

CASES IN FINANCE DISTRIBUTED BY THE PHILIPPINE CASE CLEARING HOUSE

Bancom (A). This case describes a dealer in government securities preparing bids to be submitted in the next weekly auction of Philippine Treasury Bills. It requires that the student analyze the results of past auctions, review the current short-term money market, determine a bidding strategy and prepare bids. The case contains much information about the money market in the Philippines and is suitable for either a general finance course or a course in financial institutions.

Premier Marketing Corporation (A). The controller of a sewing machine marketing company analyzes the need for funds of a typical new sales branch preparatory to consideration of opening new branches. The case covers in detail the financing of installment receivables and requires the student to project the cash flows involved in establishing a new branch.

Premier Marketing Corporation (B). The controller of a sewing machine marketing company seeks to project the profitability and financial resources of the company. He plans to relate this projection to the financial needs of a typical new branch as determined in Premier Marketing Corporation (A) and thus forecast when new sales branches should be added in the future. In this case the student looks at the whole company, rather than at a branch, and must make the projections the controller is considering.

Philex Mining Corporation. This case deals with the analysis of a mining company as a stock investment. The student makes the analysis incident to reaching a decision on whether to invest in the company's stock. The case includes information from the company's annual report and about the Philippine securities market. It is suitable for use in general finance investments or financial institutions courses.

Phil Prime Beef, Inc. A young entrepreneur is considering whether to start a beef cattle feedlot operation near Manila. The student is required to reach his own decision on the probable profitability of such an operation, to decide on the best means of financing and to compare with alternative investments. The case gives considerable incidental information on the beef cattle industry in the Philippines.

Consolidated Machinery & Construction, Inc. A rapidly growing \$25-million company is faced with a choice of long-term financing—either loan or convertible bonds. Some underlying issues are transfer of equity foreign ownership to Filipinos, presentation of financial flexibility and time value of convertible bonds from both the company and investor points of view.

The Case of the Unidentified Industries. This case presents balance sheets, in percentage form, and selected financial ratios for several companies in different industries. The student is asked to match the various industries with the appropriate set of financial data. The basic purpose of the case is to force the student to consider the relationship between the type of business a company is engaged in and the financial structure and ratios of the company.

Manila Electric Company (A) This case presents the problem of a new company treasurer trying to develop long-range financial plans when over-all company planning is still in the rudimentary stage. The need for long-term funds for the next two years is obvious and pressing and is given in the case. Beyond that, though continued rapid growth is mandatory, no calculations of requirements have been made. Several alternative sources for immediate needs are noted. The student is expected to present a financial plan for the next two years and outline the improvements which must be made in company planning to permit development of a long-range financial plan.

Guevara y Cia. This case requires the student to determine the minimum price a company is likely to accept for a new building under an arrangement for leasing-back part of the building for its own use. The builder-owner is an entrepreneurial company with attractive alternatives while the prospective buyer is an insurance company with more limited investment alternatives. Immediate returns on the building look meager, but real estate values have been booming.

Rip, Inc. In this case, the student is put in the position of an owner-manager of a new small business who is faced with an immediate need for funds. The case problem concerns the evaluation of the magnitude and duration of the need for funds and then the selection of an appropriate source. The sources of funds are limited, but include the possibility of selling part of the business or borrowing from very high interest private lenders. The situation is complicated by the owner's unique personal goals and preferences.

Ideal Appliance Sales, Inc. This case is basically an exercise in the use of present value concepts. The case problem concerns the eval-

uation of several alternative financing plans for discontinuing consumer installment receivables with a finance company. The student is asked to convert the financial costs of the various alternatives to some common base and then compare the alternatives. (The use of present value tables is implied.) The student is also asked to compare the profitability of installment selling without discounting to the cost of discounting, and to evaluate the effect of the "full recourse" provision. The case presents an opportunity to devote some time to setting up a general framework for analyzing the financing of accounts receivable.

Farm Equipment Company (A). This is a decision case requiring determination of whether a major creditor bank should participate in the reorganization and refinancing of a potentially profitable farm equipment company which is unable to meet its obligations. The case presents an unusual and interesting refinancing proposal, including assumption of control by the creditors through a voting trust arrangement, as an alternative to liquidation at considerable loss to the creditors. It also demonstrates the use of management consulting firms in the Philippines and covers in some detail the use of import letters of credit.

