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*Texts and Case Studies*

**AGRICULTURAL  
RESEARCH MANAGEMENT**

**Southeast Asian Regional Center for Graduate Study  
and Research in Agriculture  
College, Laguna, Philippines**

**Philippine Council for Agriculture and Resources Research  
Los Banos, Laguna, Philippines**

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## AGRICULTURE & ECONOMIC DEVELOPMENT: AN OVERVIEW

J. D. Drilon, Jr.\*

In this paper, economic development is first discussed in terms of its objectives, its nature as a process, its problems, the diversity of strategies to solve these problems, and the indicators of economic problems and progress. The structure of the economy is then illustrated to show its component sectors and their relationships. Agriculture is then examined as a sector and in terms of its importance, problems and the strategies that may be employed, and the issues often encountered in the formulation and pursuit of these strategies.

### Economic Development

In a broad sense, economic development in a country is the process of improving the growth and stability performance of the various sectors of the national economy interacting in a combination that seeks to achieve national development objectives in the most efficient and effective manner.

National development objectives vary in form and substance from country to country and variations are influenced by the status, size, resources, knowledge and technology systems, administrative capabilities and leadership styles of the economies concerned. But certain objectives may be pointed up as basic objectives or, perhaps more precisely, objectives common to many countries, and these are

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- (1) adequate supply of the basic necessities of life such as food and fiber, clothing and shelter; (2) socio-political stability in terms of peace and order and well-being oriented services in such fields as education, health, labor, and social welfare; and
- (3) national independence and prestige.

Viewed from another angle in the context of economic thinking, national economic development objectives include increasing the gross national product (GNP), expanding employment opportunities, raising levels of income, and distributing income more equitably.

Activities aimed at purely economic development objectives may not be, in fact, economic activities alone. Just as economic development contributes to objectives which are not merely economic but which are in the main social or political, many activities that are social or political in nature contribute significantly to the achievement of economic goals. It may thus be said that economic development plans are not complete unless they take into consideration social and political factors that necessarily impinge upon and condition the economic development process. The purposes of economic development can, therefore, be numerous. In the ultimate analysis, they all are related to the objective of improving the quality of life of the people.

How to improve the quality of life of the people is then the basic and central problem of economic development. And when we speak of people, it is well to remember that we are referring to a heterogeneous group with differences - in certain cases rather wide - within

a country and from country to country, differences in such aspects as income levels, education, skills, capacity to work, family sizes, resources, culture, and aspirations. In comparing countries, political systems could also be significantly different.

These differences call for differentiation and segmentation in planning and in implementing economic development plans. Further, it results in a diversity of strategies that recognizes the location - specific character of economic development problems.

Economic development strategies, programs and projects may not be transferable from country to country. Although strategy, program and project patterns may be transferable, modifications for adaptation are usually necessary.

The complexity of economic development is portrayed by the wide range of indicators suggesting the problems, status and progress of an economy.

Let us refer to Appendices A, B, and C.

The ADB region indicators have at least nine areas of consideration: area and population, social indicators, national accounts, production, transport, money supply and price, external trade, financial flows and international finance.

Taking the social indicators alone, we find 13 indicators and these are (1) percent of economically active population, (2) percent of economically active population in agriculture, (3) urban population, (4) agricultural land per capita, (5) life expectancy, (6) infant

mortality per 1000 live birth, (7) persons per hospital bed, (8) persons per physician, (9) primary students as percent of 5-14 age group, (10) secondary students as percent of 15-19 age group, (11) literacy rate, (12) daily newspaper copies per 1000 persons, and (13) TV receiver sets per 1000 persons.

Appendices B and C show indicators suggested as measures for evaluating the performance in development, particularly in the Philippines.

Let us examine briefly the indicators for agriculture in these two appendices.

In Appendix B, performance in achieving self-sufficiency in food and food products is to be measured by the (1) self-sufficiency ratio, (2) per capita food availability, (3) per capita calorie and food intake, (4) distribution of food supply by region, (5) extent of food importation and exportation.

Growth and efficiency is to be measured by the (1) agricultural production growth rate in terms of net value added, (2) ratio of actual agricultural production over targeted agricultural production, (3) ratio of agricultural output over agricultural input, (4) ratio of available supply over consumption requirement at regional, provincial and municipal level, (5) rate of loss reduction, (6) availability of marketing facilities, (7) number of established integrated industries based on agricultural products, by region, (8) allocation of various food crops, by region, and (9) number of tenant farmers converted into owner-operators.

These and the other indicators listed in Appendix B as well as in Appendix C all point up the complexity of the development process and the conclusion that the information systems needed to monitor the process could be equally complex. The extent of complexity in the latter has cost implications and the size and status of the economy should determine what is needed and could be supported in terms of development information systems.

#### Economic Structure

In looking at the structure of an economy, one way is to refer to the national accounts which ordinarily include the economic sectors such as agriculture, manufacturing, construction, mining, transportation and communication, trade and services. These sectors as components of an economic system, interact with each other, each one depending to a certain extent for viability upon one or more of the other sectors. For example, agriculture has to depend upon manufacturing for part of its market. Vice-versa, manufacturing has to depend upon agriculture for the supply of part of its raw materials and both would have to depend on transportation and communications, trade and services.

The interrelationships of the various sectors of the economy can better be understood, if one views the national accounts as if it were part of the accounting system of a firm, which in this case is the economy itself.

Another way of looking at the structure of an economy is to regard it in a very simplistic way, in terms of its basic components

which are households and firms. Figure 1 shows these components and their basic interrelationships.

The households provide the firms with labor and capital. The firms provide money to households in terms of salaries-wages and rent. The firms produce goods and services which they sell to households. And the households pay to the firms for these goods and services. The interrelationships are in essence a resource recycling process. A people-oriented view would regard the system as really intended to provide goods and services for the use of households.

### Agriculture

#### Functions

Most countries in Asia and the Pacific are principally agricultural economies in the sense that they are agriculture-based. Their agricultural sector plays a significant role in their economic systems.

Indeed, in many countries in Asia and the Pacific, agriculture performs many important functions:

1. It produces the food (crops and livestock) and fiber required by the people.
2. It is the source of important exports and is, therefore, a generator of foreign exchange.
3. It provides raw materials for indigenous industries.
4. It produces surplus of investible funds to develop other sectors of the economy.

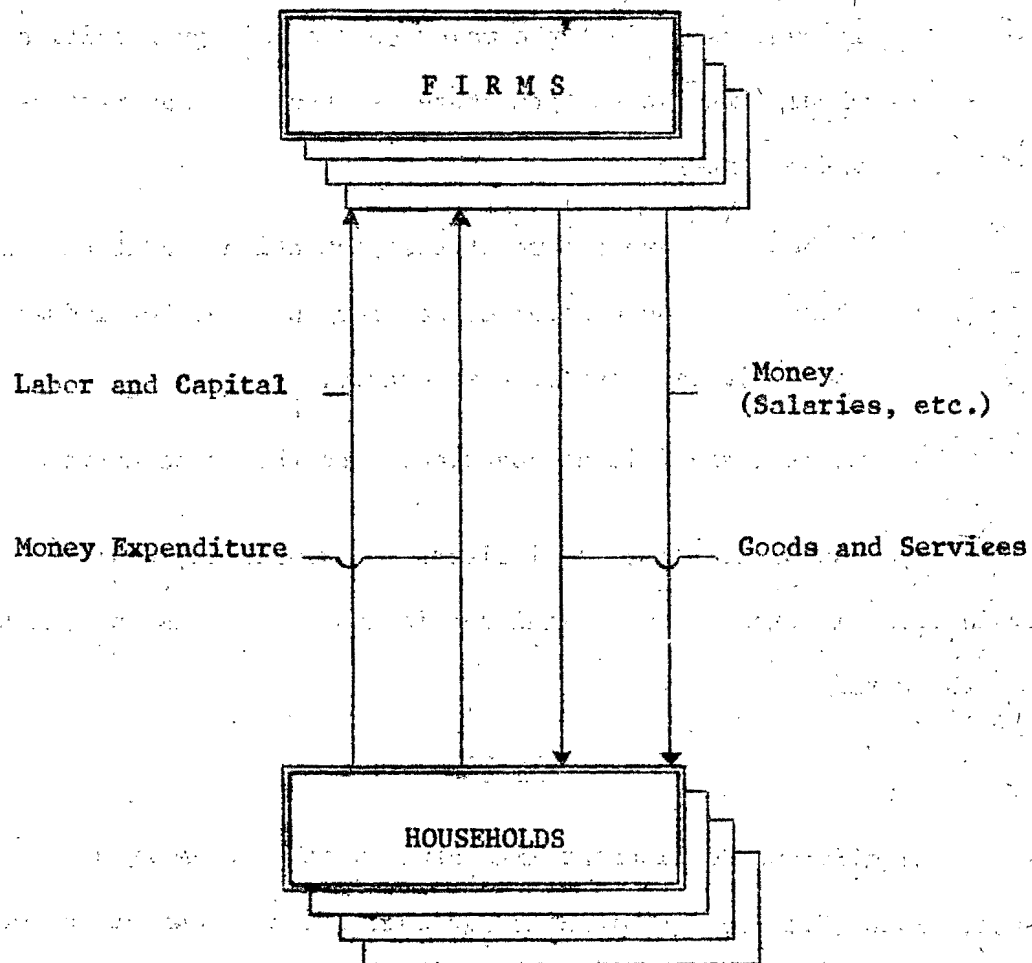


Figure . Two-Way Flow of Resources, Goods and Services Between Households and Firms.

5. It produces products for import substitution and, therefore, saves foreign exchange.
6. It provides employment opportunities - national employment in many countries, the major portion of opportunities - and should prevent the premature shift of the labor force to the urban centers.
7. It houses a great part of the population and it constitutes, therefore, the greater market for the goods of industry and the political base of the economy.
8. It is a significant contributor to the gross national product.

Because of all this, agriculture, if developed, could be the main economic development stimulator in many countries in this part of the world.

#### Problems

Significant development literature which has emerged in recent years identifies the problems of agricultural development as represented by the three broad issues, namely:

1. The food-population imbalance;
2. Malnutrition; and
3. Poverty.

A sharp awareness of food population imbalance problems has developed only in the last two decades or so. There are now a number of parameters that are helpful in this regard.

Population is expanding at an average rate of about 2% and is expected to double in some countries in about 36 years and in others in only about 25 years. On the other hand, arable land that can be devoted to agriculture has been decreasing over time. The land frontier having been almost closed, arable land has been sloping down from about 3.1 billion hectares in the 1960s to an expected 2.4 billion hectares in the year 2000.

In the meantime, the developing countries seem to be losing their capacity to feed themselves. In 1945, grain imports of developing countries amounted to only about 4 million tons. In 1964, these imports increased to 25 million tons. On the basis of trends of grain production in the last 15 years or so, the International Food Policy Institute has projected that the food grain deficits of developing market economies would be in the vicinity of 100 million metric tons in 1985-86, a volume that is quite staggering from the standpoint of financing and physically moving needed supply. The fact that developing market economies usually have problems of foreign exchange inavailability would compound the difficulties of the situation.

Insofar as malnutrition is concerned, about 1/4 of the world's population of 4 billion is adversely affected, with (1) about 400 million living "on the edge of hunger," (2) 10 million children so malnourished that their lives are at risk, and (3) about 12,000 people dying every day because of malnutrition.

Hunger and malnutrition have taken their toll in three areas of the world: (1) in northeastern South America, (2) in the Sahelian zone in Africa, and (3) in the Asian subcontinent including India, Sri Lanka, Bangladesh and Pakistan.

But the biggest toll has been inflicted in Asia where up to 12 million tons of grain deficits have occurred in certain years.

The poverty picture is equally staggering. While in 1974 the per capita GNP was \$6,720 in Sweden, \$6,640 in the U.S., \$2,770 in Italy, and \$2,300 in Russia, it was below \$500 in 90 other countries.

The poverty gap between nations may be projected to peoples within nations.

### Strategies

The strategies for solving these problems vary with the differences in country situations. But they seem to have commonality in terms of target beneficiaries and objectives.

Partly because of development concepts evolved by international assistance agencies, it is now, in a manner of speaking, in fashion for national agricultural development strategies to be aimed at the small farmers and the landless rural poor. As one development advocate puts it: "If we cast the net for the small fish we are apt to catch it as well as the bigger ones." The strategy objectives cluster around raising farm productivity, maximizing farm income, and generating non-farm sources of income.

The strategies take the form of national programs and projects.

Programs differ from projects in the sense that they may consist of a series of related projects. A project may refer to a specific area, or a component of a program such as an irrigation project or an integrated development scheme covering a particular geographical area.

Programs may be classified into traditional programs and campaign programs.

The first classification refers generally to pre-green revolution era when agricultural development programs in developing countries in Asia did not have high-production technology vehicles. They were pursued at rather low levels of input utilization and relied more on pushing the land frontier as a means for increasing production. Policy declarations were used as tools mostly for political effect, accompanied by financing programs that reflected, in their relative smallness, a bias in favor of the other sectors of the economy and a lack of urgency traceable to the low priority placed on agriculture. Many developing countries are still following the traditional type of agricultural development programs.

In contrast, some forward looking countries are now pursuing campaign programs for agricultural development, campaign in the sense that they involve the movement and use of massive resources for large targets in terms of geographical areas and number of participating farmers. Moreover, they are pursued with a high sense of urgency and, in certain cases, mandated by no less than the top leader of the land.

Examples of this type of programs are the Bimas, Inmas, and Gotong Royong rice programs of Indonesia, and the Masagana 99 rice program of the Philippines.

In the case of Masagana 99, the program was launched on a national TV and radio hook up and before a large audience of government and private sector representatives as "a program of survival" by President Marcos himself in Malacañang, the Executive Palace, and he has seen to it that the organizations expected to participate in the program play their roles and that the resources needed to support the program are provided. Credit, for instance, has been provided at levels unprecedented in the entire agricultural history of the Philippines.

The components of this particular campaign program include the following:

1. Research and technology
2. Extension
3. Credit
4. Seed
5. Fertilizer
6. Pesticides
7. Farm machinery
8. Irrigation
9. Transport
10. Storage and processing

11. Financing
12. Pricing
13. Stabilization
14. Land reform
15. Management

These components suggest the system for delivering technology for the benefit of farmers. See Figure 2.

A word should be said for each component.

An agricultural economy should have a research system that is able to absorb and adapt exogenous research findings and/or to discover indigenously the answers to production, processing and/or marketing problems. The size and sophistication of the system should depend upon the size of the agricultural sector. It is now widely accented that to be effective, a production research system must be able to reach farmers by having, at the end of its line, on-farm research.

A research system should be able to "package" its findings into technology or knowledge useful in the production of goods and services for the benefit of the people. This suggests the wisdom of problem-oriented research.

Technology to be useful must offer dramatic increases in yields and income and must be effectively extended or transferred to users. This is where the agricultural extension service is needed. In several countries in Asia, the extension service has been found inadequate in

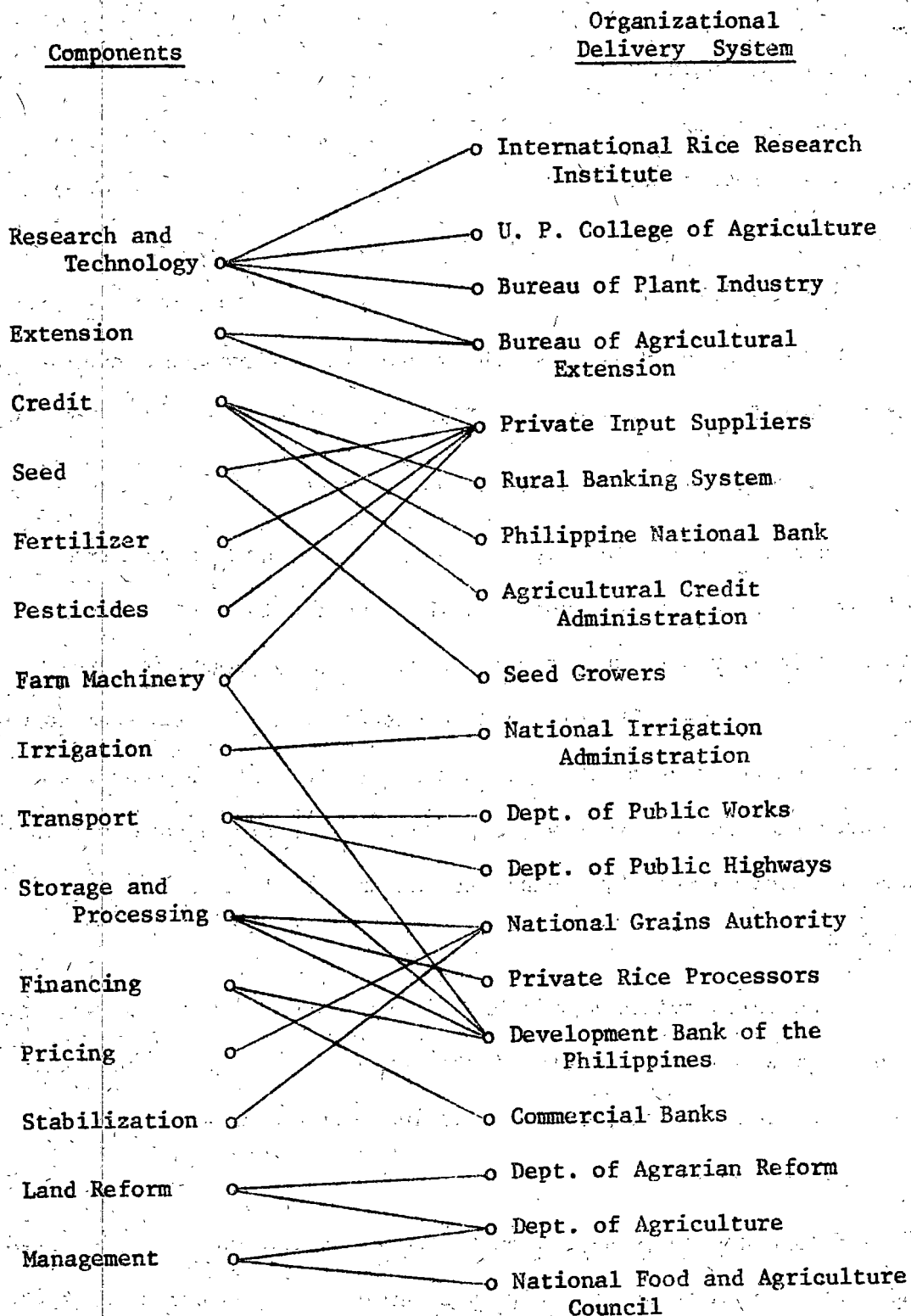


Figure Masagana 99 Strategy Components and Delivery System

terms of the number of extension agents vis-a-vis the number of farmers to be serviced. This limitation in manpower availability implies that agricultural training institutions have probably been operating without being sharply attuned to the manpower requirements of the country. But, of course, a country's need for extension agents depends to a large extent upon the manner in which they are utilized. In some countries, they are employed in addition to purely extension work to assist the rural credit institutions in preparing farm plans and accomplishing forms that serve as the basis for extending credit to farmers. In other countries, the organization of farmers into associations, or cooperatives facilitate the work of the extension service and, in certain cases, the farmer aggroupments themselves not only enhance but also supplement the work of the extension service.

Given certain characteristics such as small farms, low productivity, low incomes and slow capital formation, the Asian farmer needs credit to enable him to adopt new production technology, particularly in purchasing the inputs of such technology. Considering the low level of living of the small farmer and the fact that he usually works as subsistence farmer, some credit systems in Asia include in their loans to the small farmer an amount intended to partially meet the farmer's consumption requirements. This probably is an advisable practice, but the total loan amount at any one time ought to be determined on the basis of need and ability to pay as indicated by the anticipated income of the farmer. Not only should the credit be in the right amount but it should also be provided at the right time.

The inputs for which credit is needed mainly include seed, fertilizers and pesticides.

Some countries have been trying to develop a national seed industry and the concept of seed banks has been discussed in many international agricultural conferences in recent years. In rice, the need for seed arises only at the early stage of introducing new high-yielding varieties. A few crops after such introduction, the need disappears as the farmers are usually able to grow their own seed. Disasters, like unusual floods, which destroy the crops on the ground give rise to government emergency operations aimed at providing affected farmers with seed to enable them to replant their fields.

The new rice production technology requires the use of chemical fertilizers as it calls for the use of varieties which are highly responsive to nitrogenous fertilizers. A national drive to increase production must be able to provide the fertilizers needed to accompany the high-yielding varieties. This is also true with pesticides, to control weeds as well as protect the rice plant. Where the supply of pesticides is handled by the private sector, the private sector's representatives concerned should be involved in the planning and implementation of the rice program.

Traditional tropical agriculture has in the past used bullocks and water buffaloes for land tillage as well as for farm transport. In recent years, the use of farm machinery and equipment as substitutes

for work animals has become more and more accentuated. Modern agricultural production technology and the development of farm machinery industries even in the developing countries have promoted the use of machinery and equipment not only for land tillage and farm transportation but also for irrigation, drying, threshing, winnowing, and cleaning. For instance, the advent of early maturing, photoperiod insensitive varieties have made it possible to grow 2.5 to 3 crops of rice on the same piece of land a year but this becomes a reality only if water is adequate, mechanical tillage equipment is available to hasten land preparation, and artificial driers are ready for harvests that occur during the wet season. The use of machinery in certain farm operations may not decrease costs but may enable the farmer to do things in a different way and thus enable him to cope with a wider spectrum of farm activities that can raise productivity and income.

Transport systems must be provided mainly to enable farmers to bring in their inputs from supply points to the farm and to bring out their produce to the market. A national rice production drive is likely to become successful in areas where transport to provide market accessibility is adequate.

Irrigation systems are naturally necessary in tropical Asia, particularly where there are pronounced dry and wet seasons and where double or treble cropping is desired. A number of large gravitation irrigation projects have been constructed in Asia in the last two to

three decades or so, but in some countries the value of small irrigation systems involving water diversion schemes or the use of pumps is fast being recognized.

The need for efficient storage and processing facilities in a national rice program can be viewed in two ways: first, from the standpoint of adequate capacities "to catch" increases in production, and second, from the standpoint of saving "post-harvest losses" which in Southeast Asia has been determined to run up to 32% of the harvested grain. The minimization of these losses takes on great significance when one considers that the deficit in rice supply of a number of countries in Asia is seldom more than 10% of the national production.

Besides the provision of production credit for farmers, certain components of the strategy have to be financed by government and/or private financing institutions, and those would include the development of irrigation, transport, storage and processing facilities. The financing, obviously, would involve development (medium to long-term) and commercial (short-term) banking operations.

Assuming an efficient rice production technology and an efficient system that would deliver such technology to the farmers, there would in addition be a need for a market that would ensure reasonably attractive margins for the farmers. In developing countries, the prices of rice are not left to the market forces alone to determine. The market structure and considerations of equity between sectors of the economy usually dictate that there be pricing policies that would

support or keep prices at desirable levels. This implies the presence of a government body that intervenes in the market by supporting rice prices for the benefit of farmers. Not only that. Such a government body is normally expected to also stabilize rice prices for the benefit of the consumers.

Agrarian reform has accompanied national agricultural development programs particularly in places where tenancy has been considered a constraint to efforts aimed at increasing farm productivity. The Green Revolution, it has been argued, has resulted in more benefits for the landlords and the big farmers who by their advantageous economic position and by the nature of the land tenure system, have more access to new production technologies that emerge and a greater share in the fruits of using such technology. But, as the fragmentation of land ownership is formalized through land reform, it seems that consolidation of managing certain aspects of the farm operations becomes necessary to achieve higher productivity levels, and this is possible through the development of cooperatives or other forms of farm groupings.

Because of agricultural development program, as may be represented by a national rice production drive, is a process in which many organizations are expected to participate, coordinative mechanisms are helpful. In the case of the Masagana 99 rice program of the Philippines, such a mechanism is symbolized by the National Food and Agriculture Council (NFAC) under the leadership of the Secretary of

Agriculture, with representatives of program participants as members. NFAC has actually made instant-decision making possible because the members, although coming from organizations belonging administratively to different departments or agencies of government, are clothed with authority to contribute to decision making and to bind their respective organizations by their participation.

### Strategy Issues

In considering various agricultural development strategies for developing countries, certain issues require attention, and some of these are as follows:

#### Small Farmers

1. In agricultural development, should small farmers be the primary targets?
2. If they are, how much resources should be allocated for their development?
3. Given limited resources, are small-farmer-oriented programs reconcilable with productivity objectives?

#### Technology

4. High-yielding production technology is high-cost technology. Is it also high-risk technology? Is it the technology for the small farmer?
5. Given an agricultural sector characterized by small landholdings and small farmers with low absorptive

capacity for losses, should high cost technology be promoted?

6. The time horizon of challenge for developing capacity to meet projected food deficits is short. Within this horizon, are there alternatives to high-yielding production technology?

#### Agricultural Research

7. Research appears to be expensive, in a sense. Not all developing countries can afford to develop elaborate research systems. Are there ways of meeting their research requirements?
8. What should be the role of advanced economies in agricultural research? How about the developing countries?
9. What should be the strategy to ensure that new productive technology derived from research will reach the small farmers?
10. How could problem-oriented research be organized and coordinated? Are coordinated research systems necessary? How may such systems be established?

#### Delivery Systems

11. How should delivery systems be developed - through the program approach or project approach?

12. Should farmer relationships be encouraged as an approach to extension? Or, should farmer aggroupments be encouraged and made the channels of agricultural technology information? What is the gestation period for developing effective farmer groupings?
13. How large should a delivery system be for a particular commodity program? Should such a system be used for other commodities? How many other commodities?

Pricing and Stabilization

14. In developing countries, there appears to be a conflict of price policies, particularly those favoring the farmers on the one hand and those favoring the consumers, on the other hand. Should these be reconciled? How?
15. Should there be price subsidies? If yes, on the input side or the output side?
16. If subsidies are favored, to what extent should they be provided? What are the limits?
17. Subsidies can be provided in the form of price supports for a particular commodity. Price supports may be represented as floor prices and are usually accompanied by ceiling prices in order to stabilize the market. How can floor prices and ceiling prices be reconciled? Is there

a desirable space between them? What criteria should be used in determining that space?

### Credit

18. Credit to small farmers appears to carry high risks. In some countries, repayment curves go down after some time. What are the causes? Can downward repayment curves be minimized or avoided?
19. A small farm is a constraint to higher production and income. However much a farmer learns to be scientific, the size of his farm limits his income. Thus, with his propensity to consume and desire to raise his level of living, is he likely to find it difficult at some point in time to repay his loan? If yes, this would suggest transfers of income from the other sectors of the economy to the farming sector. How far can a developing economy afford or sustain a credit program for small farmers? Are there strategies that will improve the capacity of developing countries to provide a credit program for small farmers? Should credit programs be continuing programs?
20. In the face of actual or eventually low repayments in an agricultural credit program, the credit institutions run the risk of losing in their operations and running

out of business. What are the solutions that will prevent the ruin of credit institutions? Only viable credit institutions, as a system, can provide viable agricultural credit programs.

## REFERENCES

1. Sicat, G.P., Economic Policy and Philippine Development, University of the Philippines Press, Manila, 1972.
2. Scientific American, Inc., Scientific American, New York, September, 1976.
3. Mangahas, M., and C. T. Subido, Development Planning, Appraisal and Performance Evaluation with Special Reference to the Philippines (Paper presented at a Workshop on Review and Appraisal of Development Progress at the National Level, Bangkok, September 13-23, 1976).
4. Drilon, J. D. Jr., Masagana 99: An Integrated Production Drive in the Philippines (Paper presented at a Seminar on Accelerating National Agricultural and Rural Development, University of Reading, U.K., September 5-18, 1976).
5. World Bank, The Assault on World Poverty, The John Hopkins University Press, Baltimore, 1976.
6. Southworth, H., Farm Mechanization in East Asia, Agricultural Development Council, Inc., New York, 1972.
7. International Rice Research Institute, Changes in Rice Farming in Selected Areas of Asia, Los Baños, Laguna, Philippines, 1975.
8. International Labour Office, Sharing in Development, Geneva, 1974.

"KEY INDICATORS OF DEVELOPING MEMBER COUNTRIES OF ADB"\*

Area and Population

Area and Population

Social Indicators

Selected Indicators of Social Development

Minimum Requirement, Consumption and Supply of Calorie,  
Protein Per Capita Per Day

National Accounts

Per Capita GNP and Average Annual Growth Rates as  
Estimated by IBRD

Growth Rates of Real Products

Shares of Major Sectors in GDP

Expenditure Shares of GDP

Production

General Index of Agricultural Production

Rice (Paddy) Production

Wheat Production in Selected DMCs

General Index of Manufacturing Production

Electricity Production

Transport

Transport Railway Traffic

Civil Aviation Traffic

Money Supply and Price

Changes in Money Supply

Changes in Consumer Prices

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\*From ADB, Key Indicators of Developing Member Countries of  
ADB, Manila 1975.

External Trade

Merchandise Exports

Merchandise Imports

Imports of Selected Commodities by DMCs

World Market Prices of Selected Primary Commodities

Terms of Trade

Financial Flows

New Flow of Official (Bilateral and Multilateral)  
Resources to DMCs of ADB

Net Change in Guaranteed Private Export Credits  
to DMCs of ADB

External Public Debt Outstanding

Service Payments on External Public Debt

Debt Service Ratio

International Finance

Changes in Foreign Exchange Rates

International Reserves

Ratios of International Reserves to Imports

## PERFORMANCE INDICATORS

<u>Sector</u>	<u>Objectives</u>	<u>Indicators</u>
AGRICULTURE	Self-sufficiency in food and food products	a. <u>Local production</u> $\frac{\text{total requirement}}{\text{Food item available per capita}} = \frac{\text{Total food prod'n}}{\text{Population}}$ b. Food intake per capita = supply of calorie and protein per person per day c. Distribution of food supply, by region d. Extent of importation of food items (increase or decrease) by volume, by foreign exchange yield e. Extent of exportation of food item (increase or decrease)
	Growth and Efficiency	
	1. Accelerate growth and productivity of the sector	a. Growth rate of agricultural production in terms of net value added b. $\frac{\text{Actual levels of agricultural production}}{\text{Targeted levels of agricultural product (national and regional)}} \times 100$ c. Index of efficiency or index of productivity = $\frac{\text{Growth of agricultural output}}{\text{Growth of agricultural input}}$
	2. Improved marketing and distribution aspect of food and agriculture	a. <u>Available supply</u> (region, province, municipality) $\frac{\text{Requirement}}{\text{Rate of reduction of losses}}$ b. $\frac{\text{Numbers of marketing facilities available}}{\text{Region}}$
	3. Maximize utilization of natural resources	
	4. Export expansion	
	5. Increased income level of farm producers	Foreign exchange yield of agricultural exports

\* From Mangahas, M. and Subido, C. Development Planning, Appraisal and Performance Evaluation with Special Reference to the Philippines (Paper prepared for a "Workshop on the Review and Appraisal of Development Progress at National Level," U.N. Asian Development Institute, Bangkok, September 13-23, 1976).

6. Promotion of regional development and industrialization

Equity objective (redistribution of income)

1. Agrarian reform

INDUSTRY

Industrial expansion

Industrial diversification

Employment promotion

Industrial dispersal

Export expansion and diversification

Minimization of industrial pollution

INFRASTRUCTURE/  
UTILITIES

Transportation - to provide a well-integrated, efficient, and adequate infrastructure network consisting of: (a) trunk highways and feeder roads and railroad system; (b) ports and harbors including navigational aids; and (c) airports and airways. The development of various modes of transportation - land, sea and air - must be promoted and controlled so as to provide alternative vehicles by which passengers and commodities could be transported efficiently and economically.

- a. Number of established integrated industries based on agricultural products, by region
- b. Allocation of various food crops, by region

No. of tenant farmers converted into owner-operators

Net value added in manufacturing and mining (in absolute level or growth rate)

Share of top 3 mining and top 5 manufacturing sub-industries in gross value of output

Level and growth of employment

Standard deviation of regional value added, by industry

- a. Level of export volume and number of product lines
- b. Share of manufactured export in total exports

Level of pollution

- a. Kilometrage of paved, and gravel and earth roads
- b. Road density
- c. Number of registered vehicles
- d. Kilometrage of railroad tracks
- e. Travel time

Telecommunications - to provide a nationwide telecommunications services and maximum integration of existing systems.

Power and rural electrification - to provide adequate and dependable electric power for commercial, industrial, and residential usage on a nationwide coverage basis.

Water resources - to utilize, at an optimum level, all water resources for irrigation, hydro-electric power generation, water supply, flood control, navigation, fisheries, and recreation purposes.

- a. Telephone density
- b. Utilization factor
- c. Volume of messages

- a. Population served/not served with electricity
- b. Generating capacity/type of prime mover
- c. Installed capacity
- d. Coincident maximum-demand
- e. Load factor at the plant
- f. System losses
- g. Total energy sold

- a. Number and effectiveness of irrigation
- b. Distribution of water supply to the number of inhabitants for home consumption and number of employees for industry and commerce
- c. Number of water supply facilities versus number of municipalities and cities served
- d. Flood control and drainage structure in lineal meters
- e. Capacity of water resources to generate power

## FOREIGN TRADE

Expansion of export receipts

Level of export receipts

- a. Commodity in which country is a minor supplier-expansion of export volume and/or receipts
- b. Commodity in which country is a major supplier-expansion of total receipts (not necessarily of volume) through the proper mix of volume and price

Diversification of commodity exports

Number of export commodities and share of manufactured exports to total exports

Market diversification

Spread of the distribution of exports and imports among existing trading partners

Employment promotion

Regional dispersal of export industries

Imports to meet national input requirements

Level of output in export industries

Standard deviation of regional exports

Ratio of actual imports to required imports of strategic commodities and difference between domestic requirements and production of these commodities

## EDUCATION

Assure access to basic education

a. Enrollment relative to school-going population or enrollment by age-group or by representative age in three educational levels

b. Pupil year (actual length of stay in one level of education)

c. Student years necessary to produce a graduate

d. Average ages for entering and leaving elementary school

e. Average ages for entering and leaving secondary school

f. Drop-out rate

g. Repetition rate

h. Utilization rates - students class, students teachers, student textbook

i. Teachers - proportion of qualified elementary and secondary teachers out of total

j. Unit cost per pupil at different levels

k. Students going abroad to study

Develop productive citizens needed for national development and develop high level professionals to provide leadership for the nation

a. Brain drain

b. Unemployment

c. Employment

d. Educational expenditures relative to total expenditure

e. Education rate of increase and percentage relative to the gross national product

- f. Percent distribution of enrollment by field of study
- g. School distribution by level of education
- h. Distribution of education and teaching facilities
- i. Expenditures of national government by level of education
- j. Percentage of girls relative to total enrollment
- k. Proportion of literates in total rural population
- l. Proportion of literates in total population
- m. Out-of-school education - Young people taking part in youth movements, business training, percentage of workers attending university and courses
- n. Number of applicants relative to vacancies
- o. Number of examinees in the Civil Service
- p. Existing curriculum compared to the needs of the economy and society, e.g., importance given to science teaching in total curricula

Develop and strengthen moral values

There is difficulty in assessing this educational objective. It could probably be evaluated in relation to the psycho-sociological situation of education which is manifested by discontent among students, teachers or parents, days of studies in education, crimes committed, etc.

