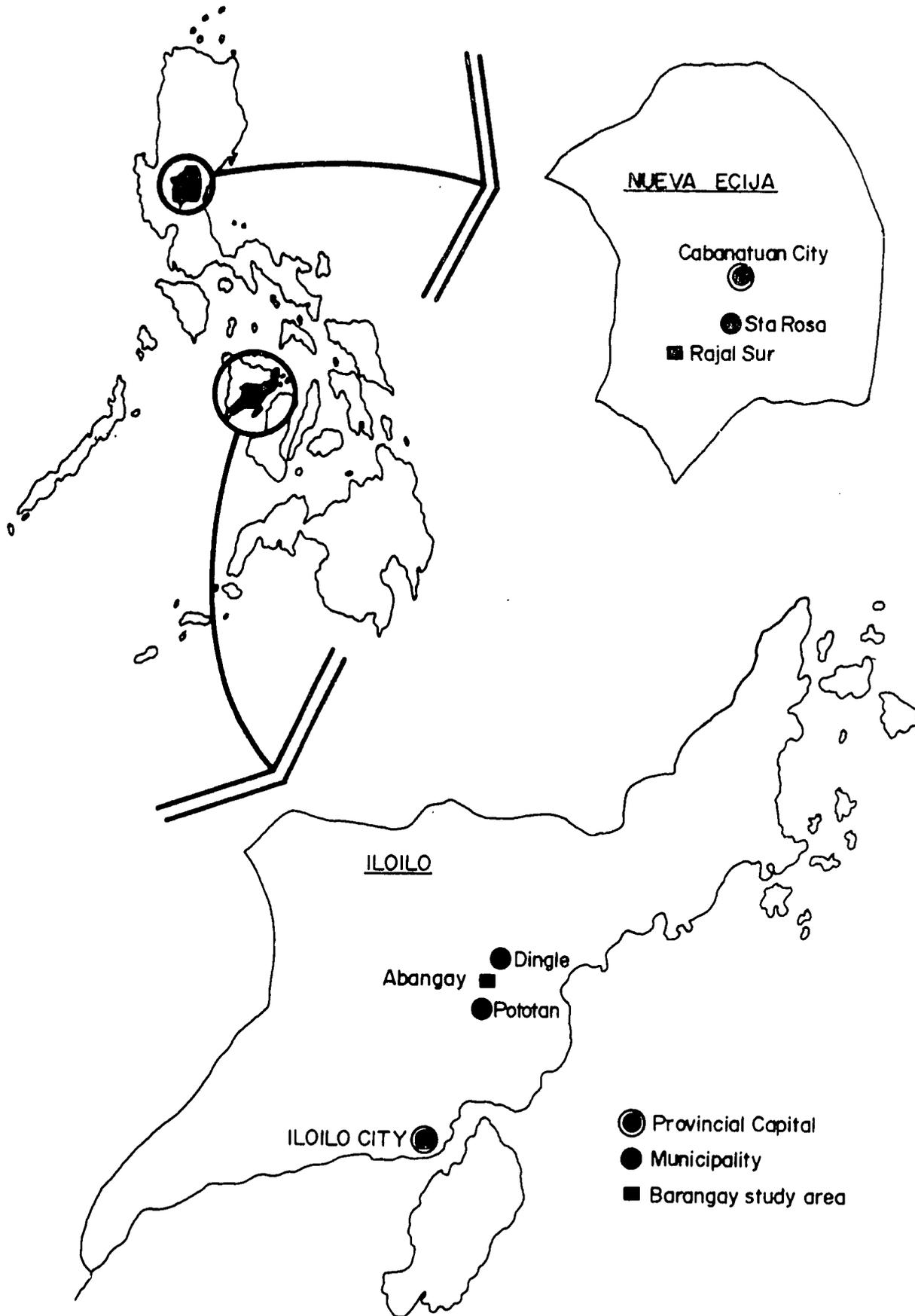


Fig. 3. Relative location of two study areas in Iloilo and Nueva Ecija.