Farm Equipment Company (B) This case outlines the decision reached by the creditors on the problems presented in the Farm Equipment Company (A) case, and relates what has happened during the six months since the creditors took over. The new problem presented to the creditors by the General Manager is a request to delay the already rescheduled payments of overdue loans in order to finance additional inventory and sales. The student is again placed in the position of a major creditor bank and asked what to do.

Mariwasa Distributors, Inc. (A) & (B). A case involving the evaluation of an offering of cumulative preferred shares with warrants to buy common shares. The actual prospectus is included as an enclosure. Forecasting of probable earnings is required as is computation of the value an investor would place on the offering, and on the stock and the warrants separately. The (B) case gives additional information on expected earnings and can be handed out in the latter part of a discussion of the (A) case. The case can also be used from the company's point of view to illustrate long-term financing.

D B R Logs. Two partners in the logging business have an opportunity to acquire a new logging concession, but lack the funds to make the purchase. They are considering three possible sources of funds: a bank which is doubtful because of credit restrictions and lack of collateral; a private loan at very high interest rates and a loan-contract with

Japanese log buyer. The case requires evaluation of the operational prospects of the new concession and of the loan possibilities. Much information is given on the logging business in the Philippines.

Continental Textile Corporation. The credit manager of a commercial bank is considering a textile firm's application for a ₱1,000,000 line of credit. The case shows the procedure followed by a bank in processing loan applications. Used in conjunction with Mayon Ore Mines (UPF 103), this case is a good basis for discussion of the heavy emphasis placed on collateral by Philippine banks. The decisions required of the student are whether the loan should be granted and on what terms.

Mayon Ore Mines. The credit manager of a commercial bank is considering a mining company's application for a ₱1,300,000 line of credit on an unsecured basis. The case shows the procedure followed by a bank in processing loan applications and serves as a contrast to Continental Textile Corporation (UPF 102) where collateral is a major consideration in granting the loan. The student must decide whether the loan should be granted and on what terms.

Hacienda Alvarez. An owner of rice lands in Central Luzon weighs the merits of investing in irrigation improvements and of buying additional tenancy rights. The crumbling of the traditional tenancy system under the impact of the Land Reform Code, the emergence of leaseholders, and the introduction of "miracle rice" are all part of his problem. In determining what action the owner should take, the student must calculate the probable financial results of several alternatives with full consideration of the economics of rice farming and of tenant and lessor reactions.

Cagayan De Oro Power & Light Co. (CEPALCO) (A).

This is a decision case requiring determination by the President of a small power company whether to extend electrical service to two barrios. It requires that the student determine the financial feasibility of the proposal, and presents an interesting situation of low return on existing investment due to voluntary rate reduction. The case gives background on power development in the Philippines and describes major institutions financing businesses in the Philippines.

Coproducts Corporation. A new process for extracting oil from coconuts has been developed and is suitable for use in coconut-producing countries. An opportunity to enter the Philippines exists if the developing firm can obtain part of the required capital in the United States. This case offers specific problems of where to look for investment capital,

how a venture of this kind should be appraised, and what alternatives are open to the developer. It is suitable for a new enterprises course as well as for long-term finance.

Cottage Textile Development Corporation. This is a decision case dealing with debt structure rearrangement, development bank loan and equity capital. The company is a rapidly expanding textile manufacturer with a lack of both short- and long-term funds, principally caused by unforeseen changes in the external economic environment. As a result the company must devise a financial strategy to rearrange its long-term debt structure, borrow more bank funds, and raise additional capital by methods especially designed for the limited capital market of the Philippines.

Goodrich International Rubber Company. This is a decision case dealing with whether the Export-Import Bank should guarantee a loan in connection with the establishment of a tire manufacturing corporation in the Philippines. The case includes an analysis by the staff of the Export-Import Bank and an appendix on the investment climate in the Philippines. The case requires analysis of the financial feasibility of the project and also an example of a joint venture between Philippine and foreign interests and of development of a new enterprise.

P.D.C.P. This is a descriptive case in which a member of the staff of the International Finance Corporation outlines the formation of the Private Development Corporation of the Philippines, citing P.D.C.P. as an example of IFC's work with development banks.

