TOWARD SELF-SUFFICIENCY IN RICE *

J. D. DRILON, JR.

After the national elections ushering it in, every administration that has come into power has promised self-sufficiency in rice within its own time. There are strong reasons for this. Rice is the most important crop of the country. It is the staple food of about 80% of the entire population. About 60% of the entire labor force in the agricultural sector is engaged in the rice industry. More than half of the entire population depends on this industry for their livelihood. The country's annual production of rice is worth about ₱2 billion, much greater than the combined value of the annual output in coconut, sugar, and tobacco.

For economic reasons, rice is obviously important. Political considerations accentuate its importance. Understandably, therefore, the rice policies in the past years have been regarded as politically oriented. As claimed by producer-groups, the orientation has inclined preferentially toward the consumers on the assumption of politicians that most of the voters are consumers as distinguished from rice producers.

As organized groups, however, rice producers appear to have succeeded in influencing the formulation of rice policies increasingly for their benefit. But, even now, when the administration is given credit by producer-groups for a *well-rounded program* aimed at self-sufficiency in rice in 1969-1970, a program much stronger, it seems, than any before it, leaders of these groups reveal in their public statements a continuing suspicion that the government is still too much concerned with the welfare of the consumers and thus negates its policies designed to promote greater productivity in rice.

The present rice program is essentially similar to previous rice programs of the country. But there are factors distinguishing it from past programs, and some of these factors which have resulted partly from a change in policy orientation and partly from the cumulative results of past programs are: (1) greater emphasis on productivity, on dominant inputs such as infrastructures, and on more effective administration; (2)

* A report on case studies involving farm management and developing projects handled separately by two agricultural management firms in the Philippines. Names of firms and their places of operations are disguised.

igher floor prices; and (3) more active participation of private enterrise in the program.

Because of these factors and because technological advances have rought about an awareness that rice production can be a business, the rganizational approach to the problem of raising productivity in rice is eginning to develop rather auspiciously both in the government and priate sectors. Of course, this approach is not a new one. For instance, ıe farmers' cooperative movement was started in the country in the arly 1950's. But the approach has taken on a new character.

First, an attempt has been made by Rizal province to run a proincial program designed to increase productivity in rice, one which is ıpported by a special provincial budget and which attempts to coordinate ıe agricultural services of national agencies within the province. To show ıat rice production can be profitable is one of the objectives of the rogram.

Second, a broader program of similar nature is being attempted at a :gional level on the Bicol peninsula. This type of program, however, ıvolves not only the development of the rice industry but also the developıent of other industries in the region.

Third, a number of private firms have been organized to manage ce farms for landlords and tenants.

It is these firms that this report is concerned with. The writer feels ıat the entry of these firms in rice production is significant because it ffers certain advantages:

(1) Heretofore, businessmen have gravitated toward the industrial sector of the economy, and the agricultural sector has suffered from the lack of business leadership. The participation of private firms in rice production activities will further stimulate business leadership in these activities in particular and in the agricultural sector in general, thus improving the chances of this sector for a faster pace of development in the country's dualistic economy.

(2) New technology is not readily absorbed at the rice farms. The reasons include the state of education among the farmers, the nature of technology itself, inadequate credit, and the lack of management skills. Farm management firms could tremendously increase the technology absorption rate at the farms. With these firms, rice farmers who engage their services could initially be saved from the not-too-easy task of understanding the "mystery" of technology and the organizational complexity of applying it to raise productivity.

Three cases are reported in this paper concerning part of the operations of two management firms. Case 1 concerns a farm management project handled by Agro-Industrial Executives in Batangas while cases 2 and 3 cover two projects of the Farm Management Corporation of the Philippines, one in Bulacan and another in Cotabato.

Each case is written in somewhat different frames of organization and this permits emphasis on areas of consideration which seemed important to the persons handling the projects and, of course, to the writer when he interviewed these persons. The different stages at which each case was caught present variations in the degree of coverage and focus of attention. This was dictated not by intention on the part of the writer, but by the circumstances in each case.

Besides using the interview as a method of gathering information, the writer participated in the discussion of some of the management problems of the firms. Also, he was given the opportunity of making an analysis of some documents showing the operational results in case 1 and the operational plans in cases 2 and 3.

Although the cases were viewed differently, the report on each one attempts to partly or entirely bring out the following:

1. The orientation and outlook of the firm.
2. The techniques used in the approach in the pre-contract stage.
3. The management techniques used by the firm in planning operations and implementing operational plans.
4. The economic benefits to the clients.
5. The attitude of the clients.

It should be noted that Case 1 covers one crop season, while Case 2 concerns on-going operations at this writing, and Case 3 pertains to a development project which was started two weeks ago (March 15th).

The presentation of the cases is followed by some integrating comments pointing out problem areas farm management firms should perhaps consider to increase their chances for success.