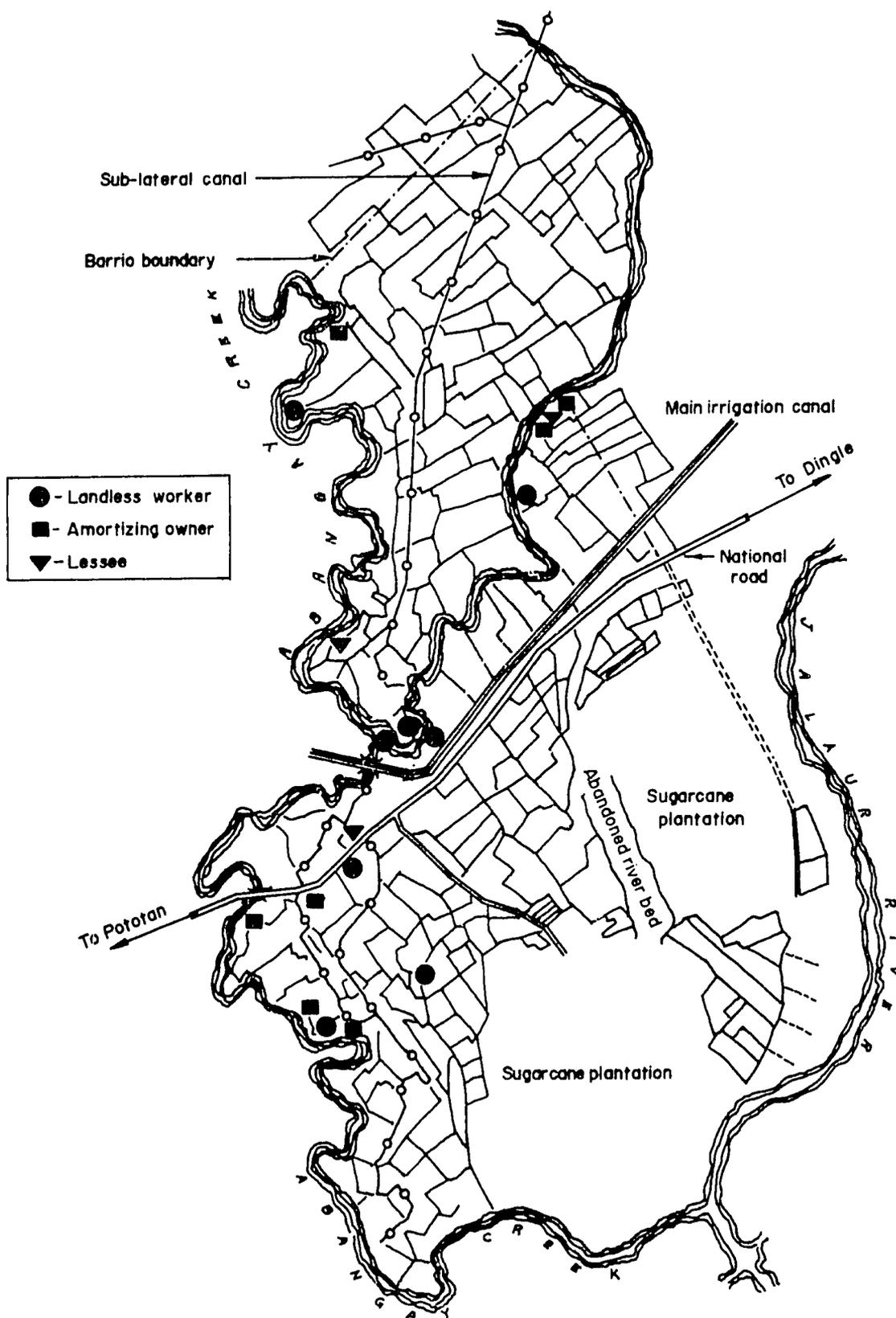


Fig. 4. Rice farms in Bgy. Abangay, Iloilo and homesites of 18 record-keeping households.

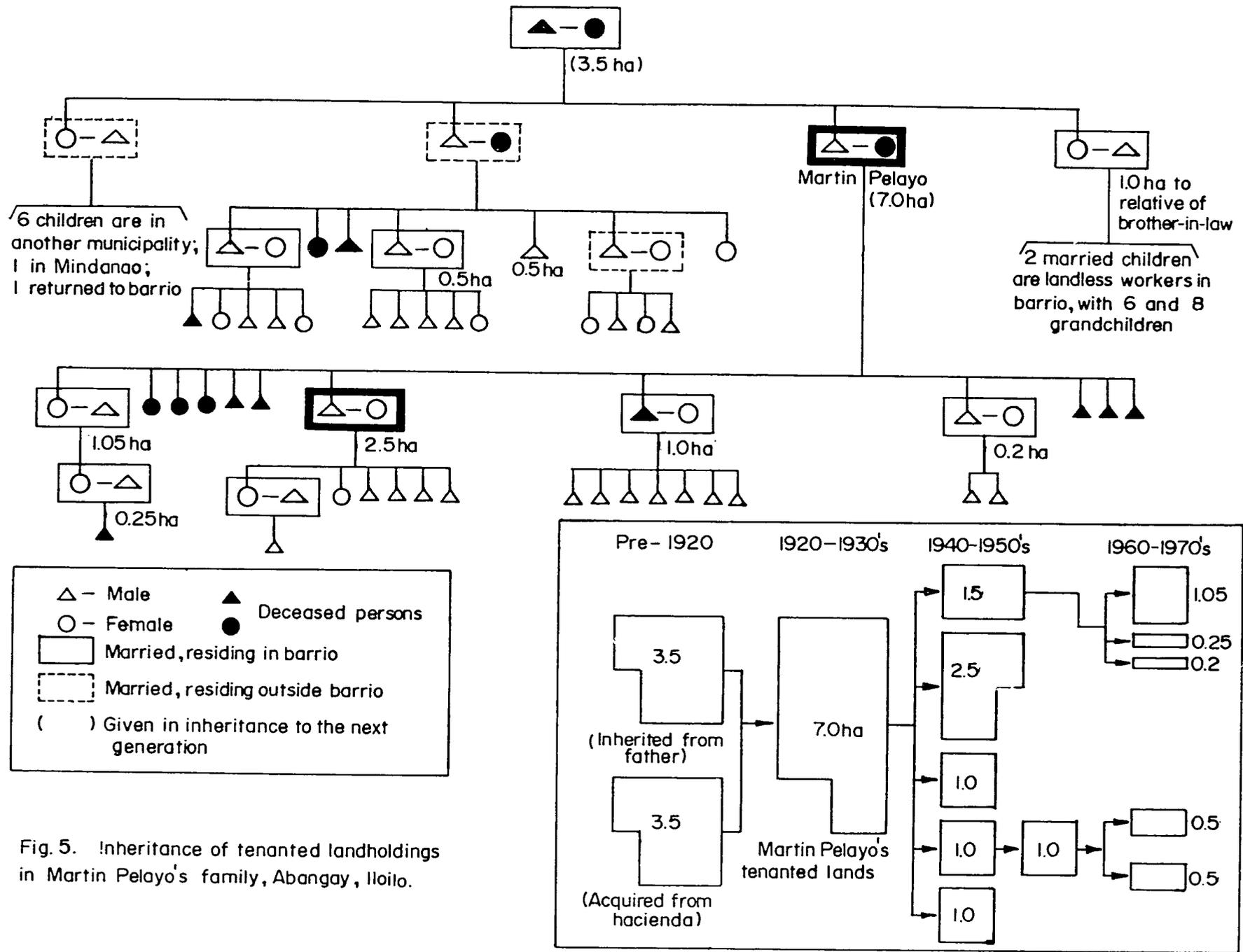


Fig. 5. Inheritance of tenanted landholdings in Martin Pelayo's family, Abangay, Iloilo.