Republic Cement (A). This is a case which requires a decision by the Central Bank of the Philippines on whether to allocate dollars to purchase equipment needed to install a new cement plant. The case gives background on the cement industry and shows to some degree the government's role in economic development. The case is suitable for a course in development of new enterprises as well as for finance.

Republic Cement (B). This case requires a decision on whether the National Economic Council should give priority to Republic Cement's request to expand its plant. This case shows the Central Bank—National Economic Council formula used in assigning priority, and includes the National Economic Council analyst's report on the project. As with Republic Cement (A), this case deals with the government's role in developing new industries as well as with financing development.

Ricotti & Company. This is a case which requires that a man interested in becoming a stock broker make a decision as to whether he should buy control of a stock brokerage firm. The case gives good background on the securities market in the Philippines and on trading in the

Manila Stock Exchange. The case can be used either in a general finance course or in one concerned with financial institutions.

The Legal Pattern of the Business Firm in the Philippines. This technical note describes the various forms in which businesses may organize and operate in the Philippines, and points out some of the more relevant statutory requirements and limitations. It is designed to supplement the information given in standard finance and accounting textbooks.

Incentives to Investments in the Philippines. This is a thirty-four-page pamphlet published by the Presidential Economic Staff Office of the President of the Philippines, describing the Investment Incentives Act and other constitutional provisions and laws of interest to investors.

Local Sources of Financing (University of the Philippines). This is a forty-nine-page technical note giving considerable information about sources of financing available to Philippine businesses. Local commercial and government sources are reviewed statistically through 1963. The types of loans obtainable from local sources and from foreign sources are described.

Advantages and Problems in Joint Ventures (ICR 275). This is a six-page technical note reviewing some of the advantages and disadvantages in joint ventures where the parent company and the subsidiary are located in different countries.

CASES IN FINANCE AVAILABLE FROM THE UNIVERSITY OF THE PHILIPPINES *

The Old and the New. This is a decision case. A certified public accountant whose business experience had been limited to merchandising and light manufacturing industries is faced with the problem of whether to invest in the banking business. The case requires students to evaluate investment opportunities in two commercial banks. Information taken from financial statements of the two banks and some data on commercial banking in the Philippines are included in the case.

Republic Telephone Company (A). This is a decision case. A stockholder of a telephone company has to make a decision whether to convert his preferred stock to common stock. Students are required to make a quantitative forecast of the relative position of common stock *vis-a-vis* preferred

*Write to the Division of Business Research, University of the Philippines College of Business Administration or call up 9-37-21.

stock during conversion period. The case includes financial statements of the company and information on the telephone business.

Republic Telephone Company (B). This is an illustrative case designed to make the students "feel" and "see" the role of a controller in formulating financial plans. The students are required to relate cash forecasts with actual financial statements and to appraise the financial plan for the expansion of a telephone company. The case includes financial statements of the company and a five-year projected cash flow.

HACIENDA ALVAREZ¹

Presented here as a sample case, "Hacienda Alvarez" is one of the cases being distributed by the Philippine Case Clearing House. As is characteristic of cases developed by the Inter-University Program for Graduate Business Education in the Philippines, it presents business and economic problems seen against a Philippine setting.

Toward the end of 1966, Mr. Antonio Alvarez was considering the possibility of constructing a deep well and pumping station on the 100 hectares of family rice lands called Hacienda Alvarez, near Barrio Sta. Mesa, Nueva Ecija. In recent years, weather conditions had not been very good and the wet season rice crop had suffered from a lack of water. As a result, fields had been quite poor. Mr. Alvarez believed that a deep well with a capacity of 1.7 million gallons per day would serve to insure the success of the wet season crop and also allow about 40 hectares to be planted during the dry season. At present, only one crop was grown each year.

Mr. Alvarez' consideration of the well centered about two problems. First, he wondered about the return he would get on his investment. Preliminary estimates indicated that the well would cost about ₱60,000. This was quite a large sum of money which the family did not have immediately available. Also, use of the family resources to dig the well would prevent the family from making other investments. In the past,

¹ This case was prepared by Paul Rosenberg under the direction of A. C. Lyles, Jr. Case material of the Inter-University Program for Graduate Business Education in the Philippines is prepared as a basis for class discussion. Cases are not designed to present illustrations of either correct or incorrect handling of administrative problems.