## HEALTH AND NUTRITION

Prolongation of life

- a. Life expectancy at birth, by sex, regions, rural-urban
- b. Mortality rates by sex, regions, rural-urban, leading causes

Freedom from hunger

- a. Incidence of nutritional disorders
- b. Infant mortality rates
- c. Age specific mortality rates: 1-2 years; 1-4 years

## HOUSING

To promote a consistent and encompassing program in housing which shall have an equally encompassing coverage as to include the servicing of all levels of income earners

- d. Height at age 7 (or school entry age)
- e. Proportion of low birth weights
- f. Proportion of children under 7 who are under weight, by degree of nourishment
- g. Available supply of calories per capita per day and available supply of protein per capita per day by origin (animal or vegetable)

- a. Housing investments or output
- b. Number of slum/squatter families resettled and relocated
- c. Availability of housing funds vs. required funds
- d. Cost of financing
- e. Land availability and cost
- f. Construction cost

## Appendix C

### LIST OF SOCIAL INDICATORS RECOMMENDED BY THE DEVELOPMENT ACADEMY OF THE PHILIPPINES

#### Recommended Indicators

##### Health and Nutrition

1. Infant mortality rate
2. Expectation of life at birth
3. Days disabled due to illness per capita per year in disability days equivalent, by membership in the labor force, and by family status (Experimental)
  - 3.1 Proportion of persons who are ill (prevalence), by degree of disability and by occupation
  - 3.2 Proportion of persons who became ill during the period (incidence), by type of disease and by occupation
4. Available supply of calories per capita per day
  - 4.1 Proportion of children under 7 who are underweight, by degree of undernourishment
5. Available supply of proteins per capita per day, by origin (animal or vegetable)

##### Learning

6. School enrollment ratio, per level of schooling (primary, secondary, tertiary)
7. Value of human capital stock created by schooling (Experimental)
  - 7.1 Ratio of mean educational capita in the most educated quintile to mean educational capital in the least educated quintile

Income and Consumption

8. Net Beneficial Product per capita (Experimental)
9. Proportion and number of families below the food poverty threshold (Experimental)
  - 9.1 Proportion and number of families below the total poverty threshold (Experimental)
10. Ratio of mean income of richest quintile to mean income of poorest quintile
11. Rate of inflation of consumer prices

Employment

12. Unemployment rate of the totally unemployed, by occupation and by educational attainment
  - 12.1 Underemployment rate, in totally unemployed equivalent, by occupation and by educational attainment
13. Real wage rate index, skilled vs. unskilled workers, by occupation

Non-Human Productive Resources

14. Reproducible capital stock
15. Arable land
  - 15.1 Concentration ratio of agricultural land ownership
16. Forested land
17. Mineral reserves, by type of mineral

Housing, Utilities, and the Environment

18. Proportion of occupied dwelling units adequately served with water
  - 18.1 Proportion of the population served by electricity at home

19. Index of housing adequacy (Experimental)

19.1 Proportion of households with 1.5 persons or less per room

19.2 Proportion of occupied dwelling units made of strong materials

19.3 Proportion of occupied dwelling units with toilets

20. Air pollution index for Greater Manila (Experimental)

20.1 Pollution concentration levels, by type of pollutant, by station

21. Proportion of river-lengths polluted by river, by degree of pollution

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Source: DAP (1975)

## Case Study 1

### THE KAUNLARAN UNIVERSITY FOUNDATION (A)<sup>1</sup>

The Kaunlaran University Foundation was a non-stock, non-profit private educational institution that specialized in agriculture, forestry and related courses. It was headed by a president, who was assisted by two vice presidents: one for Academic Affairs and one for Administration and Finance. Under the former were the University's ten institutes, and under the latter were seven administrative offices. The broad policies for the school were set by a Board of Trustees. (See Exhibit 1 for the organizational chart of the university.)

Up to December 1976, the university had an old man for its president. As he was already in his seventies when he assumed office way back in 1970, he was generally considered as "too old to have any strength left to run the affairs of the university." He was seen as relying heavily on a group of advisers for most of his decisions. The group, in the opinion of university personnel, was "not really a good management team."

Thus, although as early as 1970 a fund of one million pesos was set aside by the Board of Trustees for research purposes, not a single centavo was disbursed from this fund throughout the entire term of the president. No office was organized nor was anybody appointed to look into the research programs of the various institutes and to

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<sup>1</sup>Prepared by: Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management

disburse funds accordingly. Research projects, therefore, did not receive any financial support from the university. What is worse, the different institutes, for the most part, were not informed of each other's activities. To know what researches were being conducted in the other institutes, a researcher from one institute had to go and personally ask the deans of the different institutes. The alternative to this was failure to make use of potentially useful research outputs of the different groups in the university.

In the absence of a central research department to coordinate and fund the research activities of the different institutes, the members of the faculty and students of these institutes had to conduct researches on their own. These researches were undertaken to complement their curricular activities. For funding, they had to turn to private corporations and other funding institutions. The sole assistance they received from the university was the time it allowed them to spend in research in lieu of classroom activities.

Each institute is responsible for the planning, management, and evaluation of its research projects. All researches conducted during office hours were considered the joint property of the researcher, the university, and the funding institution, if any.

Early in 1977, upon the retirement of the old president, a new president was appointed. In contrast to his predecessor, he was young and seemingly more energetic. One of his first acts was to announce the creation of a central research department for the university. The department would, among other functions, assume responsibility

for allocating funds to the research programs of the different institutes. The announcement was warmly received by the faculty members and students alike.

To date, (from January - May, 1977), however, the research department had not yet functioned. The President was finding difficulty in looking for a man to head the department. He was not familiar enough with the university personnel to appoint somebody from their ranks. He had outsiders in mind, but was not sure how an outsider would be accepted. However, he felt that the research department must soon function. News had reached him that several institutes had been voicing the opinion that the University's standards had gone down for lack of the needed research to improve its present curricula and to design new ones as well as complement classroom activities.

The President's announcement of the creation of a research department further heightened the clamor for research funds and it seemed to frustrate the faculty members. The structure for a research department was there but it was still not functioning five months since its establishment.

It was in this connection that the following questions and suggestions from the faculty and student body surfaced:

First, before a director is appointed, the functions of the department should first be clarified. Should it conduct researches

itself? Or should it just monitor research projects and take charge of resource allocation? Should it centralize project development and evaluation?

Second, what should be the orientation of the university's research effort? Should it be basic or applied? The new president had expressed preference for the latter. However, the University's present research efforts are directed towards the first.

Third, the qualifications for the research director must first be set down.

And finally, even without a director, the President could start allocating research funds to the different institutes. He could set down the criteria for financing researches so that the different institutes might send in their proposals before the start of the new school year. (Refer to Exhibit 2 for the brief profiles of the ten institutes.)

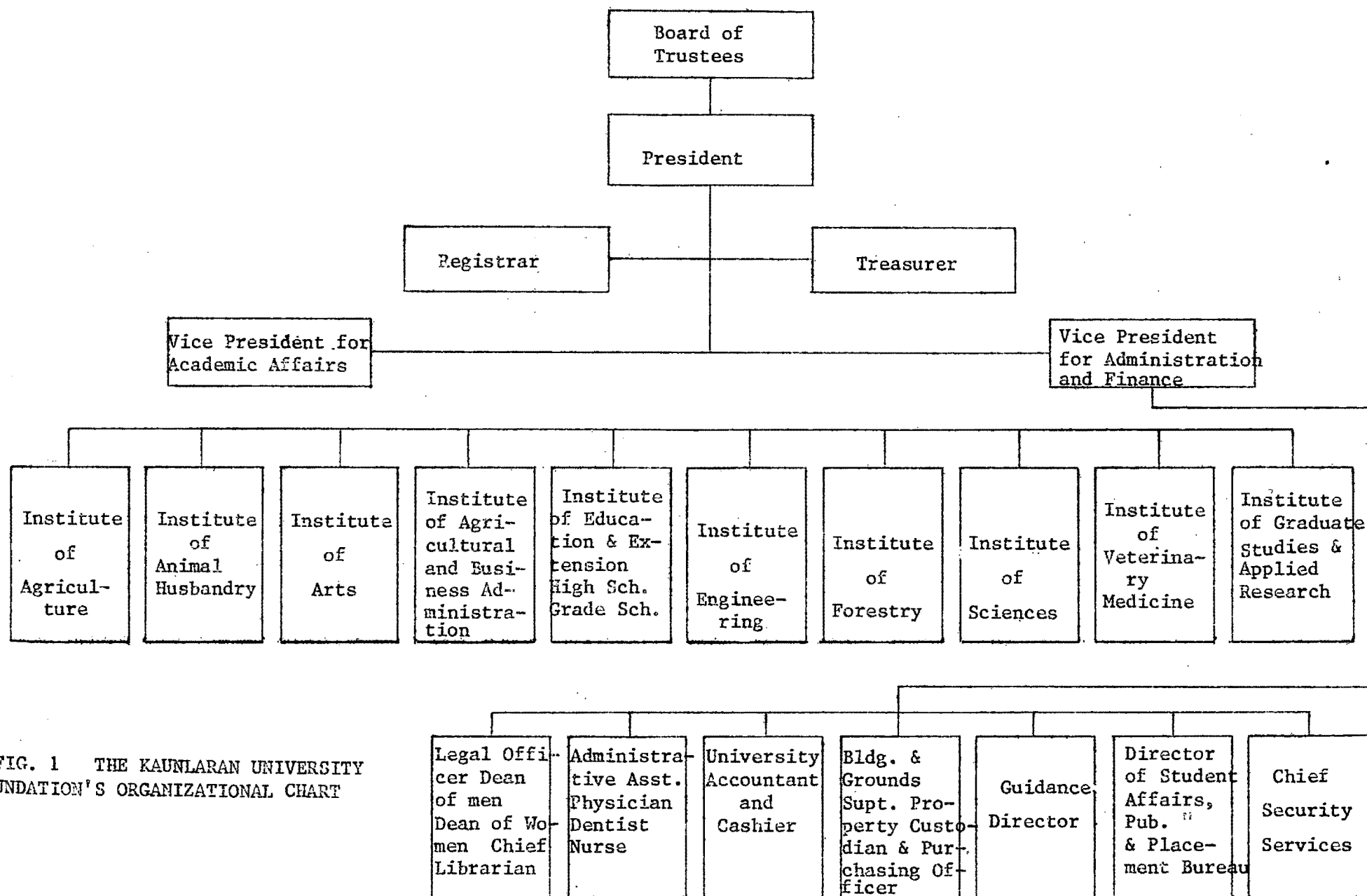


FIG. 1 THE KAUNLARAN UNIVERSITY  
FOUNDATION'S ORGANIZATIONAL CHART

## EXHIBIT II. AREAS OF RESEARCH PER INSTITUTE

Institute	Number of Students	Type of Research Done		Areas of Study/ Research
		Basic	Applied	
1. Institute of Agriculture	2,911	X X X X X X		Agronomy Plant Breeding Entomology Horticulture Pathology Soil
2. Institute of Animal Husbandry	1,257	X	X X	Animal Husbandry Swine Raising Poultry Raising
3. Institute of Arts	96	NONE		
4. Institute of Agricultural & Business Administration	939		X	Agricultural Administration
5. Institute of Education & Extension	340		X X X	Agricultural Education Home Extension Agricultural Extension
6. Institute of Engineering	1,561		X	Agricultural Engineering

Institute	Number of Students	Type of Research Done		Areas of Study/ Research
		Basic	Applied	
7. Institute of Science	289		X	Forest Technology
8. Institute of Veterinary Medicine	1,258	X	X	Veterinary Medicine
9. Institute of Graduate Studies and Applied Research	216		X X X	Animal Husbandry Agricultural Education Forestry
10. Institute of Forestry	554	X		Forestry

NOTE: Faculty member must have master's degrees in their fields of specialization.

**EXHIBIT III. BREAKDOWN OF ENROLLMENT PER COURSE PER  
INSTITUTE 2nd SEMESTER 1976-1977**

Institute	Courses	Enrollment/ Semester
1. Institute of Agriculture	B.A. General 2,361 B.A. Agronomy 197 Plant Breeding 5 B.S. Agriculture (Entomology) 21 B.S. Agriculture (Horticulture) 19 B.S. Agriculture (Soil) 37 B.S. Agriculture (Plant Pathology) 42 BAT 6 Short Courses (Seminar-type) 115 Associate in Agriculture 108  <div>Total 2,911</div>	
2. Institute of Animal Husbandry	B.S. Animal Husbandry 781 B.S.A. (AH) 436 Short Courses (Swine-Raising; Poultry-Raising; Swine and Poultry-Raising) 40  <div>Total 1,257</div>	
3. Institute of Arts	Bachelor of Arts 96	
4. Institute of Agricultural & Business Administration	B.S. Agricultural Administration 379 B.S. Commerce 247 B.S. Business Administration 150 Associate in Secretarial Science 103 Special Courses 2 Cert. in Secretarial Science 58  <div>Total 939</div>	

Institute	Courses	Enrollment/ Semester
5. Institute of Education and Extension	B.S. Education 69 B.S. Elementary Education 13 B.S. Agricultural Education 178 B.S. Agricultural Extension 35 B.S. Home Extension 45  Total 340	
6. Institute of Engineering	B.S. Agricultural Engineering 1,304 B.S. Electrical Engineering 68 B.S. Mechanical Engineering 159 B.S. Mechanical Technology 1 Short Courses (Auto Mechanics and Master Electrician 15  Total 1,547	
7. Institute of Science	B.S. Foreign Technology 243 B.S. (without majors) 10 B.S. Ag. Chem. 36  Total 289	
8. Institute of Veterinary Medicine	B.S. Veterinary Medicine	1,258
9. Institute of Graduate Studies and Applied Research	M.S. Agriculture 96 M.S. Animal Husbandry 37 M.S. Agricultural Education 21	

Institute	Courses	Enrollment/ Semester
	M.S. Education	36
	M.S. Forestry	7
	M.S.	18
	Ph.D.	1
	Total	216
10. Institute of Forestry	B.S. Forestry	504
	Associate in Forestry	33
	Cert. in Forestry Work	17
	Total	554

## THE KAUNLARAN UNIVERSITY FOUNDATION (B)

The Institute of Forestry was one of the ten institutes of the Kaunlaran University Foundation. (See Exhibit I for the University's Organizational Chart.) The university was a non-profit, non-stock organization. It was put up by a fund provided for in the will of the late Don Vicente Rojas.

The Institute had five hundred sixty (560) students.<sup>1</sup> Its faculty was composed of twelve full-time instructors and eleven part-timers.

The Institute had four departments under it; namely: the Departments of Environmental Science; Forest Resources Management; Forest Utilization and Engineering; and, Recreation and Parks Administration. (See Exhibit II for the Institute's Organizational Chart.)

### THE DEAN: HIS GOALS AND PLANS

The dean of the Institute was a fifty-years-old doctoral candidate in Environmental Science at the University of the Philippines in Diliman.<sup>2</sup> He became the dean of the Institute four-and-a-half years after he joined the University as a faculty member. He had been the Forestry dean for three-and-a-half years. Before his teaching career

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<sup>1</sup>The student population used to be 900. No information was given as to why the enrollment declined.

<sup>2</sup>He earned his bachelor of science degree in Forestry at UPLB and his Master of Science degree in one United States University. He is about to finish his dissertation for his doctoral degree.

started, he worked in private companies like Edward J. Nell and Jardine Davies where he supervised mostly basic research projects. He believed that basic research was of great value in technical institutions, although, he admitted that applied research had its own merits, too.

As dean he had encouraged and required his faculty members to undertake both basic and applied research. In one of his reports, he wrote, "A necessary complement to teaching is the conduct of basic and applied research by the faculty members. Otherwise, the teaching processes become limited to a book-oriented activity helping neither the student nor the faculty member."

Furthermore, he said that to him managing an institute did not only mean curriculum development and evaluation and faculty and student affairs management; it also meant running a research office to complement the other activities of the Institute. This was the reason why he regretted that the University did not have a separate office and budget for research.

In his desire to carry out more research projects than the limited resources allowed to him by the University, the dean sought the improvement of the Institute's laboratory facilities; experimentation sites like the Kaunlaran Farm; library; and the reduction of the number of subjects carried by the full-time faculty members so they might spend more time in research projects and by employing strict hiring and selection procedures for faculty.

### RESEARCH PROBLEMS OF THE INSTITUTE

He encountered many problems in pushing for these improvements. First, he was faced with the complex systems and procedures employed by the University's administration. In a report he wrote to the University management, he stated:

The traditional reason behind this lack of facilities (in the laboratories) is the lack of funds for the purpose. However, this justification does not hold water due to the fact that semestral allocations for this institute's (Forestry) facilities are not always used up after which these are reverted back into the general university budget. The problem lies in the slow and time consuming requisitioning procedure followed which takes more than a year to requisition for an item. Therefore, when a requisition is not processed within the semester, the funds allocated for it are reverted back to the general budget, causing backlogs that pile up in the succeeding semesters.

To complement the facilities of the University's main library, he established a library for the Institute in January, 1974 after he was appointed dean. The library had collected more than 6,500 items consisting mainly of foreign technical monographs and publications. The library received an average of ten publications per week from various sources.

However, a different kind of problem cropped up after the library was established - it had expanded and would continue to expand if the dean's plan pushed through but there was no physical space for expansion. The library was located in the office of the dean. During

peak hours, students and faculty members flocked to the library crowding both the library and the dean's office, so much so that the purposes of both places are negated. The library which was supposed to be a comfortable, quiet study area and the office, a private place that had to carry out both operations and administrative functions got so overcrowded that there was hardly enough air to breathe in.

"Furthermore," the dean lamented, "no facilities exist to prevent the deterioration of these materials, especially since our office is flooded during the intense rains and we don't have glass shelves to prevent dust from accumulating on them."

He also said that there was a pressing need to acquire more technical publications. Their present subscriptions are given to them free but these were limited. The Institute had not been able to subscribe to other publications and journals for lack of appreciation to other publications for the purpose.

As for the faculty, he had only twelve full-timers and, it was sometimes, impossible to limit their load from nine to twelve units per week. Each faculty member was required to render service of twenty-one hours a week, that is seven (7) subjects of three one-hour meetings each.

The preparation entailed by these twenty-one hours of classroom presentations ate up most of the working hours of the faculty leaving them very little time for research. Another problem that beleaguered

the Institute was the low pay given to faculty members. The salary range of the teaching staff was from ₦460-₦2,000 per month. (See Exhibit on page 4 for detailed salary scale). This caused a rather fast turn-over of personnel in the Institute. In the last three years, it had been observed that only one out of every four faculty members hired remained with the Institute - the rest went on to greener pastures, the forestry staff commented.

#### SOLUTIONS ARRIVED AT

In solving these problems, the dean with his faculty acquired books at their own expense and placed them in the library for public consumption. They, also, solicited journals and other publications on a complimentary basis. The dean incessantly sent titles of books and publications for purchase to the University secretary as University procedures required.

As much as possible, he saw to it that faculty members who wanted to go into research projects were not assigned more than twelve units a week. He, also, saw to it that he hired the "proper" people by enforcing strict hiring procedures. Prospective faculty members were invited for interviews. The Institute seldomly entertained walk-in applicants. The interviews usually were spent in analyzing practical, actual field experience or asking the interviewer questions like; "Do you think selective logging is the best method for forest conservation?" And, the interviews went on trying to gauge whether the interviewer is creative and imaginative or whether he stuck

to conventional packaged approaches to problems. It was an unwritten requirement that the applicant must be creative and imaginative, maybe even radical in his approach to the solution of problems.

This was the first criterion for full-timers so that there was plenty of room for further development and so, his smooth assimilation of the research and education philosophy and methodology of the Institute.

For the part-timers, those who supervised or directed research projects in their full-time jobs were preferred. According to the dean, this was shooting at two birds with one stone - the Institute did not only avail of the expertise of these people, in most instances, they also made available their research facilities to students and other faculty members. There were also occasions when their companies even contracted the Institute to conduct research projects for them.

He, also, sought to increase the pay of his faculty. He had proposed to increase the starting pay of an instructor from P460 to P600 - he admitted that this was still lower by P175 from that of the U. P. rate but based on the discussions with his faculty, they agreed that this was reasonable enough. (Refer to Exhibit III p. 3 for the proposed rates and to Exhibit IV p. 4 for the current rates. The exhibits also show the criteria for evaluating and promoting faculty members).

Another solution he decided was to arrest or minimize the fast turnover of personnel in the Institute to double the amount allotted for staff development - last year it was ₱26,000, this year the amount was increased to ₱52,000. This amount was granted in the form of scholarships which were awarded to deserving faculty members who wished to take up masteral and doctoral studies. However, with this type of staff development, investments could not only start paying off two or three years after. The Institute had a scholar in U. P. Diliman; two in UPLB; and another one in Ateneo University. It was a long term investment. Some faculty members thought that it would be better if more scholars were sent to seminars and training programs of shorter duration.

One last measure the dean resorted to was to conduct problem identification and work assessment sessions with his staff and faculty. In this exercise, they listed down all their problems based on three categories: academics-related problems; personnel development issues; and administrative problems.

The outputs of the sessions were documented and forwarded to the Vice-Presidents for Academic Affairs and Administration and Finance for information and action.

The other problems of the Institute were what the staff categorized as administrative problems. These included lack of transport facilities; absence of funds for nursery and plantation operations,

etc. (Refer to Exhibit V for details on these problems. The exhibit is, also, an example of the documented outputs of the Institute's semestral problem - identification workshops).

Inspite of his efforts, the dean felt that much still had to be done for the Institute to really excel or be recognized in its field of expertise. He thought that perhaps he had not exhausted all other possible solutions to his problem; may be there were other alternatives, like asking for a dialogue/open forum among the other institutes and the University managers to seek more permanent solutions to these problems. In fact, the dean confided that there are times when he felt he should have enrolled in management courses so he could manage his Institute more scientifically. Or perhaps, he should tap his connections at Los Baños to help him secure more funds. Sometimes, he thought of resigning and joining a more research oriented University.

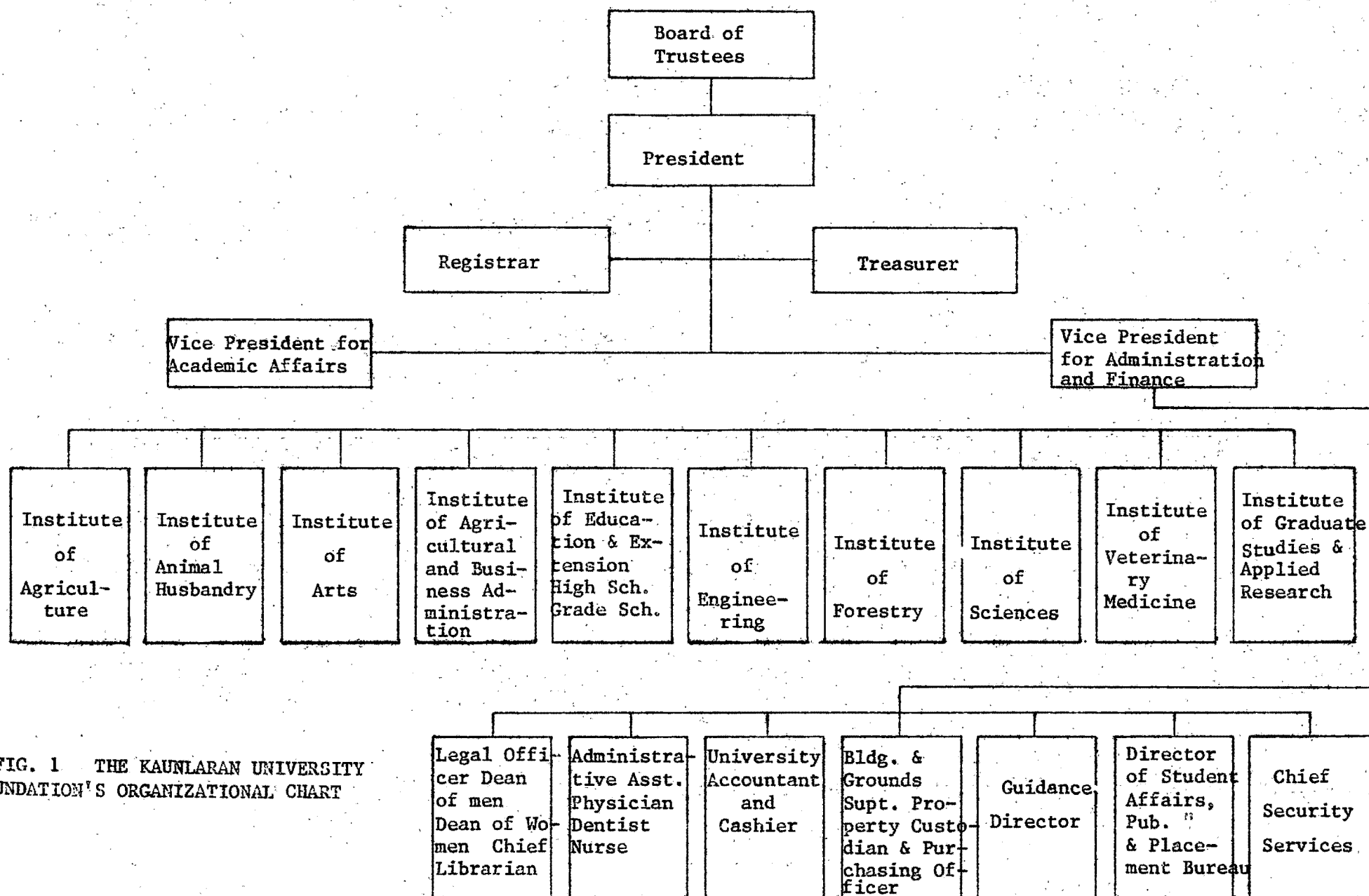


FIG. 1 THE KAUNLARAN UNIVERSITY FOUNDATION'S ORGANIZATIONAL CHART

EXHIBIT II ORGANIZATIONAL CHART OF THE INSTITUTE OF FORESTRY

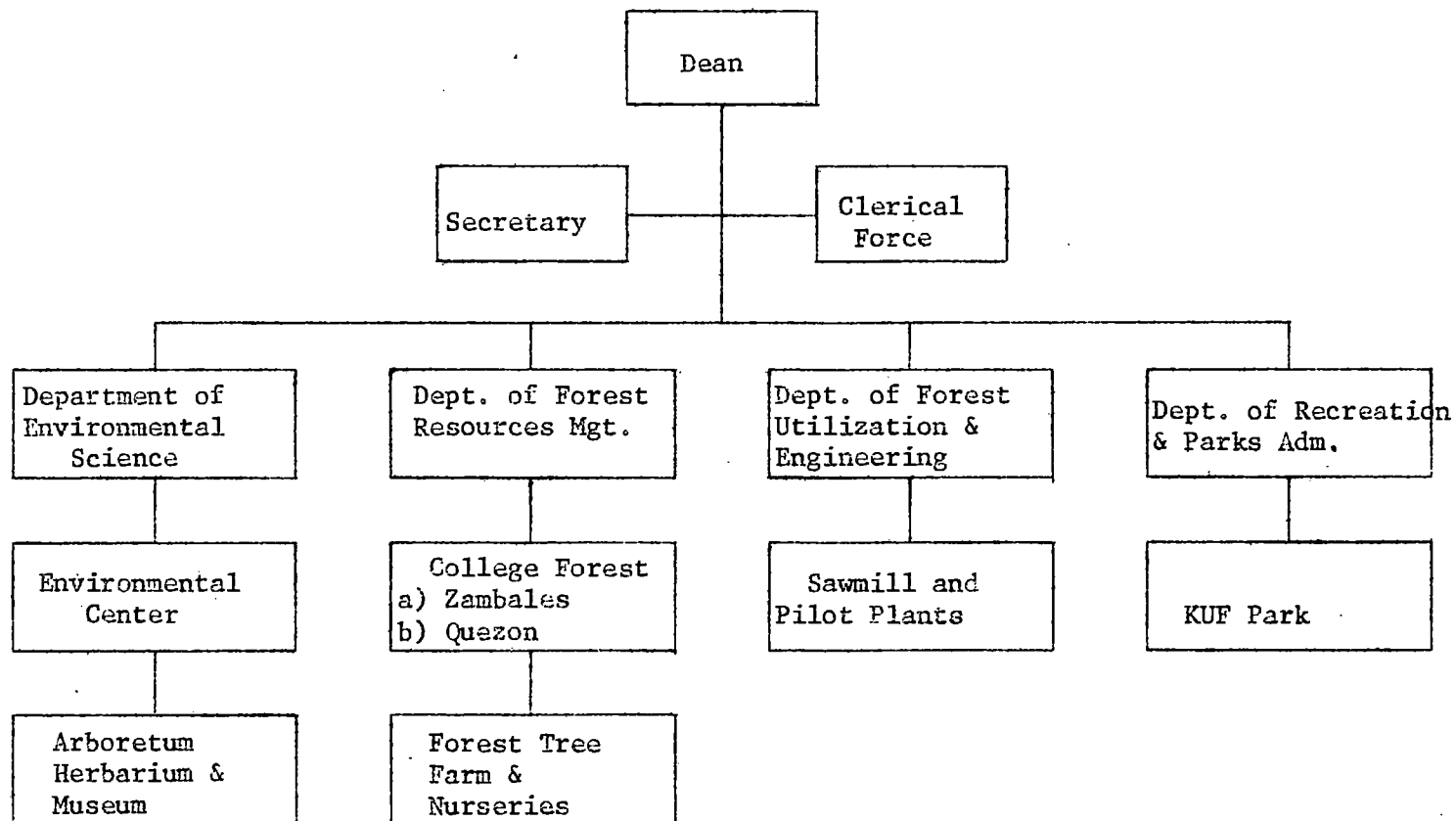


EXHIBIT III. PROPOSED EVALUATION CRITERIA FOR THE ACADEMIC PERSONNEL\*  
(Point System)

	<u>POINTS</u>
I. Academic Degree and Professional Training . . . . .	80 Maximum
A. Degree:	
1. B.A., B.S. . . . .	20
Additional B.A., B.S. . . . .	+5
B.S. B.A. +30 M.A. units . . . . .	30
2. M.A., M.S. . . . .	40
Additional M.A. . . . .	+10
M.A. M.S. +30 Ph.D. units . . . . .	50
3. Ph.D., Ed. D., M.D. Vet. Med. . . . .	60
B. Professional Training with a duration of at least 6 months:	
1. Self-financed . . . . .	+2
2. Under scholarship, fellowship or assistantship grant . . . . .	+4
C. Academic Honors:	
1. Cum Laude . . . . .	+4
2. Magna Cum Laude . . . . .	+6
3. Summa Cum Laude . . . . .	+8
D. Government Exams:	
1st placer . . . . .	10
2nd placer . . . . .	9
3rd placer . . . . .	8
4th placer . . . . .	7
5th placer . . . . .	6
6th placer . . . . .	5
7th placer . . . . .	4
8th placer . . . . .	3
9th placer . . . . .	2
10th placer . . . . .	1

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\*This proposal was drawn by the Institute of Forestry or an alternative to this University's present rating system since they found that the salary scales are too low to keep the faculty for long period of time and the rating system not very efficient in selecting the best candidates.

POINTS

## II. Professional Practice or Teaching Experience . . . . . 40 Maximum

## A. Professional Practice (last ten years)

1. As apprentice . . . . . 1/2 pt. per year
2. As supervisor or its equivalent . . 1 pt. per year
3. As executive . . . . . 2 pts. per year

## B. Teaching Experience (last ten years)

1. As assistant instructor . . . . . 1/2 pt. per year
2. As instructor . . . . . 1 pt. per year
3. As asst. professor . . . . . 2 pts. per year
4. As associate professor . . . . . 3 pts. per year
5. As professor . . . . . 4 pts. per year

## C. Scholarly Publications (Note: If there are two or more authors, the points shall be shared by the authors.)

- 1 textbook adopted not only at KUF. . . . . 10
- 1 research paper published abroad . . . . . 8
- 1 research paper published in a  
technical journal in Philippines. . . . . 6
- 1 research paper published in the  
KUF journal . . . . . 4
- 1 literary piece endorsed by a known  
literary critic and published in a  
reputable journal . . . . . 4

## III. Teaching Efficiency . . . . . 100 Maximum

## 1. Excellent

100  
98-99

## 2. Very Good

94-97  
90-93

## 3. Good

85-89  
80-84

## 4. Over

75-79  
70-74

## 5. Below

70

## BASIS FOR JUDGING EFFICIENCY

1. Thorough knowledge of the subject . . . . .	25%
2. Ability to communicate the subject or rather the knowledge . . . . .	25%
3. Promptness or regularity of attendance . . . . .	20%
4. Ability to stimulate students to think and reflect critically . . . . .	10%
5. Sense of humor and enthusiasm for teaching . . . . .	10%
6. Fairness to all students . . . . .	10%
<hr/>	
Total	100%

Provided that technical paper published in the KUF Research Journal which has attracted the attention of foreign readers as evidenced by request for reprints, shall be considered as good as a research paper published abroad and given 8 points.

PROPOSED ACADEMIC RANK AND SALARY SCALE

<u>POINTS</u>	<u>RANK</u>	<u>RANK PAY</u>
30 - 35	Assistant Instructor 1	₱600
36 - 40	Assistant Instructor 2	625
40 - 45	Assistant Instructor 3	650
46 - 50	Assistant Instructor 4	675
51 - 55	Assistant Instructor 5	700
56 - 60	Assistant Instructor 6	725
<hr/>		
61 - 65	Instructor 1	₱775
66 - 70	Instructor 2	800
71 - 75	Instructor 3	825
76 - 80	Instructor 4	850
81 - 85	Instructor 5	875
86 - 90	Instructor 6	900

<u>POINTS</u>	<u>RANK</u>	<u>RANK PAY</u>
91 - 95	Assistant Professor 1	¥1000
96 - 100	Assistant Professor 2	1050
101 - 105	Assistant Professor 3	1100
106 - 110	Assistant Professor 4	1150
111 - 115	Assistant Professor 5	1200
116 - 120	Assistant Professor 6	1250
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121 - 125	Associate Professor 1	¥1350
126 - 130	Associate Professor 2	1400
131 - 135	Associate Professor 3	1450
136 - 140	Associate Professor 4	1500
141 - 145	Associate Professor 5	1550
146 - 150	Associate Professor 6	1600
151 - 155	Associate Professor 7	1650
156 - 160	Associate Professor 8	1700
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161 - 165	Professor 1	¥1900
166 - 170	Professor 2	2000
171 - 175	Professor 3	2100
176 - 180	Professor 4	2200
181 - 185	Professor 5	2300
186 - 190	Professor 6	2400
191 - 195	Professor 7	2500
196 - 200	Professor 8	2600
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## REFERENCES:

School Executive's Guide: Prepared by the Prenticehall Editorial Staff and board of 46 Contributors. Englewood Cliffs, New Jersey: Prentice Hall Inc. 1967. pp. 121 - 145.

