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The Pinagbayan Farmers' Association and its operation

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ABSTRACT

Barrio Pinagbayan, Pila, Laguna is the site of a new farmers' association. Organized around the need for two irrigation pumps, 19 rice farmers have joined together to make the purchase and improve their incomes. The role of the change agent is described in this paper, along with many of the details crucial to the effective functioning of the association. The associations' financial resources, its organizational structure, and its broader purposes are discussed.

Barrio Pinagbayan is one of the pilot barrios in the Social Laboratory, a joint project of UPCA and SEARCA in Pila, Laguna. The Social Laboratory adopts an institutional approach to agricultural and rural development, aiming at building up an effective partnership between the government and the local people.

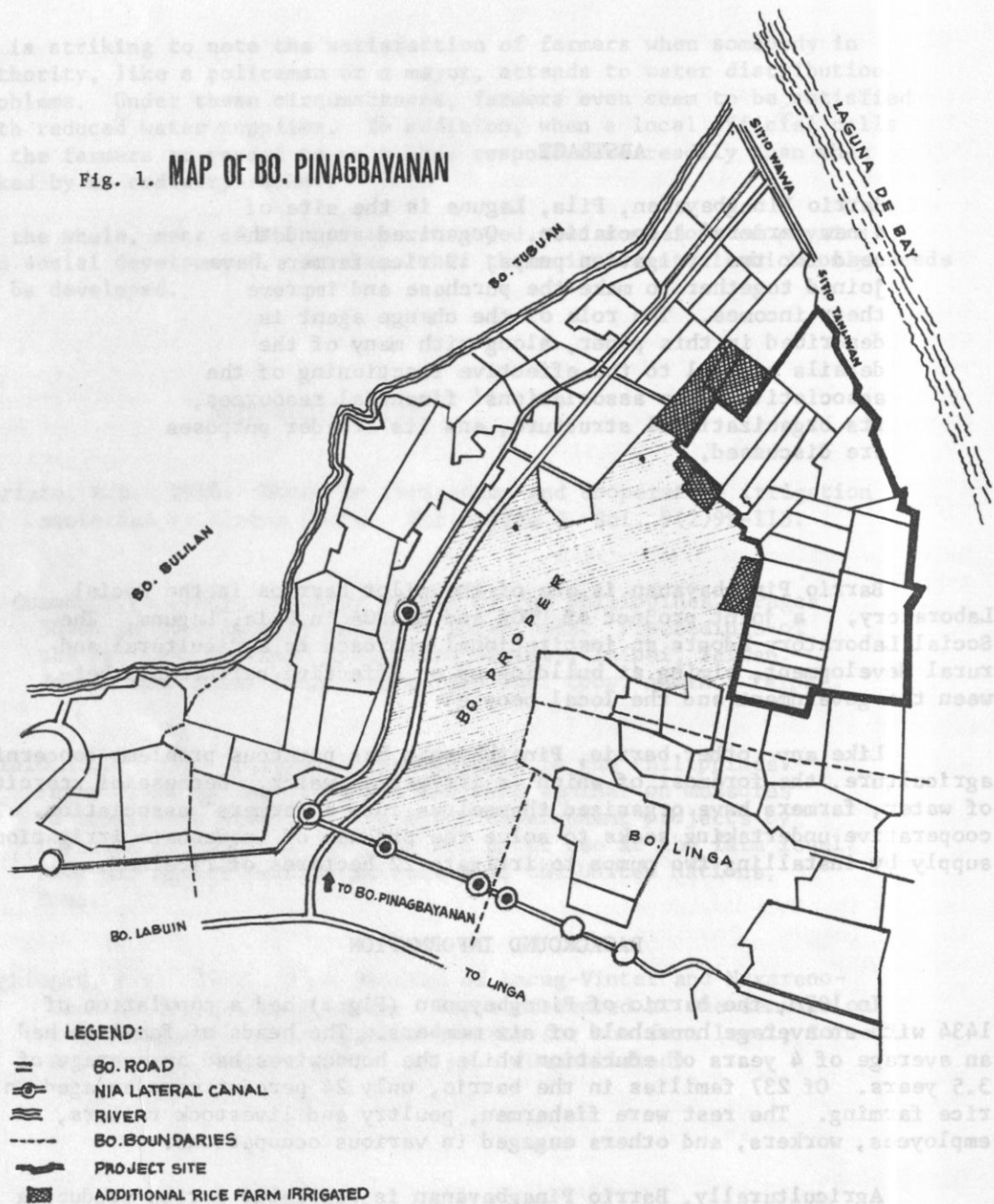
Like any other barrio, Pinagbayan has numerous problems concerning agriculture, the foremost of which is irrigation water. Because of scarcity of water, farmers have organized themselves into a farmers' association. This cooperative undertaking seeks to solve the problem of inadequate irrigation supply by installing two pumps to irrigate 22 hectares of riceland.