CASE I: FIRST PROJECT

The Agro-Industrial Executives Company was organized early in 1966 as a partnership. One of its objectives is to engage in the management of farms. It chose, as its first area of operation, two towns in Batangas where three landowners had indicated interest in engaging its services. The area seemed ideal from the standpoint of the partners. It is irrigated and is capable of producing two crops a year. Furthermore, it is

ear the residence of the owners and supervision, it was thought, would e convenient.

The partners are Mr. Antonio Libunao, a lawyer, Mr. Agerico Sanhez, an agronomist, and Mr. Gregorio Santillan, a farm manager. They re assisted by a management consultant.

The partners were friends before they went into partnership. They deided on going into the farm management service because of their realizaon (1) that the government seemed serious about its self-sufficiency rogram for rice, (2) that the problem of achieving self-sufficiency in ice had remained with the country for many years, and (3) that populaon expansion was making it difficult for the country to achieve self-ufficiency in rice.

Mr. Libunao said: "Here is one business where we can generate some rofit and, at the same time, help solve a long-standing national problem." Ie expressed confidence that the business would have a market for its ervices for some time even after national self-sufficiency had been attained. There will be more and more people who will need competent advice," e said, "not only to meet local consumption but, later, to meet foreign emand." He sounded certain that population would keep on increasing t a high rate and, therefore, the shortage in the world's rice supply would ontinue for some time. He felt population would be difficult to control ıainly because of decreasing death rates and religious inhibitions that ıake the acceptance of birth control practices doubtful, particularly in Catholic countries.

Mr. Sanchez viewed the future of the business from the standpoint f technology. He said that new knowledge was being turned out coninuously and this stream of output would create a pressure conducive to he business. New varieties would be produced. More productive cultural ıractices would be discovered. There would be changes in the inputs and ıocesses toward higher yields. With these changes, there would be a coninuing need for firms which can provide the technical know-how.

Mr. Santillan said that the government seemed to be more serious ıow than before about solving the problem of raising productivity in rice. This, he said, was creating more awareness among the farmers of the ıossibility of increasing their yields and their income. He expressed belief hat, in many cases, the awareness would merely be a beginning and hat a wide area of knowledge after the point of awareness would reıain unknown or too complex for the farmers. A firm such as the ıartnership formed by Messrs. Libunao, Sanchez and Santillan could operate n this area.

The partnership decided to launch its first project with the announcement of the government's IR8 seed multiplication program. It was thought that the government's sponsorship of the program would give impetus to the project. The partners revealed that if the government did not sponsor the program, they would have gone ahead with their first project anyway because some farmers had begun to grow IR8 during the last crop season (summer of 1966) and IR8 seed was, therefore, already available.

The high-yielding character of the IR8 rice variety was considered by the partners as the key to the conversion of rice production into a business. A farmer who used to produce only 40 cavans of palay per hectare would certainly be making an attractive profit if he produced no less than 80 cavans of palay per hectare. Table 1 shows the preliminary estimates of the farmers' profit as computed by the partners.

TABLE 1.—Estimated Additional Revenue for Landlords and Tenants
First Project

DISTRICT	AREA Ha.	TOTAL PRODUCTION Cavans	BASIC PRODUCTION Cavans	EXTRA COST Cavans	ADDITIONAL REVENUE FOR LANDLORD AND TENANT Cavans	Pesos
1	12	960	480	120	180	3,600
2	4.5	360	180	45	67.5	1,350
3	17 5	1,400	700	175	262.5	5.250
4	12	960	480	120	180	3,600

Among the first issues faced by the partners were the matter of approaching farmers and the manner in which the partnership would be compensated for its services.

Here is the approach. A rough survey would be made to determine prospective clients, and indications would be obtained on the following:

1. Who among the prospective clients would be the better choices? The criteria to be used would include:
   (a) *Size of farm.* Larger sizes would be preferred.
   (b) *Irrigation.* Better irrigated lands would be preferred.
   (c) *Transportation.* Areas near the roads would be preferred.
   (d) *Facilities.* Farms with farm equipment, such as tractors, and facilities such as threshers, driers, mills, etc. would be preferred.
2. Who among the prospective clients would react positively to the approach and offer better compensation for the services of the firm?

Initially, the landowner would be asked as to how much yield was ing obtained from his farms. Then his opinion would be requested on ıat might be considered a reasonable compensation for the services of ɛ firm if his yield were increased, say doubled, by the firm and such mpensation were to be taken from the harvest. After a number of land-ners and tenants had been approached, the distribution of answers to the ery on compensation gravitated to half of the increase in the yield.