Proceeding of the Asian Conference on Public Personnel Administration September 13 - 18, 1966, Manila.

Pigors, Paul and Charles A. Myers. Personnel Administration: A Point and Method. Japan: McGraw Hill Nogashua, Ltd., 1973 pp. 361-383 Current Salary scales of U.P., CESU, PCC, FEU, U.E. PLM. Perpetual Help College and KUF.

Evolution Criteria of Arellano University, U.E. and Philippine School of Business Administration.

The 6 - Point criteria of faculty rank and pay classification approved by the KUF Board of Trustees and applied since 1974.

## EXHIBIT IV. KAUNLARAN UNIVERSITY FOUNDATION

OFFICE OF THE VICE PRESIDENT FOR  
ACADEMIC AFFAIRS

August 29, 1974

## MEMO--REPORT AND RECOMMENDATION

FOR : The President, KUF

FROM : The Vice President for Academic Affairs

SUBJECT : Classification of Faculty Members in Rank and in Pay

The academic deans and the undersigned respectfully submit the following reports and recommendations on faculty classification in rank and pay, an issue which is considered timely, particularly because of the extent question on the ways and means by which salary increases will be affected or carried out as required, due to the 15% increase in tuition and other fees imposed on the students, effective on the first semester of school year 1974-1975.

It took the Committee of Deans more than five months up to this first semester of the present academic year of continuous, hard and painstaking work and frequent consultations with the President, before a criteria as basis for ranking faculty members would be formulated and finally adopted. The principal references used were as follows:

1. The K.U.F. revised Manual of Policies, particularly:
  - a. Art. XXIV - Rank Classification
  - b. Art. XXV - Minimum Classification
  - c. Art. XXVI - Salary Scale and Standardization
  - d. Art. XXVII- Promotions
2. WAPCO Manual on Position Classification and Administration
3. Performance Rating of Faculty Members, K.U.F. a copy is attached.

The Committee of Deans, conscious of the delicate nature of the task they imposed upon themselves, held meeting regularly at first, which intensified later during summer and the first month of the

first semester with session lasting from two or four hours at a time periodic consultation with the President as Chairman of the Academic Board, for his advise and wise counsel, without which the criteria cannot be finalized. All the meetings may be characterized as "bull sessions" because everybody is given the freedom to speak out his mind with no holds barred. Such was the case because the deans were keenly conscious of the fact that what they were doing will affect not only the present but also the future faculty members of the University.

Later on, the Deans realized although quite late but not too late that the task of classifying faculty members should not be limited only to those on the college level. They agreed to extend to all levels encompassing also the grade and high school teachers. The same criteria already adapted were also applied to them after consultation with their respective principals. The only difference was in the manner of applying the performance rating. While on the college faculty, the following percentages were observed:

Self rating	15%
Department head rating	35%
Deans' rating	50%

for the grade and high school teachers, the percentages were:

Self rating	30%
Principal rating	70%

the difference arises from the fact there are no department heads in said schools.

The most important matter given emphasis at all time was to be fair and just to all in order to avoid any kind of injustice, discrimination and favoritism. Aside from the classification of the faculty members concerned in rank and pay embodied in this memorandum. The Committee of Deans and the undersigned have also the honor to respectfully submit the following principles or guidelines in the implementation of the recommendations:

1. The President of the University may appoint a new faculty member to any rank and status according to his academic and professional qualification and may promote any faculty member who is already in the service to any higher rank in exceptionally meritorious cases.
2. Article 24 Section '85, Revised Manual of Policies which provide that "An Assistant Instructor shall at least be a holder of a bachelor's degree. Usually a new member of the faculty begins as assistant instructor and subsequently promoted. However, a faculty may be brought in, appointed or classified as assistant professor, Associate Professor, or even as Professor without a master's degree if warranted by his training and scholarly maturity to be determined by the Academic Board."

3. No dean of any institute, irrespective of the criteria hereby adopted should be classified lower than Professor 1 in rank. It was also recommended that future appointees to the position of Institute Dean must qualify for the rank of at least Professor 1.
4. At a meeting of the Deans on April 14, 1974 it was approved that every faculty member should be issued a formal appointment specifying his rank and pay.
5. At a meeting of the deans on May 2, 1974, it was agreed that rotation among the faculty members in a department, of Department Heads in accordance with Sec. 95, Art. 26, of the revised Manual of Policies be implemented. At the meeting of the deans on May 22, 1974, it was likewise approved that the position of Institute Secretary may also be rotated subject to the provision that the future appointees for the position of Institute of Secretary must qualify for the rank of at least Assistant Professor 1, which designation shall be temporary for one year at most. For Department Heads, the future appointees must qualify for the rank of at least Associate Professor 1.

After thorough study and analysis of all references mentioned above as basis and consultation with the President, a six point criteria was agreed upon, every feature of which was qualified with a corresponding percent in order to be as accurate and as exact as possible in the classification in rank and pay of every faculty member. A copy of the said criteria is attached hereto.

PROPOSED RANGES FOR THE RANKING OF K.U.F.  
COLLEGE FACULTY MEMBERS

A. College Level:	Points
Assistant Instructor I	0 - 32
Assistant Instructor II	33 - 35 Lecturer I
Assistant Instructor III	36 - 38
Assistant Instructor IV	39 - 41
Instructor I	42 - 44
Instructor II	45 - 47
Instructor III	48 - 51 Lecturer II
Instructor IV	52 - 53
Assistant Professor I	56 - 59
Assistant Professor II	60 - 63
Assistant Professor III	64 - 67 Prof. Lec- turer I
Assistant Professor IV	68 - 71

Associate Professor I	72 - 75	
Associate Professor II	76 - 79	Prof.Lecturer II
Associate Professor III	80 - 83	
Associate Professor IV	84 - 87	
Professor I	88 - 91	
Professor II	92 - 95	Prof.Lecturer III

B. High School and Grade School Levels

Teacher A-1	0 - 32
Teacher A-2	33 - 35
Teacher A-3	39 - 41
Teacher A-4	42 - 44
Teacher B-1	45 - 47
Teacher B-2	48 - 51
Teacher B-3	52 - 55
Teacher C-1	56 - 59
Teacher C-2	60 - 63
Teacher C-3	64 - 67
Teacher C-4	68 - 71
Teacher D-1	72 - 75
Teacher D-2	80 - 83
Teacher D-3	84 - 87
Teacher D-4	

PROPOSED PARTIAL IMPLEMENTATION OF  
MONTHLY\* SALARIES ACCORDING TO RANK-(COLLEGE LEVEL)

Rank Classification	I	II	III	IV
Assistant Instructor	₱ 400	₱ 415	₱ 435	₱ 455
Instructor	475	495	515	535
Assistant Professor	570	610	650	690
Associate Professor	740	800	860	920
Professor	1,000	1,060	1,120	-

PROPOSED PARTIAL IMPLEMENTATION OF SALARIES  
ACCORDING TO\* RANK HIGH & GRADE SCHOOL LEVELS BASED ON A REGULAR  
FULL TIME LOAD OF SIX SUBJECT IN THE HIGH SCHOOL & SEVEN SUBJECT IN  
THE GRADE SCHOOL

Rank Classification	I	II	III	IV
Teacher A	₱ 336	₱ 375	₱ 390	₱ 410
Teacher B	430	450	470	490
Teacher C	530	570	610	650
Teacher D	700	750	800	850

\*Please see attached Appendix A for the salary scales effected  
1975-1976 & 1976-1977.

I. Aside from the classification of the faculty members in all levels (college, High and Grade schools) who are the main consideration of this memo-recommendation, The Dean have also the honor to respectfully submit other recommendations which are considered basic and relative to the above proposed classification as follows:

1. Basic Minimum Salary of a B.S. degree holder (4 year course) . . . . . ₱ 400
2. Basic minimum Salary of a B.S. degree holder of (5 year course) . . . . . 430
3. Basic Minimum Salary of a B.S. degree holder (6 year course) . . . . . 480
4. Basic Minimum Salary of a Masters degree holder . . . . . 530
5. Basic Minimum Salary of a Bachelor of Laws . . . . . 550
6. Basic Minimum Salary of a Doctoral Degree holder except MC's . . . . . 650

II. It is also respectfully recommended that honorarium to the following officials be given in addition to the salary that they will receive corresponding to their respective ranks.\*

1. Department Head, Institute Secretaries and high and grade school principals . . . . ₱ 100.00 a month
2. Assistant Deans . . . . . 150.00 a month
3. Deans . . . . . 200.00 a month

The Deans, in spite of their best and honest efforts are conscious of the fact that they will not be able to meet and satisfy the expectation of those concerned. The only assurance that they extend to everybody is that everything has been exhausted to be just and fair to all as their human limitations will permit. The best of intentions were always there but the wisdom of doing it to satisfy them, they cannot claim to have. The only consolation left to the deans is to tell themselves that they cannot claim much less expect to better than Jesus Christ Himself who proved to be a successful failure in His noblest and more sacred mission to save humanity from sin only to be crucified by the very people whom He intended to save and later on glorified and worshipped them after realizing their mistakes.

\*Please see Appendix B for the honorarium and representation allowance effected June 14, 1976.

The 6 point Criteria for Faculty Rank  
Classification and their Equivalent Percentages

I. Educational Qualifications - - - - - 25%

A. Degree

Doctoral degrees normally completed in 9 years	- 25%
Doctoral degrees normally completed in 8 years	- 23%
Doctoral degrees normally completed in 7 years	- 21%
Degrees normally completed in 8 years and	
Masteral degrees	- 20%
Degrees normally completed, in 6 years	- 18%
Degrees normally completed, in 5 years	- 15%
Degrees normally completed, in 4 years	- 12%

B. Additional credits applicable to degrees:

1. For every additional undergraduate degree requiring 60 or more units - 2%
2. For every additional undergraduate degree requiring less than 60 units - 1%
3. For every additional masteral degrees - 3%
4. For the first 20 Master's unit (plus 1/2 the difference between BS & Masteral degree or 4 units maximum)
5. For the 1st Doctoral units (plus 1/2 the difference between Masteral and Ph.D. or 2.5 units maximum)
6. For the fellowship & special studies with a duration of 1 yr. and over - 3%

II. EXPERIENCE - - - - - 25%

1% per year of teaching experience, 1/2 for experience related to teaching up to a maximum of 25 years.

III. PERFORMANCE - - - - - 25%

The performance rating sheet shall be used as the basis for this particular criteria, in accordance with the following proportions: 50 for I, 30 for Part II, 20 for Part III.

On the over-all rating, the following percentages shall be observed:

A. For faculty members:

- |                     |     |
|---------------------|-----|
| 1. Self-rating      | 15% |
| 2. Department Heads | 35% |
| 3. Dean's           | 30% |

B. For Department Heads and Assistant Deans

- |                |     |
|----------------|-----|
| 1. Self-rating | 40% |
| 2. Dean's      | 60% |

C. For High School and Grade School:

- |                |     |
|----------------|-----|
| 1. Self-rating | 30% |
| 2. Principal   | 70% |

The performance rating shall be given the following percentage equivalents:

74 & below	- - - - -	10%
75 - 77	- - - - -	16%
78 - 82	- - - - -	19%
83 - 87	- - - - -	21%
88 - 93	- - - - -	23%
93 -100	- - - - -	25%

IV. SCHOLARLY PUBLICATIONS - - - - - 15%

A. Textbooks - - - - - 15%

- B. One technical paper published  
in an international publication  
printed abroad - - - - - 14%
- Two or more technical papers  
published in an international  
publication printed abroad - - - 15%

C. One technical paper published  
in an international publica-  
tion printed in Manila - - - - - 10%

Two technical paper published  
in an international publication  
published in Manila - - - - - 12%

Three or more technical papers published in an international printed in Manila - - - - -		15%
D. One technical paper published in National magazines or periodicals - - - - -		6%
Two technical papers published in National magazines or perio- dicals - - - - -		8%
Three or more technical papers published in National magazine or periodicals - - - - -		10%
E. One Manual/Workbook/Handbook- - -		10%
Two or more Manuals/Workbooks/ Handbooks - - - - -		12%
V. CIVIL SERVICE AND BOARD/BAR EXAMS ACTUALLY PASSED IN LINE WITH THE SUBJECT TAUGHT - - - - -		5%
A. Board/Bar Exams - - - - -		5%
B. 1st Grade Civil Service - - - - -		5%
C. Two or more professional Civil Service Exam. - - - - -		3%
VI. HONORS AND AWARDS - - - - -		5%
A. Academic Awards:		
1. Summa Cum Laude - - - - -		5%
2. Magna Cum Laude - - - - -		3%
3. Cum Laude - - - - -		1%
B. Professional Awards - - - - -		5%
One Award - - - - -		1%
Two Awards - - - - -		3%
Three or more Awards - - - - -		5%
C. Board, Bar, Civil Service Exams, Honors:		
1. 1st place - - - - -		5%
2. 2nd place - - - - -		3%
3. 3rd place to 10th place - - -		1%

## APPENDIX A

SALARY SCALE FOR VARIOUS RANKS AND GRADES  
1975-1976

A. <u>COLLEGE</u>	I	II	III	IV
Assistant Instructor	₱ 400	₱ 446	₱ 466	₱ 486
Instructor	506	526	546	566
Asst. Professor	601	641	681	721
Associate Professor	771	831	891	951
Professor	1,031	1,091	1,151	-
B. HIGH SCHOOL & GRADE SCHOOL				
Teacher A	₱ 366	₱ 385	₱ 400	₱ 420
Teacher B	440	460	480	500
Teacher C	540	580	620	660
Teacher D	710	760	810	860

SALARY SCALE FOR THE VARIOUS RANK AND GRADES  
(1976-1977)

A. FOR TECHNICAL INSTITUTE*				
Asst. Instructor	₱ 452	₱ 504	₱ 527	₱ 550
Instructor	572	595	617	640
Asst. Professor	680	725	770	815
Associate Professor	872	940	1,007	1,075
Professor	1,166	1,233	1,301	-
B. FOR NON-TECHNICAL INSTITUTE**				
Asst. Instructor	₱ 400	₱ 491	₱ 513	₱ 535
Instructor	557	579	601	623
Asst. Professor	662	706	750	794
Associate Professor	849	915	981	1,047
Professor	1,135	1,210	1,267	-

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\*Agriculture, Animal Husbandry, Engineering, Forestry & Vet. Med.

\*\*Arts, Agri-Business, Adm., Education and Sciences

APPENDIX B

HONORARIUM AND REPRESENTATION ALLOWANCE GIVEN TO DEANS,  
 ASSISTANT DEANS, DEPARTMENT HEADS, PRINCIPALS AND INSTI-  
 TUTE SECRETARIES RETROACTIVE JUNE 14, 1976

A. HONORARIUM	Previous Honorary 1975-1976	Increase 6-14-76	New Honorary 1976-1977
Deans	₱200.00	₱50.00	₱250.00
Assistant Deans	150.00	50.00	200.00
Department Heads	100.00	37.50	137.50
Principals	100.00	37.50	137.50
Institute Secretaries	100.00	25.00	125.00
B. REPRESENTATION ALLOWANCE			
Deans	-	₱50.00	₱ 50.00
Assistant Dean	-	37.50	37.50
Department Heads	-	25.00	25.00
Principals	-	25.00	25.00
Institute Secretaries	-	25.00	25.00

## Exhibit V

### Administrative Problems

#### 1. Lack of transport vehicles

Whenever our forestry students go out for field work to Salikneta Farm to plant and develop a forest plantation there, the Institute has to hire Metro-Manila buses. This is quite expensive.

We need at least a transport vehicle with a sitting capacity of 50, for use in field trips and laboratory purposes. Students may be required to pay their usual fares whenever they use the vehicle as part of a good business arrangement - to keep the vehicle going for this purpose.

#### 2. Funds for nursery and plantation operations

We are not allotted funds for the development of the Salikneta Forest, except for the employment of one (1) emergency laborer which started only last July, 1976.

We need funds for the procurement of forest seeds, fertilizers, insecticides, plantation protection, and maintenance.

#### 3. Protection of KUF forestry nursery and tree bank

We need a hog wire fence around this area to protect the trees from astray goats, cattle and carabaos.

The wooden branches constructed by students have been stolen for the second time lately.

#### 4. Herbarium and Arboretum

For teaching the flora of the Philippines among forestry students especially of the wild species is a must. For this purpose, collections which are correctly identified, classified, named, mounted, and filed in suitable cases for purposes of instruction and research. The project started on this but the cases are too inadequate to keep plant collections free from destruction against insects and molds. For this purpose, five (5) steel cases would be necessary on standard dimension. These units could be augmented as the collection increases. The herbarium is particularly important for instruction in Dendrology, for the preparation of local, regional, or national flora. In fact, where agriculture and forestry are included in a university, herbarium is a great necessity and which is given priority in its development. To supplement the herbarium, is again another important project where plants could be studies in the living state. Important forest plants could be grown and studied for its silvical requirements. Instructional subjects like plant taxonomy, morphology, physiology, ecology and plant microtechnique could well rely in an arboretum. The institute of forestry has already started this project where the university has allotted 10 hectares for its development in Salikneta, San Jose Del Monte, Bulacan. Here the Yemane, Achoan, dilay, narra, carribean pine, molucan sau, fire tree, Agoho, and some Dipterocarp species were introduced. The institute is trying very hard to make

this project a success. One difficulty attendant to its improvement and maintenance is the lack of transportation facilities such as a bus to carry students classes in the project. Transportation should not be neglected by the university in providing the Institute of forestry, as stated in the previous paragraph.

#### 5. Tools and equipments

The division needs tools and equipment for use in timber physics in order to determine hardness, bending and shearing strength or resistance of wood. Sensitive balance, millimeter and micrometer scale, even (already acquired) for determining specific gravity of woods; low and high power microscope properties of wood and for dissecting floral parts are indeed a must. This will avail the students and professor to further their research work on the utilization of wood and other forest products. In plant microtechnique the necessary exercise could not be performed in the laboratory for lack of materials and equipments such as slides, dishes, chemical, stains, rotary and sliding microtomes without which preparation of temporary and permanent mounts for microscopes studies become an impossibility.

#### 6. Pilot plants

Pilot plants are quite expensive to provide nevertheless for the enrichment of the students in industrial projects like the

manufacture of pulp and paper, particle and harboard, veneer and plywood and the artificial seasoning and the preservation of wood and with preservations chemicals, these should be provided. Forest engineers must pass all these types of various forest industries via the pilot plants for their guides in the profession. The purpose of research on wood products in depth could be attained by supplying all these laboratory tools and equipment required in their performance.

Our dream for a greater glory in the future will materialize in the Institute of Forestry by providing adequate facilities for our literature, tools and equipment, adequate space and the pilot plants for future industrialization. The support of the administration for the implementation of the proposed improvement is the only hope of our personnel and students in the forestry of the KUF.

### Financial

As our budget for the Institute of Forestry is based on its enrollment, we have very little amount allotted by the Administration for our operations, both in the school and in the field training of our students. This perhaps explains the poor and neglected situation which the Institute of Forestry is in, as compared with other Institutes with big enrollments.

We need some sort of subsidy - for instance in the development of forest plantation of quick growing species in the Salikneta Farm Forest. In the next 5 to 7 years, we can hope to have wood materials for wood chips, pulp sticks and fuel-wood which can be sold later.

In the meantime, the Institute of Forestry is continuing its forest development project in Salikneta without any university assistance.

We can only hope to move faster and accomplish more with the financial assistance of the KUF Administration.

## THE KAUNLARAN UNIVERSITY FOUNDATION (C)

Since the Kaunlaran University Foundation (KUF) had no central research office, each of its ten institutes conducted research individually.

The Institute of Forestry felt the absence of research funds more keenly because its dean and faculty had the belief that research (agricultural research more especially) was important to the students and faculty as classroom presentations were. It was mainly through research that they were able to establish a rather good and credible image of the Institute as one of the best in its field. Thus, there was a greater felt need for research funds and facilities. But like all the other institutes, the Forestry Institute had to rely mainly on outside research funding. The University's sole contribution to Institute's research program was the official time it allowed its faculty to spend in research projects. The dean costed these manhours at ₱24,000.00 a year.

To be able to conduct more research projects the faculty and other researchers of the Institute solicited funds from private/business companies and government funding institutions.

However, in the last few years, the researches obtained most, if not all, of their research funds from private companies. The Dean explained that this occurred when they found out how much easier and less problematic it was to deal with private companies as compared to government research funding institutions.

In the first case, as soon as the manager of the company agreed to the research proposal or concept, funds were readily made available for the project's implementation. Transportation and living allowances were released without much ado - the company's public relations officer made all the schedules and necessary arrangements for their travel.

The dean stated that there was less red tape. These were no voluminous and difficult requirements; no privacy of ideas and no complex accounting procedures.

It was the unhappy experience of the Institute's researchers that when they submitted proposals to public funding institutions, they not only had to spend a lot of time fulfilling many requirements for proposals, they also had to do intensive follow-ups of papers and documents. Most of the time, their proposals were rejected. They claimed that sometimes the reasons for rejection were not even stated. But what was worse, one researcher said, was that after the proposals were rejected, they found out that these were later approved by the government funding institutions and implemented by other proponents - the project objectives, concept, methodologies were exactly the same as the rejected proposals.<sup>1</sup>

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<sup>1</sup>After finding this out, the casewriter interviewed some staff members of one public funding institution and was informed that there was no privacy of proposals. It just happened that perhaps during the time the proposals were sent, there were other proposals on the same research topics submitted and approved earlier. What could have been the source of misunderstanding or doubt was that the institution did not yet have a very good information system whereby approved projects could be made known to possible project proponents.

Or, another researcher added, if the proposals were ever approved, the release of funds and the system of liquidation and clearance were so intricate and tedious to go through that they took about forty percent of the researcher's time.<sup>2</sup>

Another aspect of government funding institutions' operations that the researchers viewed as a constraint was their policy of not funding researchers conducted on materials, operations or products of private business firms. This was because the institutions feared identification with any business corporation or brand name.

The dean of the Forestry Institute said that this was an unnecessary limitation. He believed that for as long the subject matter was worthy of research and proved to be helpful to national development, it deserved investigation. The only precaution necessary was to make it clear to the business firm that the topic would be described technically and no brand names would be mentioned in the research paper/output.

One other advantage, the researchers cited in securing funds from private companies was the assurance of the utilization of the research outputs. As soon as the write-up of the project was published, the companies went about implementing the recommendations.

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<sup>2</sup>These were caused by government regulations imposed by the Commission on Audit.

PROJECT MONITORING SYSTEM EMPLOYED

However, in a situation like this, the dean expounded, project monitoring and control was a little more difficult than if funds were solicited and/or provided by one office because the body could impose certain criteria for project selection, development and prioritization and recommend common systems for management and evaluation of project. The Institute's main means of control over projects were:

- Analysis by the dean and some faculty members of the research proposal which contained the problems to be resolved; research design, time tables and budgets;
- Design of a set of criteria for validity for each project like what was an acceptable sample; what methods would be used, etc; and
- Visits to research sites before and after the project was implemented.

The dean's dilemma was if only he and his faculty could secure bigger funds from the government funding institutions they could conduct more and bigger research projects and have stricter control over project/program outputs. The output utilization would also be wider in scope. At present, the research outputs of privately funded projects was owned by the funding firms and the author, and the utilization was based upon the decision of the business firm.

The dependence on private funding, furthermore, limited the scope of their research program since only "reliable" or useful research could be conducted, useful to the firm concerned, that is.

The Institute's faculty expressed the hope that more funds might be available for research as soon as the University's research department became operational. The dean, however, thought that there still might be some problems in this because the Institute had done mostly basis research and the new University president had made known his inclination to pay more attention to applied research. (Refer to the attached exhibit for the listings of the researches accomplished or being accomplished by the Institute from 1967-1977.)

## EXHIBIT

RESEARCH PROJECTS OF THE INSTITUTE OF FORESTRY  
(1967-1977)

Forest Utilization & Engineering	Ongoing	Accom- plished	Pub- lished	Total Projects
1. <u>Pasture industries (Grazing)</u>				
1.1 Evaluation of grazing industries			1	1
1.2 Range studies	1		5	6
2. <u>Administration and Management</u>				
2.1 Analysis of logging operation:		17		17
2.2 Table of organization		1		1
2.3 Selective logging		1		1
3. <u>Harvesting Operation</u>				
3.1 Minor transportation		2		2
3.2 Major transportation		3		3
3.3 Loading and unloading		1		1
3.4 Safety Practices		1		1
3.5 Logging Methods		2		2
3.6 Machineries		1		1
4. <u>Utilization</u>				
4.1 Lumber		1		1
4.2 Plywood and veneer		6		6
4.3 Fiberboard and particleboard		4	1	5
4.4 Pulpwood and paper		5	1	6
4.5 Pencil manufacture		2		2
4.6 Logging and milling wastes		2		2
4.7 Survey of shipbuilding and shortdimension stocks	1	2		3
5. <u>Sawmill Operation</u>				
5.1 Study of different sawmill operation		2		2
6. Forest Resources and Lumber Industries		18		18
7. Economic Survey of Wood Using Industries	2	32	1	35
8. <u>Minor Forest Products (bamboo, rattan, etc.)</u>		19		19
Total	4	129	9	142

Forest Resources Management (FRM)	Ongoing	Accom- plished	Pub- lished	Total Projects
1. <u>Seeding and Planting</u>				
1.1 Nursery Practice	2	1		3
1.2 Direct Seeding		1		1
1.3 Planting site preparation		1		1
1.4 Reforestation	4	24		28
2. <u>Silvics</u>				
2.1 Environmental factors				
2.2 Silvicultural effect on soil				
3. <u>Natural Regeneration</u>				
3.1 Seed production and dispersal		2		2
3.2 Aids to natural regeneration site				
3.3 Growth of residual trees and stands				
3.4 Mechanical methods for timber stand improvement				
3.5 Pruning method and evaluation				
4. <u>Project Measurements</u>				
4.1 Growth prediction methods		10		10
4.2 Comparative studies: Evaluation of major silvicultural and management practices		8		8
5. <u>Watershed Management</u>				
5.1 Water yield. Studies on the technique for improving the quality, quantity, and timing of water yield		4		4
5.2 Water use. Water use requirement of wood based industrial plants				
5.3 Land use. Effect of land uses on erosion, flows and pollutions of river waters	2	1		3
6. Aerial Photography		2		2
7. Pollution		1		1
Total	8	55		63

Forest Biological Science (FBS)	:Ongoing:	Accom-	:Pub-	:Total
	:	:plished	:lished	:Projects
1. <u>Fertilizer</u>	:	:	:	:
1.1 Application of fertilizer on germination	:	2	:	2
2. <u>Fungicides</u>	:	:	:	:
2.1 The effect of agallol, ceusan, cupravit in the control of damping off	:	2	:	2
2.2 Use of cooked sand, sundried, and formaldehyde in the control of damping off	:	1	:	1
2.3 Use of tordon brush killer in controlling weed species	:	1	:	1
3. <u>Morphology</u>	:	:	:	:
3.1 Morphological differences between bankal and kaatoan-bankal	:	1	:	1
4. <u>Physiology</u>	:	:	:	:
4.1 Effect of sulfuric acid on germination of different species	:	6	:	6
4.2 Effect of mobilcer on germination	:	8	1	9
4.3 Effect of Alpha-Naptlene acetic acid on rooting of cuttings	2	12	:	14
4.4 Effect of urea on germination	:	1	:	1
4.5 Effect of boiling water on germination	:	1	:	1
4.6 Effect of ultraviolet rays and irradiation on germination of seeds	:	3	:	3
4.7 Effect of mineral nutrient on seedlings	1	:	:	1
5. <u>Wood identification</u>	2	1	:	3
6. <u>Marine community study in Dingalan Bay</u>	:	3	:	3

	Ongoing	Accom- plished	Pub- lished	Total Projects
7. <u>Forest entomology</u>				
7.1 Wood destroying insects		1		1
7.2 Destructive insect pest of trees		1		1
8. <u>Wild life</u>				
8.1 Identification of important wild-life species in different areas of the Philippines		5		3
9. <u>Wood preservation</u>		3		3
10. <u>Dendrology</u>				
10.1 Identification of tree flora		22	1	23
10.2 Analysis of fast growing trees		1		1
10.3 Identification of palms bamboos		2		2
10.4 Survey of edible fruit trees		2		2
Total	5	79	2	86

## SUMMARY

Forest Utilization & Engineering	4	129	9	142
Forest Resources Management	8	55		63
Forest Biological Science	5	79	2	86
Grand Total	17	263	11	291

SOILS RESEARCH CENTER, REGION VIII<sup>1</sup>

The regional office of the Soils Research Center in Region VIII was housed in a two storey building. Like most offices in the countryside, it looked more like a residential house than a business office. Region VIII was composed of the two Leytes and the three Samars.<sup>2</sup> The area was mostly rural and the main source of livelihood of the people was agriculture. (Exhibit I contains some demographic data on the region.)

The Center had five main areas of research. These were:

- Soil Survey
- Soil Research
- Soil Conservation and Management
- Soil Fertility
- Soil Laboratory Services

Refer to Exhibit II for the specific topics covered by the five research areas mentioned above.

THE CENTERS PROJECT IDENTIFICATION  
AND PRIORITIZATION PROCEDURES

The technical staff of the Center designed research proposals for their yearly budgets under these areas based on technical reports submitted by their field men every month and every four months. They also based their proposals on their actual observations of field conditions.

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<sup>1</sup>Prepared by: Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>The provinces of Northern Leyte, Southern Leyte, Western Samar, Eastern Samar, and Northern Samar.

After the proposed projects were identified, they were in turn prioritized for funds/resource allocation purposes. The criteria used in the prioritization of projects were:

- the necessity of the research project and the availability of the funds necessary to finance the whole scope of the project;
- the impact it would create among the farmers; it was important that the research outputs would be directly beneficial to the region's farmers or that the farmers should be benefitted first and the national needs met, second;
- the suitability and capability for production of the site; and
- the security or the safety from diseases and other hazards of the site.

Thus, after the projects had been prioritized, the fourth criterion played a major role in determining the experimental site.

The site was chosen primarily because of security reasons -- it was quite important to the Center managers that the members of the staff were safe. Therefore, areas infected with diseases like schistosomiasis and where dissidents were known to operate were unlikely to be chosen as experimentation sites.

One researcher pointed out that this standard for site selection was rather objectionable because many social research studies showed that where there was underdevelopment, poverty and all its concomitant ills and problems that was where diseases and social unrest thrived,

and if no development projects such as fertility experimentations were conducted in these areas, then these problems would at the very least remain unsolved and would likely be aggravated.

Perhaps, security, the researcher said did not have to mean avoidance of such areas or isolating that area. There might be other ways of safeguarding the staff without having to neglect places where research and development were most needed.

#### SOURCES OF FUNDS

The Center secured regular funds from their central office based on their proposed budget. However, the central office also had priorities for resource allocation. This year it allotted big amounts only to soil fertility research. The following were the budget allocations of the Center:

<u>Research Area</u>	<u>Amount/Quarter</u> *
Soil Research	₦ 6,000
Soil Conservation & Management	2,000
Soil Fertility	40,934
Soil Laboratory Services	4,000
Soil Survey	3,000

These amounts excluded administrative expenses and other support services like salaries, welfare and employee benefits, office supplies and materials, etc.

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\* US \$1 = ₦ 7.5

The only other source of funds the Center had tapped was the Philippine Council for Agriculture and Resources Research (PCARR). However, the Center had not secured much from this institution since most of the proposals it submitted for funding turned out to be duplication of already submitted proposals. For example, a proposal on the Micro-Nutrients Level Studies in Eastern Visayas which cost ₱ 12,000 was submitted. This was not approved because somebody else had proposed a similar study much earlier. Instead, the Center's staff was asked to take part in the project by concentrating on the soil conservation portion of it.

When asked if they (the Center managers) had requested PCARR to give them ideas as to what projects the institution might want them to conduct in soils research, they replied that they had not thought of that.

Furthermore, the Center had not tried securing funds elsewhere. Thus, their resources came mainly from the central office and occasionally from FCARR.

One obvious limitation this situation posed was that since the Center funds came from the central office, it had to abide by the latter's priorities. Another disadvantage was that the Center could only disburse funds according to regulations governing performance budgeting.<sup>3</sup>

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<sup>3</sup> These regulations were imposed by the government's central budget office, the Budget Commission and enforced by the Commission on Audit.

This meant that the Center could only spend the money on projects that had been proposed by the Center and approved at the start of the calendar year by the Budget Commission. Thus, if planning was not as effective and efficient as it should be, then the Center was stuck with not-so-useful projects and helpless in funding important projects that should be undertaken but were missed during the period of budget preparations since performance budgeting meant planning the Center's or any other government agency's programs and projects for a year and keeping to this plan during the entire year the budget was approved for.

#### THE CENTER'S PROJECT MONITORING SYSTEM

Monitoring of the Center's projects was conducted mostly through written reports. The field technicians were asked to submit monthly and quarterly reports. These were submitted directly to the Regional Director. (See Exhibits III and IV for monthly and quarterly report formats.) Some researchers complained that better forms should be devised since the forms used were so complicated and did not provide space for other data needed.

#### DATA PROCESSING AND INFORMATION DISSEMI- NATION OR OUTPUT UTILIZATION

Data that was gathered in the Center were sent to the mother office in Manila for processing. The Manila technician treated the

data statistically and sent the processed information back to the regional office for dissemination to concerned individuals or agencies. The problem here was that sometimes it took long for the information to go back to the region.

The usual recipients of this information were BAEx and BPI technicians. These people were the ones who were expected to disseminate the research outputs to the final users, the farmers. Although, the Center's field workers saw to it that farmers around the experiment areas were informed of research project's results.

The Center also prepared fertility maps based on the information sent from Manila and these given to the Masagana 99 technicians for use in their field work.