BACKGROUND INFORMATION

In 1970, the barrio of Pinagbayan (Fig.1) had a population of 1434 with an average household of six members. The heads of families had an average of 4 years of education while the housewives had an average of 3.5 years. Of 237 families in the barrio, only 24 percent were engaged in rice farming. The rest were fishermen, poultry and livestock raisers, employees, workers, and others engaged in various occupations.

Agriculturally, Barrio Pinagbayan is basically a rice producing area. It has 67 hectares of riceland with 57 farmers who cultivate an average of 1.3 hectares each. A gravity irrigation system under the National Irrigation Administration covers the barrio, but only one-third of the area is adequately served. Inadequate irrigation supply prevents many of the farmers from fully using their land for optimum production. Thirty-three farmers, cultivating an area of 45 hectares, are adversely affected by the

Fig. 1. MAP OF BO. PINAGBAYANAN



lack of adequate irrigation. Their farms are located at the end of the main distribution canal of the irrigation system. Some of the farms are situated at higher elevations which makes water distribution more difficult (Fig.1).

During 1969, the average yields in the wet season were 2.14 t/ha (48.5 cavans) and in the dry season, 2.16 t/ha (49.0 cavans). Farmers use recommended cultural practices to some extent and extension workers from several government agencies are assigned to the barrio. The International Rice Research Institute (IRRI) and the University of the Philippines College of Agriculture (UPCA) have also been conducting field experiments through farmer cooperators.

Share tenancy is common. Forty-two percent of the rice farmers are share tenants, 32 percent are owner-operators, and only 9 percent are leaseholders (Table 1). Of the 57 farmers, 81 percent borrowed money for farm production or family purposes. The loans were obtained from relatives and friends, rural banks, private money-lenders, merchants, government institutions and landlords.

STEPS TAKEN TO ORGANIZE AN ASSOCIATION

In July 1970, a technician from the Social Laboratory paid a courtesy call on the barrio captain to explain the objectives of the laboratory and to notify the captain that the technician planned to live in the barrio with one of the farm families.

The technician's first activity was to map the houses in the barrio and to identify the heads of families. The technician visited farmers at work and at home which provided him ample knowledge of farm locations, conditions of the crops, and problems associated with local rice farming. He established rapport with the barrio people by attending social gatherings, joining informal discussion groups, and befriending the youth. He also helped local school authorities with a project on rice and vegetable production. In doing so, his role as a change agent was well understood by the barrio people. The close association with farm families greatly helped him to understand their values and ways of life. The technician did not rush headlong into the organization of farmers. Not until the barrio people recognized his role and developed confidence in him did he suggest the need for group action.

To identify the farmers who share common problems and interest in group action, farm and home visits as well as informal group discussions were conducted with the assistance of a farmer leader.

Farmers expressed numerous needs. The predominant one (cited by 28 farmers) was a better supply of irrigation water. They claimed the national irrigation system did not meet the water requirements of their farms especially during the dry season. The idea of organized group action to solve irrigation problems and increase rice production was emphasized during the discussions. The farmers became interested and asked how it could be done.

The informal discussions led to an organized meeting in September, 1970 with 25 farmers attending. The farmers were informed of the nature of the project which involved their cooperation. A plan to install a 6-inch pump with a rated capacity of 900 gpm (56.6 lit/sec) that would cover a contiguous area of 20 to 30 hectares was discussed. Some wanted to expand the area of coverage to all the affected farmland.

Thereafter, weekly meetings followed. Nineteen out of 25 farmers returned to analyze the merits and benefits they could derive from the proposal. The topics discussed during these meetings were area of coverage and participation of farmers concerned, location of pump and willingness of landowners to participate, mechanics of repayment and financing, and capital investment required for the installation.

The initial setback

Financing the pump was the chief problem. The 19 farmers could not provide the P900 needed as a 10 percent downpayment for the pump. The pump was to be acquired from the Irrigation Service Unit. Only five could give their contribution of P50 each.