Production costs over and above the traditional production costs of ɛ landowner were expected and so an offer would be made for these ditional production costs to be subtracted from the increase in yield fore the yield surplus is divided between the firm and the landowner. model of the sharing system may be formulated as follows:

$$Y_f = \frac{y_i - (y_p + y_c)}{2}$$

$$y_i = y_p + y_c + \frac{y_i - (y_p + y_c)}{2}$$

where:

y_f — share of the firm

y_i — the increased yield

y_p — the previous yield

y_c — the extra cost of production needed to produce y_i

y_l — the share of the landlord

The share of the landlord in the increase in yields, $\frac{y_i - (y_p + y_c)}{2}$, ıuld be divided between him and his tenants, if any, in accordance with ɛ usual sharing system. Three landlords with an aggregate land area 46 hectares were chosen. They were enthusiastic landowners who readily proved additional production cost requirements. These requirements were ɛntified as the *dominant inputs* and included only the cost of fertilizers d insecticides. They were called dominant inputs because the significant ɛld responses were expected from them and they were called additional ɔduction costs because the tenants or the landowners used fertilizers d insecticides in previous years only intermittently and in small quanti-s.

The schedule of farm operations was based on the "General Cul-ɛal Recommendations for IR8 and Similar Selections" issued by the ɛternational Rice Research Institute. Planting was completed during the ɛt week of July and the first week of August, 1966.

The standing crop on the land of the three landowners was outstanding compared to the other fields in the vicinity. Many tenants agreed that never in their lives had they seen so good a standing crop. However, just before harvest, a typhoon came. On the land of the first and second landowners, the IR8 stood erect except in a few isolated places where lodging occurred. In nearby fields where other varieties were grown by farmers (not clients of the firm) there was widespread and complete lodging and the crop was badly damaged.

The yields on the land of the three landowners together with the extra costs of production and the previous average yields are shown on Table 2.

TABLE 2.—Previous Yields, Actual Yields, Extra Cost of Production First Project

DISTRICT	CAVANS, AVERAGE YIELD/HA. Last 3 years	CAVANS, AVERAGE YIELD/HA. 1965 Wet season	EXTRA PRODUCTION COST IN CAV./HA.	EXTRA REVENUE FOR LANDLORD AND TENANT IN PESOS/HA.*
1	38	78	8	256
2	41	66	12	104
3	39	89	10	320
4	42	68	9	136

* Computed at ₱16 per cavan.

CASE 2: SUMMER CROP

The IR8 variety is known to yield more during the summer season when there is more sun and photosynthesis is more effective. With this in mind, executives of the Farm Management Corporation of the Philippines (FMCP) attempted to find out whether a number of farms in the province of Bulacan could be managed by FMCP.

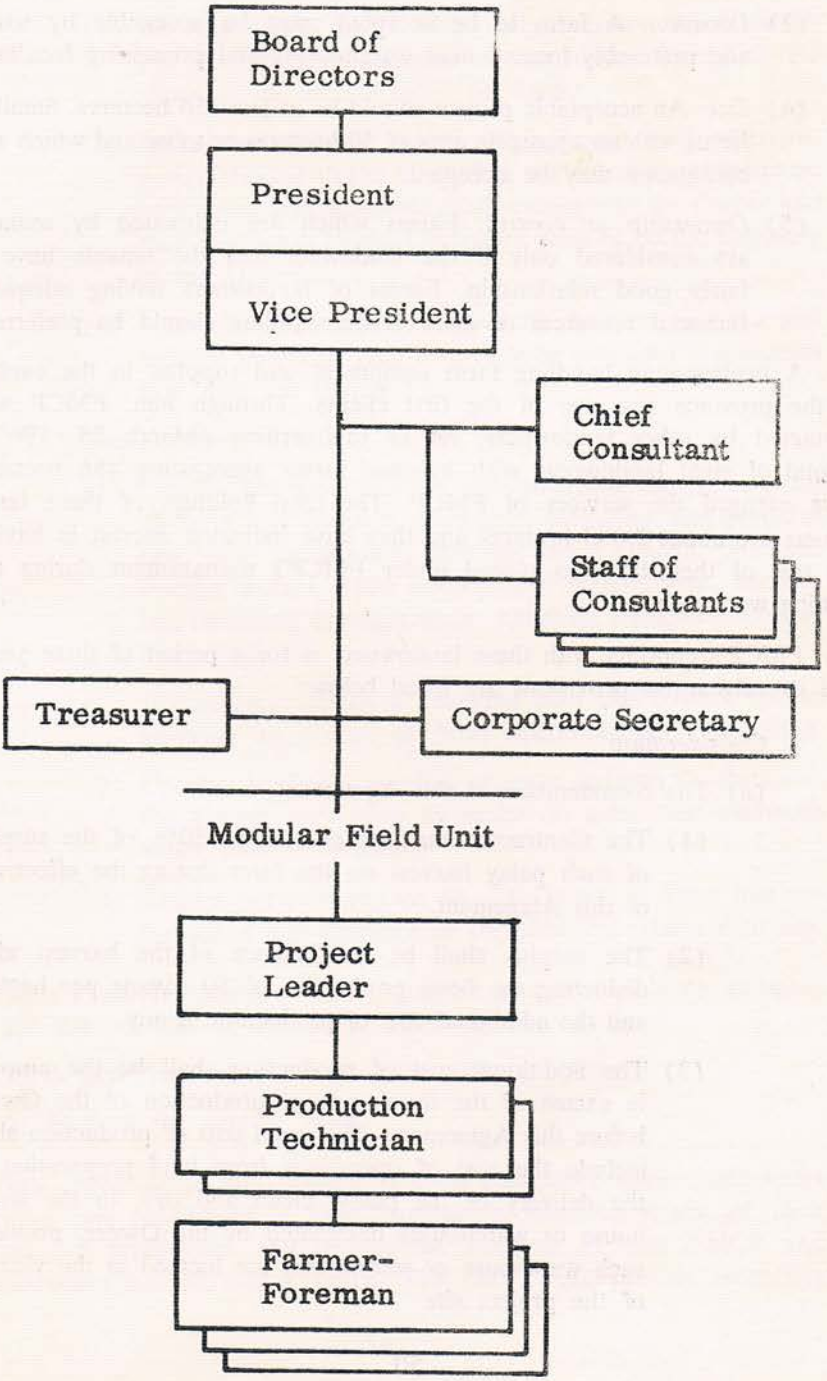
FMCP is a new corporation rather modest in capitalization, but it seems well-organized. Only three officers man the main office. Well-trained production technicians and farmer-foremen are hired by FMCP on a project basis and the firm's staff of part-time specialists provide back-stopping services for them.