PLANTILLA OF PERSONNEL  
January 1, 1976  
PROJECT 102 - Soil Conservation

Soils, Region No. 8  
NAME OF OFFICE Tacloban City

Item No. PD 733	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan 1, 1976 Per BC 23 & 256	Appt. Status	Edu. Attain.	CSC Eli- gibilities (All)
13-56	M	Supvg. Soil Tech.	61	Leyte District	₱ 11904	P	B.S.A.E.	S.S.T.
20-84	S	Sr. Soil Technologist	57	Reg'l. Office	9756	P	B.S.A.E.	B.S.A.E. (Board)
	S	"	57	"	"	P	B.S.A.E.	"
	S	"	57	Eastern Samar	"	P	B.S.A.E.	"
	M	"	57	Northern Samar	"	T	B.S.A.E.	None
35-91	M	Soil Technologist II	53	Eastern Samar	7992	P	B.S.A.E.	B.S.A.E.
35-89	S	"	53	Northern Samar	"	T	B.S.A.	None
35-88	M	"	53	Southern Leyte	"	T	B.S.A.	C.S. (P)
	S	Soil Technologist I	50	Reg'l. Office	6888	T	B.S.A.E.	None
43-120	M	"	50	Western Samar	"	T	B.S.A.	F.M.T. A.R.T.
43-121	M	"	50	"	"	T	B.S.A.	None
	S	Junior Soil Tech.	46	Regional Office	5640	T	B.S.Ch.E.	C.S. (S)
61-88	M	"	46	Southern Leyte	"	T	B.S.A.	None
61-93	S	"	46	Western Samar	"	T	B.S.A.	None
61-95		"	46	Eastern Samar	"	T		None
86-88		Soil Technician	39	Leyte District	4632	T	H.S.(2nd)	Lab Aide
86-90	S	"	39	Eastern Samar	4404	T	B.S.C	None
		"	39	Regional Office	4404	T	B.S. Ch.E.	C.S.(S)

PERSONNEL COMPLEMENT OF THE CENTER

January 1, 1976

NAME OF OFFICE \_\_\_\_\_

PROJECT 102 F - Fertility

Item No. PD 733	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan 1, 1976 Per BC 236 & 256	Appt. Status	Edu. Attain.	CSC Eligibilities (All)
13-53	M	Supvg. Soil Tech.	61	Northern Samar	11904	P	B.S.A.	S.S.T.
13-60	M	Supvg. Soil Tech.	61	Eastern Samar	11904	P	B.S.A.	S.T.
20-86	M	Senior Soil Tech.	57	Reg'l. Office	9756	P	B.S.A.	S.T.
20-85	M	Senior Soil Tech.	57	Leyte District	9756	P	B.S.A.	S.T.
	M	Soil Tech. II	53	Leyte District	7992	T	B.S.A.Ed.	none
43-116	M	Soil Tech. I	50	Eastern Samar	6888	T	B.S.A.	none
43-122	S	Soil Tech. I	50	Eastern Samar	6888	T	B.S.A.E.	none
61-87		Junior Soil Tech.	46	Leyte District	5640			
61-89	M	Junior Soil Tech.	46	Southern Leyte	5640	T	A.B.(3rdYr.)	none
61-91	M	Junior Soil Tech.	46	Western Samar	5640	T	B.S.A.	none
		Junior Soil Tech.	46	Reg'l. Office	5640			
86-85	S	Soil Technician	39	Leyte District	4404	T	A.B.	none
86-92	M	Soil Technician	39	Western Samar	4404	T	B.S.C.	none

COMPLEMENT OF THE CENTER  
January 1, 1976

NAME OF OFFICE \_\_\_\_\_

PROJECT 101 - Survey

Item No.	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan 1, 1976 Per BC 236 & 256	Appt. Status	Edu. Attain.	CSC Eligibi- lities (All)
PD 733								
7-8	M	Regional Soil Tech.	63	Tacloban City	₱ 13152	P	B.S.Chem.	S.S.T.
13-57	M	Supvg. Soil Tech.	61	Southern Leyte	11904	P	B.S.A.	C.S.(P) Q. S.S.T S.T. Agronomist C.S. (P) S.S.T
13-59	S	Supvg. Soil Tech.	61	Western Samar	11904	P	B.S.A.	S.S.T
20-85	M	Senior Soil Tech.	57	Northern Samar	9756	P	B.S.A.	S.T.
43-115	S	Soil Tech. I	50	Leyte District	6888	T	B.S.A.	none
43-117	M	Soil Tech. I	50	Southern Leyte	6888	T	B.S.A.Ed.	none
43-118	S	Soil Tech. I	50	Northern Samar	6888	T	B.S.A.	none
43-120	M	Soil Tech. I	50	Eastern Samar	6888	T	B.S.A.E.	none
		Junior Soil Tech.	46	Regional Office	5640		B.S.A. (Agronomy)	

Item No.	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan. 1, 1976 Per BC 23 & 256	Appt. Status	Edu. Attainment	CSC Eligibi- lities (All)
PD 733								
61-86	M	Junior Soil Tech.	46	Leyte District	75640	T	B.S.A.	none
61-90		Junior Soil Tech.	46	Northern Samar				
61-92	S	Junior Soil Tech	46	Western Samar	5640	T	B.S.A.Ed.	none
61-94	S	Junior Soil Tech.	46	Eastern Samar	5640	T	B.S.A.	none
66-8	I	Cartographer II	42	Tacloban City	4860	T	3rd Yr. Arch.	Illustrator
86-91	I	Soil Technician	39	Western Samar	4404	T	High School Graduate	Light Equipment Operator

PLANTILLA OF PERSONNEL  
January 1, 1976  
PROJECT 103-Soil Research---

NAME OF OFFICE \_\_\_\_\_

Item No.	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan. 1, 1976 Per BC 23 & 256	Appt. Edu. Status Attain.	CSC Eligi- bilities (All)
20-87	S	Sr. Soil Technologist	57	Regional Office	₱ 9756	T	B.S.Chem. none
		Junior Soil Tech.	46	Regional Office			

PERSONNEL COMPLEMENT OF THE CENTER  
January 1, 1976  
PROJECT 104 - Laboratory

NAME OF OFFICE \_\_\_\_\_

Item No. PD 733	Civil Status	Position Title	Range	Place of Assignment	Adj. Salary Eff. Jan. 1, 1976 Per BC 236 & 256	Appt. Status	Educational Attainment	CSC Eligi- bilities (All)
13-55	M	Supvg. Soil Tech.	61	Tacloban City Laboratory	₱ 11904	P	B.S.Chem.	S.T.
20-88	M	Senior Soil Tech.	57	- do -	9756	P.	B.S.Chem.	S.T.
35-85	S	Soil Tech. II	53	- do -	7992	P.	B.S.Chem.	B.S.Chem.
35-86	S	Soil Tech. II	53	- do -	7992	T	B.S.Chem.	2nd Grade (Converted)
43-112	S	Soil Tech. I	50	- do -	6888	T	B.S.Chem.	none
43-113	S	Soil Tech, I	50	- do -	6888	T	B.S.Chem.	none
61-85	S	Junior Soil Tech.	46	- do -	5640	T	B.S.Med.Tech.	none
86-87	M	Soil Technician	39	- do -	4404	T	B.S.Grad.	none
82-87	M	Security Guard	39	- do -	4404	T	B.S.Grad.	none
93-50	S	Soils Aide	36	- do -	3792	T	B.S.C.(3rd Yr.)	none

Exhibit I : Demographic Data on Region VIII

LEYTE

I. Land Area: 626,826 hectares

II. Land Classification as of June 20, 1968

	Area(hec)	% Total Land Area
Total Area Classified and/or Certified	485,273	79.42
A. Alienable or Disposable After Reversion	400,169	63.84
B. Classified Areas Considered as Timberland after reclassification	85,104	13.58
1. Timberland	65,251	10.41
2. Forest Reserves	18,534	2.95
3. National Parks	1,271	0.21
4. Military and Naval Reservation	48	0.01
5. Civil Reservation		
Unclassified Public Forest	<u>141,553</u>	<u>22.58</u>
Area of the Province	<u>626,826</u>	<u>100.00</u>

III. Population (1970census) : 1,626,000

IV. Literacy of Persons 10 years old and over in the Province  
Census year 1960

No. of persons 10 years and over	780,110
No. of persons Literate	516,453
Percent Literate	62.20

## V. Type of livelihood:

## A. Agricultural Production : Census 1960

## Commercial and Food Crops

Crops	Area Utilized (hectares)	Quantity of Crops Produced
Palay	74,689	1,679,091 cavans
Corn	77,410	913,727 cavans
Sugarcane	5,692	312,163 M. T.
native variety	961	438,064 M. T.
Virginia and other variety	8	2,746 M. T.
Abaca	11,059	8,293,799 kilos
Banana	7,256	23,709,032 kilos
Coconut: nuts	*	237,855,288 kilos
Tuba	*	11,202,331 liters

## B. Mineral Production 1968

Non-metallic	Quantity	Value(₱)
sand, gravel & earth	32,499 cu. m.	158,773
pottery	41,250 pcs.	16,125
stones, cobbles & boulders	3,900 cu. m.	22,400
salt	63 M. T.	3,000
bricks	10,000 pieces	<u>1,800</u>

TOTAL ₱ 202,098

Metallic Group	Quantity
Manganese	4,500 M.T.
Copper	56,211 M.T.
Rock Asphalt	550,000 M.T.
Sulphur	510 M.T.

#### C. Fishing Industry

##### I. Fish pond in operation

Privately owned (hec)	27.88
Government leased (hec)	1448.79
Total	1,515.67

##### II. Production (kilos) 303,330.00

##### III. Swamplands Available for development

Mangroves	5,451.18
Freshwater	2,630.00
Total	8,081.18

## SAMAR

I. Land Area : 1,342,863 hectares

II. Land Classification of the  
Province as of June 30, 1968

	Area (hec)	% Total Land Area
Total Area Classified and/or Certified	581,017	43.27
A. Alienable or Disposable after revision	428,026	31.88
B. Classified Areas Considered as Timber- land after reclassification cation	152,991	11.39
1. Timberland	132,669	9.89
2. Forest Researves	19,154	1.43
3. National Parks	840	0.06
4. Military and Naval Researves	128	0.01
5. Civil Reservation		
Unclassified Public Forest	761,846	56.73
Area of the province	1,342,863	100.00
III. Population (1970)	1,217,000	
IV. Literacy of Persons 10 years old and over (1960)		
no. of persons 10 years and over	578,750	
no. of persons literate	370,667	
Percent literate	64.00	

## V. Type of Livelihood

## A. Agricultural Production (1960)

## Commercial and Food Crops

Crops	Land Area Utilized (hectares)	Quantity of Crops Produced
coconuts	143,211.9	455,321,807 nuts
tuba	143,211.9	18,160,619 liters
abaca	13,257.3	8,020,280 kilos
palay	102,133.2	2,344,590 cavans
corn	16,486.6	307,244 cavans
camote	15,005.7	60,443,885 kilos
banana	10,658.8	34,631,127 kilos
gabi	1,003.6	14,476,114 kilos

## B. Mineral Production (1968)

Metallics	Quantity	Value (₱)
silver (ozs.)	428,480	4,020,123.00
copper (M.T)	7,847	39,219,500.00
non-metal sand, gravel & earth	20,119	98,468.00
Total		₱ 43,438,081.00

## C. Fishing Industry (1967)

## I. fishponds in operation

Privately owned (hectares)	-
Government Leased (hectares)	4,430.51
Total	4,340.51

## II. Production in kilos 43,050.00

## III. Swamplands available for development

Freshwater (hec)	-
Mangroves (hec)	26,327.09

Exhibit II. Specific Topics Covered by the Five Research Areas  
of the Center

I. Soil Survey

- A. Land Capability
- B. Special Soil Investigations
- C. Detailed Soil Survey
- D. Semi-Detailed Soil Survey

II. Soil Conservation

- A. Topographic survey in relation to water impounding projects, small diversion dams, irrigation and drainage and farm planning
- B. Feasibility Studies on Water Impounding Projects and Small Diversion Dams
- C. Design and Supervision of Lay-out of Soil and Water Conservation Measures
  - 1. Vegetative erosion control
  - 2. Mechanical erosion control

III. Soil Fertility

- A. Fertility Experiments
- B. Fertility Demonstration
- C. Compost Demonstration
- D. Multiple Cropping
- E. Fertility Variety Test

IV. Soil Research

- A. Soil Research per se
- B. Soil Conservation

V. Soil Laboratory Services

- A. Soil Analysis

# Exhibit III. Soils Research Center

Laboratory

(Date)

The Regional Director

Soils Region No. \_\_\_\_\_

Subject: MONTHLY REPORT OF ACCOMPLISHMENT

S i r:

I have the honor to submit hereunder the report of accomplishment for the month of \_\_\_\_\_, covering the period from \_\_\_\_\_ to \_\_\_\_\_.

Particulars	: Paid	: Official <sup>1</sup>	: N F A C	: Special:	
			: Rice: Corn: Other	Fund	: TOTAL
				: Project	
I. Number of soil Samples received and analyzed	:	:	:	:	:
1. Number of samples carried over from the previous month.	:	:	:	:	:
2. Number of samples received during the period	:	:	:	:	:
3. Total number of samples to analyze	:	:	:	:	:
4. Number of samples analyzed	:	:	:	:	:
5. Number of samples analyzed	:	:	:	:	:
II. Number of Farmers served <sup>2</sup>	:	:	:	:	:
III. Number of hectares covered <sup>3</sup>	:	:	:	:	:

<sup>1</sup> Official samples include (A) those submitted under different projects of the Bureau, excluding samples for the NFAC and research samples under the Special Land Use Project (b) samples submitted through official request by other government agencies, for research and demonstration purposes (c) samples submitted through official request by private parties including farmers owning not more than 10 Ha. requiring fertilizer recommendations for crops other than rice and corn.

<sup>2</sup> and <sup>3</sup> Based on 1-4

1. Number of samples analyzed:

2. Number of hectares covered corresponding to samples analyzed:

3. Crops given fertilizer recommendations:

[illegible]





### Case Study 3

#### ALLOCATION OF RESOURCES FOR RESEARCH<sup>1</sup> AND DEVELOPMENT PROJECTS

The National Commission on Inventions (NCI)<sup>2</sup> was a government agency charged with the task of promoting "the development and commercialization of local inventions, innovations, and industrial designs." It was formed through the initiative of the Association of Filipino Inventors (AFI), the largest organization of inventors in the Philippines. Dr. Eliseo Joaquin, AFI president, explained the need for the Commission thus:

"In contrast to advanced countries with complex research organizations, research work and innovative activities in the Philippines are by individuals, most of whom are poor and have barely finished high school. The development of new products and processes have, therefore, been hampered by the inadequacy of an inventor's personal funds. If ever a novel idea is, indeed, developed into a new product or process, the latter rarely gets mass-produced, not because it is not marketable but simply because the inventor is not able to reach or convince a manufacturer. The situation has proven to be very discouraging for researchers and inventors."

As conceived, the NCI would provide the following services to inventors and industrial designers:

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<sup>1</sup>Prepared by Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>The NCI was one of the agencies under the National Science Development Board (NSDB).

- Preparation of Patent Application and follow up of the same with the Philippine Patent Office (PPO);
- Patent marketing and licensing;
- Legal assistance in infringement cases;
- Technical and financial support to Research and Development (R and D) activities;
- Market research and advertising services;
- Venture management consultancy services;
- Information services; and
- Training programs on creativity and related matters.

In return, the NCI would be entitled to 10% of all royalties derived from an NCI-assisted invention.

To accomplish its objectives, the NCI was granted an annual appropriation of P 2 million,<sup>3</sup> of which 35% went to grants-in-aid. Since the NCI received over 200 applications for assistance annually, the Commission was faced with the serious problem of how to allocate its meager resources most effectively.

A system was, therefore, devised for selecting projects to be supported. Among the criteria included were economic and technical feasibilities and project cost (See Exhibit I). Conformity with national sectoral priorities was also considered and, in this connection, agriculture was given top priority, enjoying a two-point advantage over industry, mining and quarrying (See exhibit II).

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<sup>3</sup> This appropriation was provided for by its mother agency, the NSDB.

After a few years of application, various inadequacies of the resource allocation system surfaced. There was a point in time when support was being extended to two tractor-development projects. One high ranking NSDB official questioned why this was so, when one tractor development project might have been sufficient.

The query of the NSDB official led to an examination of records which revealed that in Fiscal Years 1973 to 1975, assistance was being given for the development of five threshers, three dryers, two tractors and two planters (See Exhibit III).

Another persistent complaint was that the resource allocation guidelines were ambiguous such that evaluation could be subjective and erroneous. With regards to the terms used in the guidelines, for example, it was pointed out that it was doubtful whether one could draw a line between "very sellable" and "sellable", "fair" and "doubtful," and "very competitive and competitive." It was also observed that the cost of evaluating the merits of a project could very well exceed the project cost; that sectoral classifications overlap, thus eliminating the advantage projects with top national sectoral priority should have over the others; and that the present guidelines were too profit-oriented. It was further suggested that social desirability and environmental viability be included as criteria for evaluation.

A workshop was held to discuss the Commission's system for resource allocation. The following observations and recommendations were made by the division and section chiefs during the workshop:

- The major problem pinpointed was that they had no way of knowing when a really good project was forthcoming. At a given period, a certain invention may seemed to be the most meritorious one. But a better one might be coming in the next period. Thus, inefficient utilization of resources could result in deciding too fast. On the other hand, if the decision-maker waited and waited for a better project which may not come, then the development of a meritorious invention could be duly delayed. A control system had to be devised such that the probability of selecting really good projects for funding within a reasonable time was maximized.
- There should be an effective information system to enable decision-makers to make an objective evaluation of a project before funds could be allocated to it.
- Terms must be clearly defined and overlapping classifications eliminated to facilitate objective evaluation of project proposals.
- Social desirability and environmental viability must be included as criteria for evaluation of proposals.

It was further cited that if a more effective project proposal evaluation criteria and a more viable resource allocation system were not devised soon, the NCI might not be able to meet its objectives - this was because support might not be given where it was needed and the few resources the Commission had might not be put to effective use.

# EXHIBIT I

## Procedure in the Determination of Priority of Requests for Financial Assistance to Inventions

1. Requests for financial assistance are evaluated by the members of a Committee constituted for the purpose. Evaluation of the requests is made on the market, technical and financial aspects of the patented inventions and scored in accordance with the attached rating guide
2. Scores are collated and ranked according to economic, technical and financial aspects. The highest score gets Rank No. 1, next to highest gets Rank No. 2, and so on... In case two or more items have the same scores, the sum of the rank digits are divided among them, the resulting quotient will be the corresponding rank assigned to the items as per Example I.
3. The rank numbers are added to arrive at the Total Rank.
4. The average rank is derived by dividing the total rank by the number of evaluators, as follows:

$$\frac{\text{Total Rank}}{\text{Number of Evaluators}} = \text{Average Rank}$$

Example 1 - Economic Aspect

Code Number	E <sub>1</sub>		E <sub>2</sub>		E <sub>3</sub>		Total: Rank	Average Rank
	S	R	S	R	S	R		
76-1	30	4.5	31	4.0	29	5.0	13.5	4.50
76-2	35	1.5	32	3.0	30	3.5	8.0	2.66
76-3	30	4.5	35	1.5	35	1.0	7.0	2.33
76-4	35	1.5	30	5.0	30	3.5	10.0	3.33
76-5	35	1.5	35	1.5	32	2.0	5.0	1.66

5. Steps 1 to 4 are repeated for Technical and Financial Aspects.
6. The Weighted Rank is then derived by multiplying the average rank by percent weight. The percent weight for economic, technical and financial is 35%, 40% and 25% respectively. Example 2 illustrates the procedure.

Example 2

Code Number	Ave. Rank Economic	Weighted Rank	Ave. Rank Technical	Weighted Rank	Ave. Rank Financial	Weighted Rank
76-1	4.50	1.575	3.00	1.20	6.50	1.63
76-2	2.66	.931	5.33	.13	2.50	.63
76-3	2.33	.815	5.33	2.13	6.50	1.63
76-4	3.33	1.165	4.84	1.93	2.50	.63
76-5	1.66	.581	5.33	2.13	2.50	.63

7. The Weighted Ranks of each request are tabulated according to economic, technical and financial as per Example 3.
8. The Weighted Ranks for economic, technical and financial aspects for each request are added to derive the Total Weighted Rank as per Example 3.
9. For Final Rank, the lowest of the Total Weighted Rank gets Rank No. 1, next to lowest will be Rank No. 2 and so on... as per Example 3.

Example 3

Code Number	Weighted Rank			Total Weighted Rank	Final Rank
	Economic Aspect	Technical Aspect	Financial Aspect		
76-1	1.575	1.200	1.630	4.405	4
76-2	.931	2.130	.630	3.691	2
76-3	.815	2.130	1.630	4.575	5
76-4	1.165	1.930	.630	3.725	3
76-5	.581	2.130	.630	3.341	1

10. From the hypothetical table the priority of request for financial assistance will be like this:

<u>Rank (Priority)</u>	<u>Code Number</u>
1	76-5
2	76-2
3	76-4
4	76-1
5	76-3

11. The Tabulated results will then be submitted to the Commissioner with the recommendation embodied in a memo signed by the members of the Committee. Financial assistance may now be extended to the inventors in the order of priority in No. 10, subject to the availability of funds.

Prepared by:

TECHNO-ECONOMIC STAFF

Rating Guide for Perfect Score  
Criteria for Financial Assistance to Inventors

<u>I. Marketability</u>	<u>Scoring Guide</u>	<u>Perfect Score</u>	<u>Perfect Rating</u>
1. Is the product sellable to the present customer?		10	
a. Very sellable - - - - -	10		
b. Sellable - - - - -	7		
c. Fair - - - - -	3		
d. Doubtful - - - - -	1		
2. Is the expected life of the product of considerable length?		8	
a. Over 5 to 10 years - - - - -	8		
b. Over 1 to 5 years - - - - -	4		
c. Less than one year - - - - -	1		
3. Does the product fill a well-established need? - - - - -		12	
a. Basic needs - - - - -	12		
b. Comfort and convenience - - -	6		
c. Luxury - - - - -	2		
4. Can it be sold at a price assuring a reasonable return of required investment?		10	
a. Price assures high return of investment - - - - -	10		
b. Price assures medium return of investment - - - -	5		
c. Price assures low return of investment - - - - -	1		
5. Is the market history of a similar product desirable?		10	
a. Very desirable - - - - -	10		
b. Desirable - - - - -	7		
c. Slightly desirable - - - - -	3		
d. Not desirable - - - - -	1		
6. Will the new product be competitive in the following areas product exist? - - - - -		10	
a. <u>Price</u>			
1. Very competitive - - - - -	10		
2. Competitive - - - - -	5		
3. Non-competitive - - - - -	1		
b. <u>Utility</u>		10	
1. Very competitive - - - - -	10		
2. Competitive - - - - -	5		
3. Non-competitive - - - - -	1		
c. <u>Quality</u>		10	
1. Very competitive - - - - -	10		
2. Competitive - - - - -	5		
3. Not-competitive - - - - -	1		
d. <u>Reliability</u>		5	
1. Very reliable - - - - -	5		
2. Reliable - - - - -	3		
3. Not-reliable - - - - -	1		
e. <u>Appearance and Size</u>		10	
1. Very acceptable - - - - -	10		
2. Acceptable - - - - -	5		
3. Not-acceptable - - - - -	1		

	<u>Scoring Guide</u>	<u>Perfect Score</u>	<u>Perfect Rating</u>
f. <u>Operating Cost</u>		5	
1. Low - - - - -	5		
2. Medium - - - - -	3		
3. High - - - - -	1		
TOTAL		<u>100</u>	35%
II. <u>Technical Aspect:</u>			
1. Workability of the patented invention		37.5	
a. Very feasible - - - - -	37.5		
b. Feasible - - - - -	20		
c. Slightly feasible - - -	10		
d. Doubtful - - - - -	5		
2. Availability of raw materials		25.0	
a. All local - - - - -	25		
b. Mixed of local and imported - - - -	12.5		
c. Imported - - - - -	6		
3. Availability of machineries and equipment - - - - -		12.5	
a. Could be locally fabricated - - - - -	12.5		
b. Combination of local & foreign - - - - -	6.		
c. Foreign parts but locally assembled	3.		
d. Foreign made - - - - -	1		
4. Availability of technology		12.5	
a. Local - - - - -	12.5		
b. Combination of local & foreign - - - - -	7		
c. Foreign - - - - -	2		
5. Increased technical capability in new fields		12.5	
a. Much - - - - -	12.5		
b. Moderate - - - - -	8.		
c. Slight - - - - -	5		
d. None - - - - -	0		
Total		100.00	40%
III. <u>Financial Requirements:</u>			
1. Below 10,000 - -	100	100	25%
2. 10,000 to 25,000	80		
3. 25,000 to 50,000	60		
4. Above 50,000 - -	40		
Total		<u>100</u>	<u>100</u>

Exhibit II. SECTORAL PRIORITIES\*

<u>Sector</u>	<u>Value Factor</u>
1. Agriculture, Forestry & Fishing	20%
2. Industry (Mining & Manufacturing)	18%
3. Water Resources and Power	16%
4. Transportation and Communication	14%
5. Housing	12%
6. Health and Nutrition	10%
7. Education and Manpower Development	4%
8. Social Welfare and Community Development	2%
9. Tourism	2%
10. Others	1%

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\*Based on NSDB and NEDA guidelines

### EXHIBIT III

LIST OF AGRICULTURAL INVENTIONS AND INNOVATIONS  
PATENTED AND DEVELOPED WITH NCI ASSISTANCE WHICH  
ARE NOW USED BY INDUSTRY OR BEING MANUFACTURED IN  
COMMERCIAL SCALE AND PROMOTED BY NCI (FY 73-75)

1. Grain Dryer
2. Palay Row Seeder-Planter
3. Rice Mill (New method of milling)
4. Palay Thresher
5. Palay Thresher
6. Multi-Purpose Dryer
7. Corn Husker-Dryer
8. Pest Prayer-Device
9. Hand Tractor
10. Hand Tractor
11. Multi-Purpose Thresher
12. Rice Mill
13. Grain Seeder
14. Copra Dryer
15. Rice Cleaning Machine
16. Seed Planter
17. Corn Peeling Machine
18. Portable Thresher
19. Organic Fertilizer composition  
and Processing
20. Portable Palay thresher

## EXHIBIT IV.

SECTORAL CLASSIFICATION OF INVENTIONS  
APPLIED FOR NCI ASSISTANCE  
(196501976)

<u>SECTOR</u>	<u>NUMBER</u>	<u>PERCENTAGE</u>
1. Housekeeping, Housing Technology and Arts	392	15.74
2. Agriculture, Forestry, and Fisheries	338	13.61
3. Water Resources, Energy and Fuel	319	12.88
4. General Inventions	311	12.52
5. Infrastructure, Transportation and Communication	234	9.42
6. Health and Sanitation	231	9.30
7. Education	194	8.13
8. Shelter Systems	187	7.52
9. Manufacturing, Mining and Quarrying	132	5.31
10. Foods and Food Technology	122	4.94
TOTAL	2,483	100.00

#### Case Study 4

#### CENTER FOR DEVELOPMENT

The Center for Development (CD) was a government agency created by a Presidential Decree on September 21, 1973, "to provide consultancy, research and publication services to other government agencies and corporations in the fields of management; organizational planning and development; agriculture and natural resources and human resource development in the government's effort to bring dynamism and technical expertise into the service." (Refer to Exhibit I for the Organizational Chart of CD).

The Center was given an endowment of ₱60 million<sup>1</sup> by five revenue-generating agencies of the national government and a modern, completely equipped research and training center in Baguio City. The Center, however, could only spend the interest earned by its endowment fund and may not withdraw from the capital amount. During emergency situations, it could at most borrow 5% of ₱60 million and would have to repay the loan within two years.

During the first two years of the organization, the Center had plenty of finances to spend or invest. Aside from the accumulated interests the endowment fund earned, it was able to solicit from the government a well-funded research and training program for government executives. This program which was intended to prepare middle-level executives for new positions in the proposed parliamentary system of government had an annual budget of ₱1.5 million.

The research and training center in Baguio was made free for all staff members and their families who were on vacation. They only had to pay a token of ₱15.00 a day per guest and they could enjoy all the

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Prepared by Andrea D. Domingo & Associates; release being negotiated.

Cases of SEARCE/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>1</sup>US \$1 = ₱ 7.5

facilities of center - big, clean and well-furnished rooms; and pelota, tennis, and basketball courts.

Participants of training programs ran by the Center were charged ₱80.00 a day for board and lodging and for the use of conference rooms, workshop rooms, audio-visual facilities, medical clinic and library.

During these first two years, the Centers' operations personnel solicited projects mainly on training and research projects which usually were short-ranged if not one-shot deals. Because of the novelty of the service being offered to government agencies, there were more new projects coming in than the Center's project teams could handle and the Baguio Center could accommodate. Some training programs had to wait two or three months before they could be implemented.

The volume of project work to be done had forced the Center's management to pay full attention to operation; thus, the development of administrative systems lagged behind. There was no control on disbursing or spending of petty cash and cash advance funds for travel, supplies, materials, representation expenses, etc.; there was a very rapid and sudden expansion in which many personnel were hired permanently for short-term projects; many consultants were employed and there were instances where some employees got salary increases up to as much as ₱1,000.00. And, perhaps, more importantly, the Center did not have an official, uniform pricing system for its services and projects. As long as the projects were funded by client-agencies, they were classified paying projects - although there were no measures or criteria by which to gauge their financial viability or profitability.

So, it happened that after two years of operation, the Center found itself quite busy with many projects but with red figures on its balance sheets. The total funds it got from the ₱60 million endowment fund was ₱3,000,000 a year and it was spending ₱32 million a year. The ₱29 million deficit was to come from paying projects.

But the projects were turning in only ₦25 million. The Center faced a deficit of ₦4 million a year or ₦8 million in two years.

In order to be on a more secure and balanced financial position, the Center's management came up with a financial scheme: reduction of costs and tighter control on disbursements; strict hiring and promotion procedures; emphasis on longer term research projects whose capital and incidental expenditures were much less than training programs and which could be priced better than seminars and more useful to client on a long term basis; and a uniform pricing system for projects.

Cost reduction was imposed by requiring project managers to draw up their total project needs including personnel, external research, representation, supplies and materials before project implementation. They were asked to submit their quarterly cash flows and program of expenses after their project budget had been approved. This enabled the financial planner to determine the center's cash flow needs. Furthermore, project managers were required to keep records of their expenses and balances and were not allowed to exceed their prepared quarterly cash flows. But they were, however, allowed to juggle their funds by taking money out of one item and putting it on another that needed new funds. (Refer to Exhibit II for the Cash Flow format.)

To restrict hiring, a policy was drawn to the effect that no new personnel would be hired until all available Center manpower had been 100% involved in paying projects. Also, hiring was centralized. The project managers and program directors could not hire until the Central office had approved their requests for new personnel.

Training program series instead of one-shot training programs were supported and encouraged by management. Unless a seminar was to become an entry point for other research and consultancy projects, it

was given second priority. Organizational and development planning researches whose project life was from 6 months to three years were developed and packaged and sold out not only by project managers but also by the Center's top-level executives.

To simplify the implementation of the uniform pricing system for projects (both paying and internally funded),<sup>2</sup> a form called the Project Authorization (PA) form was devised (See Exhibit V for the form).

Before any project concept could be developed into a proposal, it had to be duly approved by the Center's Executive Vice-President (EVP), Senior Vice-President (SVP) for Operations and the director of the program from which the concept originated. This was done by accomplishing a PA for development and attaching the write-up on the project concept. After the proposal was developed and the client agreed to it, a PA for implementation was filled up by the project manager, again, to be duly approved by his program director, the EVP and SVP.

The cost of project development was computed as follows:

A. Add costs of:

1. Personal Services
2. Supplies and Materials
3. Printing and Publication
4. Travel and Transportation
5. External Research (resource persons aside from regular consultants/contractuals)
6. External Relation (representation expenses)
7. Workshops and Conferences (in Baguio)
8. Miscellaneous

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<sup>2</sup> The Center had a policy to fund worthwhile research projects as long as the total cost of these did not exceed 20% of the total revenues generated by paying projects.

B. A equals sub-total of budget

C. Add 65% of the sum of 1,2,3,4,5,6, and 8 (administrative overhead)

D. B & C equals total budget for project development

The project development cost was shouldered by the Center. It was an investment into the project. This was later on charged to the client when the Memorandum of Agreement between the Center and its client was drawn.

For project implementation, the total project budget which was what usually was charged the client was computed as follows:

Added to the sub-total of budget and the 65% administrative overhead were the development cost of the project and 20% of the sum of 1,2,3,4,5,6 and 8 (which served as the Center's mark-up or profit).

The pricing system held up for almost two years until the project managers and clients complained of the high costs of projects. The project manager would not agree anymore that only half of what the client paid for<sup>3</sup> went into the actual operations activities for the project and management was very strict in re-channeling funds from the overhead and mark-up costs even when it was quite necessary. A formal resolution was drafted to look into the Center's finances and recommend the necessary changes.

The committee found out that if the Center cut down on its expenses on internally funded projects which exceeded the 20% limit

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<sup>3</sup> The sum of the overhead costs and mark-up were almost equal to the actual/direct cost of the project. This was aside from the revenues generated by the training center in Baguio which was declared a profit center and which was run like a hotel business corporation charging ₱120 per day for board and lodging per participant and project team member. And while, the charger for staff member on vacation was minimal before (₱15 per day for board) this had been an increased by 100%.

to 40%, then they could come up with a new pricing scheme that would make projects contribute to the Center's administrative overhead and mark-up only 33% of the total amount charged to clients.

The President immediately disapproved the development of new projects for internal funding, cut down the budgets of existing ones and approved the recommended pricing scheme which was:

A. Add costs of:

1. Salaries + 1.25% of total salaries
2. Consultant/Contractual fees + .80% of total consultant fees
3. GSIS/Medicare
4. Provision for Increase
5. Supplies and Materials
6. Printing and Publication
7. Travel and Transportation
8. External Research
9. External Relation
10. Miscellaneous

B. A equals sub-total of budget

Add (1) 20% of 1 to 11 except No. 10 if held in Baguio; and  
(2) development cost

C. A & B equals total budget

The new scheme was met with approval. However, the project personnel were still thinking whehter, after the 33% was induced, the optimum share of the administrative personnel would be achieved since the project team's budget already included provision for clerk-typists, driver and messenger.

The project managers were asked to fill up a project income statement quarterly (See Exhibit VI for the format).