It was suggested that the landlords provide the initial investment and the farmers could pay it back after harvest. The landlords, however, did not support the idea and kept silent. Credit assistance from a rural bank was not feasible because the majority of farmers were afraid to borrow and did not have the necessary collateral. It was also felt that there were too many requirements imposed by the rural bank. The technician explained that by organizing themselves into an association, collateral would not be a problem, the association could act as the co-maker since it would have legal personality. In spite of this, the interest of some farmers sagged and three withdrew, breaking the contiguity of the proposed area of coverage. The possibility of forming a farmers' association with this group failed.

The breakthrough

The challenge of continuing the project and organizing an association was thrown back to the remaining interested farmers. The farmers suggested meeting with other neighboring farmers. This group cultivates rice farms which were supposed to be covered later. Nineteen farmers attended this meeting and agreed to form a farmers' association, to be called the Pinagbayanan Farmers' Association.

Registration with the Government

After the farmers decided to form the association, six meetings were conducted to discuss and fulfill the requirements for registration with the Securities and Exchange Commission. The requirements were five copies of articles of incorporation and by-laws, a list of members and corresponding signatures, explanation of how the association objectives would be met, and a board resolution regarding compliance of a non-stock corporation.

The formulation of by-laws and the constitution was done before election of officers. This gave everybody a basic idea of the functions and responsibilities of the members and officers who were to be elected. The by-laws were translated to local dialect (Tagalog) and made available to the members. They were patterned on the by-laws of the Farmers' Association for Commodity Exchange and Services in Santa Maria, Laguna, and the Santo Angel Irrigation Association in San Pablo City. The technician provided the leadership during the writing and adopting of the by-laws. Everybody actively participated in the discussions. The members gave suggestions and comments on policies concerning attendance, discipline, and responsibilities.

Most of the farmers did not have residence certificates. Since the residence certificate was a requirement for the registration of the association, the technician helped the members in securing their certificates in town.

When the by-laws were completed, elections for president, vice-president, treasurer, secretary, and members of the board of directors were held.

After 3 months of preparation, when all the pertinent papers were completed, they were sent through the provincial agriculturist and the Agricultural Productivity Commission to the Securities Exchange Commission for approval. The association gained legal status in January 1971. It had taken 7 months before the farmers were finally registered with the government.

Organizational structure

The association is a non-profit, multi-purpose cooperative operating primarily for the mutual benefit of the members. Membership in the association is restricted to farmers. The association can market agricultural products and buy inputs for its members, acquire and operate facilities for its activities, help members get farming information, and act as a bridge between the members and government programs. The association's board of directors is composed of seven elected officers who hold office for 1 year.

The members

Not all members of the association are residents of barrio Pinagbayan. Six are from the adjacent barrios, but their farms are located in Pinagbayan. Aside from farming, 16 were engaged in other livelihoods such as duck raising, poultry and livestock raising, fishing, harvesting, rig driving and as hired laborers.

The average household size was 7.4 members, with a low of 2 and a high of 12. The average member is 51 years old, the youngest is 35 and the oldest is 72. Fifteen had formal education ranging from primary to secondary grades while four had not gone to school. Ten are owner-operators,

six are share tenants, two are leasees and one is part-owner. Each farmer cultivates an average of 1.2 hectares.

During the 1970 wet season the average yield of the members was only 1.5 t/ha. Only four members were able to plant in the 1971 dry season. On a total of 4.5 hectares, their average yield was 2.0 t/ha. The members already were using some recommended practices such as application of fertilizer, seed selection, straight-row planting, insecticides, and high yielding varieties.

PROJECT ACTIVITIES

Installation of two water pumps

After the association gained legal personality, weekly meetings were held with the farmers to discuss the irrigation pump project. Only 17 members having an area of 19.5 hectares were involved because the other two members could get water from the national irrigation system. At the meetings the purchase of pumps, site and size of pumps, cost of installation, financing and sharing of payment were discussed. Instead of a 6-inch pump, the members decided to install two 5-inch water pumps to ensure that the farms would be adequately served during the dry season.

Next, the landlords were contacted. The landlords liked the proposal and gave their approval. The plan to have farmers install irrigation pumps was also presented to the administrator of the National Irrigation Administration (NIA) system covering the locality. The NIA approved the idea since their irrigation system could not fully satisfy the water needs of the farmers, especially in the dry season.

Application for two water pumps under a 10-year installment plan was made through the field representative of the Irrigation Service Unit. The president of the association acted as the applicant. With the application, the association had to submit a sketched map of the area, a tax declaration copy of the land, a copy of the association's articles of incorporation and by-laws, and identification photograph of the applicant.