Figure 1 on the next page shows the organizational chart of FMCP.

Usually, FMCP undertakes a farm management project only after its President, Vice President and a member of its consulting staff are able to personally visit and assess the potential of the proposed project. In appraising a proposed project, emphasis is placed on:

Case 2.

Figure 1. The Organizational Chart of FMCP



(1) *Productivity.* If the farm is producing 80 cavans per hectare or better, it is rejected as a project.

(2) *Water Availability.* Only an irrigated farm is accepted. Water must be adequate during the summer season.

(3) *Location.* A farm to be accepted must be accessible by road, and preferably located near warehousing and processing facilities.

(4) *Size.* An acceptable project should be at least 50 hectares. Smaller farms with an aggregate area of 50 hectares or more and which are contiguous may be accepted.

(5) *Ownership or control.* Farms which are cultivated by tenants are considered only if the landowner and the tenants have a fairly good relationship. Farms of landowners having adequate financial resources or good credit standing should be preferred.

A businessman handling farm equipment and supplies in the capital of the province was one of the first clients. Through him, FMCP was contacted by other landowners. As of this writing (March 25, 1967), a total of eight landowners with irrigated farms aggregating 486 hectares have engaged the services of FMCP. The total holdings of these landowners are about 2,000 hectares and they have indicated interest in having the rest of their holdings placed under FMCP's management during the coming wet season.

FMCP's contract with these landowners is for a period of three years and its substantive provisions are listed below:

1. *Consideration*

(a) The consideration of this Agreement:

(1) The Contractor shall be entitled to 50% of the surplus of each palay harvest on the farm during the effectivity of this Agreement.

(2) The surplus shall be the balance of the harvest after deducting the basis production of 50 cavans per hectare and the additional cost of production, if any.

(3) The additional cost of production shall be the amount in excess of the usual cost of production of the Owner before this Agreement. The usual cost of production shall include the cost of operations from land preparation to the delivery of the palay, clean and dry, to the warehouse or warehouses designated by the Owner, provided such warehouse or warehouses are located in the vicinity of the project site.

2. *Obligation*

(a) The Owner shall:

(1) Make his land available to the Contractor for the purpose stated in this Agreement.

(2) Be responsible for financing all necessary inputs which will contribute at desirable returns toward increasing the yields of, or income from, the farm.

(3) Make available all facilities, equipment and personnel now dedicated to the farm. The control of these facilities, equipment and personnel shall remain with the Owner and their utilization by the Contractor shall be on the authority of the Owner.

(4) Allow the Contractor to control the choice of seed rice and cultural practices, such control to be exercised in consultation with the Owner.

(b) The Contractor shall:

(1) Provide technical services, guidance and supervision for all farm and off-farm operations, including land preparation, seed preparation, planting, weed control, pest and disease control, water control, soil management, harvesting, threshing, drying, storage, handling, transportation and marketing.

(2) If necessary, design a financing plan and control system covering all phases of farm operations and marketing.