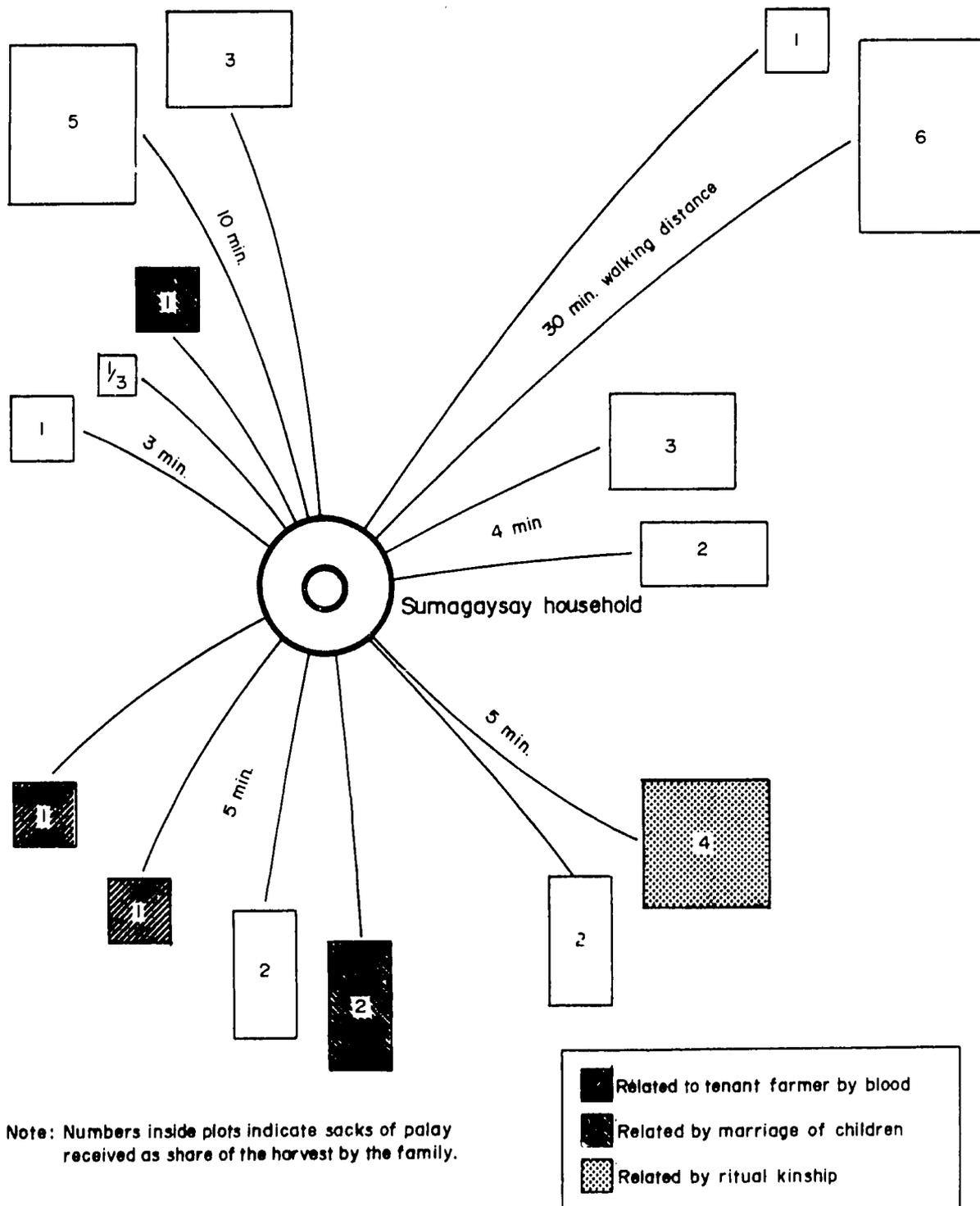


Fig. 6. Rice plots contracted by a landless worker's family under the "sagod" system, dry season, 1977-78, Abangay, Iloilo.