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the family rice lands had always been a source of capital for other investments without requiring major outlays for improvements.

Second, there was the problem of land reform. Mr. Alvarez was very worried that the part of Nueva Ecija in which Hacienda Alvarez was located might be declared a land reform area. If that were to happen, the government might take over the land in order to resell it to the present tenants and other small farmers. Payment for the land would be ten per cent in cash and ninety per cent in Land Bank securities, mostly bonds. As far as Mr. Alvarez was concerned, these bonds were not worth very much since they carried an interest rate of only six per cent and maturities of as much as 25 years. The passage of the Land Reform Code,² aimed at abolishing share tenancy, had already caused some changes at the hacienda. A few of the tenants had applied to change from tenancy to a leasehold basis. It was likely that the number would increase in the future. Mr. Alvarez had summed up his feelings about land reform when he stated, "I'll be damned if I'm going to invest large amounts of money improving the land and then have my tenants turn their backs on me and gain most of the benefits."

HACIENDA ALVAREZ

The Alvarez lands had been in the family for more than fifty years. Mr. Alvarez' great grandfather had purchased the land from the original owners who had been granted a very large tract by the Spanish king. The land was fertile and well suited for the cultivation of rice. It was located in what was sometimes referred to as the "rice granary" of Central Luzon. As far back as Mr. Alvarez could remember, very little had changed at the hacienda. Rice was grown in much the same way as it had been at the turn of the century. The main source of power was the carabao and most of the work was done by hand. Perhaps the major change was the use of mechanical threshing instead of the old hand methods. Occasionally some fertilizer and pesticide was used, but, in general, the rice was planted and the rest of the job was left to the land, the rains and the sun. There was a gravity irrigation system at the hacienda and in most years it was sufficient to supply adequate water for the rice. However, the storage capacity was not large enough to insure against unusually dry weather. In recent years, this problem had become particularly acute.

Of the 100 hectares owned by the Alvarez family, 20 hectares were administration lands—owned outright, free and clear of tenants. Most of

² Agricultural Land Reform Code, Republic Act No. 3844.

the administration land was a result of Mr. Alvarez' buying of tenancy rights. He was currently offering the tenants between P250 and P350 per hectare for their tenancy rights. When Mr. Alvarez bought a tenant's rights, he usually guaranteed the man a job at a salary. The labor needed to farm the administration lands was usually obtained by contract. The current contract fee was about P350 per hectare per crop. Usually, the contractor was a former tenant. In effect, this relationship allowed the former tenants to earn a guaranteed cash income. They could work the land themselves or hire others to help. The remaining 80 hectares were farmed in lots of 2-1/2 to 4 hectares by about 25 tenants. Ten tenants farming a total of 30 hectares had made applications to change to leasehold instead of tenancy.

The tenancy system was very old and well-established in the Philippines. The tenant and the landlord were supposed to work together for their mutual benefit. The landlord usually provided the capital inputs and the tenants supplied the labor. The tenants were endowed by law with certain rights and could not be evicted from the land except for specified reasons such as the refusal to work the land. Philippine law decreed that the tenant and landlord should receive specific shares of the crop according to their inputs. On the Alvarez hacienda, this split worked out to 55% for the tenant and 45% for the landlord. Mr. Alvarez also received 5% of the whole crop before the split in return for the use of his mechanical thresher, which was the standard threshing fee.

At Hacienda Alvarez, the relations between the Alvarez family and the tenants stretched over several generations. Mr. Alvarez believed that his family had been fair to the tenants and treated them well. As with most other landlords, Mr. Alvarez did more than just supply the necessary capital inputs for the rice crop. Very often, he loaned money to tenants to help tide them over through the period between harvests. Mr. Alvarez said, "Every time I come to the province, there is usually a long line of tenants outside my door who need money for food, clothing, school expenses, etc. I have to sit and listen to their stories in order to determine whether or not to give them a loan. Many times a tenant says that he needs some money for one purpose but he actually wants it for something else. I don't have enough money to give them all what they want. Also, if I make too many loans, I may not even get back the full amount at the end of the harvest."