(3) Conduct studies, if needed, to serve as bases for decisions the Owner may have to make on significant problems which require financing.

(4) Render periodic reports to the Owner to keep him informed of developments on the farm and related activities.

FMCP's officers considered two possible methods of being compensated for the services of the firm. These were:

(1) A percentage share of the gross yield, say 5%.

(2) Half of the surplus yield.

They chose the second because it gives protection to the landowners since they are assured of a basic production and the return of their extra cost of production, and it provides incentive to both FMCP and the landowners toward higher yields. The first would provide incentives

for both FMCP and the landowners but would not ensure the usual yields of the landowners.

Under the chosen method, no basic production can really be assured, since yields are subject to many variables and actual yields could be lower than the basic yields indicated in the contract. What is assured merely is: if the actual yield equals the basic yield plus the quantity equivalent to the extra cost of production, FMCP does not receive a share of the harvest.

FMCP prepares for its clients a schedule of operation covering seedbed preparation, seeding, land preparation, transplanting, fertilizer applications, weeding, weed control applications, disease and insect control applications, harvesting and threshing.

A schedule of supplies, materials and services required is prepared by FMCP for the approval of the landowner. Two samples of the schedule are shown on tables 1 and 2. These tables indicate not only the requirements but also the extra cost of inputs the landowners should furnish. Landowners are informed by the firm about the dates of delivery of supplies and materials at the project site.

Some of the landowners have revealed their reasons for enjoying the services of FMCP. These include the following:

1. FMCP appears to be led by dependable persons.

2. The landowners are interested in raising their productivity to increase immediately their income from the land.

3. The landowners are preparing for the declaration of the area where their land is located, as a land reform district. Higher yields on their land now would mean higher rent and higher value for their land.

4. The landowners realize that they and their tenants, if any, would learn productivity-raising techniques which they could apply after the termination of their contracts with FMCP.

5. Some of the landowners are too busy with other activities which keep them away from the farm. Hiring FMCP solves their problems of supervising their farms.

6. FMCP is not paid in cash but is paid in kind after the harvest.

TABLE 1.— Cost of Production per Hectare

ıdowner—Juan P. Marcos

:a—55 Hectares

PARTICULARS	USUAL	RECOM-MENDED	DIFFER-ENCE	REMARKS
Labor				
1. Seedbed Operation	—	—	—	No cost difference
2. Field Operation	—	—	—	"
(a) Land preparation	—	—	—	"
(b) Transplanting	30	50	20	
(c) All other operations	—	—	—	
Materials				
1. Seed	23	28	5	
2. Fertilizer	111.70	133.65	21.95	
3. Pesticide	3.75	41.40	37.65	
(a) Leafhopper Control				
(b) Stemborer Control				
1st		49.50	49.50	
2nd		75.00	75.00	
TOTAL	168.45	342.55	209 10	

TABLE 2.—Cost of Production per Hectare

lowner—Carlos Hizon

ı—17 hectares

PARTICULARS	USUAL	RECOM-MENDED	DIFFER-ENCE	REMARKS
Labor				
1. Seedbed Operation	—	—	—	Tenants' participation
2. Field Operation	—	—	—	"
(a) Land preparation	—	—	—	"
(b) Transplanting	30	50	20	
(c) All other operations	—	—	—	
Materials				
1. Seedbed	22	28	6	
2. Fertilizer	30	133.65	103.65	
3. Pesticides				
(a) Leafhopper Control	3.00	41.40	38.40	
(b) Stemborer Control				
1st	—	49.50	49.50	
2nd	—	75.00	75.00	
TOTAL	85.00	377.55	292.55	

CASE 3: DEVELOPMENT

On February 22, 1967, the Farm Management Corporation of th Philippines (FMCP) was engaged by the Cotabato Plantation, Inc. (CPI to develop CPI's hacienda of about 700 hectares.

Surrounded by rivers, the hacienda is located on the western rim c Cotabato province. The river on the northern boundary of the haciend is fed by streams from a nearby mountain and by tributaries from th highlands to the northwest of the hacienda. It is a good source of irriga tion water.

FMCP was contacted through Mr. Arturo Blanco, one of its consultant by Mr. Antonio Abadilla, CPI's Administrator. Mr. Abadilla asked M Blanco "whether something could be done to develop the hacienda an make it more productive."

Subsequently, FMCP was invited by CPI's President-General Manag to look over the hacienda, conduct a study, and submit a plan of develo ment which could be implemented within "the next two months." FMC dispatched a team of two men to the hacienda, one an agricultural e gineer and the other an economist.