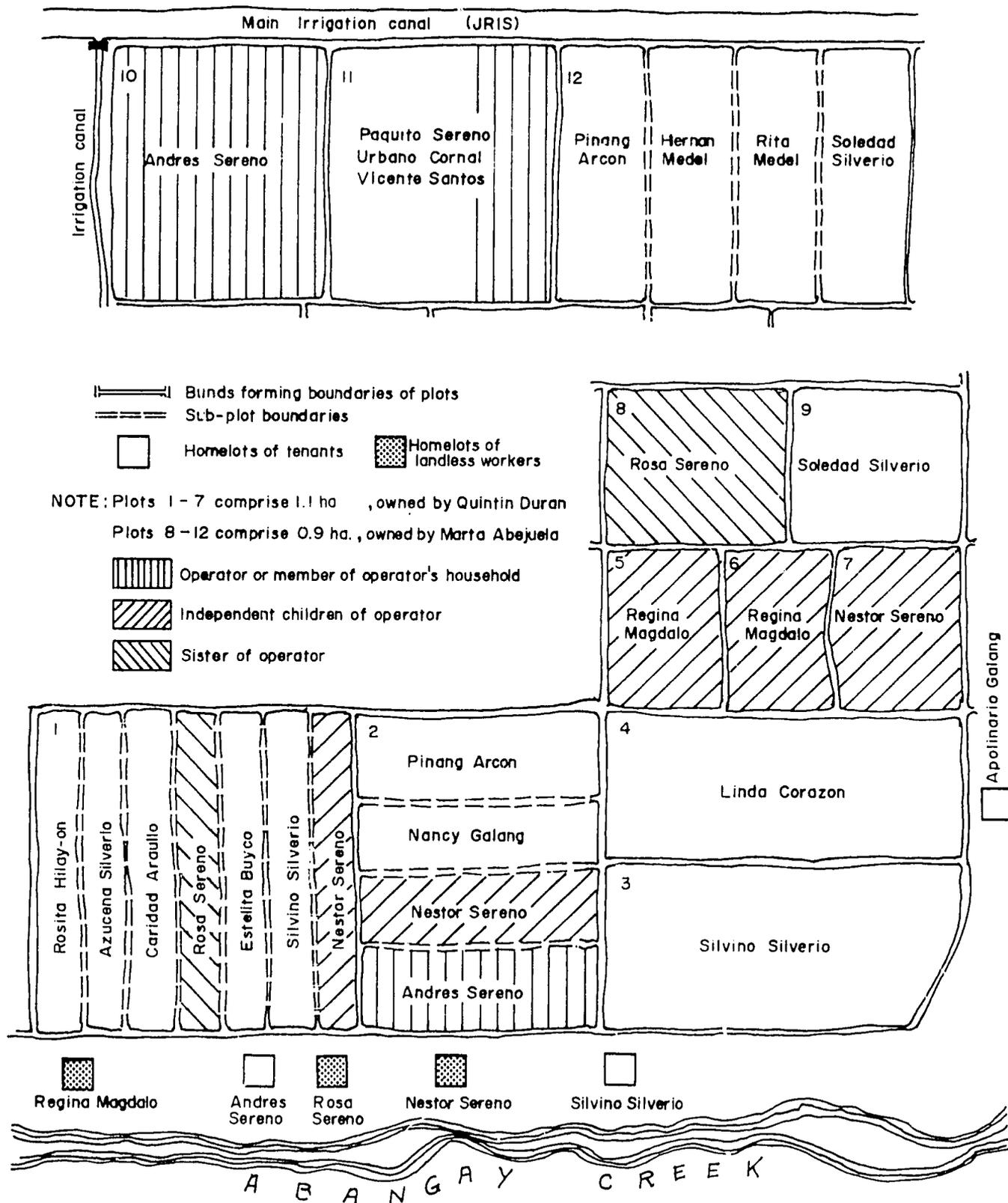


Fig. 7. Weeder-harvesters under the "sagod" system on a tenant-farmer's rice farm, dry season, 1977-78, Abangay, Iloilo.

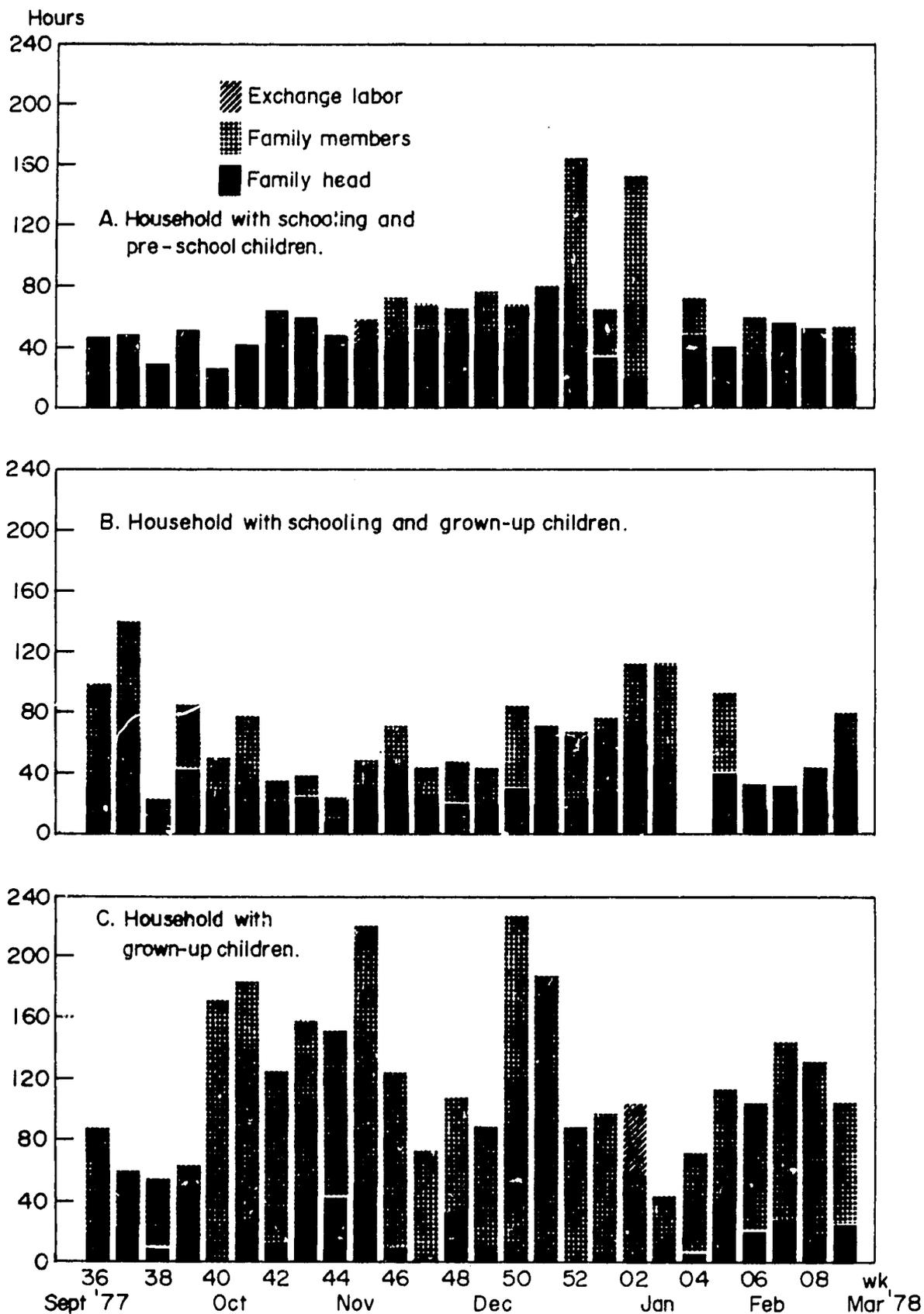


Fig. 8. Labor allocation on rice farms by source among three landless worker households, Abangay, Iloilo, 26 weeks, 1977-78.