The usual procedure for making a loan to a tenant was to buy part of his share of the next rice crop at a specific price per cavan of palay. For example: Mr. Alvarez might buy the palay at P14.00 per cavan in June when the harvest was expected in December. When the

palay was threshed after the harvest, Mr. Alvarez or his agent collected his share of the crop plus any palay due for loan repayment. The landlord had first priority in taking his share of the crop. In many cases when the tenant was no longer able to get money from the landlord, he would borrow from middlemen or rice traders by selling his future crop. Usually, the price received would be less than that received from the landlord.

Because of the poor weather conditions in recent years, the harvest at Hacienda Alvarez had been below normal. As a result, many of the tenants were unable to completely pay off their obligations to Mr. Alvarez. As Mr. Alvarez described the situation, "Legally, I could take almost the whole crop if it was due to me, but I never do that. I have to leave enough for the tenant to support him until the next season. I end up carrying him on the books for at least another year, but I don't get any additional interest."

The majority of the rice planted at the hacienda was either BE-3 or Tjeremas, two local varieties. In normal years, the yields were in the range of 50 to 60 cavans per hectare. In the past three years, yields had dropped to about 40 cavans per hectare. Mr. Alvarez and his foremen had tried to advise the tenants and teach them how to obtain better yields by using fertilizer and better growing techniques. The results had been mixed. Mr. Alvarez said, "It is very hard to get these guys to change anything, particularly if it means more work for them. I tell them to weed the fields but they don't do it because it means extra work and they can't see any immediate gain. Whatever I say, they always answer 'opo' but as soon as my back is turned it quickly becomes 'hindi naman.' I just don't know how to fight their attitude. One time, I gave a tenant some fertilizer for his fields. I later found out that he went into town and sold the fertilizer because he needed money." Mr. Alvarez thought that it was almost impossible to be sure that the tenants were doing what they were supposed to do. "They're very independent in some ways. They know that they have certain rights and they take advantage of them. I would be willing to spend more money on the land and for the crop if I only could be sure that the tenants would follow my advice and make the investment pay off."

Another point which irked Mr. Alvarez was the recent application of some of the tenants to change from tenancy to leasehold. He considered a change to leasehold equivalent to the tenant being ungrateful and turning his back on him. The Land Reform Code gave tenants the right to elect leasehold at their discretion. The annual lease payment was established at not more ". . . than the equivalent of twenty-five per

centum of the average normal harvest during the three agricultural years immediately preceding the date the leasehold was established after deducting the amount used for seeds and the cost of harvesting, threshing, loading, hauling and processing, whichever are applicable. . . . Provided, finally, that if capital improvements are introduced on the farm not by the lessee to increase its productivity, the rental shall be increased proportionately to the consequent increase in production due to said improvements." (Sec. 34, Republic Act No. 3844).

When a tenant elected leasehold, the landlord was no longer responsible for supplying any of the inputs for the crop, capital or otherwise. The Land Reform Code had established various governmental agencies such as the Agricultural Productivity Commission (APC) and the Agricultural Credit Administration (ACA) *to service the needs of the farmers and make them more independent of the landlords*. Mr. Alvarez believed that while the laws provided for the needs of the farmers, the implementation of the laws was very poor and they were not carried out well. The farmers didn't know how to get money from ACA and there was no one around to teach them. They could not work with the bureaucracy. Much of the time, there was no money available. As far as Mr. Alvarez was concerned, once a tenant elected leasehold, Mr. Alvarez didn't want to have anything to do with him except to collect his share of the crop. "This is what they want, let them go to the government for help." The possibility of more applications for change to leasehold bothered Mr. Alvarez. A conversion to leasehold would mean less income for him. Because of the lack of support, the crops of the lessees would probably be smaller. This, in addition to the lower percentage for the landlord, would decrease the Alvarez share.

In the past two years, Mr. Alvarez had started to give more thought to the management of Hacienda Alvarez. The increased interest was due to two factors. First, there were the problems associated with the Land Reform Code and the changes that were being made in the landlord-tenant system. Second, there was the increased publicity devoted to the new strains of rice that were being developed and the fantastic yields that were possible. The variety commonly called "miracle rice" or IR-8, developed at the International Rice Research Institute, had produced yields of more than 200 cavans per hectare in some tests. The new strain held the promise of much greater profits for those who could grow them successfully.