After a week at the hacienda, the team came back with a surv report. The coverage of the report is indicated by the survey outli shown below:

SURVEY OUTLINE

1. *Population*	Composition. Language. Education. Males a Females. Age Groups. Leaders. Religion.
2. *Living Conditions* ...	Homes. Sanitation. Nutrition. Church. Schoo
3. *The Land*	General description of area and sub-area. Sect which can immediately be used. Sectors which can be used during the rainy s son. Sectors which can be developed over ti for the dry and rainy seasons. Soil types.
4. *Irrigation*	Water sources. Water utility. Existing irrigati facilities-status. Needed facilities. Location (s gested) of new facilities.
5. *Labor*	Land preparation. Weeding. Harvesting. Threshi Availability, quality and cost.
6. *Power*	Animal population. Availability and cost (ini outlay and service cost) Tractors-types, H.P. c dition, spare parts, operational costs.

7.	*Farm Implements.*	Types, age, costs, etc.
8.	*Crops*	Varieties, yields, prices. (Rice and others).
9.	*Cropping Season* .	Planting. Harvesting.
10.	*Climate*	Rainfall. Temperature.
11.	*Farm Supplies* ...	Fertilizers. Insecticides. Clothing, etc. Sources and prices.
12.	*Land Preparation*.	Method. Timetable. Cost.
13.	*Seeding*	Method. Timetable. Cost.
14.	*Planting*	Method. Timetable. Cost.
15.	*Harvesting*	Method. Sharing system. Labor efficiency.
16.	*Threshing*	Method. Efficiency. Cost.
17.	*Drying & Storage*.	Method. Cost. Warehousing capacity. Type of warehouses.
18.	*Processing*	Kind of machinery. Capacity. Recoveries. Location.
19.	*Credit*	Rural bank facilities. Credit system of the plantation. Others. Interest rates. Availability.
20.	*Prices*	Crops and all other commodities not mentioned above.
21.	*Transportation* ..	Means. Cost. Frequency. Try to obtain operational and maintenance cost of the company boat and all other means of transportation used on the plantation.
22.	*Operational Plan* .	Past. Current. Future. Status of present plans.
23.	*Organization*	Chart. Personnel and personnel qualifications. Compensation. Relationship with Manila Office (requirements imposed by the Manila Office).
24.	*Finance.*	Budget formulation and control. The chart of accounts. Control of funds, (receipts, remittances and accounting) financial planning (cash flow, B&L and BS, projected). Sample of report to Manila. Analysis of financial statements.
25.	*Grain Marketing.*	Vicinity of Plantation. Zamboanga City. Government operations. Private enterprise operations. Transportation facilities and costs. Plantation to Zamboanga, Cebu, Manila, etc.

The hacienda is mortgaged rather heavily and no more than ₱20,000 could immediately be made available for development. Obviously no plan that would require an initial outlay of more than ₱20,000 would be acceptable.

Certain thoughts expressed by CPI's President-General Manager served as guidelines for the plan:

1. The plan should call for a quick turnover so that funds initially made available could be revolved to sustain further development.
2. The project under the plan should be able to generate enough funds to make possible the complete development of the hacienda's arable land within a period of 5 years.

The survey revealed that rice and corn had been grown on the hacienda. Rice yields on cultivated patches have been as low as 8 to 15 cavans per hectare and corn of 3 to 4 inches long on the cob has been grown intermittently with no record of yields at all. Some 200 hectares of the hacienda is flat. The soil as per records of the Bureau of Soils is San Manuel sandy loam and is suitable to such crops as rice, sugar cane, corn, root crops and vegetables. The nearest market is about 12 hours away by boat and it would cost about ₱0.50 per bag to transport grain from the hacienda to this market.

A plan was evolved to initially grow rice of the IR8 variety on an initial area of 20 hectares. The more important parts of the plan may be outlined as follows:

1. *Objectives*:
   (a) To develop an initial area of 20 hectares and gradually expand this.
   (b) To produce profitable yields through an integrated application of improved rice cultural practices.
   (c) To establish a 3-crop-a-year production pattern for the owner.
2. *Planning Horizon*:

   This covers the first 5 to 6 months of operation and offers a modular guide for future similar operational activities on the area.
3. *Limiting Factors*:
   (a) Only ₱20,000 is available.
   (b) Lack of experience in improved rice cultural practices on the part of farmers.
   (c) Storage facilities and marketing channels.

4. *Strategy*:

(a) Begin with an easily manageable area and expand as funds generated by development will permit.
(b) Establish initial irrigation facilities with the use of 2 portable pumps.
(c) Use improved cultural methods and practices.

5. *Pre-harvest Operational Calendar*:
See below.

6. *Financial requirements*:
See Tables 1 and 2.

7. *Income Estimates*:
See Tables 3, 4, and 5.