EXHIBIT: CD's ORGANIZATIONAL CHART

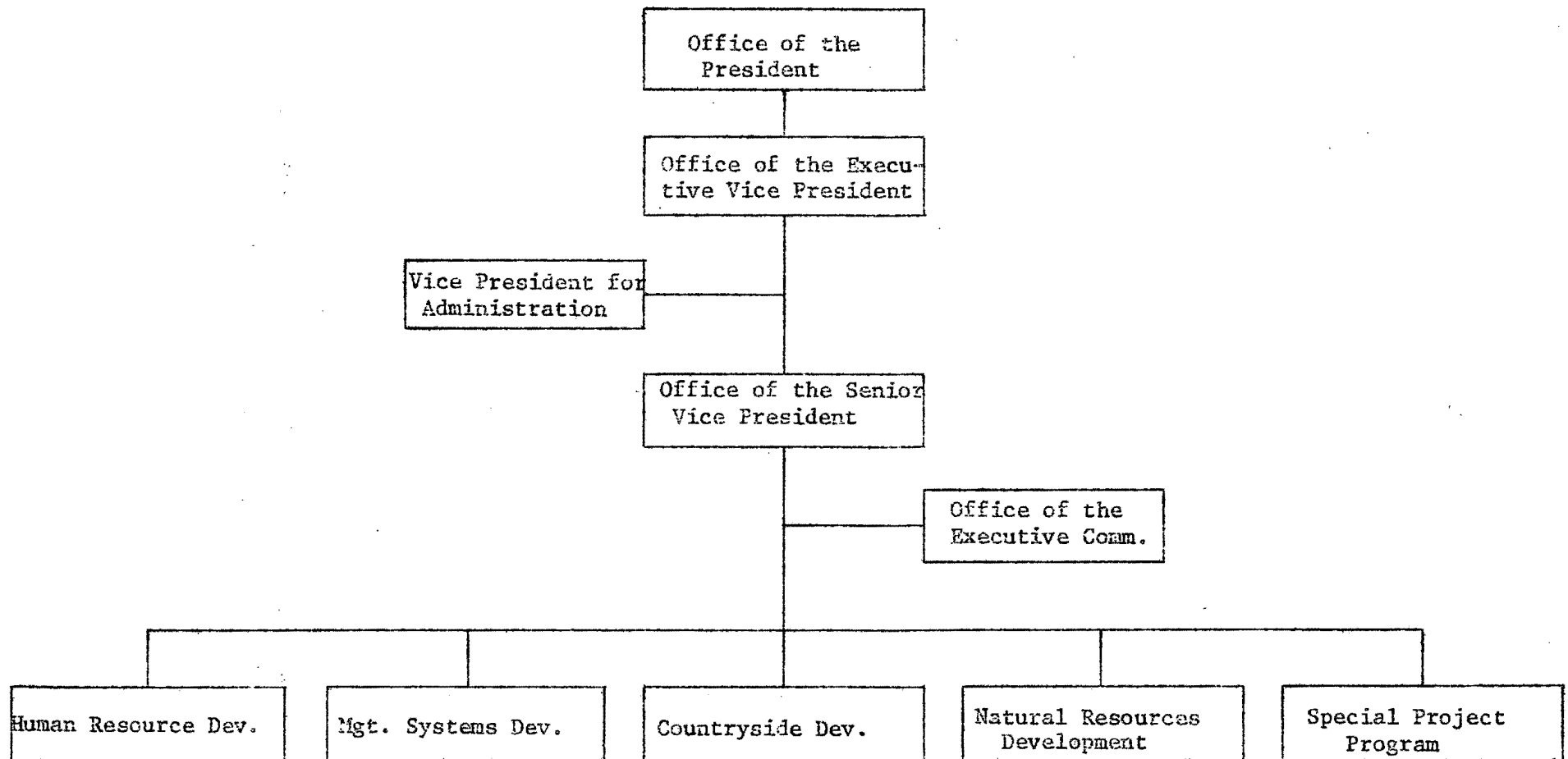


EXHIBIT II. CASH FLOW FORM

PROGRAM: \_\_\_\_\_

PROJECT TITLE: \_\_\_\_\_

DURATION: \_\_\_\_\_

**TOTAL BUDGET (Gross):** \_\_\_\_\_

Expected Expenditures: \_\_\_\_\_

Expected Net Earnings: \_\_\_\_\_

### CASH FLOW FOR ACTUAL PROJECT EXPENSES

Expense Item	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
TOTAL				

## Case Study 5

### MANAGEMENT AND ORGANIZATIONAL DEVELOPMENT PROGRAM<sup>1</sup>

Lorinda Reyes, a fellow of the Management and Organizational Development Program (MODP)<sup>2</sup> of the Organizational Research and Development Institute (ORDI)<sup>3</sup> was quite excited one day. She had just received a signed Memorandum of Agreement from the Program's client, the Philippine Agricultural Society (PAS), for ₱750,000.00. The agreement was for the conduct of an organization and systems study of the Society. The package was called Integrated Institutional Servicing for the Philippine Agricultural Society.

The three areas of assistance the package identified were: Management Development; Corporate Planning and Organization Building; and Personnel and Career Systems Design and Development.

The proposal defined these three areas of involvement as follows:

"The Management Development (MD) program envisioned for the Authority is aimed at the accomplishment of a two-fold objective: 1) to raise the level of effectiveness of the organization by improving the individual effectiveness of the Society's top-level officials; and 2) to raise the level of effectiveness of the organization by knitting the Society's top-level officials into a cohesive management team using applied behavioral and social science techniques.

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<sup>1</sup>Prepared by Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>See Exhibit I for MODP's organization chart and areas of involvement (services it offers to other government agencies).

<sup>3</sup>See Exhibit II for ORDI's organization chart.

"However, there is a limit to what can be accomplished by the mere improvement in individual and team effectiveness. Unless organizational lines are clear-cut, unless tasks are well defined and properly differentiated and integrated, unless responsibilities and powers are shared equitably and delegated when necessary -- in short, unless the formal and informal structures and processes of the organization are geared to achieve maximum operating effectiveness and efficiency -- individual and group effort, no matter how well-knit the group, can easily be frustrated. The Corporate Planning and Organizational Building component of this proposal, therefore, will look into the organizational machinery to ferret out cumbersome procedures, overlapping functions within the organization, grey areas in operations vis-a-vis other agencies, and other organizational maladies that might be present in an agency.

"Finally, a Personnel and Career Systems Design and Development Program will be undertaken to attract, recruit and retain qualified personnel for the Society. As an integral part of this component, a mechanism will be devised to prepare people with recognized potential for future advancement and responsibility in proportion to their capabilities.

"An evaluative and control machinery will be built in the whole program to assure that the objectives of the program are attained."

Lorinda rushed to her program director's office to give him the good news and discuss with him the project's strategy of implementation.

Lorinda: Mr. David we just received our signed Memo Agreement. I think we'll have to meet with the PAS Commissioner, Florendo Mapa, to settle the detailed terms of references, the expected outputs, etc.

Mr. David: Good. But you will have to observe fully your Project Authorization<sup>4</sup> and Staffing Pattern or we'll have problems with the Office of the Executive Committee (OEC).

Lorinda: Of course, I'm sticking to it, Sir. My approved staffing pattern says I can have two project assistants, one project officer and two systems analysts. The assistants must have some background in management and the officer must be good in organization planning and development.

Mr. David: I think we have these types of personnel available and take Baby and Josie, they are Project Assistant II's and are not involved in any project and there's Maria, a Project Officer I who's free, too.

Lorinda: Gosh, Mr. David I need real good people, ₱750,000 is a lot of money and our client expects to get its money's worth. You see we're angling for other projects from PAS.

Mr. David: I know but you can't get people from other programs unless the program directors agree - the OEC objects to internal piracy. Neither can we hire unless all our technical personnel are 100% utilized in projects.

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<sup>4</sup>See Exhibit IV for Project Authorization Form.

Lorinda: But what if those who do not have project involvement are not taken in by other project managers precisely because they are not competent or good enough for the work?

Mr. David: We are responsible for training them and we can't fire them. They are permanent employees and you know they have Civil Service rights.

Lorinda: Okay. I'll take a chance but if these people can't really meet the demands of the project, we'll have to get others. I'll still be needing two analysts.

Mr. David: Alright. Right now what's important is to get the project off the ground. As for the analysts we can request the Systems Program to detail two of their men to us on a fulltime basis for the project duration.

Lorinda then went back to her office prepared for detailed plan of operation, the timetable and initial assignment memos to her staff. After two days, Lorinda called a staff meeting with Mr. David attending.

During the meeting, she oriented the staff on what the project was all about, the expected outputs/terms of reference, when they were expected and an idea of what each one would be asked to accomplish.<sup>5</sup>

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<sup>5</sup>See Exhibit III for the project's organigram.

The two analysts, Tom and Ed, were there. They informed Lorinda and Mr. David that they would only be assigned to the project fifty per cent of the time as they had other work in some of the projects of their home program.

Lorinda felt a little disappointed and asked the program director if he could do anything about it. Mr. David replied that the only thing he could suggest was to request for two more analysts on 50% time involvement.

Lorinda said that from experience too many part-timers and no full-timers in the project led to inferior outputs and delayed schedules because they could not be expected to take full responsibility of the work and they were not present all throughout the project experience. In fact, a lot of time was spent in informing everybody, everyday about the other people's findings and experiences when the others were not around.

She then told Mr. David she would try to make do with Tom and Ed - if it did not work out well, she said she would just have to hire new people or the project would suffer. She thought of a system by which coordination and information relay needs would be minimized.

Tom and Ed were supposed to spend every morning together so that they gathered data and wrote their reports together. This simplified procedures. The arrangement worked out fine since Maria the Project Officer and project coordinator was good at documentation and did the transfer of information from the other staff members to the two analysts. Lorinda later found out that this was about all that Maria was good at.

Furthermore, since it had been the Institute's experience that the joint-team approach seemed to be more effective than the other approaches, Lorinda went about setting up a counterpart team from the Society. Her projects had always been successful in using this approach. It facilitated data gathering and

feedback (verification, usually) and change acceptance in the client agency. It also gave the project the support of the joint team members which might be equivalent to the formation of a "critical mass" that any change agent might need in the client organization. Furthermore, on operations and legal matters, the officials in the client-agency were more knowledgeable than the project team members and their expertise could be of great use to the project. It even boosted the personnel's morale when they were involved in "such important organizational endeavors."

What Lorinda did not foresee was that previously she had a good, expert staff - officers and assistants she herself picked; her new staff, as it was, was not prepared for such an approach.

This approach, although effective under certain conditions was disastrous under others. It required that the project team members were professional, tactful and discreet regarding their dealings with their counterparts. They got more data and information than what they were divulging, especially on confidential matters like which offices would be strengthened and which would be abolished; and that the staff knew their business quite well and more importantly, they knew their business better than their client. But under other circumstances it could cause the total failure of the project.

Lorinda found out rather painfully this oversight almost ruined her project and professional credibility and the Institute's as well with the PAS during one incident. Maria, the project coordinator, when asked by a counterpart team member in a meeting what was to be the outcome of the project, she replied nonchalantly that if the group's recommendations would be upheld by management, there would be a massive re-shuffling of personnel, some offices will be abolished and if present personnel did not meet the set/recommended qualifications they would be terminated or placed to lower positions to which they qualified.

And then, she added, "and that does not exclude you!" The counterpart team members were all silent and Lorinda could not find words to salvage the situation.

From that time on, the counterpart team seemed to be distant and too busy to attend meetings. Their reports either came late and incomplete or they never did.

Other news about her staff began reaching Lorinda. One counterpart team member told her that Baby and Josie did not seem to know much about organizational diagnosis and development - they did not even know the difference between staff and line offices. Also, that they were rude with the other team members - shouting off commands, demanding confidential records and even losing some of them.

This started Lorinda on a fact finding project. She wanted to know why her staff had been doing these things. She asked people in the office with whom her two assistants and coordinator had worked before. She found out that Maria was an A.B. Sociology graduate who had joined the Institute as a researcher with a rank of P.A. I when the Institute was just being set up. However, because ORDI did not have definite policies on hiring and promotion at that time, she managed to get a permanent item and was promoted to a P.O. I position. She never had any substantial project involvement and had been transferred from one program to another and MODP was the last program to take her. She was a fairly good researcher and writer but did not even have the basic training or experience in management.

Baby, on the other hand, was a secretarial graduate. She had been very loyal to her boss, Mr. David as a secretary. Thus, after four years of secretarial work, he rewarded her with a P.A. III position. She had never worked with any project before because no manager had wanted to because of her volatile temper and her seeming lack of talent. She did not get along well even with the other secretaries before, Lorinda found out.

Josie was a clerk. Her former boss was the newly appointed senior vice-president for operations of the Institute. She, apparently, had been a very efficient typist and office administrator. But after her boss was promoted, she could not transfer along with him to his new office since he had a full staff waiting for him there. So he had her promoted to a P.A. II position and assigned at MODP.

After her factfinding mission, Lorinda met with Mr. David and informed him that if she was not relieved of her staff and assigned new members who were qualified, she would resign from the project. Mr. David would have to face the PAS people himself.

Mr. David told her they could start requesting new personnel but this would take a month with the OEC policies and other requirements for hiring.

Lorinda knew she she was in a bind but she made up her mind that either she got her new staff or the project could go to another project manager.

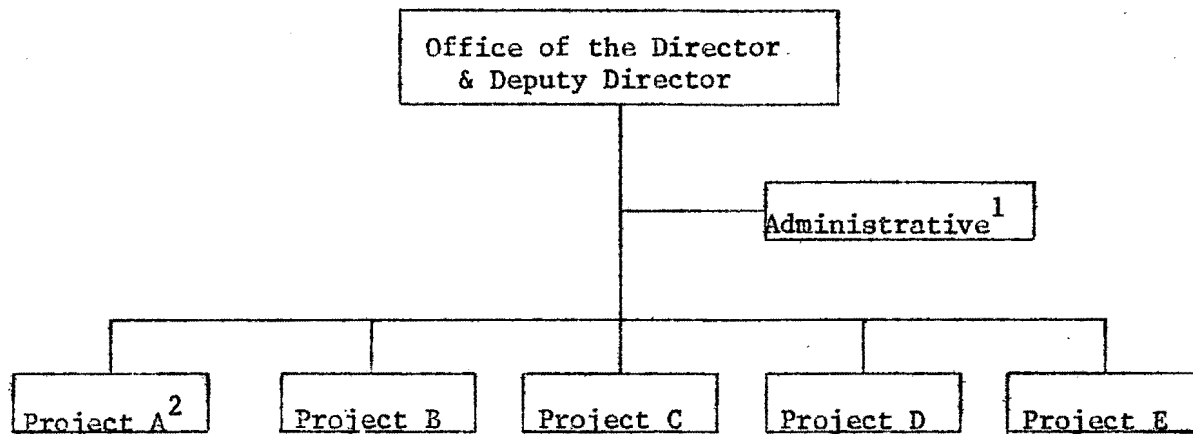
Mr. David was left thinking how he could meet Lorinda's demand; to lose her would mean losing a competent, hard working member who had sold projects for the Institute amounting to \$3 million in two years. What would he do with Maria, Baby and Josie. They could not forever be charged against his administrative overhead budget.<sup>6</sup>

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<sup>6</sup> Each program had an administrative overhead budget granted it by the Institute. Salaries of personnel not involved in projects or in between projects were charged to their fund.

EXHIBIT I: MODP's ORGANIZATIONAL CHART

List of Services



Service:

- o Training
- o Organizational Development
- o Corporate Planning
- o Management Consultancy
- o Packages such as Integrated Institutional Servicing
- o Financial Studies

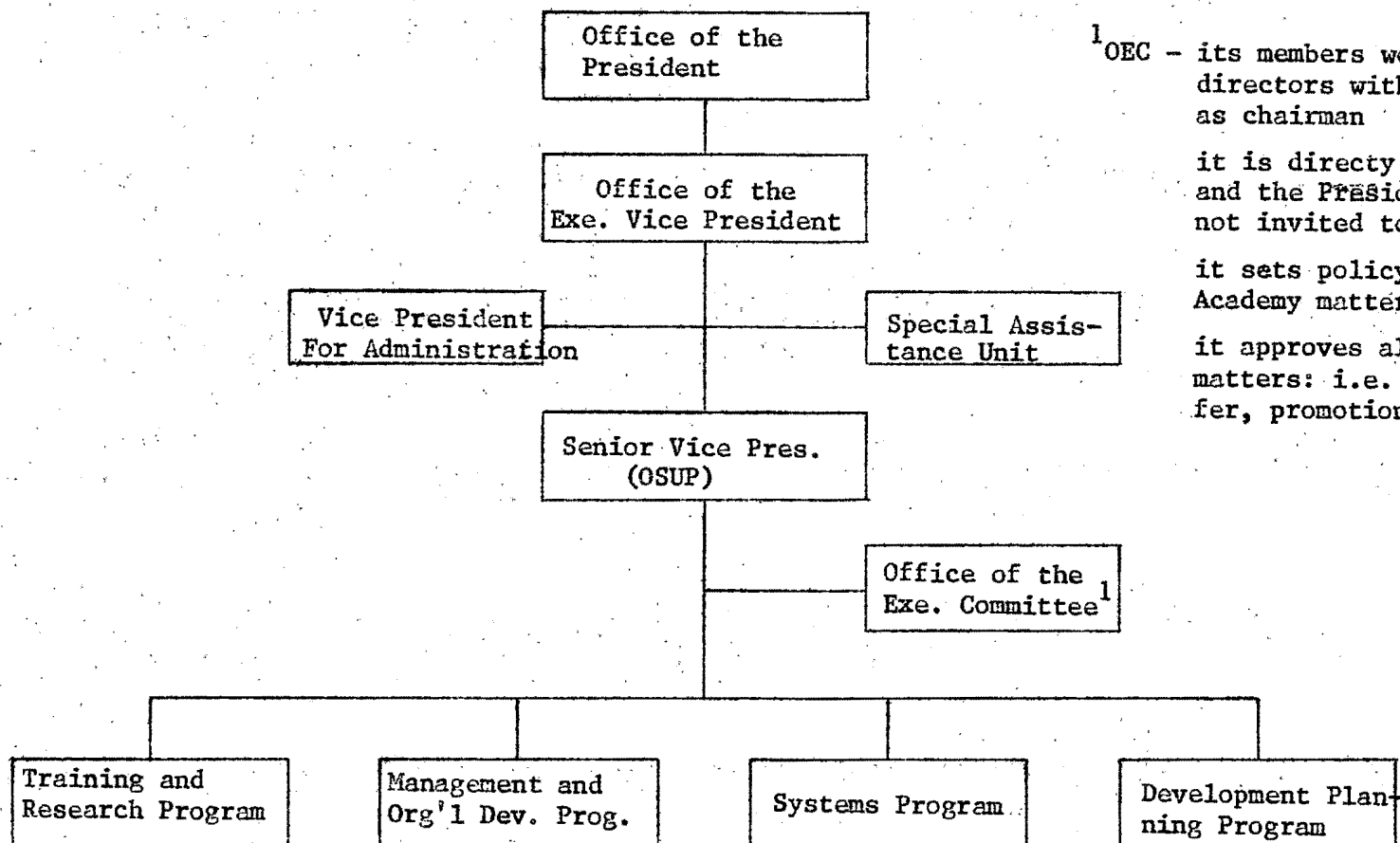
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<sup>1</sup> All administrative work like typing, messengerial and driving services were centralized.

<sup>2</sup> All projects were headed by either a Fellow or Project Officer who was called the Project Manager. Under the manager were her staff composed of p.o.'s and p.a.'s.

EXHIBIT II

THE ORDI's ORGANIZATIONAL CHART



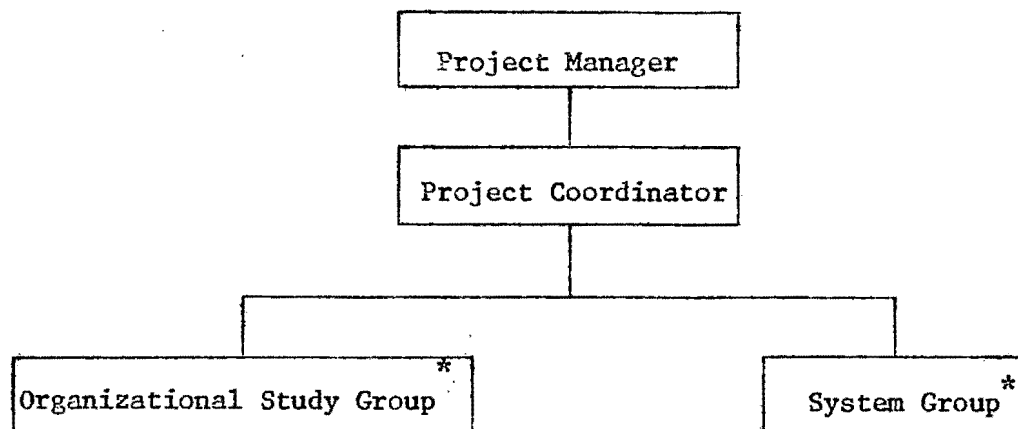
<sup>1</sup>OEC - its members were the program directors with the Sr. V.P. as chairman

it is directly under the OSVP and the President & EVP are not invited to its meetings

it sets policy on all Academy matters

it approves all personnel matters: i.e. hiring, transfer, promotions

EXHIBIT III. PAS PROJECT ORGANIGRAM



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\*Included the member of the counterpart team.

## EXHIBIT IV

PERSONNEL ACTION SLIP				Date Prepared:	
Name: (Last, first, middle)			Official Station:		
Old	Position:	Department/Project/Location:	Pay Class/Step:	Salary rate:	
new	Position:	Department/Project/Location:	Pay Class/Step:	Salary rate:	
Nature of action: <input type="checkbox"/> new appointment <input type="checkbox"/> promotion <input type="checkbox"/> detail <input type="checkbox"/> contractual <input type="checkbox"/> transfer <input type="checkbox"/> renewal <input type="checkbox"/> permanent <input type="checkbox"/> casual <input type="checkbox"/> reinstatement <input type="checkbox"/> probationary <input type="checkbox"/> others (specify)			Salary Breakdown: Basic <u>      </u> <u>      </u> Allowance <u>      </u> <u>      </u> Gross <u>      </u> <u>      </u>		
Recommended Effectivity date:		Approved Effectivity date:	Date of original appointment:		
Recommended by/Date: _____ Signature & Position		Concurred by/date: _____ Signature & Position		Approved by/date: _____ Signature & Position	

## PROJECT AUTHORIZATION FORM

Project Title		Phase: Development Implementation	
Start:	Effectivity date:	Target completion date:	Approved: Senior Vice President
Project Manager		Recommended by: Program Director	Final Approval: Exec Vice Pres

Project Objective/Description:

## Project Budget:

Item	Amount	Remarks
Salaries		Include clerks, drivers, messengers
Consultants/Contractual fees		
GSIS/Medicare		(8% of total salaries)
Provision for Increase		(10% of total salaries)
Supplies and materials		
Printing/Publication		
Travel/Transportation		
External Research		
External Relations		
Workshops/Conferences		
Miscellaneous		
SUB-TOTAL		
*Administrative Overhead (65% of sub-total)		
TOTAL BUDGET		
**Capital Outlay Requirement		
+Mark-up (20%)		
Total Budget + Development Cost + Mark-up		

## Project Funding:

Sources	Amount
1.	
2.	
3.	
4.	
5.	
Total Funding	

This amount should at least be equal to Total Budget plus Development Cost (if any) plus DAP Mark-up.

\*Covers rentals, security & janitorial services, utilities, communication services, employee benefits, maintenance, depreciation, and staff offices expenses.

\*\*Total Budget covers only depreciation, not the cost of capital equipment.

+To compute for mark-up: 1) Subtract "Workshops/Conferences" from Total Budget, if done in Baguio, 2) add development costs, if any, 3) take 20% of the resulting amount.

Project Title		Phase: Development Implementation	
Start:	Effectivity date:	Target completion date:	Approved: Senior Vice President
Project Manager		Recommended by: Program Director	Final Approval: Exec Vice President

Project Objective/Description:

## Project Budget:

Item	Amount	Remarks
Salaries		Include clerks, drivers, managers
Consultants/Contractual fees		
GSIS/Medicare		(8% of total salaries)
Provision for Increase		(10% of total salaries)
Supplies and materials		
Printing/Publication		
Travel/Transportation		
External Research		
External Relations		
Workshops/Conferences		
Miscellaneous		
<b>SUB-TOTAL</b>		
<b>*Administrative Overhead (65% of sub-total)</b>		
<b>TOTAL BUDGET</b>		
<b>**Capital Outlay Requirement</b>		
<b>+Mark-up (20%)</b>		
<b>Total Budget + Development Cost + Mark-up</b>		

## Project Funding:

Sources	Amount
1.	
2.	
3.	
4.	
5.	
<b>Total Funding</b>	

This amount should at least be equal to Total Budget plus Development Cost (if any) plus DAP Mark-up.

\*Covers rentals, security & janitorial services, utilities, communication services, employee benefits, maintenance, depreciation, and staff offices expenses.

\*\*Total Budget covers only depreciation, not the cost of capital equipment.

+To compute for mark-up: 1) Subtract "Workshops/Conferences" from Total Budget, if done in Baguio, 2) add development costs, if any, 3) take 20% of the resulting amount.

## PROJECT AUTHORIZATION FORM

Project Title		Phase: Development Implementation	
Start:	Effectivity date:	Target completion date:	Approved: Senior Vice President
Project Manager		Recommended by: Program Director	Final Approval: Exec Vice Pres

Project Objective/Description:

## Project Budget:

Item	Amount	Remarks
Salaries		Include clerks, drivers, messengers
Consultants/Contractual fees		
GSIS/Medicare		(8% of total salaries)
Provision for Increase		(10% of total salaries)
Supplies and materials		
Printing/Publication		
Travel/Transportation		
External Research		
External Relations		
Workshops/Conferences		
Miscellaneous		
<b>SUB-TOTAL</b>		
<b>*Administrative Overhead (65% of sub-total)</b>		
<b>TOTAL BUDGET</b>		
<b>**Capital Outlay Requirement</b>		
<b>+Mark-up (20%)</b>		
<b>Total Budget + Development Cost + Mark-up</b>		

## Project Funding:

Sources	Amount
1.	
2.	
3.	
4.	
5.	
<b>Total Funding</b>	

This amount should at least be equal to Total Budget plus Development Cost (if any) plus DAP Mark-up.

\*Covers rentals, security & janitorial services, utilities, communication services, employee benefits, maintenance, depreciation, and staff offices expenses.

\*\*Total Budget covers only depreciation, not the cost of capital equipment.

+To compute for mark-up: 1) Subtract "Workshops/Conferences" from Total Budget, if done in Baguio, 2) add development costs, if any, 3) take 20% of the resulting amount.

Exhibit VI. PROJECT INCOME STATEMENT

Project Title:

Client:

Project Manager:

Date Completed:

REVENUE

Amount

%

REALIZED REVENUE

COLLECTED REVENUE

COLLECTIBLE REVENUE

EXPENSES

BUDGET

ACTUAL

VARIANCE

SALARIES

CONSULTANT/CONTRACTUAL FEES

GSIS/MEDICARE

PROVISION FOR INCREASE

SUPPLIES & MATERIALS

PRINTING/PUBLICATION

TRAVEL/TRANSPORTATION

EXTERNAL RESEARCH

EXTERNAL RELATIONS

WORKSHOPS/CONFERENCES

MISCELLANEOUS

Sub-Total

OVERHEAD

CAPITAL OUTLAY

DEVELOPMENT COST

MARK-UP

Sub-Total

TOTAL

Prepared by:

Noted by:

Code	Value
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
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89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Project Title:

Place \_\_\_\_\_

[illegible]

Target completion date

Total effective charges

Month=21 working days

Prepared by: (Project Manager)

Approved by Vice-President/Account Manager).

## Case Study 6

### PHILIPPINE FOUNDATION FOR SOCIAL PROGRESS (PFSP)

The Philippine Foundation for Social Progress (PFSP) was a private, non-profit foundation that granted funds and aid-in-grants. However, in the definition of its functions it stated that it was not only a funding institution but that it had assumed two other roles in the pursuit of social development, namely, (1) to work closely with a project proponent in developing its project proposal into a fully balanced program of assistance to the projects' beneficiaries and (2) to work closely with the project proponent in using the successful implementation of the program of the project. The PFSP's staff was of the opinion that "successful implementation of the project redounds to the social development of the beneficiaries of the project."

In playing the above mentioned roles, the PFSP staff, thus, developed a monitoring and evaluation scheme to come up with periodic assessment of the program operations, to determine whether the project was proceeding and was implemented as planned, and if there were problems, to make necessary modification to avoid further difficulties. The scheme provided for a regular dialogue between PFSP and the proponent. It included tri-annual progress reports from the proponent, field visits by PFSP Project Officer, annual evaluations by PFSP and a final evaluation upon completion of the project.

The annual evaluation was aimed primarily at assessing how the objective of the project for a whole year had been achieved. From the review of the project activities for the year and the program outputs in terms of kinds and number over a period of time, the evaluation hoped to provide recommendations to further improve the implementation of the program.

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Prepared by Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

The evaluation scheme which was adopted for the U.S. AID "Evaluation for Project Assistance,"<sup>1</sup> assumed the following:

1. If the input were provided, then the outputs would be obtained e.g. if University of Agriculture (UA), Philippine Research Academy, and the PFSP provided the funds, personnel, and facilities for the period covered by the evaluation, then the project would be able to attain its objectives.
2. If the outputs were obtained, then the objective for the project period would be achieved.
3. If the objectives of the project for the period were achieved, then the program goals were gradually being evaluated had achieved its objective for the period, then PFSP's goals for social development of communities was being promoted and gradually being attained.

Therefore, in the annual evaluation of projects, the following were looked into:

1. What were the project plans for the year on which the evaluation would take place?
2. What activities had been conducted?
3. What results had been achieved by the activities?

The sources of data for the evaluation were:

1. Project Development of PFSP
2. Presentation report of PFSP
3. Programming report of PFSP
4. Status report of PFSP
5. Field Visit Report of PFSP
6. Memo of Agreement
7. Progress Report
8. Annual Report
9. Research Paper
10. Research Design: Conceptual Framework and Research Instrument
11. Research and Evaluation: Progress Report
12. Project Feedback Guideline
13. General Information
14. Correspondence

One of the projects the PFSP evaluated according to this scheme was the Pilot Project for Social Progress.

The project was conceived by the PFSP, UA and the PRA.

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<sup>1</sup> 1966: M.C. 1026.1, Supplement I, p. II-2.

University of Agriculture (UA) - Philippine Research Academy (PRA)  
Pilot Project for Social Progress (PPSP)

A. Project Description

The experiences of community development institutions had shown that in most cases farmers reverted to their traditional farming practices shortly after the change agent was pulled out from the community and as a consequence the poverty cycle would continue. This demonstrated that agricultural and rural development problems could not be solved by the mere transmitting or diffusing of innovations from the experiment station to the farm population. The many government services could hardly be effective if extension agents or similar officials dealt with individual farmers who were too many to be given individual attention. Furthermore, it has been proven by a recent experience in Barrio Janopol, Sta. Maria, Laguna and of countries like Taiwan and Japan that communities which had organized farmers' associations were able to provide the needed services so the farmer could grow on a self-sustaining basis.

Dr. Richard Go, Agrarian Reform Center (ARC) visiting professor at the University of Agriculture and moving spirit behind the Pilot Project for Social Program emphasized the need for field facilities where innovative solutions to problems of agricultural and rural development could be tested and where change agents and students could be made to work in actual situations.

The PPSP concept was finalized after a series of discussions among professors at the UA and the PRA from May 1969 to June 1970.

In July 1970, the PPSP, a five-year pilot project on agricultural and rural development with special emphasis on the development of human resources was implemented. The project was located at Sta. Ana, Pampanga. Farmers were to be trained to manage their farms; provided the needed economic and social services; and organized into self-help and multi-purpose associations through which projects involving agric-

ulture, informal education, health, nutrition, youth work and family and child welfare would be undertaken. The PPSP concept stressed that the projects would be based on the expressed needs and interests of the local people - at the initial stage, since the target population was a point of entry. The project had two components: field operations, to include the irrigation pump revolving fund, and training and research.

#### B. Objectives/Expected Results of the Project

In the First Five-Year Program of the Pilot Project, it was stated that the ultimate goal of the project was "to develop finer families, living in better homes on more productive land and in more progressive communities." Hence, it had adopted a long-range objective, namely, "to mobilize the human resources to fully develop the land and water resources and to transform the present traditional farming into modernized commercial agriculture, in order to raise the standard of living and accelerate rural progress."

For the first five years of endeavor, however, the PPSP had adopted three (3) short term objectives, namely:

1. to increase agricultural production,
2. to develop credit and marketing facilities, and
3. to lay the foundation for a steady progress of agricultural and rural development.

The PFSP Programming Report and the Memorandum of Agreement stated the following expected results for the period of five years, July 1970 to June 1975:

1. trained field technicians (agriculturists and home management technicians) and trained rural leaders;
2. better educated people with progressive attitudes toward development;
3. viable, self-sustaining farmers' associations which can provide needed economic and social services;
4. modernized, economically productive farms;
5. a rural social development model for wider application in other areas; and
6. documented research findings and case studies.

### C. Project Inputs

The financial requirements of the project from 1970 to 1975 amounted to ₱636,043.21.

The terms of reference drawn among the agencies involved were:

1. University of Agriculture - Philippine Research Academy:

- a) provide funds amounting to ₱355,170.00 from 1970 to 1975 for operations of the project
- b) In the Memorandum of Agreement with PFSP for the year 1971-1972, UA-PRA made a commitment to implement the plan of action, systems and procedures as well as the requirements and conditions agreed upon with PFSP, specifically, the following:
  - 1) be responsible for the over-all management of the Pilot Project for Social Progress
  - 2) provide for the honorarium of the Research Leader and for the compensation of the existing staff, namely, a Project Leader, three (3) Agriculturists and one (1) Home Management Technician.
  - 3) devote more efforts to helping farmers' associations to plan and implement an integrated socio-economic development program within the five-year period since it is understood that agricultural development was used only as a point of entry.
  - 4) carry out a research program according to a research design to be submitted to PFSP within a month after the release of foundation's assistance.
  - 5) provide PFSP with the quarterly and annual reports of the Project Leader of the project, the annual evaluation report of the Research Team and other official reports on the project.
  - 6) provide for the employment of the project staff after the project's completion.

2. Philippine Foundation for Social Progress (PFSP)

- a) In the Memorandum of Agreement with University of Agriculture-Philippine Research Academy for the year 1971-1972, PFSP committed itself to the following:
  - 1) give a grant to UA-PRA for the one-year salaries of two (2) Agriculturists, one (1) Home Management Technician, and two (2) Research Assistants and for

research supplies and transportation expenses for the Research Team for one year amounting to ₱28,016.00

- 2) give a financial advance for an irrigation pump revolving fund of ₱28,914.29 with administrative and other expenses equivalent to 3% per annum for five years, with the understanding that the proponents will set aside part of the fund's earnings equivalent to 7% per annum which will go to a farmers' capital fund for building a warehouse or a dryer; that there will be a grace period of one year before the start of repayment; and that repayment will be made on June 30 and December 31 of the second year and each year thereafter.
  - 3) participate in the review and development of the PPSP.
  - 4) release the annual appropriation subject to the approval of the PFSP Executive Committee after carefully reviewing the previous year's performance against the provisions of the programming report, with the understanding that PFSP may modify or terminate altogether its assistance should the performance fall below expectations.
- b) Other provisions of the Memorandum of Agreement include the following:
- 1) a semestral review of funds and expenditures of the project would be conducted by all funding agencies.
  - 2) University of Agriculture-Philippine Research Academy would spend PFSP assistance funds only on the items it was appropriated for.
  - 3) University of Agriculture-PRA would make available to PFSP's accountant its book of accounts with respect to project operations.

### 3. Canadian Freedom from Hunger Campaign:

- a) Committed initially a grant in the amount of ₱136,917.72 to finance the total training program of the project.