Financing the project. Inasmuch as the members of the association could not finance the pump project, the local rural bank was asked to extend a loan. A feasibility study was prepared to determine the profitability of the project. The manager of the rural bank was also invited to one of the meetings to discuss the policies of the bank in giving loans to farmers and associations. This meeting enlightened the farmers and reduced their fear of borrowing money from the rural bank. The bank granted the association ₱10000 without collateral, payable in 1 year at 12 percent interest per annum. The amount of ₱8760 was left to the association after the interest and filing fees were discounted. The funds were released in 1971 and were deposited in the savings account of the association. Ten members of the association

acted as co-makers to guarantee the loan. The participating farmers were required to sign promisory notes so all of them will be involved.

Before the funds could be released, proper authorization was required from at least two of the three officers of the association, and in addition the releases had to be countersigned by the technician. The treasurer only kept petty cash for immediate use.

Construction. After the irrigation pumps arrived the materials needed for the installation and pump accessories were bought in Manila. The president, treasurer, and the technician worked together in purchasing these materials. The total cost breakdown is shown in Table 2.

The members contributed free labor for drilling, construction of the pump house, and laying of the foundation. It became a group activity. The members were anxious to finish the construction immediately because some of the crops were already in dire need of irrigation water. The construction was finished in April 1971 in time to serve the needs of the farmers. People in the community as well as the members were happy to see the fruits of their labor.

The project scheme. The irrigation pump project involves the cooperation of both the landlords and tenants. They share the payment by deducting the irrigation fee before dividing the harvest. Owner-operators and leaseholders pay on their own.

Payment for irrigation was set at 16 cavans (of 44 kg) per hectare per season or 32 cavans per year. This quantity was arrived at on the basis of a P16 price per cavan of palay in order to repay the P10000 borrowed from the rural bank. The price of rice was set at the government support price to give allowance in case of crop failure. However, this rate was only applicable in the first year. Table 3 shows each farmer's pro-rated fee. The irrigation fee will be adjusted after the initial investment has been paid.

If the price of rice is greater than the assumed price, the extra amount will become a part of the savings of the individual participant.

Role of members. All the members actively participated in the formulation of policies and regulations for an efficient management of their project. The members convened at least once a month to discuss the problems that were vital to the operation.

To properly maintain and operate the pumps, two members who are knowledgeable were assigned to be in charge. In the meantime since the association had limited funds to pay the operators, it was agreed that they would be paid in kind. Each operator will receive 15 gantas (approximately 27 kg) of palay per hectare every season. The operators also record the fuel consumed and pro-rate it for each member using the water. In this way the water requirement of each

Table 1. The tenure situation of 57 farmers in Pinagbayanan.

Tenure status	Percent
Share tenant	42
Leasee	9
Owner-operator	32
Part-owner	5
Lease-share tenant	3
Not ascertained	5
Others <u>a/</u>	3

a/ Farmer use of the land for a number of years is agreed upon without a rental fee.

Table 2. Initial expenses in the installation of the irrigation pumps.

Itemized Expenses	Amount
10% down payment for the pumps and membership fee	P 1442
Purchase of pump accessories	2080
Purchase of construction materials	1636
Driller-contractor's fee	800
Purchase of storage tank and drums	727
Service fee	100
Wages for hired labor	456
Crude petroleum and gasoline	660
Food	408
Miscellaneous	100
T o t a l	8409

Table 3. Estimated irrigation fees in tons pro-rated according to size of farm of participants.

Farmer	Area of farm (has)	Irrigation fees ^{1/} Tons of palay per year	Peso equivalent per year
Biluan, Emilio	1.02	1.44	522.56
Campanero, Lorenzo	2.92	4.11	1,494.08
Castillo, Marcelino	1.43	2.01	732.80
Datay, Exequiel	1.75	2.46	896.00
Escasura, Antonio	1.75	2.46	896.00
Espinosa, Teodoro	1.38	1.94	705.60
Gutierrez, Felimon	0.29	0.41	149.44
Javier, Apolinario	0.26	0.36	132.16
Lopez, Pedro	0.29	0.41	149.44
Manangkil, Domingo	1.24	1.75	635.20
Palasin, Oesario	0.32	0.46	166.08
Pelasin, Ciriaco	0.29	0.41	149.44
Penuela, Placido	1.12	1.58	575.04
Prescilla, Maximo	1.50	2.11	768.00
Ravelas, Olympia	1.10	1.54	560.96
Tope, Nazario	1.14	1.61	586.56
Vergara, Jose	1.75	2.46	896.00
T O T A L	19.57	27.50	P 10,017.60

^{1/} Based at P16.00/cavan of 44 kg. per season.

farm served by the two pumps is also recorded.