PRE-HARVEST
OPERATIONS CALENDAR
(20 Hectares)

	Days													
Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ɛedbed preparation	2p	2p	2p	2p	2p	2p	2p	2p	2p	2p	—	—	—	—
ɛed treatment	2c	2c	2c	2c	2c	2c	2c	2c	2c	2c	—	—	—	—
ɔwing, SB	—	2c	2c	2c	2c	2c	2c	2c	2c	2c	2c	—	—	—
lowing	3h	3h	3h	3h	3h	3h	2h	—	—	—	—	—	—	—
st Harrowing, Dry	—	4h	4h	—	4h	—	4h	2h	—	—	—	—	—	—
ɪd Harrowing, Wet	—	—	—	—	—	—	2h	2h	2h	2h	2h	2h	2h	2h
rd Harrowing, Wet	—	—	—	—	—	—	—	—	—	—	2h	2h	2h	2h
evelling	—	—	—	—	—	—	—	—	—	—	—	2h	2h	2h
ransplanting	—	—	—	—	—	—	—	—	—	—	—	—	2h	2h
ertilization, PP	—	—	—	—	—	—	—	—	—	—	—	2h	2h	2h

	Days													
Activities	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ɪd Harrowing, Wet	2h	2h	—	—	—	—	—	—	—	—	—	—	—	—
rd Harrowing, Wet	2h	2h	2h	2h	2h	2h	—	—	—	—	—	—	—	—
evelling	2h	2h	2h	2h	2h	2h	2h	2h	—	—	—	—	—	—
ransplanting	2h	2h	2h	2h	2h	2h	2h	2h	—	—	—	—	—	—
ɛvin Spray	—	—	—	—	—	—	—	—	2h	2h	2h	2h	2h	2h

	Days											
Activities	29	30	31	32	33	34	35	36	37	38	39	40
ɛvin Spray	2h	2h	2h	2h	—	—	—	—	—	—	—	—
/eeding, C	—	—	—	—	2h	2h	2h	2h	2h	2h	2h	2h up to 42
/eeding, R	—	—	—	—	—	—	2h	2h	2h	2h	2h	2h up to 44
HC	—	—	—	—	—	—	—	—	—	2h	2h	2h up to 47

Note: After harvest, repeat cycle.

TABLE 1.—Fund Requirements and Allocation

ITEM	ALLOCATION Manila	Cotabato	Total
Administrative			
Transportation	₱1,250	₱ 75	₱ 1,325
Per Diems	340	400	940
Communications	20	85	105
Sundries		500	500
Contingency		287	287
Farm Supplies and Materials			
Seed	1,050		1,050
All Others		9,517	9,517
Tools and Equipment			
Harrows	240		240
Rotary Weeder	300		300
Threshers	450		450
All Others	1,292		1,292
Personnel Services			
Farmer-Foreman	600		600
All Others	—	6,850	6 850
Total	₱4,450	₱19,006	₱23,456
Adjusted Total			21,302 *

* See Table 2.

TABLE 2.—Financial Requirements by Month

ITEM	1st	2nd	3rd	4th	5th	Total
Administrative	₱ 817	₱ 585	₱ 585	₱ 585	₱ 585	₱ 3,157
Personnel Services	1,490	1,490	1,490	1,490	1,490	7,450
Supplies & Materials	10,467					10,467
Tools & Equipment	200 *					200
Total	₱13,002	₱2,075	₱2,075	₱2,075	₱2,075	₱21,302

TABLE 3.—Estimated Gross Income at Different Production Levels First Crop Season

YIELD, Cv/Ha.	INCREASE, Cvs FROM BASIC YIELD	HACIENDA'S SHARE, Cvs	C/INCOME PER Ha. P16/cv	TOTAL C/INCOME, 20 Has.
30	—	30	480	9,600
40	10	35	560	11,200
50	20	40	640	12,800
60	30	45	720	14,400
70	40	50	800	16,000
80	50	55	880	17,600
90	60	60	960	19,200
100	70	65	1,040	20,800
110	80	70	1,120	22,400
120	90	75	1,200	24,000
130	100	80	1,280	25,600
140	110	85	1,360	27,200
150	120	90	1,440	28,800

TABLE 4.—Estimated Gross Income at Different Production Levels 2nd Crop Season

YIELD, Cv/Ha.	INCREASE, Cvs FROM BASIC YIELD	HACIENDA'S SHARE, Cvs	C/INCOME PER Ha. P16/cv	TOTAL C/INCOME, 20 Has.
30	—	30	480	9,600
40	—	40	560	11,200
50	—	50	800	16,000
60	10	55	880	17,600
70	20	60	960	19,200
80	30	65	1,040	20,800
90	40	70	1,120	22,400
100	50	75	1,200	24,000
110	60	80	1,280	25,600
120	70	85	1,360	27,200
130	80	90	1,440	28,800
140	90	95	1,520	30,400
150	100	100	1,600	32,000