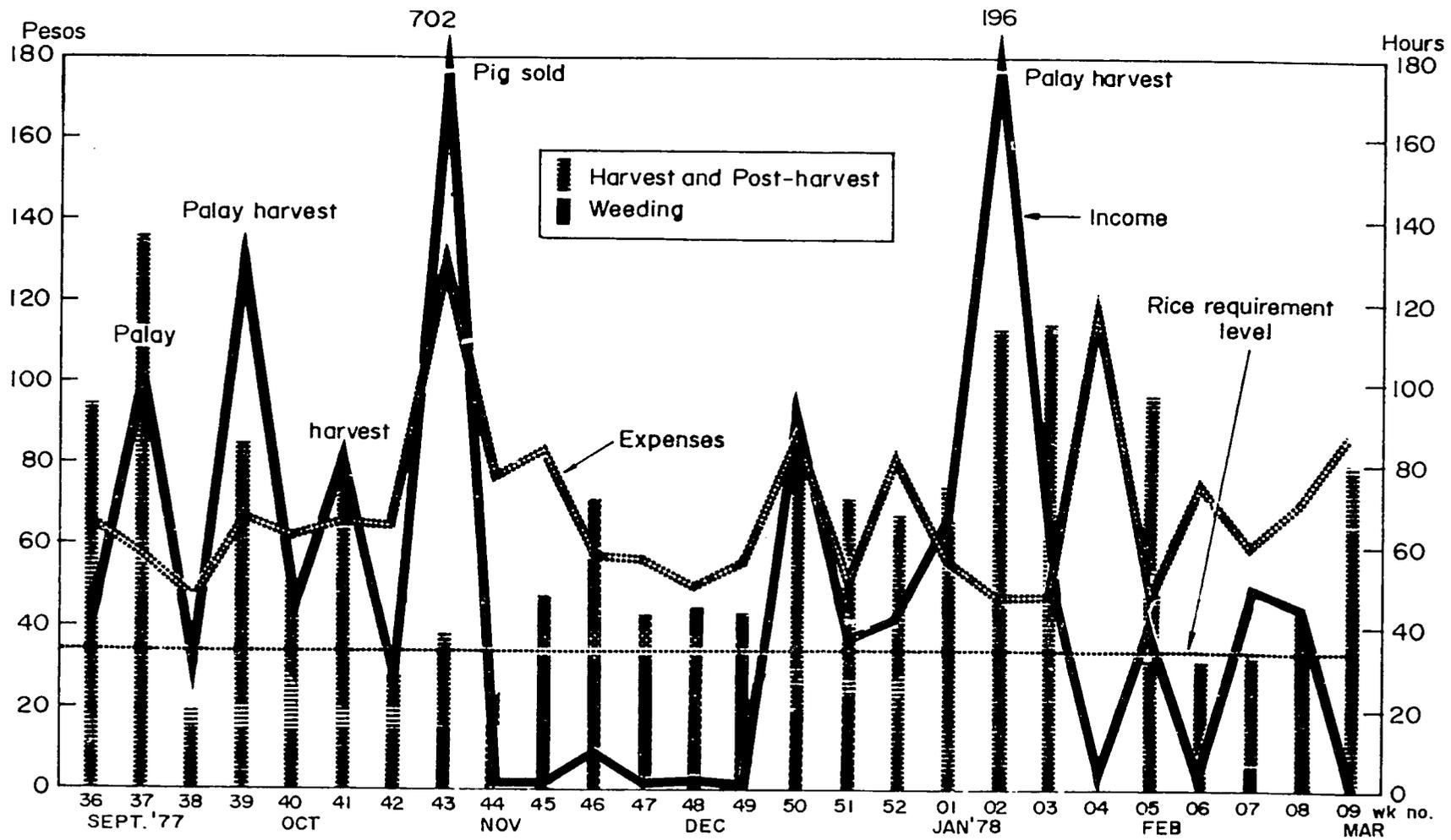


Fig. 9. Weekly income and expenses, and labor allocation by rice farming operation of a landless worker's family, Abangay, Iloilo, 26 weeks, 1977-78.