The members are all responsible for the maintenance and repair of dikes to minimize losses from seepage and percolation. Before and after the planting seasons, all the members worked cooperatively in repairing the embankments of the irrigation canals.

The operators are responsible for the distribution of irrigation water over the whole area. Each member is given a water schedule according to which water will be available. This was done to avoid conflicts between farmers and to insure fair water distribution. Members found violating the regulations were to be fined heavily.

Each member is obliged to get his own fuel from the storage tank located in the yard of one of the members. The secretary records the amount taken and the members who use it. A member hauls the fuel only when the water is allocated to his fields.

Production loans

Aside from the loan granted to the association, eight members were also given production loans amounting to P9795. The average loan was P445 per hectare in the wet season and P442 per hectare in the dry season. The loans were without collateral and payable in 6 months (every cropping season). The individual member is responsible for repaying the loans with the rural bank. The members did not borrow large amounts because it was the first time they had borrowed from a bank. Also they feared that they might not be able to repay the loan.

A farm plan and budget prepared by the technician was the first requisite for a member who planned to apply for production loans. The borrower and his wife signed an application paper and a promissory note. A co-maker's statement signed by the president, treasurer, and a member recognized by the bank was also required. It takes about a week before the loans are approved and released so that a farmer must apply 2 weeks before the onset of the planting season.

To avoid diversion of loan funds, savings accounts were opened for each member. The amount loaned was deposited in their respective accounts, and were made available only for the scheduled loan releases indicated in the farm plan and budget. The technician also checked to make sure that funds were used appropriately. Operations involving fertilizer application, use of insecticides, and planting operations were supervised. The members were required to follow the recommended cultural practices indicated in the farm plan.

Partnership with government and private institutions

The association serves as a link between the government and private agencies in executing agricultural development programs, in conducting field experiments, and in training students of agricultural extension and social sciences. The technician represents the association in these activities. Before any activity is undertaken, however, the decision of the members concerned is sought. Some of the activities in which the association has been involved were a rat control program conducted by the Bureau of Plant Industry, a trial of an experimental drier and an irrigation planning and design project with UPCA, a water management study with IRRI, soil analysis by the Bureau of Soils, and construction of a multipurpose pavement with the Presidential Arm on Community Development supplying ₱1000 for materials and the members supplying the labor. A multiple cropping project assisted by IRRI was also conducted in the barrio.

THE OUTCOME

Increase in rice yield. The irrigation pumps installed by the association contributed greatly to an increase in rice yield. Without sufficient water, production inputs could not be properly used for optimum production. Harvesting of the first crop started in October 1971 and ended in December. The second crop was harvested in May and June 1972. Table 4 shows the net yield of two harvest seasons before and after the installation of water pumps.

Another factor that contributed to the increase was greater use by members of recommended cultural practices. Aside from the increase in yield per hectare, the members will be able to plant two crops a year or even five times in 2 years. A still better situation lies ahead if the members will go on with the same cooperative spirit. Input use is shown in Table 5.

Repayment of loans. Right after the harvest of the first wet season crop, the members delivered their irrigation fee in the form of rough rice to the house of the treasurer for safekeeping. The association, through its president and treasurer, looked for market outlets. Full discretion was given by the members to the officers in selling their rice contributions. This is an example of the trust and confidence exhibited by the members in the association. Before finally disposing of the rice, however, the members concerned were informed of the price set by the buyers.

By selling the rice in bulk, a better price, ₱30.22 per cavan (44 kg), was received for 186 cavans (8.2 t) that were collected than if the farmers had sold it individually. The total sales amounted to ₱5620. The money was immediately deposited in the savings account of the association. Depositing of money is usually done by the president, the treasurer, or the technician.

Table 4. Yields before (1970-71) and after (1971-72) installation of pumps.

Crop year	Yield (t/ha)	
	Wet season	Dry season
1970-71	1.5	2.0*
1971-72	2.6	3.3
Increase (%)	75	61

*Based on two members with an area of 2.3 ha.

Table 5. Use of recommended cultural practices of the 17 members of the Association before and after installation of the pumps.