IR-8

Mr. Alvarez had done some research on the growing of IR-8 which had yielded the following information: IR-8 was a result of a cross

between a local variety, Peta, and a Taiwanese variety. The strain had been bred to produce a plant with several positive characteristics. First, IR-8 was very sensitive to fertilization with nitrogen. The yield increased almost linearly with the amount of nitrogen fertilizer used until a cut-off point well above that for all other varieties. Second, IR-8 produced a much shorter plant which was very resistant to lodging. Lodging occurred when the maturing plant, heavy with grain, could no longer support itself and fell over to the side. When rice lodged, the plants were not able to get enough sunlight and yields were decreased. Also, harvesting was much harder. IR-8 was also very sensitive to the amount of sunlight it received. Because of this, the yields in the dry season, when there was more sun, were greater than in the wet season. A final advantage of IR-8 was its short growing time—120 days from planting to harvest. This allowed the possibility of as many as three crops per year. On the negative side, IR-8 was not very resistant to disease. It was particularly susceptible to rice blast, a disease found in several areas in the Philippines, but not around Hacienda Alvarez. In order to obtain the greatest advantage from IR-8, much more care and work were necessary in the growing process. Planting, weeding, and the application of fertilizers and insecticides were very important for success. A final disadvantage, and perhaps the most important, was the taste. Many people said that the taste of IR-8 was inferior to the regular varieties. Some people even said that Filipinos might refuse to eat IR-8. However most tests had demonstrated that while IR-8's taste was probably not as good as many local varieties, the difference was not great enough to stop Filipinos from eating the rice. At worst, it seemed that IR-8 might eventually sell at a slight discount from the price of other varieties. At the present time, most of the IR-8 being grown was sold as seed and commanded a price of ₱25.00 or more per cavan. How long this situation would last, Mr. Alvarez did not know. It was certain, however, that the price was supported at the government support level of ₱16.00 per cavan.

Some of the other planters in Nueva Ecija had experimented with IR-8 during the wet season which had just ended. As far as Mr. Alvarez could determine, their results had not lived up to the full promise of IR-8. Yields had ranged from a low of 80 cavans per hectare to a high of 130 cavans, with most in the range of 100-120 cavans. After checking with some of his friends, Mr. Alvarez found out that the examples of the lowest yields had resulted either from a lack of water or a departure from recommended procedure. For example, one planter had neglected to apply the full recommended amount of insecticide because he believed that he would not have trouble with stem borers. Unfor-

tunately, his crop suffered from an attack of stem borers and the yield was cut appreciably. He was greatly attracted by the potential of IR-8 and had made definite plans to experiment with it on his administration lands the next year.

After reviewing his research, Mr. Alvarez believed that, properly cultivated at Hacienda Alvarez, IR-8 would yield about 100 cavans in the wet season and 125 cavans in the dry season. He had also obtained a comparison of the costs of raising IR-8 vs. normal varieties (Exhibit 1).

THE DEEP WELL

The potential of IR-8 made an investment in a deep well a much better proposition since the larger yields of IR-8 would allow the cost of the well to be repaid in a much shorter time. The potential of growing a dry season crop on part of the hacienda and obtaining yields of 125 cavans per hectare was the major attraction. The second crop would yield income which it was now impossible to earn.

Mr. Alvarez checked with several suppliers of well equipment in order to find out how much it would cost to have a well put in at the hacienda. He received the following firm quotations:

- 1) Drilling to a depth of 500' including 200' of 16" pipe, 150' of 14" pipe and 150' of 12" pipe —P26,000.00
- 2) All necessary machinery including: 70 horse power diesel engine and water pump with capacity of 1200 gallons per minute of 147' TDH —P34,380.00

The suppliers estimated that the well machinery would consume 200 liters of diesel fuel for each full day of operation. Mr. Alvarez found that the diesel fuel would cost approximately 11 centavos per liter. It would also be necessary to hire men to run and watch over the machinery. Mr. Alvarez estimated that he would need three men each day at a cost of P6 per man per day. The supplier also told Mr. Alvarez that maintenance and repairs would probably cost about 5% of the value of the machinery each year.