### D. Project Management

The responsibility and authority for the over-all administration of the project would rest with the Dean of the UA and the Director of PRA.

The actual management of the project involved a three-level organizational structure. These three levels were the Advisory Council, the

Joint Working Committee and the Operations Team.

The Advisory Council included the Vice-President of UA, Chairman; the Governor of Pampanga, Co-Chairman; Dean of UA, Vice-chairman; Mayor of Sta. Ana Municipality, member; highest representatives of the twelve national government agencies in the province covering the project area, members; Manager of the Sta. Ana Rural Bank, member; and the Assistant Director of PRA, secretary. The Council served as a clearing house for ideas. It met twice a year to review the work program, heard progress reports and made recommendations for improvements.

The Joint Working Committee included the Director of Extension-Education, AU, chairman; PRA Project Leader, co-chairman; visiting Professor of Agricultural Education; the chairmen of five departments of agronomy, animal husbandry, agricultural engineering, home technology, agricultural education, and agricultural economics to represent their respective science divisions; and associate professor and two assistant professors in the agricultural extension; the UA Director of Research, Instruction, and Graduate Studies, the Director of Graduate Studies and the Assistant Director of Graduate Studies and made recommendations on policy matters, work program, and other developmental measures. However, major decisions on policy and financial matters were subject to the approval of the University Dean and the PRA Director before they could be implemented. At the instance of the chairman, the Committee met four times a year.

The Operations Team included two groups: the Field Operations consisting of a full time Project Leader on Field Operations, five Agriculturists as Field Technicians and two Home Management Technicians and the Research consisting of a part time Project Leader on Research and Evaluation, three Research Assistants and two clerk-typists. The team also included a Project Adviser. A Coordinator had been appointed to coordinate the two project leaders. The team was the implementing arm of the project. It met every week to assess the previous week's work and plan that of the coming week.

Under the supervision of the Project Leaders, the team members undertook the following:

1. Field Technicians:

- a) Know the nature of the process of socio-economic change and the project idea.
- b) Establish his residence in the barrio of his assignment.
- c) Develop a mastery of the barrio situation - human and material resources, their actual use and potential. Initially, this should be achieved by means of a group informant survey.
- d). Assist selected key farm leaders in identifying socio-economic problems at the individual farm and group levels.
- e) Initiate and encourage small group discussion among farmers with similar problems and interest and guide them toward the identification of the need for an organized farmers association as a socio-economic structure that will provide their mutually needed services.
- f) From time to time as the need arises, the project agriculturist provides technical production advice and assistance. This may include conducting, with cooperating farmers, trial planting or field demonstrations.
- g) To develop and sustain the interest of the farmers, the technician provides advice and assistance to farmers in securing the immediate and much needed services while at the same time the farmers are being assisted and trained to provide these services by themselves.
- h) Assist farmers in getting themselves organized and registered with the Department of Local Government and Community Development.
- i) Provide the leadership in the formulation of the farmers' associations program at work.
- j) Provide the leadership in getting the officers and members trained in the efficient and effective management of the farmers' association.
- k) At the beginning, provide the leadership in linking the farmers' association to the different and private agencies that serve farmers and rural communities.
- l) As adviser of the farmers' association, the Social Action Pilot Project agriculturist. is an analyzer, problem-solving leader, and a teacher of individual and group behavior with some socio-economic development orientation.

- m) As an agriculturist by technical preparation, he is a teacher of modern farming ideas, techniques and practices.
- n) Keep record of important activities, problems, and observation needed in making reports, evaluation and supervision.
- o) Perform activities assigned to him by the Project Leader relevant to the attainment of the objectives of the Social Action Pilot Project.

2. Home Management Technicians:

- a) Know the nature of the process of socio-economic change and the Social Action Pilot Project idea.
- b) Establish her residence in a centrally located barrio in her areas of assignment.
- c) Develop a mastery of the barrio situation - human and material resources, their actual use and potential. Initially, this should be achieved by means of a group informant survey.
- d) Assist selected key women leaders in identifying problems at the family and community level.
- e) Initiate and encourage small group discussion among the wives of farmers who are members of the farmers' associations and other interested women and guide them toward an institutional approach to many of their mutually shared problems.
- f) Assist the women get organized into homemakers' club or society.
- g) Work with the agriculturist to develop joint work activities with the farmers' association.
- h) Provide the leadership in the formulation of the women's club program of work.
- i) Provide technical advice and assistance on home and family improvement. This may include conducting method demonstrations.
- j) Provide the leadership in getting the officers and members of the women's club trained in its effective functioning.
- k) Provide the leadership in linking the women's association with the different government and private agencies that serve farmers and rural women and families.

- l) As adviser of the women's club, the home management technician is an analyzer, problem-solving leader and a teacher of individual and group behavior which will complement and supplement the socio-economic development-oriented activities of their husbands.
- m) As a home technologist by preparation, she is a teacher of modern ideas, techniques, and practices in family and home management.
- n) Keep records of important activities, problems and observations needed in making reports, evaluation and supervision.
- o) Perform activities assigned to him by the Project Leader relevant to the attainment of the objectives of the Social Action Pilot Project.

### 3. Research Assistants

- a) Know the nature of the process of socio-economic change, the variables involved and the objectives of the Social Action Pilot Project.
- b) Establish his/her residence around Farmers University.
- c) Go to the Social Action Pilot Project area from time to time to collect data from the technicians, farmers and the community as the case may be.
- d) Keep on file the data collected from the Social Action Pilot Project area for reference.
- e) Tabulate and analyze (statistically) data for reports and evaluation.
- f) Provide the Project Leader and the leader on survey, program planning and evaluation statistical information needed in evaluation and program planning.
- g) Perform activities assigned to him by the leader on survey, program planning and evaluation relevant to the program planning, evaluation and research aspects of the Social Action Pilot Project.

## 1972 Program Operations and Outputs

### A. Objectives for 1971-1972

The PFSP Programming Report and the Memorandum of Agreement and the AU-PRA First Five-Year Program of the Pilot Project for Social Progress stated the objectives of the project for the entire duration of the project.

The project activities followed the Fiscal Year months, July to June. In this connection, annual objectives and plans were made at the beginning of June for the whole year. PFSP's calendar for the project was actually March to February. This report of program operations in 1972 would include part of activities conducted from June to December 1971.

#### A.1. General Objectives and Plan of Work: 1971-1972

The short-term objectives for the second year of operations of the project were the following:

1. to increase agricultural production and
2. to lay the foundation for a steady progress of agricultural and rural development in the project area.

The programmed activities and corresponding means included the following:

1. Organization of farmers associations and development of local leadership by:
  - a) assisting Barrio Sta. Ana to organize a farmers' association,
  - b) making all farmers' associations thus far organized more viable, dynamic, and functional,
  - c) conducting training courses for officers and members of all the farmers' associations.
2. Improvement of irrigation and drainage facilities by:
  - a) encouraging more barrio farmers' associations to install irrigation pumps, two in Barrio Liloy and one

each in Barrios Lubigan and Sta. Rosa.\*

- b) encouraging the Liloy Rice Farmers' Association to complete its drainage facilities.
- c) encouraging the Mabahay Farmers' Association to complete the construction of canals and ditches to fully utilize the water from the two pumps already installed and by working out a satisfactory cropping system for the irrigated area during the year in order to maximize yield.

3. Increase of agricultural production by:

- a) adopting improved practices by all the farmers' associations to increase rice production.
- b) assisting the Liloy Livestock and Poultry Raisers Association to improve its production through training and the establishment of a feed mixing plant.
- c) promoting swine production by the Lubigan Farmers' Association.
- d) promoting backyard vegetable production in two selected barrios.
- e) encouraging high quality seed production in the barrios, preferably through the farmers' associations.
- f) encouraging all farmers' associations to take leadership in rat control.

4. Use of credit facilities by:

- a) assisting farmers in securing production loans from lending institutions.
- b) urging farmers to pay back their loans on time
- c) encouraging farmers to make savings deposits

5. Use of marketing facilities by:

- a) holding a one-day training course on marketing problems for members of all the farmers' associations.
- b) assisting farmers to market their produce cooperatively.

6. Promotion of home industries and betterment of family life by:

- a) assisting farm families in two barrios in backyard gardening and better nutrition.

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\*Sta. Rosa, Liloy and Lubigan were barrios of Sta. Ana, Pampanga.

7. Promotion of Rural Sanitation and family planning by:

- a) assisting five farm homes in two barrios to serve as demonstration projects on sanitation.
- b) encouraging farm people in two barrios to use the services of the Rural Health Officers in Adobe.
- c) organizing a mothers' class in Barrio Labak to learn responsible parenthood.

A.2 General Objectives and Plan of Work: 1972-1973

- 1. to lay the foundation for a steady progress of agricultural and rural development (development of functional farmers associations and development of human resources).
- 2. to develop credit and marketing facilities and the atmosphere conducive to more productive efforts.
- 3. to increase agricultural productivity and income and improve the general well-being.

Specifically, the targets for the period July 1972 to June 1973 were the following:

- 1. to help all farmers' associations to get registered with the ACA.
- 2. to conduct systematic training program for adult farmers, adult women, older out-of-school youth, practical art teacher, and mass education.
- 3. all farmers' associations should conduct regular monthly meeting with no less than 75 percent attendance.
- 4. update all necessary books and records of the farmers' associations.
- 5. increase the membership of the farmers' associations by no less than 20 percent.
- 6. help the members to increase productivity and income by no less than 25 percent.
- 7. increase the number of farmers using the rural bank for credit by no less than 50 percent and repayment rate by no less than 100 percent.
- 8. develop markets for poultry and livestock other than by the GMTFM, including the promotion of a meat processing industry.
- 9. try to solve the problems identified last year.
- 10. make a mid-year progress report and an annual report.

11. mimeograph the summary report of the total enumeration village survey for the first five barrios.
12. mimeograph a brief evaluation of the Social Action Pilot Project for the last two years, 1970-1972.
13. make case studies on the farmers' associations in Mabahay, Liloy, Lubigan, Sta. Rosa, Labak, and Buko and also the Liloy Livestock and Poultry Raisers' Association.

#### B. Field Operations: Activities and Outputs

The field operations started as early as the latter part of 1970 in three (3) barrios, namely, Mabahay, Liloy and Lubigan. Later in 1971, Barrios Tabihan, Alabat, Sta. Rosa and Labak<sup>2</sup> were added. In 1972, Barrios Sumilang, Buko, Katubusan and Palayan, and Yakal (Poblacion) and in early 1973 Halaan were included in the program of the Social Action Pilot Project.

##### B.1. Personnel

<u>Position</u>	<u>Number</u>
Project Leader on Field Operations (Full time)	1
Field Technicians	7
1970-1971	
Agriculturists	-3
Home Mgt. Tech.	-1
1972	
Agriculturists	-2
Home Mgt. Tech.	-1
TOTAL	<u>8</u>

##### B.2. Operational Procedure

The general operational procedures followed in the field operations in the barrios by the Field Technicians, either the agriculturist or the home management technician, were the following:

1. assignment in the barrio

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<sup>2</sup>Other barrios of the Municipality of Sta. Ana.

2. establishment of residence in the barrio by the technician
3. conduct a group informant survey
4. holding a small discussion group
5. farm and home visits
6. befriending the barrio leaders, adult small farmers and the youth
7. attending at social gathering
8. giving technical advice on the farm and being with the farmers while working in the farms.

These procedures were followed in the field activities in the first five barrios covered, namely, Tabihan, Sta. Rosa, Lubigan, Liloy, Mabahay. Through these procedures the following problems/needs were identified by the five barrios:

1. inadequate irrigation water supply for farming
2. in livestock and poultry: high cost of feeds and lack of capital.
3. lack of technical advice and agricultural services and no barrio-based technician.
4. problems of family life include:
  - a) low income
  - b) inadequate food
  - c) high price of prime commodities
  - d) lack of employment
5. no funds for education
6. no unity among the barrio people

### B.3 Activities and Outputs: 1971-1972

In order to meet the above needs, the following activities, some of which were begun early 1971, were undertaken:

#### B.3.1. Organization of Farmers' Associations

This is a very critical activity in the life of the PPSP since the institutional approach took the

form of barrio farmers' associations which would later be federated into a municipal multi-purpose farmers' association.

In the first (fiscal) year of the project, only the Mabahay Farmers' Association was registered with the SEC, although a total of four associations were organized.

In the second (fiscal) year, eleven farmers' associations and one poultry and livestock raisers' association were registered with the SEC. The remaining four farmers' associations have pending papers of registration with the ACA. In the organization work, the Land Reform Team and the Agricultural Productivity Commission Team cooperated with the Social Action Pilot Project personnel, while the Rural Bank of Sta. Rosa Technicians assisted in organizing one farmers' association. A total of thirteen associations were organized as follows: one association in each of nine barrios, two associations in Barrio Liloy, one association covering two barrios jointly and one association at the Poblacion.

The organization in the barrios should be completed on the fourth year of operations of the Social Action Pilot Project. Hence, the achievement was beyond expectation.

(Exhibit I summarizes membership, meetings and percentage of attendance at meetings, projects/activities, and volume of production)

The membership grew in the case of the livestock and poultry raisers' association by 357.9 percent in more than two years since organization. Six other farmers' associations grew in membership from 9 to 60 percent in many cases more than one year since organization.

Attendance at meetings is very high with from 80 to 95 percent of members attending. However, the number of meetings gives the following frequencies: eight have been meeting regularly (5 met every month, 2 every other month, and one twice a month), and two met every 3 months. On the other hand three met only once in 8 to 9 months.

All activities and projects undertaken were related to farming such as rice production, loans for production, construction of irrigation pumps and canals, marketing and rat control. The production of rice in most of the associations was good with increases compared to previous harvest before the farmers joined.

#### B.3.2. Improvement of Irrigation and Drainage Facilities

The Mabahay Farmers' Association acquired two 5-inch Irrigation Service Unit (ISU) irrigation pumps to irrigate 22 hectares. The Masagana Farmers Association of Barrio Liloy got one 5-inch ISU irrigation pump on a ten-year installment plan to irrigate 10 hectares. On the other hand, the Lubigan Farmers Association was finally able to acquire one irrigated pump under the PFSP revolving/guarantee loan fund scheme. Water was a big problem during the dry season.

Three farmers' associations of Liloy, Sta. Rosa, and Lubigan jointly undertook the task of widening and deepening diversion canals in order to improve drainage which was a problem during the rainy season.

#### B.3.3. Increase of Agricultural Production

The table on page 45 re Status of Farmers Associations as of December 1972 showed the volume of the production in cavans of the twelve farmers associations with date

compared against previous productions for both planting seasons, wet and dry.

In 1972, ten farmers' associations were able to plant rice during the wet season. Three had increased productions from 15 to 20 percent while another three by 23 percent. Three others had each 37, 45, and 60 percent increase and one had a decrease in production by 2.4 percent. Two farmers' associations were not able to plant because of the floods.

For the same year, broiler production increased by 624.7 percent.

During the dry season, only six farmers reported harvests; the others had newly planted palay. One increased by 53 percent and another by 24 percent. The rest had each 5, 10, 13 and 17 percent increases over the past periods.

#### B.3.4 Use of Credit Facilities

Reported were six farmers' associations (Mabahay, Liloy, Masagana, Lubigan, Sta. Rosa, Labak, and Buko) which used the credit services of the Sta. Ana Rural Bank under the guidance of the project's field technicians for the fiscal year 1971-1972.

As of June 1972, forty-seven farmers' from 6 farmers' associations which planted during the dry season borrowed a total of ₱30,796.00 while forty farmers who planted during the wet season of 1971 borrowed ₱21,742.00. All the loans had been paid on time at the rate of 100 percent.

The Mabahay Farmers' Association had likewise fully paid its ₱10,000.00 for the down payment and installation of two ISU irrigation pumps. On the other hand, the

Liloy Masagana Farmers' Association borrowed ₱4,000.00 for one ISU irrigation pump; the payment will be due in January 1973.

The Liloy Livestock and Poultry Raisers' Association had been using the credit services of the Makahoy Rural Banks<sup>3</sup> since 1970 for broiler production. The association borrowed and fully paid ₱35,300 in 1970 and ₱208,477.50 in 1971 which is an increase of 490.5 percent over the previous year. As of June 1972, it has paid 75 percent of ₱238,027.00 loan which was 14.2 percent more than that of 1971. For hog production, it borrowed and fully paid ₱33,812.50.

In March 1972, PFSP made available a financial advance in the amount of ₱28,914.29 as a revolving fund to be deposited as guarantee fund at the Sta. Rosa Rural Bank. It was deposited on June 14, 1972. On December 29, 1972, the farmers of the Liloy Masagana Farmers' Association borrowed ₱12,413 to pay for one irrigation pump to irrigate 8.06 hectares of farm land. The loan was payable in three years. The association was planning to borrow an amount of ₱6,310.00 to finance one more irrigation pump.

On December 13, 1972, four farmers of the Lubigan Farmers' Association borrowed the amount of ₱6,825.00 to purchase one irrigation pump to irrigate 6.75 hectares of farm land. The loan was payable in three years. The Association was also planning to get an additional amount of ₱400.00 for labor and materials; ₱2,400 to buy eight hand sprayers, and ₱560.00 to buy 20 rotary weeder.

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<sup>3</sup>The rural bank in a nearby town.

#### B.3.5 Use of Marketing Facilities

Only the Liloy Livestock and Poultry Raisers' Association was reported to have made use of marketing facilities. The Greater Manila Terminal Food Market was the principal market outlet of the Association in more than two years. The marketing tie-up was made through the Marketing Fieldman of GMTFM who is a resident of Barrio Liloy.

GMTFM stopped getting broilers from the Association in April 1972. The Association looked for other marketing outlets but were unable to find agreeable terms. The Association lost ₱67,643.45. The Association temporarily stopped operations until a more dependable market outlet was found.

#### B.3.6 Promotion of Home Industries and Betterment of Family Life

Training activities in clothing construction, vegetable gardening, handicrafts, and in youth organization for the promotion of home industries and betterment of family life were reported. These were conducted by the Labak and Mabahay Women Group.

#### B.3.7 Promotion of Rural Sanitation and Family Planning

The Labak and Mabahay Women Group undertook training in responsible parenthood in cooperation with the Department of Social Welfare.

#### B.3.8 Training

In May 1972, the Canadian Freedom from Hunger Campaign gave a grant which would enable the project to implement the "total training program" for three years. This training program consisted of five training projects for adult farmers, rural women, older rural youth, school teachers, and mass education.

The training program was very informal. Informal classes were held in all the farmers' associations. With the Liloy Livestock and Poultry Raisers' Association, a two-day seminar on swine production was held with the help of two specialists from the UA's Department of Animal Science.

The individual on-the-farm instruction was carried on practically everyday by the field technicians.

The subject matter usually taken up for discussion included the following:

- a) Analyzing general and specific economic and farming problems.
- b) Understanding the demands of modern farming
- c) Understanding and studying the nature of the farmers' association and how it can be an effective means of development.
- d) Knowing new technological aspects of crop and animal production, management of farm enterprises and to a limited extent home management. Development of skills for a certain technology is also included.

Special training courses were given to different groups as follows:

- a) The UA-UNICEF Vocational Education for the Out-of-School Farm Youth Program at Barrio Mabahay, begun in March 1972.
- b) The Out-of-School youth vegetable production project at Barrio Labak.
- c) Grain processing, specifically drying demonstration by the Department of Agricultural Engineering/UNDP project at Barrios Mabahay, Lubigan and Alabat.
- d) Demonstration on water management (irrigation) by the IRRI at Barrio Mabahay.
- e) Trial and demonstration plots on multiple cropping by the IRRI and Farmers University at Barrios Mabahay, Liloy and Bato.
- f) Demonstration on rat control by APC technicians and the Rodent Research Center Specialists.

### B.3.9 Use of Other Resources

Several agencies had been tapped as resources for the project by the UA-PRA:

- a) Agricultural Credit Administration experimented with the project in making loans to those farmers who had long unpaid FACOMA loans.
- b) Agricultural Productivity Commission helped and complemented in the organization of some farmers' associations.
- c) Bureau of Public Schools helped in seed certification.
- d) Bureau of Public Schools extended the use of its school building facilities and assistance in working with barrio people.
- e) Bureau of Soils provided soil analysis and conducted demonstration plots in fertilizer level requirements.
- f) Central Bank Rural Banks Department encouraged the Rural Banks of Sta. Ana and Makahoy to grant more loans to the farmers affected by the project.
- g) The Department of Agrarian Reform helped and complemented in the organization of some farmers' associations.
- h) UA's Department of Agricultural Engineering provided irrigation specialists services and rice drying demonstration in three barrios.
- i) UA's Departments of Agricultural Economics and Animal Science provided specialists services to the LLPRA.
- j) UA's Department of Agricultural Education set up the Vocation Education for Out-of-School Youth in Barrio Mabayah with the assistance of the UNICEF.
- k) Department of Social Welfare collaborated in the family planning activities.
- l) The IRRI conducted trials on different levels of irrigating rice and trials on multiple cropping.
- m) The Irrigation Service Unit helped in expediting the procurement of the ISU irrigation pumps and sent a supervising engineer to Adobe.

- n) Sta. Ana Municipal Council and officials showed interest and gave encouragement and support to the project activities. It also designated the project leader on field operations as adviser to the mayor and the Association of Barrio Captains of Sta. Ana on agricultural development.
- o) National Irrigation Administration helped in the assessment of areas not adequately supplied with water for pump installation and gave permits to install ISU irrigation pumps in selected areas.
- p) The National Food and Agriculture Council, the Agricultural Productivity Commission helped in the Rat Control campaign in Sta. Ana while the Rodent Research Center provided demonstrations on rat control measures.
- q) PACD helped Mabahay Farmers' Association in securing funds for the improvement of the irrigation canals.
- r) The Makahoy Rural Bank provided liberal credit assistance to the farmers.
- s) Sta. Ana Rural Bank extended credit to the farmers in the project area in six barrios.

#### B.4 Problems Identified

As of June 1972, the following problems were reported under the following topics:

##### a) Educational Problems

- 1) The farmers' past experiences which were not always encouraging regarding developmental efforts of different government agencies do not predispose them to enthusiastically participate in developmental programs.
- 2) Application of new practices or possibilities lagged behind awareness of these. There was the problem of coping with impatience resulting into their resignation or frustration. Ideally, it should develop creativeness or resourcefulness.
- 3) The farmers depended too much on the technicians in making decisions or in adopting new practices. Likewise, farmers who had come to like the technician try to monopolize the attention of the technician.

b) Technological Problems

- 1) Inadequate drainage during the rainy season and lack of irrigation water during the dry season remain serious problems in the lakeshore barrios.
- 2) Inefficient water management in the irrigated areas results in loss of water, at the distribution canals and fields due to loose soil structure, and in the limitation of the coverage of irrigation.
- 3) Rat infestation.
- 4) Only one marketing outlet under an informal agreement resulting in over production and losses when the said market stopped its purchases.
- 5) Epidemic of broilers
- 6) Ineffective movement of supplies or production inputs and products to and from isolated barrios.
- 7) Lack of storage facilities for supplies and products, especially for rice and broilers.

c) Administrative Problems

- 1) Lack of training facilities at the project area.
- 2) The project field technicians were on vacation leave basis which may result in work disruptions whenever the technician took a vacation leave.
- 3) Insurance problem for the non-UA technicians and research assistants
- 4) Problems related to management of personnel on detail to the project.

d) Collaborating with Service Agencies

- 1) Making the Sta. Ana Rural Bank more responsive to the credit needs of the farmers under the project supervision and in making new credit arrangements.
- 2) How to minimize the possible disruptive effect of research trials in the farmers' fields.
- 3) Since the project was a teaching facility, many visitors came resulting in their too much use of the time of the project team and in research; the difficulty of accounting for the possible influence of the visitors on the behavior and achievements of people in the project area.

- 4) The informal marketing agreement between the farmers' association and the GMTFM resulted in more production than what the GMTFM could absorb.
- 5) The registration requirement was moved from the Securities and Exchange Commission to the Agricultural Credit Administration resulting in delays in the registration of several farmers' associations.

e) Sociological Problems

- 1) Conflict between group and individual interests in the institution like the farmers' association as in the allocation or distribution of inputs and benefits.
- 2) Difficulty in safeguarding the interest of different interest groups.
- 3) Transition from informal relationship among barrio people to the more formal organizational (business-like) relationship creates some misunderstanding.
- 4) Attendance and punctuality at group activities remain a problem to the technicians.
- 5) Farmers from neighboring barrios and towns had constantly been asking to be covered by the project.

As of December 1972, the following problems and plans were reported for each of the twelve farmers' associations, one livestock and poultry raisers' association, and one women's group. (See Exhibit II).

C. Research: Activities and Outputs

C.1. Personnel

<u>Position</u>	<u>Number</u>
Project Leader on Research and Evaluation (part time)	1
Research Assistants 1970-1971	3
Research Assistant - 1 1972	
Research Assistant - 2	
Clerk-typists	2*
	<hr/>
TOTAL	6

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\* They do clerical jobs not only for the research but also for the field operations personnel and the staff of the Department of Agricultural Education.

## C.2. Operations Procedures

Research in the project followed the usual procedures relevant to research, such as the following:

1. formulation of the conceptual framework and the research design
2. operationalization of the research design in terms of objectives and research direction
3. construction and pretesting of research instruments
4. data gathering and processing
5. report writing

However, since research played a crucial role in the project, the following additional procedures were made:

1. conduct of a Group Informant Survey (GIS) in each barrio for program planning
2. conduct of a Complete Enumeration Survey (CES) in each of the barrios
3. formulation of guidelines for research feedback by action research group to the field operations group at the following levels, informal and formal;
  - a) at the informal level, feedback is given verbally in a face-to-face relationship
  - b) at the formal level, feedback is given in a staff meeting or is presented in written form

Feedback information is classified into:

- a) general information which applies to the entire project operations was normally given at the formal level
- b) specific information which was localized and applied specifically to one person or community was given as follows:
  - non-confidential information (i.e. would not create ill feelings or antagonistic overtones) was given tactfully at the informal level
  - confidential information was given at the formal level verbally or in writing to the Leader on Research and Evaluation who transmitted the information to the Leader on Field Operations or vice versa.

In addition, all kinds of information regarding field operations, training, and action research which were intended for the Project Coordinator and for external systems passed through the leader concerned. Information to outside of the project was given in the form of formal papers or reports.

### C.3. Activities and Outputs: 1971-1972

Research activities and the corresponding outputs were related to four general areas, such as:

1. Studies of the Elements and Conditions of the communities in the project area.
2. Studies of Change Factors and how these were related to the developmental elements and conditions.
3. Studies of the processes involved in the task of human and socio-economic development.
4. Studies of the impact of identified change processes

#### C.3.1 Formulation of Research Instruments

The following research instruments were formulated:

- a) Interview schedule for the conduct of the group informant survey of the thirteen barrios.
- b) Interview schedule for the conduct of the complete enumeration survey of the thirteen barrios.
- c) Interview schedule to gather data regarding the processes and factors involved in the institutional approach to rural development. This consisted of three sets:
  - (1) for the Project Leader on Field Operations and the resident Field Technicians
  - (2) for the Officers and Members of the farmers' associations
  - (3) for the non-members of the farmers' associations
- d) Interview schedule to gather data for the evaluation of the Home Management Training, particularly the training in clothing construction.

C.3.1 Studies of the Elements and Conditions of the Communities in the Social Action Pilot Project area.

The first five barrios covered by the Project were studied as of December 1972 using both the group informant survey and the complete enumeration survey techniques. A total of 956 households were studied. The results of the survey, particularly the data from the complete enumeration survey, were used for the report entitled "The First Five Social Action Pilot Project Barrios: A Benchmark Study Report."

The other seven barrios of Sta. Ana were included in the study using the group informant survey technique conducted by the researchers of the project on "Vocational Education for Out-of School Farm Youths" in October 1971. One barrio was not included in the survey because it was deemed very small. The study was incorporated as Chapter One of the Research Report for Phase I: Focus on the Rural Out-of-School Youth by the Department of Agricultural Education, Farmers University. On the other hand, a complete enumeration survey study of the seven barrios may be taken within the year (1972-73) in connection with a graduate student's thesis.

C.3.3 Studies of Processes and Factors involved in the institutional approach to rural development

Using the formulated research instrument consisting of a set of three, one for each of three groups of respondents, namely the Project Leader on Field Operations and the resident Field Technicians, Officers and Members of Associations, and the non-members of the farmers' associations, data were collected from three associations, the Mabahay Farmers' Association, Liloy Masagana Farmers' Association, and the Liloy Livestock and Poultry Raisers' Association. The final reports had not yet been completed.

The study included the following areas of inquiry:

- a) The organization of the association to include exploration of the possibility of organizing an associations, promotion of the idea, pre-organization meetings, formal organization, and problems encountered.
- b) the operation of the association to include structure of the association, facilities, services, financing, activities and projects, and consideration of membership.
- c) the development of linkages and partnerships with other service agencies.

#### C.3.4 Studies of the Impact of Identified Change Processes

The formulated research instrument to study the impact of the institutional approach and the Social Action Pilot Project to rural development was used to gather data from three associations. Mabahay Farmers' Association, Liloy-Masagana Farmers' Association, and the Liloy Livestock and Poultry Raisers' Association. These 3 associations had been in operation for over one year by the end of June 1972. The final reports had not yet been completed.

The study covered the following areas of inquiry regarding data before and the present on choice of enterprise, income, crop production and expenses in the wet and dry seasons, production practices, livestock and poultry inventory and practices, marketing of farm products, activity planning, problems encountered, budgeting and expenditures, record keeping, employment of family members, credit practices and attitudes to credit, education, acquisitions and improvements over two years, illnesses, present food and nutrition practices, leadership conflicts, present community services, communication patterns and sources of information.

### C.3.5 Studies Conducted in the Social Action Pilot Project

Studies conducted were on two levels. Two unpublished master thesis at the graduate level were made regarding "Leadership Roles of Field Technicians in Organizing Farmers' Associations" and "The Usefulness and Validity of the Group Informant Survey Technique in Program Planning." The former study covers the processes involved in the institutional approach to rural development while the latter is on research methodology regarding the validation of a research technique.

At the undergraduate level, a research report on special problem was made regarding "A Study of Selected Farm Practices in Mabahay Before and After the Organization of Farmers' Association." The study covered the changes in farmers' Association.

### C.3.6 Feedback

At the December meeting between the UA-PRA PFSP at the latter's place, the importance of a feedback system was accepted by UA-PRA Center. For this purpose, the Project Feedback Guidelines were prepared.

The following were feedback data gathered or observed by the Field Researchers in the Farmers' Association and relayed to Field Operations for information and action from April 1972 to January 1973:

<u>Data Observed</u> <u>Association/Information Gathered</u>	<u>Results/Action Taken</u>
1. Mabahay	
a) The resident field techniques went on leave for one month. The Association through the President and the Secretary	The Project Leader was informed by Researcher of the request and met the two officers. At

expressed their desire for a visit of the Project Leader on Operations.

- b) The Technician extended his leave. Meanwhile, the farmers did not start on land preparation. The production loan papers were not yet completed.

the meeting he was informed of a problem. He advised them to take it up with the technician, Board of Directors, and general body in that order.

The Project Leader met them in a caucus to explain the extension of the leave. The farmers were not bothered by the delay of the papers since they were busy after the typhoon. When the technician reported, the papers were prepared and the loans were released.

## 2. Katubusan - Palayan

The members, particularly the auditor, suggested an immediate meeting to clarify how they could fit into the training programs with the other associations, since many of them were affected by the flood. They are aware that the technician is busy with the processing of the production loan papers of 3 associations. They also think that the technician is too loaded with 3 associations.

The Project Leader and the technician were informed by Researcher. A meeting was held and the formal training classes were scheduled every Wednesday, starting late November.

## 3. Masagana

- a) The technician spent most of his time with the LLPRA at the height of its marketing problems. Very little of his time could be given to the Masagana Farmers' Association. The President of Masagana, also an officer of LLPRA, forwarded the complaint and request of Masagana Farmers that there should be one technician for each of the 2 associations.

The Project Leader, seeing the need for the full-time attention of the technician on the LLPRA, adjusted his schedule to temporarily look after the Masagana farmers.

- b) Since the PFSP guarantee assistance fund was taking time before operations, the Masagana farmers planned to borrow money, to buy 3 more irrigation pumps, from the Maligaya Rural Bank.
- c) With the installation of the 3 pumps, the irrigation canals needed to be improved.

The Maligaya Rural Bank released the amount of ₱16,500.00.

The UA Department of Engineering responded to a letter of request sent jointly by Masagana-Lubigan Farmers' Association by sending technical men to supervise the improvement of irrigation canals. The canals were being improved on bayanihan by the 2 associations.

#### 4. Lubigan

- a) PFSP guarantee loan fund
  - Farmers were wondering why no further action regarding the pump has been taken as of July 9, 1972.

The technician was informed by Researcher about the matter and he explained to the farmers that action on the pump was temporarily put off because of other pressing jobs in the other two barrios such as processing of production loans.

- On November 5, 1972, the farmers said they want to have the pump purchased and installed. They felt they had waited long enough.

The Project Leader on Research and the technician were informed about it by the Researcher. The technician explained to the farmers that arrangements are being made with the Adobe Rural Bank Manager for the transfer of the PFSP guarantee loan fund to be used in the project.

#### b) Drier

- The farmers wanted to make the drier operational but did not know how. The UNDP technician, who promised to return, has not shown up.
- The farmers presented the problem of fees for the use of the drier.

Since the technician was not around, Researcher informed the Project Leader on Opera-

rations who was at Barrio Alabat as resource person in a farmers' class. Researcher was told to contact UA Department of Agricultural Engineering for the proper person who was unfortunately out of town. The Researcher went to UNDP and finally was able to get the technician and both went to Barrio Lubigan to check on the drier.

Researcher inquired from technician and was informed about the fees.

c) Installation of Pump

- On January 25, 1973, the farmers inquired about who would be responsible for the installation of the pump.

Researcher approached the technicians and was informed that the pump would be installed on January 29, 1973. He further inquired from the President of Masagana regarding the mechanics of installing the pump.

- d) The impatience of a technician with his farmers was relayed to Researcher by another technician who witnessed the incident.

Researcher informed the Project leader on Operations about the matter.

5. Sumilang

- On November 16, 1972, Researcher found out about half of the members would not be able to pay their loans from the Rural Bank.
- On January 18, 1972, Researcher gathered from some members that the "unpaid" members were encouraging the others not to pay. Researcher then

Researcher inquired from technician who said the yield was low due to the strong winds.

Researcher informed the technician about it who explained to the Researcher that some of the members with small loans were

interviewed the "unpaid" members. One of those who confirmed the rumor stressed that the others should cooperate with them.

- The farmers said they asked the technician to visit their farms before harvest but he failed to come.

helped by the association.

The technician told the Researcher that he purposely failed to visit their farms because he wanted to teach the farmers a lesson for their not cooperating with him.