P r a c t i c e s	Before	After
	Number of farmers	
Use of high-yielding rice varieties	5	17
Use of dapog	6	17
Straight-row planting	7	15
Application of fertilizer	15	17
Weed control (rotary, weedicide and hand weeding)	12	17
Use of insecticides	9	17
Seed selection	10	11
Germination test	8	12

In the dry season, the members paid their obligations in cash rather than in kind. They were given a free hand to sell their rice to relieve them of the burden of bringing it from the field to the house of the treasurer. Two members were designated to remind other members of their contributions and obligations. The members paid their obligations to the president or the treasurer who in turn issued receipts for the money received. The total collection amounted to P5971 and was also deposited in the savings account of the association.

The association was then able to repay its P10000 loan from the rural bank of Pila. This was a remarkable achievement and it attests to the members' concern for living up to their commitments in a cooperative way.

The production loans were 100 percent repaid by the eight members of the association who took out the loans. They paid back the loans even before the maturity date. The technician encouraged them to pay in advance to establish a reputation with the rural bank. It will be easier for the farmers to acquire subsequent loans in the future.

Expansion of area of coverage. Due to the availability of water, more land was cultivated and additional farms were served by the pumps. The rice land served by the pumps increased from 19.5 to 22 hectares. With this additional area, the association now charges the members an irrigation fee of 10% of their net harvest. The fee serves as an additional source of income for the association that can be used for maintaining the pumps.

Effect on other individuals. The association's novel idea of installing water pumps on a cooperative basis became an example for other farmers' associations. The association has also been instrumental in motivating five landowners to invest in water pumps for supplementary irrigation.

PROBLEMS ENCOUNTERED AND THEIR SOLUTIONS

Not many problems have been encountered in the organizational setup of the association. The members and the officers are aware of the policies and the responsibilities expected of them. Problems are threshed out during meetings with everybody actively participating by giving suggestions and recommendations. One problem occurred in the installation of the second pump. The drilling operation was unsuccessful. It was decided to relocate the pump site but the association lacked money to finance the job. Two members paid their irrigation fees in advance, however, and with the services of another driller the reconstruction and relocation of the pump was accomplished.

Another problem, at first, was the use of the pumps beyond the time allotted for each member. The problem was solved by laying down policies for the use of the pumps. A schedule of water distribution was made for the members to follow.

The association asked the help of the Department of Agricultural Engineering, UPCA to improve the performance of the two irrigation pumps. A test showed that the pumps were only delivering 480 gpm (30 lit/sec) at maximum speed. A change from direct coupling to a V-belt connection between the engine and the pump increased the water delivery.

To reduce water loss through seepage and percolation, an irrigation distribution lay-out was developed to widen and properly construct the canals.

One member became a problem to the association because, due to personal conflicts with some of the members, he sometimes did not want to follow the water distribution policies. The officers and the technician confronted him and he admitted his mistakes. The members could have dropped him from the membership but he was given the chance to change. Besides, his farm is situated at the center of the area served by the pumps, and dropping him from the membership would mean changing the canal layout or acquiring an additional pump so that the farming operations of other members would not be affected.

A few members have not paid the full amount of irrigation fees set by the association, but it has nevertheless been able to repay its obligations with the rural bank of Pila. The delinquent members were given time to pay their balance in the next season.

LOOKING AHEAD

Rural development is a slow process since it involves human and economic factors. Organizing farmers to work cooperatively to achieve a common goal is helpful in leading them towards rural uplift. The Pinagbayan Farmers' Association, although young, has full confidence that its members' objectives can be realized.

There are still many things the association needs while continuing its plans. One of the big problems is lack of financing. The members of the association hope that government and private institutions will extend financial assistance to them, to speed the implementation of new plans.

To fully use the irrigation water from the pumps, the members plan to line the canals with concrete. It would make water distribution more efficient and minimize losses due to percolation and seepage. Some other plans are to: (a) Provide the members and officers of the association more training in management techniques such as keeping records and making business transactions, (b) Purchase farm equipment such as hand tractors and small farm implements for use in farming operations. This will enable the members to follow their calendar of operations smoothly.

(c) Build a drying pavement and a warehouse to store the crop. Farm

production inputs would be readily accessible to the members. (d) Undertake regular training on rice production to keep members informed of advances. (e) Encourage savings as a means of acquiring or forming capital. This would increase self-reliance.

CONCLUSION

Cooperative undertaking through farmers' organizations is not an easy task because human factors are involved. The situation, needs, and interests vary among individuals and places so that there is no stereotyped procedure to follow in forming a successful farmers' association. The objective must not merely be to organize, but to create leadership, and to hasten education and training for a viable and functional organization.

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