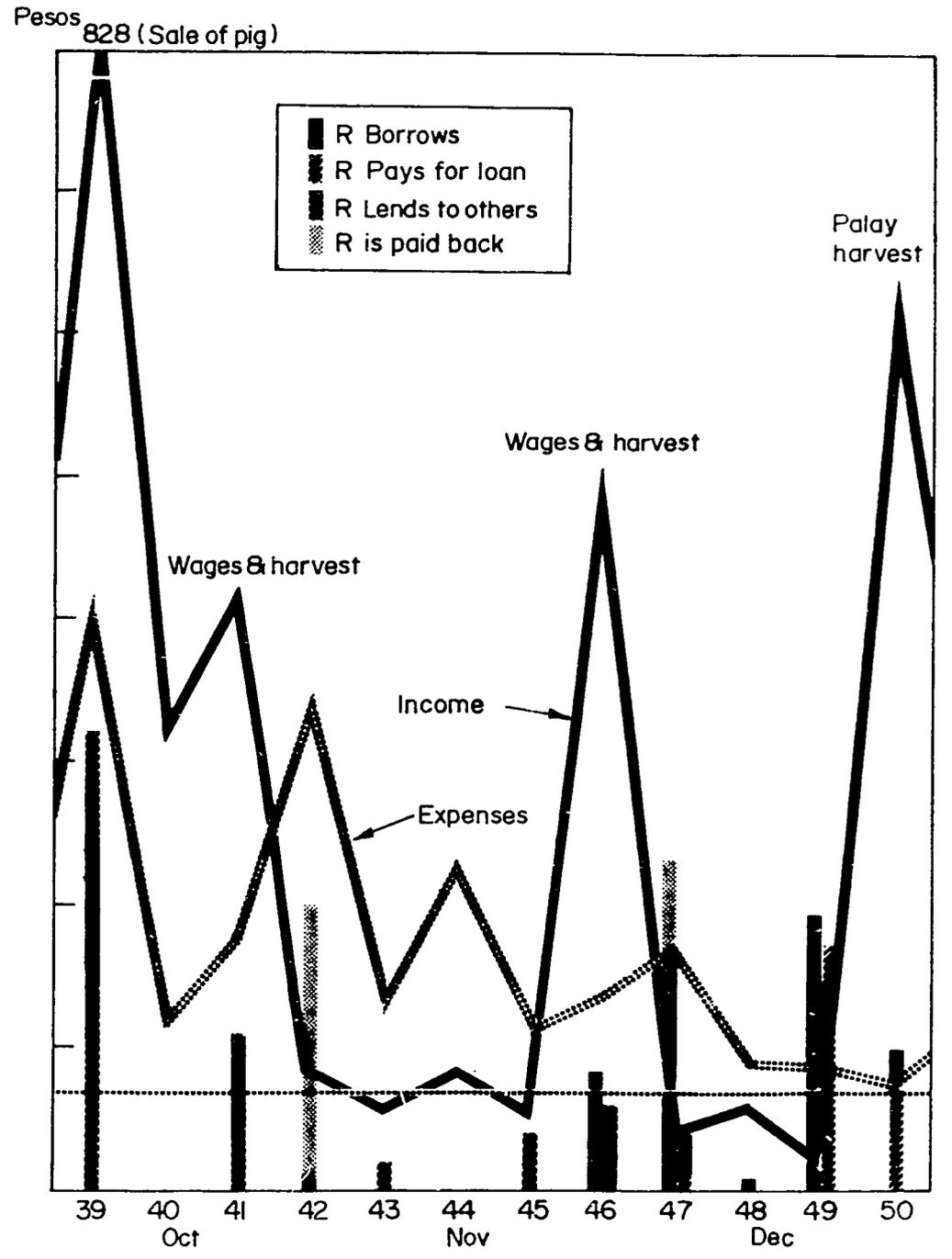
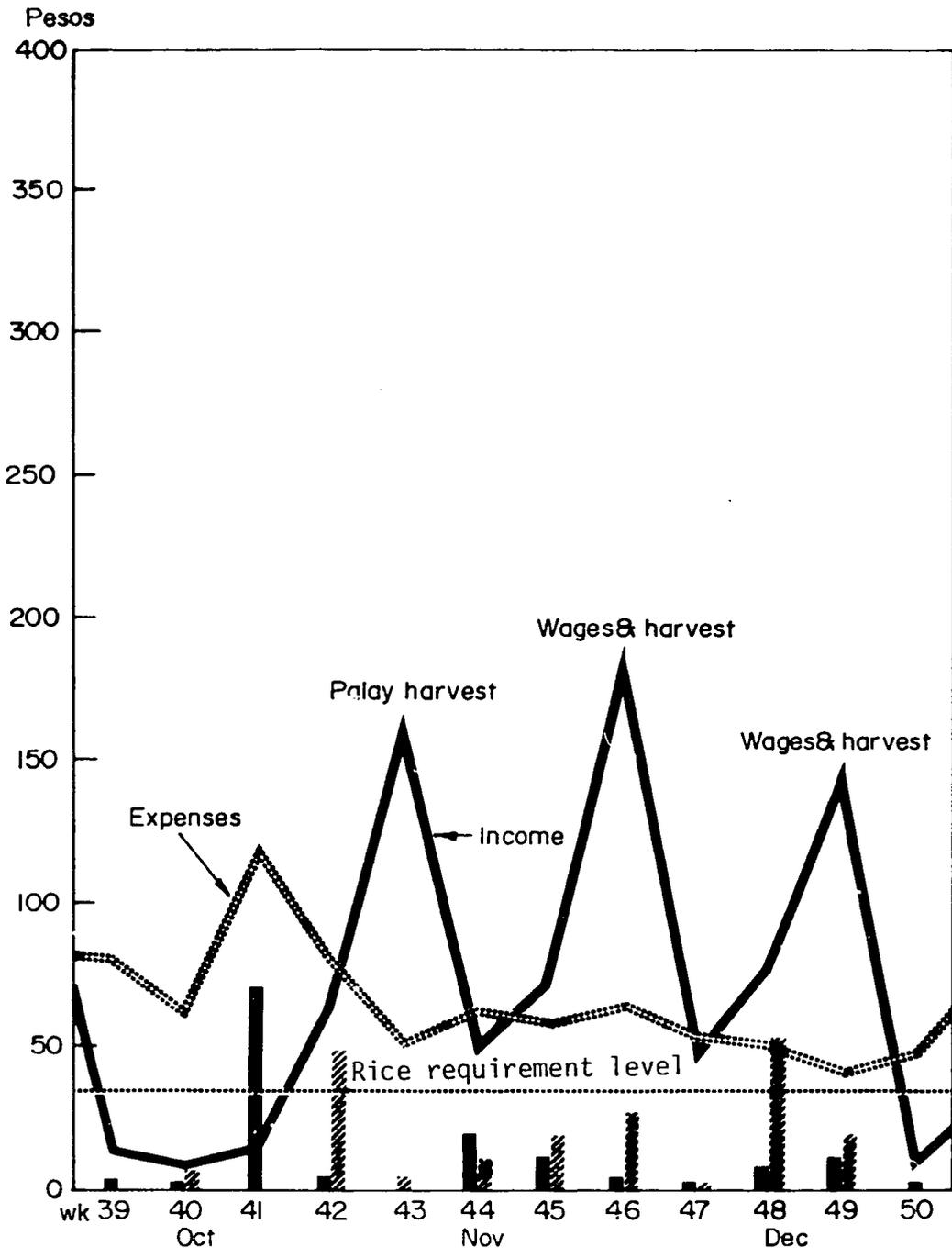


Fig. 10. Credit practices of two landless worker households over a 12-week period, Abangay, Iloilo, 1977.