#### C.4 Problems Encountered

The following problems were encountered and for some of them appropriate solutions were given:

Problems	Actions Taken
<b>1. Writing the Report</b>	
a) Need for formulating guidelines in report writing since writing took a slower pace.	A guideline was devised and finalized by September 1972.
b) Inadequate experience in writing technical report by the Research Assistants.	Researcher will attend a short course in technical report writing in the Summer of 1973.
c) Inadequate clerical services resulting in delays in completing the research reports. The two clerk-typists engaged by the project did clerical work for both the Social Action Pilot Project Field Operations and Research and the Department of Agricultural Education.	So far no action on this has been reported.
d) Need for an official editor for the reports arising from the problem of inadequate experience in technical report writing.	So far no action on this has been reported.

## 2. Surveys and interviews

- |    |  |   |
|----|--|---|
| a) | Interviews extending to the evening due to farmers' availability mostly in the evenings necessitate a vehicle since public transportation is only up to 6 p.m. | The request for a vehicle had been granted to a limited extent. Priority was however given to regular needs of the institution. |
| b) | Insecurity of the researchers during travels and field work resulting in the request for insurance.  | A group insurance for the researchers was suggested.  |

## 3. Others

- |    |  |  |
|----|--|--|
| a) | Employment on project funds derived from different sources results in an unadjusted salary scale and no fringe benefits. | Discussed with PFSP.   |
| b) | Lack of research supplies because the funds allocated and requested were not enough.                                     | Discussed with PFSP  |
| c) | Many people trying to study Project resulting in the difficulty to account for the influence of the visitors on it.      | Formulation of guidelines on visits to the Project as a site for research study. |

## CONCLUSIONS, PROBLEM AREAS IN MANAGEMENT, AND RECOMMENDATIONS

PFSP conducted an annual evaluation of the project to assess project operations during PFSP's first year of assistance. However, the evaluation covers the period July 1971 to December 1972 to coincide with the project's one and a half fiscal year. The Evaluation Study showed that in general the project had satisfactorily met the objectives set at the beginning of the project's fiscal years in July 1971 and July 1972. The Project had therefore gradually worked toward the achievement of not only the ultimate goal of the Project "to develop finer families living in better houses on more productive land and in more progressive communities" but also the program goal of PFSP toward the social development of communities.

## A. Conclusions

Specifically, the following results were achieved as of December 1972:

### A.1. Field Operations

- a. The organization of twelve farmer's associations in thirteen barrios, to include one association covering two small barrios and an association at the Poblacion, and a poultry and livestock raisers' association in another barrio was completed. Nine of the 13 associations are registered with the SEC while four are in the process of being registered with the ACA. With this, the goal of organizing an association in each barrio by the fourth year of project operations has been surpassed. This is a very critical activity in the operations of the Project because the institutional approach took the form of farmers' associations in the barrios. Membership grew for the livestock and poultry raisers by more than three times in two years of operations while six farmers' associations grew in membership over the previous year ranging from nine to 60 percent in more than a year of operations. Attendance at meetings is high with from 80 to 95 percent of members attending. Eight associations met regularly at least every month, while two met every 3 months and three met once in eight to nine months.

It may be needless to say but the three associations should be encouraged to meet regularly more often as the others because of the critical role of the associations in the project. A presentation of the problems encountered by the associations on pages 17 and 18 seem to shed light on possible reasons why they had not been meeting regularly.

- b. The associations had shown a certain level of organizational functioning in terms of a variety of conducted projects and activities. In answer to problems and needs in agricultural production, activities included rice production, production loans, operation of irrigation pumps, construction of drying pavements, rat control, and construction of irrigation canals. In answer to problems and needs of the organizational functioning of the associations, the activities included training of officers, expansion of members, and encouragement of savings of members. Field visits reports had taken note of the record keeping procedures used by the association.

- c. Formal and informal training were conducted in all the associations by the resident field technicians and resource people in agriculture. In the training, analysis of economic and farming problems as group discussions were emphasized.
- d. Irrigation and drainage facilities were improved as planned by the farmers with the guidance of the field technicians.
- e. For 1972, nine of the farmers associations which planted rice during the wet season had from 15 to 60 percent increases in production compared against the previous year's production, while one had a decrease of 2 percent. Two farmers' associations were hit by flood. During the dry season, only six farmers associations had reported harvests while the others had 24 to 53 percent increases over the past periods. For the same year, broiler production increased by 624.7 percent from 15,000 to 108,700 in two years of operations.
- f. All the twelve farmers' associations and one poultry and livestock raisers' association made use of credit facilities of the rural banks of Sta. Ana, Makahoy and Maligaya under the guidance of the field technicians. Six farmers' association had fully repaid their loans. The rest were paying on schedule.
- g. Two farmers' associations, Lubigan and Masagana, availed of the irrigation pump revolving fund made available through the PFSP financial advance. Both associations had purchased and installed pumps.
- h. The Liloy Livestock and Poultry Raisers' Association had been selling their broilers to the GMTFM up to the end of June 1972, when GMTFM stopped its purchases from the association. In nine months, starting October 1971 to June 1972, a total of 104 broilers costing ₱532,090.69 were marketed. However, the experience with the GMTFM pointed to results and inadequacies of informal business relations such as the absence of a formal contract resulting in losses to the association when GMTFM failed to get the broilers and inadequacies of having one main outlet for the broilers. Because of these, the association temporarily suspended its operations until more dependable outlets will have been found. A business analysis was planned to better study the situation.

- i. The women of Barrios Labak and Mabahay undertook training for the promotion of home industries and betterment of family life such as clothing construction, vegetable gardening and handicrafts while the youth of both barrios have organized themselves to help the women in the home industries.
- j. The study on Processes and Impact made on the Livestock and Poultry raiser's association aptly states the following educational and sociological problem "the activities undertaken in the Project area and the number of personnel involved clearly indicate that the economic well-being of the people is well-taken cared of. It is disheartening to note however, that not much attention is being given the development of the individual person or the family. The Project had only one Home Management Technician covering the whole area of operation."

The above observations pointed out the following:

- a) agricultural production had been stressed for the past two years.
- b) the social aspects of development of the community had been given minimal attention.
- c. activities of the field technicians had been limited solely to technical agriculture whereas the social development aspects have been the sole responsibility of the Home Management Technician.

Since there was only one home management technician, the field technicians should be encouraged to focus on the other aspects of development since agriculture is just the major means of entry into the farmers' association. Hence the farmers' association would not be merely institutions through which members could solve purely agricultural problems in the farm but also the main structure or barrio institution through which members could discuss and solve other community problems.

On the other hand, it must be said that many of the details on these aspects were not in the annual reports. Field visit reports showed that the farmers' associations had conducted activities toward promotion of social development in the communities as in the case of Labak and Mabahay. This deficiency, however, would be solved by the new reporting forms designed by the Researcher.

## A.2. Research

- a. Research instruments and guidelines had been formulated for the following activities.
  - 1) guidelines were prepared for the group informant survey of the thirteen barrios. The survey results of the first five barrios were used in the program planning for these barrios.
  - 2) interview schedules were constructed for the complete enumeration survey of the thirteen barrios. The first five barrios have been surveyed with a total of 956 respondents.
  - 3) interview schedules were developed to gather data for the study on the impact of the institutional approach in particular and the Social Action Pilot Project in general to rural development.
  - 4) interview schedules were prepared to gather data for the study of the processes and factors involved in the institutional approach to rural development.
  - 5) interview schedules were made to gather data for the evaluation of the training in clothing construction of the Home Management Training.
- b. For the studies of the elements and conditions of the commodities in the Project area, a report entitled "The First Five Pilot Project, for Social Progress Barrios: A Benchmark Study Report" was completed. Final printing is being done. Copies of the final drafts were given to PFSP.
- c. For the studies on the remaining eight barrios, only seven were surveyed because one barrio was found very small in size. The study was conducted in October 1971 and is included as Chapter one of the Research Report for Phase I: Focus on the Rural Out-of-School Youth by the Department of Agricultural Education of all.
- d. For the studies of processes and factors involved in the institutional approach to rural development, three associations were studied, namely, Mabahay Farmers' Association, Liloy Masagana Farmers' Association, and the Liloy Livestock and Poultry Raisers' Association. Final drafts for the studies were being prepared for printing. However, they were made available for this Evaluation Study.

- e. For the studies of the impact of identified change processes on the members of the associations, the three associations mentioned above were again studied in as much as these associations have been in operation for over one year by the end of June 1972. Final drafts have not been completed.
- f. The Social Action Pilot Project had been made available to students for study. Two students at the graduate level and one student at the undergraduate level made their thesis on the Social Action Pilot Project.
- g. A feedback system was formally instituted through the formulation and implementation of well-defined guidelines on a feedback system between Research and Field Operations, as agreed upon at the December 8 meeting between PFSP and the UA-PRA.

However, the researchers had been gathering and providing the feedback data to the Field Operations personnel in terms of personal information and discussion with the Field Technician concerned, reporting verbally or in writing during the regular weekly meetings of both the Field Operations and Research, and in cases of classified or confidential information, reporting to either of the Project Leaders or both.

The feedback data, in the examples cited earlier, showed clearly the important role the feedback plays in the successful implementation of the project, particularly, in relation to the overall successful implementation of the project. The data provide the following insights which should be closely considered in relation to the management of the farmers' associations:

- 1) farmers were very sensitive to the technician's absence since it meant a delay in meeting their needs. When a technician went on leave, arrangements should be made so that attention was also given to the farmers' pending needs.
- 2) as presented in the "Problems Identified," the farmers are still dependent on the technician so much so that when the technician had urgent matters to attend to, the farmers began to be paralyzed. This emphasized the need to help the farmers gradually become self-sufficient and self-propelling by a conscious effort on the part of the technicians to train them.

- 3) professionalism was very important in social development work. Strong frustration tolerance is critical in the personality make-up of a technician.

## B. Problem Areas in Management

Specific problems were discussed in the following areas in management, namely, policy formulation, management of associations and groups, and reporting system.

### 1. Policy Formulation

Problems affecting work efficiency and morale arise from the following: a) employment of personnel on a project basis with funds derived from different sources resulting in an unstandardized compensation and other fringe benefits for the non-University technicians and research assistants. Another problem related to continuity of field operations arises whenever the field technicians, who follow the UA and PRA provisions on vacation leaves, take their vacation leaves, thus leaving the barrios without technicians in the meantime.

These were internal policy problems which should be acted upon by the Joint Working Committee.

### 2. Management of Associations and Groups

A review was made of the following problems presented by the June 1972 report and the December 1972 report.

- a) Actions taken on the following problems were reported in June 1972 were not reported in December; hence the question must be raised of whether these problems had been solved.
  1. Educational problems related to farmers' participation arising from past discouraging experiences with development agencies, non-application of new practices inspite of awareness of such practices, and too much dependence of farmers on the technicians. These problems reflected on the extent to which technicians used their interpretative role and functions to encourage the use of the institutional approach (i.e. through the farmers' associations) as a structure to provide for technical advice and assistance as the need arose.

2. Technological problems related to the use of market outlets, movement of supplies and production inputs and the availability of storage facilities for supplies and products. These problems should be looked into by the technicians with the view of interpreting to farmers the importance of group action via the association in harnessing and tapping resources.
3. Sociological problems related to conflict between group and individual interests, safeguarding of interests of different groups, transition from informal to formal relationship and punctuality and attendance at meetings. These problems again pointed to the need for more interpretation to farmers particularly through guided experience.

b) In December 1972, the following problems were reported:

- 1) problems related to the need for training farmers in farm management as a business activity and for more technical know-how in rice production. At this point in project schedule, training could be intensified to cover farm business operations.
- 2) Problems related to the need for more farmers' participation in the activities, farmers' cooperation, group planning and group action. The problems point to the need to strengthen the group's organizational functioning.
- 3) problems related to the wide age gap among participants of the training for women's groups who are also highly factionalized and the need for a fixed training center. These problems would call for better planning in determining eligibility criteria and selection procedures.

c) A review of the feedback data gathered by the researchers points to the following critical areas in the management of farmers' associations:

- 1) workload of the field operations staff

1 technician (70 members)	- 3 associations	
4 technician (113, 50, 57, 49 members)	- 2	"
2 technician (19 and 29 members)	- 1	"
1 technician (31 members)	- 1	"

possible women groups in 11 other barrios

In view of the above arrangements, the following feedback data were gathered:

- a. The Katubusan Palayan farmers observed that their technician had too heavy a workload with 3 associations.
- b. The Masagana farmers requested for one technician for them and one for the LLPRA because their present technician spent most of his time with the LLPRA.

In other case the home management technician stated that covering all barrios for home management activities was too heavy a workload for only one technician.

The above observations necessitate changes in workload of the field technicians. On the other hand, the home management technician should use other resources, either by training barrio women aides in the promotion of home management or by using the institutional approach (i.e. through the associations or groups), especially women groups in spreading the practices of home management and other social development activities.

## 2) professionalism

The following case pointed to the need to emphasize professionalism in the management of farmers' associations:

The farmers complained about their technician's failure to visit their farmers before harvest. The technician later on told the researcher that he purposely failed to visit the farms because he wanted to teach them a lesson for being uncooperative.

## 3. Reporting System

A review was made of problems encountered, the reporting of progress of operations to PFSP and the feedback system of research to field operations.

### a) Two specific problems were presented:

- 1) The inadequate experience of the Research Assistants in writing technical reports results in the need for an official editor of technical reports. In the summer of 1973,

the researchers will attend a short course in technical report writing. However, no plan has yet been made for the need for an editor.

- 2) The inadequate clerical services, due to the availability of only two fully-utilized clerk typists, causes delays in completing research reports and progress reports.
- b) The reporting of the progress of operating to PFSP has been hampered because of a lack of a proper form. This was resolved with the formulation by the Research Team of a form congruent to the requirements of PFSP. Applications of this form will begin covering the period March to June 1973 as part of a tri-mestral reporting to PFSP.
- c) At a field visit by PFSP, the researchers expressed their being overwhelmed with the magnitude of the work and their need for guidance and supervision. These were threshed out at a meeting between PFSP and UA-PRA with the Project Leader on Research and Evaluation to provide closer supervision.
- d) Feedback-data gathering was a function of the researcher who was supposed to relay the information to the proper recipient. However, at one occasion, the researcher had to step into the role of a field technician in order to remedy a situation. This should be avoided. Functions should be kept sacrosanct as delineated.

#### C. Recommendations

A discussion of the conclusions on field operations and research and on the problem areas in management brought out the following general conclusions:

1. field operations had achieved its objectives as exemplified by:
  - a) organization of twelve farmers' associations and one livestock poultry raisers' association with nine associations registered with the SEC and four in the process of registering with ACA.
  - b) associations had conducted projects and activities mostly in agriculture
  - c) formal and informal training had been conducted for farmers.

- d) improvement of irrigation and drainage facilities
  - e) agricultural production increased
  - f) credit facilities were availed of by associations
  - g) the PFSP financial advance was availed of by the two target farmers associations
  - h) home industries and betterment of family life was promoted
2. field operations were, however, still weak as exemplified by the following limitations:
- a) three associations were not meeting often and regularly
  - b) activities to strengthen the organizations functioning of associations were few
  - c) farmers were still too dependent on the technician
  - d) informal business relations, as shown by the absence of a formal contract, and the dependence on only one market outlet.
3. research activities had achieved their goals as shown by:
- a) formulation of research instruments and guidelines
  - b) the baseline data of five (5) barrios
  - c) studies of processes and factors involved in the institutional approach
  - d) studies of the impact of identified change processes on the members of the associations
  - e) institution of a feedback system
4. research had been still weak in the following aspects:
- a) completed and final study reports on time;
  - b) operational formal feedback system (until a meeting was called for by PFSP)
  - c) closer supervision of the researchers (until a meeting was called to thresh out the problem)
5. project management had to clear up the following problem areas:
- a) policies regarding field operations staff employed on a project basis and the need for staggered vacation leaves of all project staff

- b) management of association and groups regarding educational, technological and sociological problems; effects of a heavy workload of the technicians on the management of associations; the need for professionalism; and problems in the reporting system.

In the above conclusions, the following recommendations were necessary to achieve a more successful implementation of project operations:

1. to maintain and improve the high level of achievements of the objectives of field operations. Much have been achieved in two years and a half of operations.
2. to continue to systematize research operations in order to produce the final reports on time.
3. to look closely into how the following identified weak points and problems in the following areas could be resolved:

a) Field Operations:

- 1) to encourage and enable the members of the three associations to become more functional and responsive to the members.
- 2) since agricultural needs have been amply met as shown by the results discussed earlier, more activities should be focused towards strengthening the organizational functioning of association such as training of leaders in managing organizations, group discussions on how members can better participate in the organization, etc.
- 3) field technicians should review their functions relative to the management of farmers' association and development of leaders so that they can give more attention to developing the association's organizational capabilities and gradually withdraw from associations which are increasing in capacity to manage themselves. They can then assist in developing other organizations.
- 4) the associations should gradually learn the skills of business management and relations.

b) Research:

- 1) to finalize completed reports on time

- 2) to maintain the operational formal feedback system between Research and Field Operations.
- 3) for the Project Leader on Research and Evaluation to provide and maintain the present level of close supervision to the research assistants.

c) Project Management:

- 1) to review the present regarding employment of staff on project basis and the vacation leaves of all project staff.
- 2) regarding educational, technological, and sociological problems, the field technicians should interpret and motivate farmers to use their association as the means to meet pressing needs and problems and to tap available resources within and outside of Adobe.
- 3) regarding the problems on wide age gap and highly factionalized women's group, the Home Management Technician should formulate eligibility criteria and selection procedures
- 4) on the heavy workload, the following might be done:
  - a. an average of two associations per technician was adequate
  - b. the technician's attention should be distributed equitably among the associations except those associations which are strong enough and do not need as much help from the technician.
  - c. the technician should be consciously guided by the philosophy that farmers' associations should be developed into self-sustaining and viable organizations and that he will eventually have a limited role in an organized association as an expert to give advice when called upon by the association. When that time comes, he could eventually withdraw from one association in order to assist another.
  - d. the Home Management Technician could make use of the other technicians by asking their assistance in the promotion of home management activities in the different barrios

where they are assigned. Again the groups to be formed should make use of the institutional approach so that they might become self-sufficient.

- e) professionalism should be emphasized to the field operations and research staff in their dealings with the farmers.
- f) although some of the reported problems regarding the reporting system have been acted upon, the problems on editing reports and inadequate clerical services still need attention.

The above recommendations were intended initially to offer suggestions for the solution of the presented problems and ultimately to effect a more successful implementation of the project.

The Evaluation Study had covered all the available data and had led to the conclusion that the Social Action Pilot Project was moving toward the achievement of its goal for the social problem areas were cited and some suggestion were made to further improve and work for the success of the project.

Exhibit I. STATUS OF FARMERS' ASSOCIATIONS AS OF DECEMBER 1972

Name and Place	Date <u>Or-</u> <u>ganized</u>	Date & Office of Regis- tration	<u>Membership</u>		No. of Meetings	Rate of Atten- dance	Projects/Activities	Production in Cavans per hectare			
			<u>Ini-</u> <u>tial</u>	<u>Pre-</u> <u>sent</u>				<u>Wet Season</u>		<u>Dry Season</u>	
								<u>Before</u>	<u>Present</u>	<u>Before</u>	<u>Present</u>
1. Liloy Livestock and Poul- try Raisers' Association Bo. Liloy	2/20/70	8/2/71 SEC	19	87	12	90%	broiler production	Before : Present:	15,000 broilers 108,700 broilers		
2. Mabahay Farmers' Asso. Bo. Mabahay	10/28/70	1/27/71 SEC	19	19	9	90%	rice production, pro- duction loans, opera- tion of two 5-inch irri- gation pumps, construct- ion of drying pavement, rat control, and con- struction & lay-out of irrigation canals.	38.1	60.7	47.5	72.9
3. Masagana Farmers' Asso. Bo. Liloy	5/29/71	7/2/71 SEC	19	24	15	95%	installation of 4 irri- gation pumps, group acti- vities on cleaning irri- gation canals & drainage.	45.0	flooded	75.0 newly planted	
4. Lubigan Farmers. Asso. Bo. Lubigan	4/71	7/71 SEC	33	36	10	95%	drainage canal, rat con- trol, savings project, grain drier proj., irrig. pump, rice prod. loan, training of officers	43.4	53.8	55.6	69.0
5. Eato Farmers' Asso. Bo. Sta. Ana	7/71	10/71 SEC	15	14	2	80%	drainage canal, rat con- trol, rice prod. loan, savings proj., inst. of 3 pumps for 3 members	44.8	42.4	34.8	39.0
6. Halaan Farmers' Asso. Bo. Halaan	8/10/71	8/24/71 SEC	22	28	2	80%	prod. loan for members	56.2	69.2	69.3	76.3

7.	Labak Farmers. Asso.	8/21/71	10/4/71 SEC	20	32	12	90%	rice prod. farmers' training, prod. loan, marketing, rat control	58.6	72.4	66.7	78.3
8.	Yakal Farmers. Asso. Poblacion	8/26/71	10/4/71 SEC	21	21	2	90%	production loan for member	51.0	flooded	67.6	71.1
9.	Buko Farmers' Asso. Co. Buko	9/10/71	10/5/71	17	19	2	90%	Farmers' training (Nov. '72 - Feb. '73), expansion of membership, production loan for members	55.8	67.5	64.1	newly planted
10.	Katubusan Farmers' Asso. Co. Katubusan	4/11/72	Under consideration ACA	23	23	9	95%	farmers training (Nov. '72-Feb. '73) production loan for members	53.8	73.5	77.2	newly planted
11.	Palayan Farmers' Asso. Co. Palayan	4/72	Under consideration ACA	28	28	3	90%	farmers' training (Nov. '72 - Feb. '73), production loan for farmers	53.7	64.4	63.6	newly planted
12.	Sumilang Farmers' Asso. Co. Sumilang	6/15/72	Under consideration ACA	25	20	5	80%	rice production, loan production, rat control	39.2	45.4	60.5	newly planted
13.	Alabat Farmers' Asso. Co. Alabat	6/72	Under consideration ACA	25	25	12	90%	rice production, production loans, marketing, rat control	43.7	63.5	57.7	newly planted

Exhibit II. STATUS OF ASSOCIATIONS BY PROBLEMS AND PLANS, AS OF DECEMBER 1972

ASSOCIATION	PROBLEMS	PLANS
1. Liloy Livestock and Poultry Raisers' Association (LLPRA)	<ul style="list-style-type: none"> <li>-high cost of feeds</li> <li>-inadequate market outlet</li> <li>-inadequate technical knowhow of the members</li> </ul>	<ul style="list-style-type: none"> <li>-expansion of membership</li> <li>-increase in production</li> <li>-resumption of swine raising project</li> <li>-employment of a full-time Business Manager for the LLPRA</li> </ul>
2. Mabahay Farmers' Association	<ul style="list-style-type: none"> <li>-leadership among officers and members still inadequate</li> <li>-improper lay out and construction of irrigation canals</li> <li>-lack of drying outfit especially during wet season</li> <li>-low price of palay and high cost of production inputs</li> <li>-lack of training of members regarding farming as a business</li> </ul>	<ul style="list-style-type: none"> <li>-continue training of officers and members of associations</li> <li>-buy 2 hand tractors for the association thru Adobe Rural Bank with financing by June 1973</li> <li>-continue construction of drying pavement by March 1973</li> <li>-start a savings plan for each member by November 1973</li> </ul>
3. Liloy Masagana Farmers' Association	<ul style="list-style-type: none"> <li>-poor drainage facilities</li> <li>-crop losses due to flood in August 1972</li> </ul>	<ul style="list-style-type: none"> <li>-improve water management</li> <li>-continue training of officers and members of association.</li> </ul>
4. Lubigan Farmers' Association	<ul style="list-style-type: none"> <li>-inadequate technical skills in rice production</li> </ul>	<ul style="list-style-type: none"> <li>-continue training of officers and members of association</li> <li>-vegetable production project for February -March 1973</li> <li>-install one irrigation pump by March 1973</li> <li>-start swine raising project in April 1973.</li> </ul>
5. Bato Farmers' Association	<ul style="list-style-type: none"> <li>-leadership among officers and members still inadequate; members not responsive.</li> </ul>	<ul style="list-style-type: none"> <li>-reorganization of the whole association by March 1973.</li> </ul>

ASSOCIATION	PROBLEMS	PLANS
6. Halaan Farmers' Association	<ul style="list-style-type: none"> <li>-members delinquent in attending + meetings</li> <li>-only 50% of the members actively participate</li> </ul>	<ul style="list-style-type: none"> <li>-install one grain drier by 1973 (under study)</li> </ul>
7. Labak Farmers' Association	<ul style="list-style-type: none"> <li>-tenancy of about 50 percent of the members</li> <li>-credit sources</li> <li>-no high quality seeds</li> <li>-no technical know-how</li> </ul>	<ul style="list-style-type: none"> <li>-improve marketing arrangement</li> <li>-put up a storage house</li> <li>-produce high quality seeds</li> <li>-engage in livestock production</li> </ul>
8. Yakal Farmers' Association	<ul style="list-style-type: none"> <li>-inadequate irrigation water</li> <li>-pests and diseases</li> </ul>	<ul style="list-style-type: none"> <li>-install one water pump by 1973 (under study)</li> </ul>
9. Buko Farmers' Association	<ul style="list-style-type: none"> <li>-slow increase in membership</li> <li>-members' rice fields are not adjacent to each other resulting in the impracticability of a pump project</li> <li>-65 percent of members are in account with ACA so that the rural bank cannot give them production loans.</li> </ul>	<ul style="list-style-type: none"> <li>-install one grain drier by April 1973 (under study)</li> </ul>
10. Katubusan Farmers' Association	<ul style="list-style-type: none"> <li>-eight members have loans with ACA so that the rural banks cannot give them production loans</li> <li>-crop losses due to the flood in August, 1972</li> </ul>	<ul style="list-style-type: none"> <li>-acquire 2 hand tractors and install 3 irrigation pumps by 1973 (under study)</li> </ul>
11. Palayan Farmers' Association	<ul style="list-style-type: none"> <li>-crop losses due to flood in August</li> <li>-50 percent of members have loans with ACA so that the rural banks cannot give them production loans.</li> </ul>	<ul style="list-style-type: none"> <li>-install 3 communal pumps by June 1973 (under study)</li> </ul>

ASSOCIATIONS	PROBLEMS	PLANS
12. Sumilang Farmers' Association	<ul style="list-style-type: none"> <li>-loans to be repaid</li> <li>-too much time involved in obtaining production loans because of the rural banks' sophisticated procedures</li> <li>-low price of palay and high cost of production inputs</li> <li>-high incidence of rat infestation</li> <li>-lack of cooperation, group planning and group action among members</li> <li>-drying, storage, and marketing facilities</li> </ul>	<ul style="list-style-type: none"> <li>-increase the capital formation to be able to purchase fertilizers and chemicals direct from the factory</li> <li>-improve marketing arrangements</li> <li>-put up a storage house and acquire a grain drier</li> <li>-increase the membership</li> <li>-reduce rat infestation</li> </ul>
13. Alabat Farmers' Association	<ul style="list-style-type: none"> <li>-tenancy of about 50-60 percent of members</li> <li>-credit sources</li> <li>-no high quality seeds</li> <li>-no technical know-how</li> </ul>	<ul style="list-style-type: none"> <li>-improve marketing arrangement</li> <li>-put up a storage house</li> <li>-production of high quality seeds</li> <li>-engage in livestock production</li> </ul>
14. Labak-Mabahay Women's Association	<ul style="list-style-type: none"> <li>-no fixed training center</li> <li>-inadequate transportation facilities</li> <li>-wide age gap among the trainees</li> <li>-social factions</li> <li>-there is only one Home Management Technician</li> </ul>	<ul style="list-style-type: none"> <li>-expansion of training program to other barrios</li> <li>-have a permanent training center.</li> </ul>

Case Study 7

DEVELOPMENT ASSOCIATES INCORPORATED<sup>1</sup>

When Fred de Vega, Director for Project Development of Development Associates Incorporated, paused to read the newspapers one morning, one small news item -- no more than 2 columns by 3 inches in an inside page of one of the dailies caught his attention. The news item was about the availability of research grants from the National Science Development Board, but it contained only the barest of details. De Vega called in one of his technical assistants, Rey Torres, an economics graduate of a leading university in Manila.

"This is an announcement about the availability of research grants from the NSDB," De Vega said, as he pointed out the news item to Torres, "As you can see, it does not tell as much, except that the NSDB is offering to extend financial assistance to worthwhile research activities in the areas of food production and energy. I want you to inquire about these research grants because some of our staff, such as Joaquin at Finance, are very much interested in working on projects that could possibly qualify for NSDB support."

De Vega continued, "Joaquin has already designed a research proposal to look into the economic feasibility and social adaptability of bio-gas technology. Thus far, however, we have not succeeded in securing

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<sup>1</sup>Prepared by Andrea D. Domingo & Associates; release being negotiated. Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

financing for this and related projects. The local governments, with whom we are working, prefer to engage our services along the lines of regional planning and public administration. They feel -- and rightly I believe -- that the problems of energy and the like are best tackled at the macro or national level, by national agencies.

"There are a number of reasons why I think we should exert every effort to look for funding for research activities like those of Joaquin. One is that the outputs of these activities will undoubtedly redound to the national good. Another is for the personal growth and development of our people. Nothing can compare with the lift and satisfaction one gets from working on a pet project.

"Now, I want you to go to the NSDB and learn more about the grants. Specifically, I want you to find out whether we can avail of the grants and how; the amount of the grants; and the conditions that go with them. See whether it is advisable for us to avail of these grants. You know, a grant may amount to only a few thousand pesos and for that they might expect us to accomplish a stack of documents a foot high; then it simply is not worth all the trouble, and we might as well forget it.

"What I want you to do, in short, is to gather as much information as you can that will enable us to determine whether the costs associated with the grants do not outweigh the benefits. Today is Wednesday, you can

research on it either today or tomorrow, so by Friday at the latest you should be ready with the report."

That Friday, Torres was ready with his report.

De Vega: Well, what did you learn?

Torres: First, about the NSDB. It was created by Republic Act 2067, otherwise known as the Science Act of 1958, to promote scientific and technological research and development. The Board is provided with various functions, powers, and duties one of which is "to offer to, and accept from public and private sectors, specific project proposals of scientific and/or technological research and development and to provide appropriate financial, technical and other support thereto." It has a Research and Development Assistance Program which provides support for researches and development activities in the areas of agriculture and natural resources, industry, engineering, medical and allied sciences, food and nutrition, social sciences, and manpower training. Proposals may be submitted by individuals or by organizations.

De Vega: Does that mean that our bio-gas project qualifies?

Torres: I gather that much.

De Vega: How much do they give out in research grants?

Torres: Depends on the project requirements. A simple research problem may require financial assistance amounting to only a couple of

thousand of pesos or so. In which case this is all it will get. On the other hand, a project that requires the use of sophisticated equipment and the hiring of technicians to run the equipment is naturally entitled to more. According to the NSDB personnel I interviewed, the NSDB can fund research and development activities to the tune of P100,000 or more.

De Vega: Who evaluates and approves the project proposals submitted to the Board?

Torres: Research proposals are evaluated by the relevant technical staff and technical consultants with the help of resource persons or panel of experts in the particular field of study. The technical staff may also invite the project proponents for some informal discussions. An evaluation report is then prepared and submitted to the NSDB Chairman and Board of Governors for action.

De Vega: They must have some criteria for evaluating project proposals.

Torres: The scientific merit of the proposal, the qualification of the principal investigator, the significance of the planned research, and the budget required are the factors considered in the evaluation.

De Vega: How long does it take them to act on a project proposal?

Can a proposal be submitted just anytime or do they have definite periods for receiving and evaluating proposals?

Torres: Proposals are received anytime, although, as a general rule, proposals received after October 31 of each year are considered for the next fiscal year. As to how long it takes them to act on a proposal, they are a bit hazy on this. As far as their technical staff is concerned, they say that the latter can come up with an evaluation report within a few weeks upon the receipt of a proposal. However, they say they have no control over the schedules of their resource persons who are contracted on a project-to-project basis. The assistance of these persons are needed in the evaluation of proposals. As long as the papers are complete it should not take an inordinate amount of time to act on a proposal.

De Vega: Which brings us to brass tacks. When are the papers considered complete? In other words, what documents do we have to submit if we are to ask for a research grant?

Torres: There are several, and the NSDB people have provided me with a checklist. The primary requirement is a proposal prepared in accordance with NSDB Form No. 4-A. (See ExhibitA.) In addition, there are several other things which we have to submit such as (a) a bibliography, (b) line-item budget (see ExhibitB), (c) curriculum vitae of the project director and major researchers, (d) duties of and qualification guides for the different positions in the project, (e) breakdown of traveling expenses exceeding ₱2,000,

(f) list of materials and supplies exceeding ₱2,000, (g) breakdown of sundry expenses to be procured, to be used in the project indicating their book value, cost, and source of funds, (i) Gantt or bar chart or PERT/CPM for the estimated period of time required by the various phases of the project, and (j) the necessary illustrations, charts, graphs, etc.

De Vega: They do not seem to be asking much. Most of those things are needed to properly evaluate proposals and to monitor projects once they are on-going. The others are probably required by existing government regulations. It is possible that they may be asking too little. Or they may be asking the wrong things. Try to think about it. You may come up with some suggestions which we can forward to them.

Torres: Okay, I'll think about it. Now, here are some of the conditions of a grant, just in case we succeed in securing financial assistance for some of our projects.

First, with regards to the grant period, It generally runs for one year. Projects which have been approved in principle for more than one year by the Board of Governors may request for continuation of support for each succeeding year, subject to the approval of the NSDB Chairman. Projects which have been delayed due to unavoidable circumstances may request for an extension of

the grant period.

Second, as soon as a project proposal has been approved, the project director should submit to the Board a quarterly financial plan which shall be the basis for the quarterly release of funds for the project. The approved budget of a project is normally followed, but it can be adjusted to meet changing needs. Transfer of funds or savings from one item to another or transfer of allotments from a later quarter to an earlier one is allowed, if justified, and upon approval of the NSDB. The savings of a project which has been granted an extension without additional appropriation may be reprogrammed for the period of extension.

Third, on the matter of personnel. The personnel necessary to provide the personnel services set forth in the budget and plan-tilla shall be hired by the Project Director and the NSDB shall be furnished a copy of their appointment or contract of services, together with their curriculum vitae, within ten days of their hiring. Employees of NSDB-assisted projects are not considered government employees. However, project personnel who are at the same time government employees are required to submit their appointment to the Civil Service Commission for notation and attestation of their additional compensation from the project. Full-time project

personnel are allowed fifteen days sick leave and fifteen days vacation leave every year. Overtime pay, severance pay, social security premiums, workmen's compensation premiums, and other fringe benefits are not allowable except when the sponsor organization elects to provide for them itself. No official or employees in the project shall be permitted to accept a fellowship of the like or in any way leave his station without prior approval of the NSDB.