TABLE 5.—Summary of Estimated Gross Income at Different Production Levels, 20 Hectares, First Year, 2 Crop Seasons

YIELD, CAVANS PER HECTARE	₱ TOTAL C/INCOME First Crop	₱ TOTAL C/INCOME 2nd Crop	₱ TOTAL C/INCOME One Year
30	9,600	9,600	19,200
40	11,200	11,200	22,400
50	12,800	16,000	28,800
60	14,400	17,600	32,000
70	16,000	19,200	35,200
80	17,600	20,800	58,400
90	19,200	22,400	41,600
100	20,800	24,000	44,800
110	22,400	25,600	48,000
120	24,000	27,200	51,200
130	25,600	28,000	54,400
140	27,200	30,400	57,600
150	28,800	32,000	60 800

COMMENTS

Obviously, the cases presented can be considered from various points of view, and reactions to them would vary with differences in the interest and background of the persons considering them. Because of this and because not all the facts available concerning each case have been included in the case reports, the following general comments are made merely to invite attention to some areas of consideration which seem important in these case reports.

1. *Orientation and outlook of the firm.*

There are two firms concerned in the case reports. Both have indicated full awareness of the rice problem as this may be traced to the causes of low yields and to a fast-increasing population. They have expressed belief that the problem of producing enough rice for a growing world population will continue for many years and that, therefore, self-sufficiency in rice in the Philippines will not eliminate the market for their services, since such services will be needed to maintain or improve production levels to meet local and foreign demand. Continuing advances in technology and the need for applying these in the field on an increasingly widening area bolster their belief. The fact that in the country there are only a few firms such as those mentioned argues in favor of a bright future for the two firms on which the case reports focus attention. But such a future would depend, to a large extent, on the results of their performance.

2. *Approach.*

The pre-contract approaches considered by the two firms generally call for flexibility and skill on the part of the firm executives in their pre-contract talks with clients. This seems not only desirable but imperative considering that farm management services in rice are a relatively new business activity in the country. The experience in management services in the industrial sector cannot serve as a very useful guide for management services in agriculture because of greater risks and various variables in agriculture.

3. *Management Services.*

It seems that in order to succeed farm management firms must be able to provide three kinds of services: (1) technical know-how, *per se,* or scientific knowledge on how to grow rice; (2)the business orientation which should include (a) an accurate, meaningful system of recording, (b) competent analysis of records to give reliability to decisions concerning production and marketing and (c) the planning of production and marketing operations and the supervision of the implementation of plans; and (3) corollary services which should include (a) coordinative relationship with government agencies whose functions involve rice and with government and private financing institutions, and (b) a clientele relationship which should carry a readiness on the part of the firms to perform their extension function only during the contractual period and to relinquish clients after the contractual period rather than develop a perpetual clientele dependence.

To provide these services, the farm management firm must have personnel who by formal training and experience have competence in each of these kinds of services.

Techniques of management must be applied on all project farms so that the cycle of effective planning and efficient implementation can be established firmly on these farms, and this would call for an organization with combined desk and field capabilities.

4. *Economic Benefits.*

The continuance of the services of a management firm in any given project will depend largely on the performance of the firm particularly toward increasing the economic benefits for the landlord and tenants.

The contractual conditions with respect to the compensation for services of the management firms mentioned in the case reports are in line with this thought. Under these conditions, economic benefits enjoyed by a prospective client at the time are protected and more benefits are promised. In addition, the compensation for services of the management firms is dependent on surplus. In effect, such compensation accrues only when the results of cooperative effort between a management firm and its client permit it and that would occur only when the results are profitable.

This arrangement exposes the management firms to great risk in case it happens to have unreliable clients who would have ways of reducing their harvest. Considering the usual practice of harvesting and threshing in the country, it is difficult to have an accurate count of the harvest without the assignment to the field of full-time personnel in sufficient number. That number can be multiplied by as much as the number of harvesting points, particularly if these points are distant from each other. It is important, therefore, that management firms are able to accept offers to engage their services only from reliable clients. The criteria used in the first case for choosing clients appear helpful in this respect. In addition, a system of checks seems necessary to insure that yields on a project are accurately reported and recorded.

5. *Attitude of clients.*

The attitude of clients (as indicated in Case 2) toward management services shows that landowners, at least those who have engaged the services of management firms, are generally rational.

It is an indication of the location of the market for farm management services.

It should be realized that these clients are located in irrigated areas where water control is relatively good. At present, these areas constitute only about 10% of the land cultivated to rice in the country. This seems to indicate that the area of operation for farm management firms should be and will be limited to the irrigated areas. Here, prospective clients with orientation for better farming are located. Here, the growing of more than one crop is possible and, therefore, the burdens of the management firms could be spread over more sources of revenue, and more income for the firms from a greater number of turnover could be expected.