After he obtained all of the information, Mr. Alvarez was still uncertain about whether he should have the well drilled. In order to pay for the well, the family would have to withdraw money from other investments which were giving very good returns. Most probably they wouldn't consider the well unless the payback was very rapid. Another problem was the lack of full control over the land and the people

ming it. The well would be capable of supplying more water than needed for the Alvarez administration lands. How could he be sure that the rest of the water would be utilized efficiently? There was a chance that the extra water could cause squabbles amongst the tenants. It was very difficult to give water to one and not to another. Mr. Alvarez wondered whether he should hold off on the well until he had purchased enough tenancy rights to insure that most of the water would be used on his administration lands.

The buying of tenancy rights raised another problem. Mr. Alvarez wondered how much the tenancy rights were really worth. He had never tried to figure out their true value. The price of P250 to P350 per hectare was the going rate in that area. Perhaps it would pay for Mr. Alvarez to offer more for the tenants' rights. Certainly the administration lands he was farming himself with contract labor would be less subject to appropriation. Mr. Alvarez thought that he should analyze this situation more carefully in order to see if he should change his offering price. If he could buy more tenancy rights, he would have much more control over the hacienda.

Exhibit 1

HACIENDA ALVAREZ

Cost per Hectare to Produce Rice

(Following Recommended Agricultural Practices)

EXPENSES	WET SEASON		DRY SEASON	
	Traditional Variety ¹	Improved Variety (BPI-76)	IR-8	Improved Variety (BPI-76)
<i>Direct:</i>				
Seed (assumes 1 cav./ha.)	P 18	P 25	P 25 ²	P 25
Weed Control	0	15	15	15
Insect Control	10	44	132	44
Water	12	12	12	200
Fertilizer (nitrogen)	20	56	84	96
Total Direct Expenses	P 60	P 152	P 268	P 380
<i>Land & Labor Inputs:</i>				
Land Preparation	P 120	P 120	P 120	P 120
Labor to Apply Insecticides & Herbicides	3	10	28	10
Sedbed (dapog bed) ³	10	10	10	10
Transplanting (Straight rows)	60	60	60	60
Handweeding	50	50	50	50
Harvesting & Threshing ⁴	210	300	440	350
Cleaning & Drying ⁴	25	35	50	40
Sacks ⁴ (P1.50 each)	90	127	187	150
Rat Control	?	?	?	?
Total	200	700	700	700
			Traditional Variety ¹	IR-8
			P 18	P 25 ²
			0	15
			10	44
			200	200
			35	96
			P 263	P 380
			P 120	P 120
			3	10
			10	10
			60	60
			50	50
			245	350
			30	40
			105	150
			?	?
			200	700

EXHIBIT 1 (Continued)

<i>Return per Hectare:</i>							
Yield (in cavans)	60	85	125	70	100	150	
Value of Yield at P18 per cavan	P1,080	P1,530	P2,250	P1,260	P1,800	P2,700	
Less Direct Expenses	60	152	268	263	380	516	
	P1,020	P1,378	P1,982	P 997	P1,420	P2,184	
Less Value of Land & Labor Inputs	768	912	1,145	823	990	1,278	
Net Return (Profit) per Hectare	P 252 ⁵	P 466 ⁵	P 837 ⁵	P 174 ⁵	P 430 ⁵	P 906 ⁵	

¹ Farmers planting traditional varieties seldom followed the recommended practices regarding insect control and fertilizer, and their yields were lower than those shown in this exhibit.

² Assumed the use of RCA palay seed.

³ The use of a regular seedbed would be P25 instead of P10.

⁴ These expenses varied with the yield. See Part II of the chart for the yield assumed for each variety.

⁵ Farmers normally did not place a value on the land and the labor inputs of their families and themselves in figuring the profit made on a rice crop.

Note: These costs assumed that general agricultural recommendations were followed. In actual practice few farmers raising the traditional varieties use insecticides or fertilizer.

The costs of chemicals, fertilizer, labor and irrigation water varied with locality, as do the local customs by which harvest laborers were paid.

Source: The International Rice Research Institute and Seed Corporation of the Philippines.