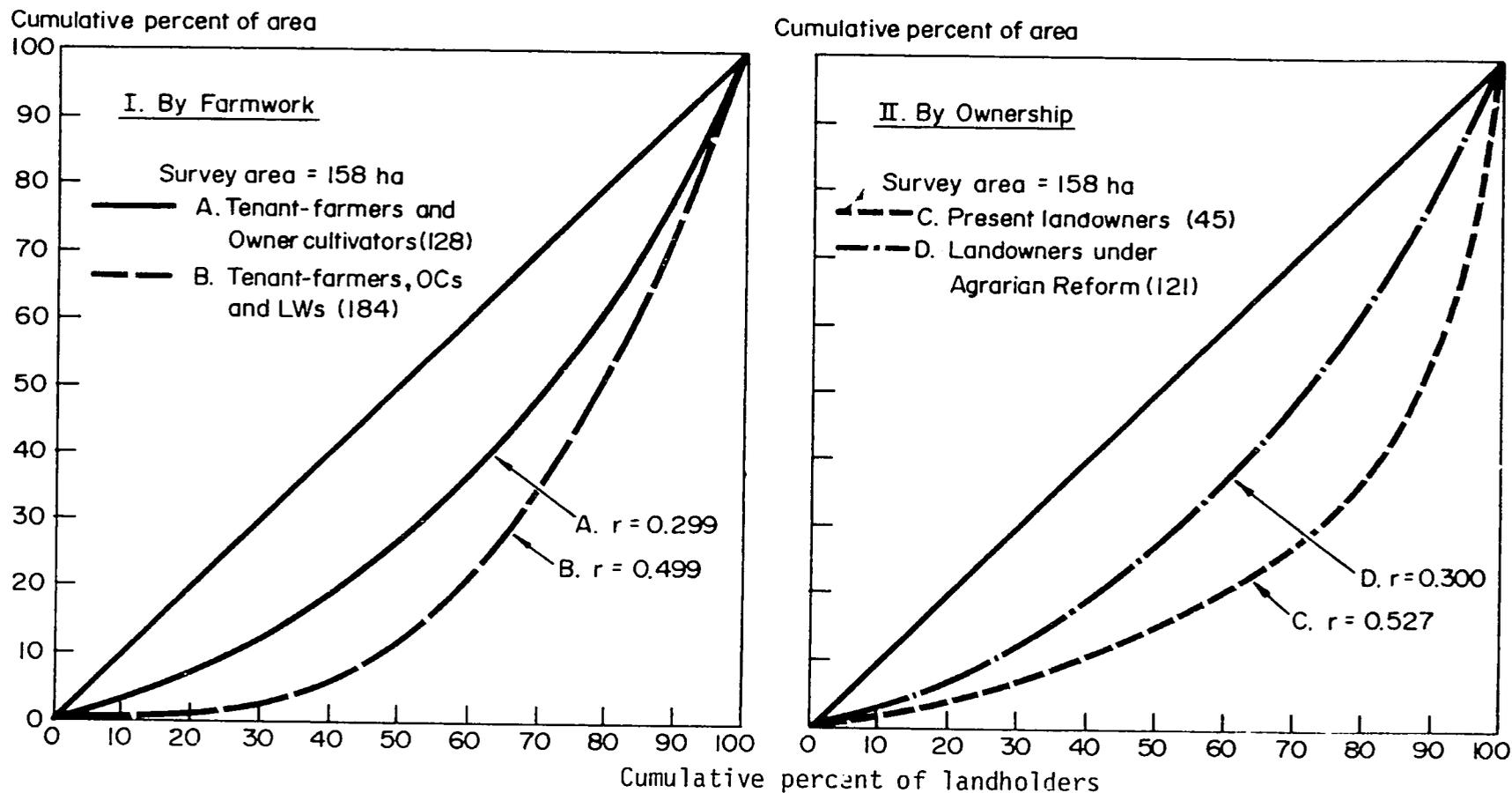


Fig. II. Lorenz curves indicating distribution of landholdings under different categories, Abangay, Iloilo, 1977.

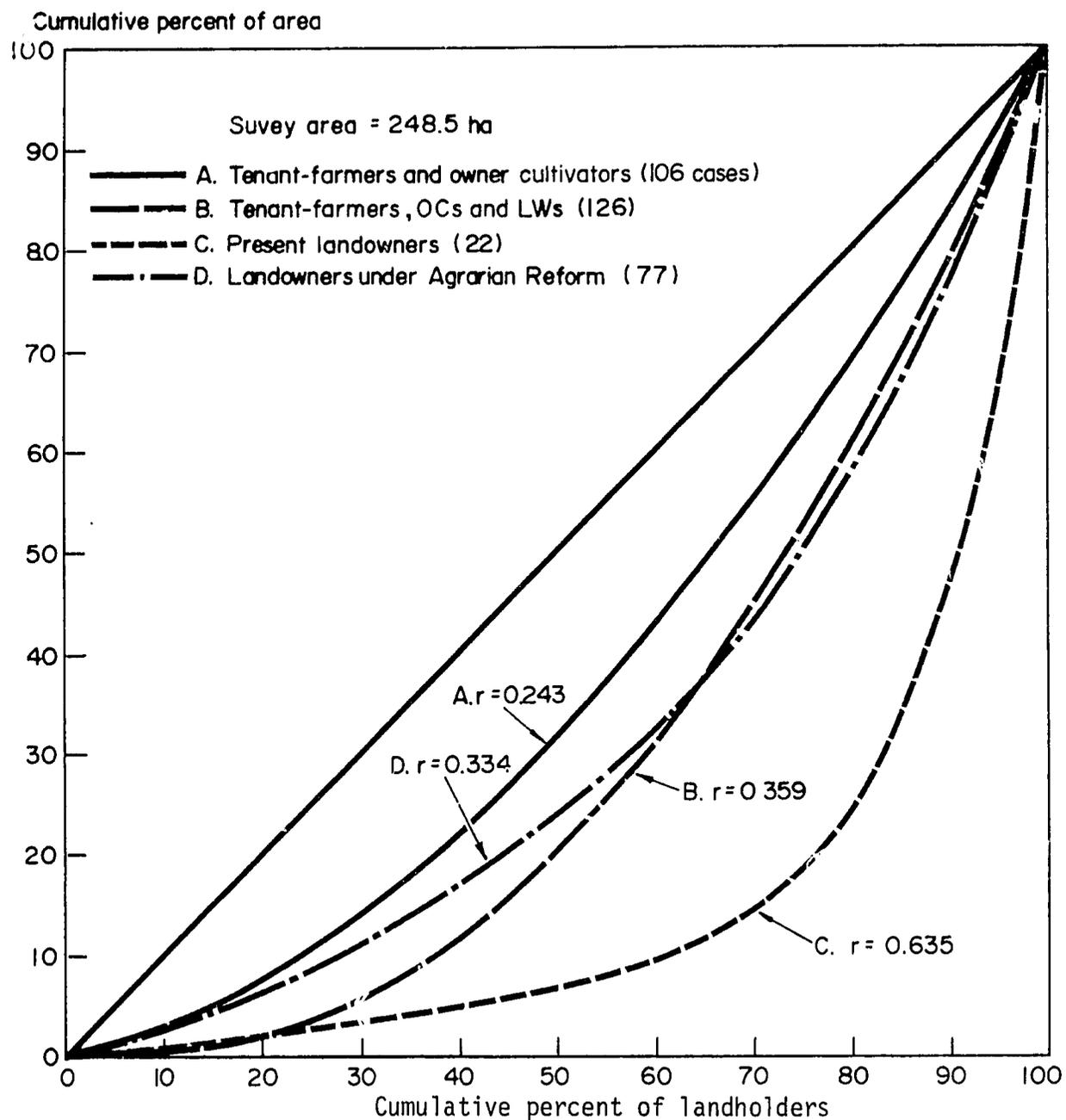


Fig. 12. Lorenz curves indicating distribution of landholdings under four different categories, Rajal Sur, Nueva Ecija, 1977.

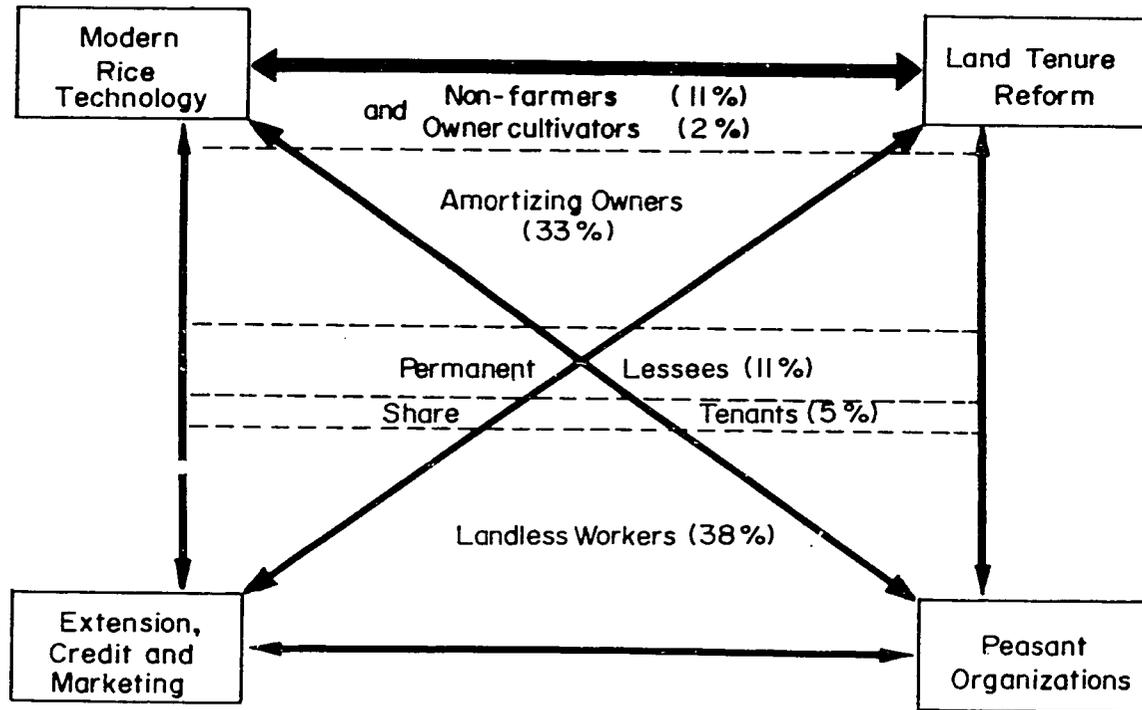


Fig. 13. Modified framework for Rural Development, Bgy. Abangay, 1977-1978.