Fourth. All supplies, materials, and equipment purchased by the project out of funds granted by the Board belong exclusively to the Board. Reports of any acquisition, with corresponding receipts, shall be made to the Board within fifteen days after each acquisition. All properties shall be inventoried annually and the non-expendable ones shall be returned to the Board at the termination of the project. However, if the Board has no immediate use for the equipment, its loan may be properly arranged. The maintenance and repair costs necessary for the upkeep of project equipment during the grant period may be included in the budget request. Research equipment not available locally may be imported tax-free upon certification of the NSDB and Board of Investments.

Fifth, on the subject of finances. We shall be required to maintain records "in accordance with generally accepted accounting

principle." Such records are subject to inspection and audit by NSDB representatives at any time during the period of the grant. Property records shall be kept, and these records shall indicate the cost and date of purchase of properties purchased out of project funds, their location, etc. In addition, payroll and time records shall be maintained, verified, and approved by the Project Director. Bonding of the people who will handle the project funds is required. The cost of the bond may be charged to the project funds.

Sixth. the project director shall submit to the Board any proposed publication or release of information about the result of the project or invention arising out of it. The release should be mutually agreed upon in writing by both parties. Appropriate acknowledgement of NSDB assistance should be made, and the Board should be furnished six copies of each reprint of all publications arising from the project.

Seventh. Discoveries and inventions of NSDB-assisted projects shall be owned jointly by the government, through the NSDB, and the proponent in case the proponent is a government institution. In case the proponent is a private entity, said discoveries and inventions shall be owned by the proponent who shall have free industrial and commercial disposition thereof. The NSDB, however, shall be

entitled to a royalty in an amount to be fixed by it not exceeding 50%.

Eight. The NSDB may discontinue financial assistance to the project at any time when, in its opinion, the results obtained or that can be obtained in the project do not justify further investigation or that there is a failure to adhere to the conditions of the grant. The grant may also be cancelled upon the initiative of the grantee subject to the approval of the NSDB.

Finally, there are a number of reports which have to be accomplished at regular intervals. These are the progress, financial, technical, and final reports. I've secured the standard forms for these reports in case you might like to look them over (ExhibitC).

De Vega: Well, you seem to have found out a lot. Now, tell me what you think. Should we try applying for a grant?

What do you think of their requirements? Their systems and procedures? And their forms, I want you to study them. And see whether we can adapt them for our own use.

Torres: I'll need a few days to answer your suggestions.

De Vega: I'll see you next week then.

NATIONAL SCIENCE DEVELOPMENT BOARD  
P.O. BOX No. 3596  
Manila

PROPOSAL FOR FINANCIAL ASSISTANCE

NOTE: This form enumerates the various steps that have to be taken by a proponent to present a proposal for financial assistance from the National Science Development Board (NSDB). This must be submitted in five (5) copies to the NSDB chairman in typewritten form and must contain all the accompanying documents herein required. Except this page, the rest are outlines of the steps to be taken.

PART I. PROPOSAL SUMMARY

1. PROJECT TITLE: \_\_\_\_\_
2. PROJECT Proponent: \_\_\_\_\_  
\_\_\_\_\_  
(If proponent is an agency, state name and agency.)
3. COOPERATING AGENCIES, if any: \_\_\_\_\_  
\_\_\_\_\_  
(enumerate the agency or agencies that are expected to cooperate or contribute to the project.)
4. PROJECT COSTS: Total . . . . . ₱ \_\_\_\_\_
  - 1) NSDB Financing requested . . . . . ₱ \_\_\_\_\_
  - 2) Proponent's counter-part if any . . . . . ₱ \_\_\_\_\_
  - 3) Others, if any . . . . . ₱ \_\_\_\_\_
5. SUMMARY: (State the duration (months) and estimated starting date and give briefly a description of the project and plan of work).

N.B. Check List of Annexes.

- \_\_\_\_ 1. Annex "A" ----Bibliography
- \_\_\_\_ 2. Annex "B" ----Line-Item Budget (detailed)
- \_\_\_\_ 3. Annex "C" ----Position description of needed employees including curriculum vitae of technical personnel recommended to receive honorarium or additional compensation.

## PART II. TECHNICAL DESCRIPTIONS

6. OBJECTIVES OF THE PROJECT: (State specific objectives, purpose of the project, including problems intended to be solved, hypothesis to be tested, etc. and expected results.)
7. SIGNIFICANCE OF THE PROJECT: (Give justification of the project, stating the benefits to be derived, e.g. new products, improved quality of products, conservation of natural resources, utilization of waste products, acquiring better understanding of physical and/or social phenomena that would contribute to development and/or to science in general).
8. PRESENT STATUS OF THE PROPOSED PROJECT: (State what has been done in the area of research of the project, both locally and abroad by others and by the proponent. List as Annex "A" the bibliography).
9. PROCEDURE/METHODOLOGY: (State proposed procedure and/or methodology to be used. If possible, present research design, schedule/questionnaires to be used, sampling procedures/techniques, etc.)

## PART III. PLAN OF WORK

10. SCHEDULE OF ACTIVITIES: (State estimated time to be spent for the project in terms of weeks, for the various phases of the project, by following the outline below).

PHASES	DESCRIPTION	DURATION IN WEEKS	REMARKS
--------	-------------	----------------------	---------

11. FINANCIAL PLAN: (Present a summary of the financial plan for the project according to the outline below. If the project is to last for more than a year, a separate plan for each year or a fraction thereof should be presented. The plan should include if any, the type and amount of counter-part the proponent or any other agency would give for the project. The summary should be detailed in a line-item budget as Annex "B").

### SUMMARY OF FINANCIAL PLAN

	Totals	Requested from NSDB	Proponent's Contribution	Others Sources
I. Personal Services	₱ _____	₱ _____	₱ _____	₱ _____
II. Furniture & Equipment	₱ _____	₱ _____	₱ _____	₱ _____
III. Maintenance & Other Operating Expenses	₱ _____	₱ _____	₱ _____	₱ _____
IV. Special Purposes	₱ _____	₱ _____	₱ _____	₱ _____
<b>TOTAL COST OF PROJECT</b>	₱ _____	₱ _____	₱ _____	₱ _____

12. PERSONNEL REQUIREMENTS: (Submit information on the number of personnel, including type for technical and supporting personnel. Attached, as Annex "C" curriculum vitae for the main investigator and technical personnel of the project and the position description for each position needed for the project.)

No. of Positions	Position/Title	Duration	Salary
------------------	----------------	----------	--------

12. (State duration and salaries, monthly, per annum or daily basis. If on daily basis, estimates should be based at 22 working days per month.)

#### PART IV. ADDITIONAL INFORMATION

13. REFERENCES: (Submit at least three(3) names and addresses of researchers who are outstanding in the field of research in the proposed project and who are competent to comment on the project and the proponent).
14. RELATED ACTIVITIES OF PROPONENT: (State whether proponent or principal investigator has undertaken and/or engaged in other research work, where, when and in what field/s).

#### PART V. ACCEPTANCE OF CONDITIONS

I/We hereby agree to accept and abide by all terms and conditions which the National Science Development Board may stipulate in respect to the grant of assistance to my/our project proposal and which shall be embodied in a contract and/or Memorandum of Agreement to be executed by me/or our institution and the NSDB.

\_\_\_\_\_  
Name and Signature of Proponent or  
Principal Investigator

(If the proponent is concerned with an institution(government or non-government), the approval and signature of his/her immediate superior and finally the head of the institution is needed as indicated below. In which case, the head of the agency must formally transmit the proposal to the Chairman, NSDB, indicating the agency's commitment to participate and contribute to the project. If the project will have a counter-part assistance from the agencies other than the NSDB, a written commitment, stating the extent and amount of that agency/cies' commitment must also be submitted in writing by a responsible official of the contributing agency).

APPROVAL RECOMMENDED:

PROJECT TRANSMITTAL APPROVED:

\_\_\_\_\_  
Name and Signature of Immediate  
Supervisor

\_\_\_\_\_  
Name and Signature of Head of Institution

\_\_\_\_\_  
Title/Position in Institution

\_\_\_\_\_  
Title/Position in Institution

\_\_\_\_\_  
Unit in Institution

----- DO NOT FILL BELOW -----

RECEIVED AT THE NSDB: By: \_\_\_\_\_ Date: \_\_\_\_\_

FOR FURTHER CLARIFICATION CONSULT WITH ANY OF THE NSDB OFFICIALS CONCERNED.

LINE-ITEM BUDGET

Project Title: \_\_\_\_\_

Proponent: \_\_\_\_\_

DETAILS	TOTAL	Requested from NSDB	Proponent's Counterpart	Others
<b>I. PERSONAL SERVICES:</b>				
(Enumerate number, position title of personnel needed and the corresponding salaries and/c wages. Exclude, honoraria or additional compensation for personnel on part-time basis, consultants, etc.)				
1) Salaries	P _____	P _____	P _____	P _____
2) Wages	P _____	P _____	P _____	P _____
Total of Personal Services	P _____	P _____	P _____	P _____
<b>II. MAINTENANCE AND OTHER OPERATING EXPENSES</b>				
(Submit as follows, and include list of supplies and estimated cost according to source of fundings)				
1) Travel	P _____	P _____	P _____	P _____
2) Supplies and Material	P _____	P _____	P _____	P _____
3) Sundry (Miscellaneous, including cost for contractual services)	P _____	P _____	P _____	P _____
Total for Maintenance & Other Operating Expenses	P _____	P _____	P _____	P _____
<b>III. FURNITURE &amp; EQUIPMENT</b>				
(List type, number and cost of equipment, according to source of funding)				
Total of furniture & equipment	P _____	P _____	P _____	P _____
<b>IV. SPECIAL PURPOSES</b>				
(Including here honoraria and/or additional compensation for part-time personnel, consultant's fees, cost of electronics data of processing, printing etc., according to source of funding)				
Total for Special Purpose	P _____	P _____	P _____	P -
<b>V. CAPITAL OUTLAY</b>				
(Include land, building and all permanent improvements on land and structures outlay)				
Total for Capital Outlay	P _____	P _____	P _____	P _____
<b>VI. SUMMARY</b>				
I. Total for Personal Services	P _____	P _____	P _____	P _____
II. Total for Maintenance and Other Operating Expenses	P _____	P _____	P _____	P _____
III. Total for Furniture & Equipment	P _____	P _____	P _____	P _____
IV. Total for Special Purposes	P _____	P _____	P _____	P _____
V. Capital Outlay	P _____	P _____	P _____	P _____
Total Cost of Project	P _____	P _____	P _____	P _____

NATIONAL SCIENCE DEVELOPMENT BOARD  
Bicutan, Taguig, Rizal  
P.O.Box 3596, Manila

GENERAL INSTRUCTIONS

Herewith attached are guidelines in the submission of progress, financial and final reports, for all assisted projects.

I. Who are to submit reports -

Proponent/Project Director/Principal Investigator

II. Submission of Reports -

- (a) Progress Reports (Appendix I) - within ten (10) days after the sixth month of implementation
- (b) Financial Report (Appendix II) - within ten (10) days after each quarter.
- (c) Final Report (Appendix III) - within two (2) months after completion of the project.
- (d) Technical Report (Appendix III, Annex "A") - For projects that are approved for more than one year, five (5) copies in publishable form if technical report should be submitted at the end of each project year, within one (1) month from the last day of the project year by the Proponent/Project Director/Principal Investigator.

III. Required Copies of Reports -

All Proponents/Project Directors/Principal Investigators are required to submit five (5) copies of the progress, financial and final reports. Technical report submitted at the completion of the project should be in 30 copies as stated in Appendix III, Annex "B".

IV. Where to Submit -

Report should be submitted to the NSDB.

NATIONAL SCIENCE DEVELOPMENT BOARD  
Bicutan, Taguig, Rizal  
P.O.Box 3596, Manila

PROGRESS REPORT FOR NSDB-ASSISTED PROJECT  
(Guide Only)

FREQUENCY: Progress report should be submitted every six (6) months (Project Year), or as often as the Board may require.

PART A

1. Progress Report No.:
2. Project No:
3. Title of the Project:
4. Name and Title of Proponent/Project Director/Principal Investigator:
5. Proponent Agency and Address:
6. Cooperating Agency:
7. Date of Memorandum of Agreement:
8. A. Date Project Started:  
B. Date Assistance Granted:  
C. Expected Date of Completion:
9. Period Covered by the Report:

PART B

1. Objectives of the Project
2. Brief summary of accomplishments including estimates of work accomplished on the basis of the total work programmed for the year and in relation to the objective/s of the project.
3. Administrative, technical and other problems encountered.
4. Corresponding action taken.
5. Recommendations.

Please attach the necessary tables, figures, charts, photographs and other pertinent papers.

PART C

1. Personnel ( Including Consultant):

Name :	Designation :	Date of :	Date Terminated/:	Salary	Fund
:	:	Employment:	Resigned :	:	Source
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:

2. Financial Status:

Fund Source	:	Total Appropriation:	:	Allotment	:	Actual Expenditures
:	:	:	:	Received	:	to date
:	:	:	:	to date	:	:
a. NSDB	:	:	:	:	:	:
b. Counterpart	:	:	:	:	:	:
c. Others	:	:	:	:	:	:
TOTALS	:	:	:	:	:	:

Submitted by :

\_\_\_\_\_  
Proponent/Project Director/Principal Investigator

\_\_\_\_\_  
Date

NSDB Form No.  
Series of 1974

## FINANCIAL REPORT

APPENDIX "II"  
SCHEDULE I

DEPARTMENT \_\_\_\_\_  
BUREAU OF \_\_\_\_\_  
REPORT NO. \_\_\_\_\_  
DATE \_\_\_\_\_

NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
PROJECT TITLE \_\_\_\_\_

FISCAL YEAR

STATEMENT OF DISBURSEMENTS AND OUTSTANDING OBLIGATIONS  
For the period \_\_\_\_\_ to \_\_\_\_\_

[illegible]

APPROVED:

CERTIFIED CORRECT :

Proponent/Project Director/Principal Investigator

Accountant

SCHEDULE II

DEPARTMENT \_\_\_\_\_ NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
BUREAU OF \_\_\_\_\_ PROJECT TITLE: \_\_\_\_\_  
REPORT NO. \_\_\_\_\_  
DATE \_\_\_\_\_ FISCAL YEAR \_\_\_\_\_

STATEMENT OF STATUS OF FUNDS  
As of \_\_\_\_\_

ADVANCES RECEIVED:

Prior ; . . . . . P \_\_\_\_\_  
This Quarter . . . . . P \_\_\_\_\_  
Total Advance Received . . . . . P \_\_\_\_\_

DISPOSITIONS:

Total Disbursements to Date . . . . . P \_\_\_\_\_  
Balance of Advances to Disbursing Officers:

a. \_\_\_\_\_ P \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_ P \_\_\_\_\_

Total Disbursements and Advances P \_\_\_\_\_

BALANCE IN BANK, as of \_\_\_\_\_ P \_\_\_\_\_

T O T A L . . . . . P \_\_\_\_\_

APPROVED:

CERTIFIED CORRECT:

\_\_\_\_\_  
Proponent/Project Director/  
Principal Investigator

\_\_\_\_\_  
Accountant

**SCHEDULE III**

DEPARTMENT \_\_\_\_\_ NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
BUREAU OF \_\_\_\_\_ PROJECT TITLE \_\_\_\_\_  
REPORT NO. \_\_\_\_\_  
DATE \_\_\_\_\_

SCHEDULE OF ACCOUNTS PAYABLE  
As of \_\_\_\_\_

[illegible]

APPROVED:

CERTIFIED CORRECT:

Proponent/Project Director  
Principal Investigator

**SCHEDULE IV**

DEPARTMENT OF _____	NSDB-ASSISTED PROJECT NO. _____
BUREAU OF _____	PROJECT TITLE _____
REPORT NO. _____	_____
DATE _____	FISCAL YEAR _____

**STATEMENT OF BANK RECONCILIATION\***

As of \_\_\_\_\_

Cash in Bank - Per Bank Statement . . . . . \$ \_\_\_\_\_

**Deduct:**

Items credited in the books not debited by Bank:

1. Outstanding checks

a. \_\_\_\_\_ \$ \_\_\_\_\_

b. \_\_\_\_\_ \$ \_\_\_\_\_

2. c. \_\_\_\_\_ \$ \_\_\_\_\_ \$ \_\_\_\_\_

\$ \_\_\_\_\_

**Add:**

Items debited in the books not credited by Bank:

1. Deposit in Transit . . . . . \$ \_\_\_\_\_

2. \_\_\_\_\_ \$ \_\_\_\_\_

Items debited by Bank not credited in the Books:

1. Bank charges . . . . . \$ \_\_\_\_\_

2. \_\_\_\_\_ \$ \_\_\_\_\_

Cash in Bank - Per Books . . . . . \$ \_\_\_\_\_

**APPROVED :**

**CERTIFIED CORRECT:**

\_\_\_\_\_  
Proponent/Project Director/Principal  
Investigator

\_\_\_\_\_  
Accountant

SCHEDULE V

DEPARTMENT _____	NSDB-ASSISTED PROJECT NO. _____
BUREAU OF _____	PROJECT TITLE _____
REPORT NO. _____	_____
DATE _____	FISCAL YEAR _____

LIST OF EQUIPMENT PURCHASED  
As of \_\_\_\_\_

Total - Previous Report . . . . . \$ \_\_\_\_\_

A d d:

Purchased this quarter:

- |     |          |
|-----|----------|
| 1.  | \$ _____ |
| 2.  | _____    |
| 3.  | _____    |
| 4.  | _____    |
| 5.  | _____    |
| 6.  | _____    |
| 7.  | _____    |
| 8.  | _____    |
| 9.  | _____    |
| 10. | _____    |
| 11. | _____    |
| 12. | _____    |
| 13. | _____    |
| 14. | _____    |
| 15. | _____    |

Total . . . . . \$ \_\_\_\_\_

NOTE: This Report should be supported by the following:

- a. Three (3) copies of Memorandum Receipts ( 1 original and 2 duplicates)
- b. One (1) copy of Equipment Ledger Card.

APPROVED:

CERTIFIED CORRECT:

\_\_\_\_\_  
Proponent/Project Director/ Principal  
Investigator

\_\_\_\_\_  
Accountant

SCHEDULE VI

DEPARTMENT OF \_\_\_\_\_  
BUREAU OF \_\_\_\_\_  
REPORT NO. \_\_\_\_\_  
DATE \_\_\_\_\_

NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
PROJECT TITLE \_\_\_\_\_  
FISCAL YEAR \_\_\_\_\_

REPORT OF INCOME  
As of \_\_\_\_\_

Income of two projects not remitted to the NSDB.

per Last Report . . . . . \$ \_\_\_\_\_

A d d:

Income of the Project this quarter:

1. From Operation, . . . . . \$ \_\_\_\_\_  
2. Others . . . . . \$ \_\_\_\_\_ \$ \_\_\_\_\_  
Total . . \$ \_\_\_\_\_

Deduct:

Income of the project remitted to the NSDB

this quarter:

	Date	Check No.	Amount
1.	_____	_____	_____
2.	_____	_____	_____

Total income remitted this quarter \$ \_\_\_\_\_

Total income not remitted  
to the NSDB. . . . . \$ \_\_\_\_\_

APPROVED:

CERTIFIED CORRECT:

Proponent/Project Director/Principal  
Investigator

Accountant

NATIONAL SCIENCE DEVELOPMENT BOARD  
Bicutan, Taguig, Rizal  
P.O. Box 3596, Manila

FINAL REPORT FOR NSDB-ASSISTED PROJECTS  
(Guide Only)

1. NSDB-Assisted Project No.
2. Project Title:
3. Name and Title of Project Director and Institution:
4. Name and Title of Proponent/Project Director/Principal

Investigator:

5. Cooperating Agency/s, if any:
6. Date of Memorandum of Agreement:
7. Date of Project Started:
8. Date Assistance Granted:
9. Date Project Completed: (date final report submitted):
10. Financial Statement: Only totals are to be placed. All details are to be accomplished in accordance with the attached Annex "A" forms:

Fund Source	Total	Allotment	Actual Expenditures
	: Appropriation	: Received	: to date
a. NSDB	:	:	:
b. Agency's	:	:	:
Counterpart	:	:	:
c. Others	:	:	:
Totals	:	:	:
d. Income derived from project if any:			

11. Description of project including the following:
  - a. Objectives
  - b. Procedures
  - c. Results and discussions
  - d. Conclusions and recommendations

12. Attached technical report in publishable form in thirty (30) copies  
(Form attached as Annex "B")

13. Total cost of Equipment from NSDB Funds: ₦ \_\_\_\_\_.  
(mention total cost only of equipment purchased (out of NSDB funds)  
The details should be in accordance with the attached Annex "C" form.
14. Total Personal Expenditures ₦ \_\_\_\_\_. The details should be  
reported in accordance with the attached Annex "D" form.
15. Tax Exemptions: Were there any equipment imported by the propo-  
nent whether NSDB-financed or not which enjoyed tax exemption  
under the provisions of R.A. 2067 as amended?  
Yes \_\_\_\_\_ No \_\_\_\_\_.

If yes, how much was their aggregate value:  
₦ \_\_\_\_\_

16. Problems and Recommendations: State the problems encountered  
in the prosecution of the project and recommendations which  
would eliminate or minimize these problems.

Submitted:

\_\_\_\_\_  
Proponent/Project Director/Principal  
Investigator

\_\_\_\_\_  
Date

DEPARTMENT \_\_\_\_\_  
BUREAU OF \_\_\_\_\_  
DATE \_\_\_\_\_

ANNEX "A"  
SCHEDULE I

NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
PROJECT TITLE \_\_\_\_\_  
FISCAL YEAR \_\_\_\_\_

STATEMENT OF DISBURSEMENTS AND OUTSTANDING OBLIGATIONS  
For the period \_\_\_\_\_ to )) \_\_\_\_\_

APPROVED:

CERTIFIED CORRECT::

Proponent/Project Director/Principal Investigator

Accountant

ANNEX "B"

NATIONAL SCIENCE DEVELOPMENT BOARD  
Bicutan, Taguig, Rizal  
P. O. Box 3596, Manila

TECHNICAL REPORT FORM

Scientific Report

This is a complete scientific report about the project. It should follow a format of a scientific report generally used by scientist working on the same area of research, for publication.

The following format shall be used:

a. The Preliminaries

- 1) Project No., title, kind of report
- 2) Persons and officials involved in the project
- 3) Authors of the report, degrees and titles
- 4) Acknowledgements
- 5) Abstract
- 6) Table of contents with the references
- 7) List of tables, with titles and page references
- 8) List of figures and charts with title and page references

b. The text

- 1) Introduction
- 2) Review of literature
- 3) Materials and Methods
- 4) Results and discussion.
- 5) Conclusions

c. List of references

d. Appendices

- 1) Tables
- 2) Figures, chart
- 3) Others

NSDB Form No. \_\_\_\_\_  
Series of 1974  
Project No.

ANNEX "C"

EQUIPMENT REPORT

Quantity	Description	Date Purchased	Purchased Cost	Remarks (State whether it is usable, out of order, condemned, lost, etc.)

ANNEX "D"

NSDB Form No. \_\_\_\_\_  
Series of 1974 \_\_\_\_\_  
Project No. \_\_\_\_\_

PERSONNEL EXPENDITURE  
For the Period \_\_\_\_\_ to \_\_\_\_\_

Name of Personnel Including Consultants	Title of Position	Salary/ Honoraria Per Month	Source of Funds	Date of Effec- tivity of Appointment	Date of Termina- tion of Appointment

Submitted by:

Proponent/Project Director/  
Principal Investigator

Date



**SCHEDULE V**

DEPARTMENT \_\_\_\_\_  
 BUREAU OF \_\_\_\_\_  
 REPORT NO. \_\_\_\_\_  
 DATE Y \_\_\_\_\_

NSDB-ASSISTED PROJECT NO. \_\_\_\_\_  
 PROJECT TITLE \_\_\_\_\_  
 FISCAL YEAR \_\_\_\_\_

**LIST OF EQUIPMENT PURCHASED**  
 As of \_\_\_\_\_

T o t a l - Previous Report . . . . . ✓

A d d:

Purchased this quarter:

- |     |          |
|-----|----------|
| 1.  | <u>✓</u> |
| 2.  | _____    |
| 3.  | _____    |
| 4.  | _____    |
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| 14. | _____    |
| 15. | _____    |

T o t a l . . . . ✓

NOTE: This Report should be supported by the following:

- a. Three (3) copies of Memorandum Receipts (1 original and 2 duplicates)
- b. One (1) copy of Equipment Ledger Card.

APPROVED:

CERTIFIED CORRECT:

\_\_\_\_\_  
 Proponent/Project Director/Principal Investigator

\_\_\_\_\_  
 Accountant

Case Study 8

A CASE OF INDEFINITE LEADERSHIP<sup>1</sup>

1954

Forty-six years after its establishment, the Faculty of Agriculture of the University of Malaga received its first major research grant of ₧350,000\* from the National Rice and Corn Administration, a government agency, to undertake research on rice and corn, the staple crops of the country.

The contract covered a period of four years. At the end of the contract, a total of 29 rice and 11 corn research studies had been conducted involving 15 faculty researchers and 28 research assistants.

1958

In recognition of the growing importance and potential of the Faculty to serve as the government's research arm, the grant was renewed, this time as a continuing support for rice and corn research. The amount was appropriated annually by the National Assembly. The research grant amounted to ₧623,853 as of 1961.

With the expansion of the research operations of the Faculty of Agriculture, which had been traditionally a teaching institution, the Office of the Director of Research was created in 1958. Part of the funds for rice and corn research became seed money to support research on the other commodities which are of national importance. Since the beginning of the grant, the utilization of rice and corn by products for poultry and livestock

<sup>1</sup> Prepared by Carmencita Necesito; release being negotiated.

Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

\* US \$1 = ₧ 7.5

and livestock feeding constituted a problem area upon which animal production studies could be justified on the rice and corn budget.

1962

The national government stepped up its food and agricultural productivity campaign. In 1962, it set up under the Office of the President of the Republic of Malaga the National Food and Agriculture Organization (NFAO) which was charged with the responsibility of coordinating the activities of 22 government agencies and bureaus of agriculture. Among other things, this body was created to generate greater cooperation among the agricultural agencies of the government. This body also took over the administration of the rice and corn research grant of the Faculty of Agriculture.

In the meantime, the agricultural and forestry units of the University of Malaga gained semi-autonomy from the mother unit located in the nation's capital city. The Dean of the Faculty of Agriculture was concurrently appointed Vice-President for Agriculture and Forestry Affairs. Included under his administration were the Faculty of Agriculture, Faculty of Forestry, Dairy Training and Research Institute and Agricultural Credit and Cooperative Institute.

The Dean and Vice-President for Forestry and Agricultural Affairs was later appointed to a cabinet post as Deputy Minister of Agriculture. This development and the growing recognition of the role of the Faculty of Agriculture for food research, lead to the more active involvement of a new faculty members in NFAO operations. These people were young Ph.D.s who obtained fellowships or graduate assistantships in American universities.

Through the leadership of one particular faculty member, several food production programs were presented and approved by NFAO. These covered research and extension projects on corn, sorghum, legumes and vegetables.

As of 1970, the Faculty of Agriculture had six NFAO supported research programs at a total budget of ₦1,401,189.92. In the same year, research grants were provided by 13 government, private and international agencies at a total amount of ₦2,495,079.39 with 56% of this amount provided by NFAO. The research budget of the university amounted to ₦878,461.45 with only 20% actually earmarked for operational expenses; the remaining 80% was allotted for the salaries of faculty members who were designated on the university research budget.

The growth of the NFAO research grant to the Faculty of Agriculture is shown in Table 1.

#### 1971

The Director of Research of the Faculty of Agriculture, after serving for one year as the chairman of a committee organized by the Dean to evolve a 10-year development program for the Faculty of Agriculture, took a hard look at the research operations of the Faculty. A part of the report read:

While (one NFAO program) has been satisfactory to NFAO, it seems that the program is not pursuing a clear goal. This program, originally intended to boost the production of corn in the country, has, without having clearly and definitely accomplished the goal, involved itself with sorghum and soybean.

The (another NFAO program), in addition to corn, sorghum, and soybean has supported work in peanut and mungo. Lately, the program has given support to studies on multiple cropping.

It should not be taken to mean that sorghum, soybean and other crops that these programs have supported are not recognized

Table 1. Annual appropriation of the National Food and Agriculture Organization (NFAO) research grant to the Faculty of Agriculture. 1954-1975.

Year	₪ Amount	Year	₪ Amount
1954 )		1964	634,229
1955 )	350,000	1965	663,250
1956 )		1966	681,286
1957 )		1967	790,446.38
1958	-	1968	985,216
1959	778,045	1969	1,334,474
1960	481,000	1970	1,401,189.92
1961	623,853	1971	no data
1962	631,229	1972	1,867,000
1963	645,087	1973	3,217,756
		1974	3,735,304
		1975	8,000,000

as important crops. However, it is apparent that the two programs do not have clearly defined goals so that there is a tendency to undertake projects in a very arbitrary manner.

It was recommended that these programs should be evaluated and their objectives specified and pursued as stated.

The committee also observed that the leadership in the NFAO research programs was getting to be confined to a handful of people such that the responsibilities were too much to handle for any one man or department. At one point, one faculty member coordinated four programs. Of the seven program coordinators, only one was not from the Department of Agronomy.

It became apparent that the more viable programs were those in agronomy where problem areas were basically applied in nature. Hence, the research grants were largely concentrated in this department. (Table 2)

This was an area, which was to prevail for a long time, when one did not get to conduct research unless he could raise the necessary funds, and this meant having direct relations with the funding agencies. Thus, research emphasis revolved around the interests of the more aggressive faculty members. The plan to develop an integrated program where the researchers from all departments could articulate specific fields of specialization for the development of a commodity industry remained an ideal but, according to some sectors, impractical way of generating research funds.

Nevertheless, the NFAO research grant increased in allocation and the number of research programs. Three programs were later added, one each for pasture, multiple cropping and livestock production.

By 1972, there were nine research programs under the NFAO grant which had amounted to ₦1,867,000 or 52% of the total research grants provided by nine donors including NFAO.

Table 2. Distribution of NFAO research funds by department.  
Faculty of Agriculture, 1973.

Department	Allocation	
	₦ Amount	Percent
Applied Mathematics	16,550	0.5
Botany	97,695	3.0
Chemistry	88,408	2.7
Agricultural Communication	19,546	0.6
Economics	45,354	1.4
Education	800	0.02
Agricultural Engineering	48,833	1.5
Home Technology	23,250	0.7
Plant Pathology	122,186	3.7
Entomology	107,100	3.3
Agronomy	1,034,314	32.1
Animal Science	90,445	2.8
Soil Science	150,086	4.6
Food Science	56,247	1.7
Administration	789,315	24.5
Other Offices	57,307	1.7
Substations*	47,500	1.4
Scholarships	13,373	0.4
Reserve	409,447	12.7
TOTAL	3,217,756	99.32

After seventeen years of refinement, the NFAO research programs had remained basically applied researches with an extension and training component that related directly to the food production programs of the national government. Its extension network covered the entire country and involved all agencies of the NFAO network with primary leadership emanating from the Faculty of Agriculture.

#### 1972

The agriculture and forestry units of the University of Malaga gained full autonomy and became a university. But the appointment of the Vice-Chancellor<sup>2</sup> was delayed for almost one year. A new Faculty of Sciences and Humanities was created from the departments of humanities, botany and chemistry of the Faculty of Agriculture.

#### 1973

The Vice-Chancellor was finally appointed. He was formerly the Dean of the Faculty of Public Administration of the University of Malaga.

As the new Vice-Chancellor, his first move was the reorganization of the administration. The minutes of the 836th Meeting of the Board of Regents of the University of Malaga which formally approved the reorganization scheme read:

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<sup>2</sup>

The Minister of Agriculture is the titular Chancellor of all agricultural universities in Malaga.

1. The following are recommendations for strengthening the system of development planning and research administration in the University of Malaga:

- a. Creation of an Office of Planning and Development to be headed by an Assistant for Planning and Development directly under the Vice-Chancellor.
- b. Institution of a new system of research administration as follows:
  - (1) Creation of the University of Research Council to be composed of the Vice-Chancellor as chairman, Deans and Directors of colleges and other units, and four senior faculty members each representing the biological sciences, physical sciences, social sciences and humanities, to be appointed by the Vice-Chancellor for a term of two years.
  - (2) Creation of a position of Assistant for Research to act as the principal staff arm of the Vice-Chancellor for research and as executive secretary of the University Research Council.
  - (3) Abolition of the Office of the Director of Research in the Faculty of Agriculture, and transfer of personnel, equipment, records and appropriations to the new Office of the Assistant for Research.
  - (4) Formulation of a Technical Evaluation Group (TEG) to be composed of composite teams of subject matter specialists to be drawn from the various units and departments.

The TEG shall be under the overall coordination of the Assistant for Research, who may be assisted by such associate coordinators and subject matter specialists as may be necessary. All associate coordinators and subject matter specialists shall be appointed by the Vice-Chancellor upon the recommendation of the University Research Council.

In his capacity as the principal staff arm of the Vice-Chancellor on matters pertaining to research at the university level, the Assistant for Research had the following functions:

1. Provide necessary leadership in the systematic appraisal of problems affecting the socio-economic development of the Philippines, including the necessary resources and relevant technologies for national growth. In carrying out this function, the Assistant for Research:
  - a. Keeps abreast with recent discoveries and trends relevant to identified problem areas.
  - b. Gathers relevant statistics to analyze and interpret for planning purposes.
  - c. Develops and implements long range substantive fiscal programs of research.
2. Facilitates responsive promotion and planning of research programs by:
  - a. Examining and encouraging cooperative and coordinated research undertaking among units, departments and individuals on closely related problem areas.
  - b. Carrying out a program for continuing professional improvement of research personnel on research methodologies and instrumentation.
3. Provide leadership in the systematic and efficient processing of research proposals.
4. Provide leadership in the systematic implementation of approved research undertakings by:
  - a. Making sure that appropriate research coordinators and/or leaders are appointed for all approved research undertakings.
  - b. Maintaining a periodically updated summary by subject matter on the allocation of research fund and stage of completion of approved research undertakings.
5. Publish titles, names of proponents, duration and source of funds of ongoing and proposed research projects.

Dr. Alvarez was appointed the first Assistant for Research. His appointment had no tenure. Before his appointment to this position, he served as Acting Director of Research of the Faculty of Agriculture.

Before the reorganization took place, Dr. Alvarez, in his capacity as Director of Research, administered the NFAO program. When the position of Director of Research was abolished, the new administration transferred all responsibilities and resources of the Office of the Director of Research to the Office of the Assistant for Research.

1974

In less than a year that the Office of the Assistant for Research served as the clearing house for all research projects of the university, the Vice-Chancellor designated Dr. Madriaga, Dean of the Faculty of Agriculture as coordinator of the NFAO research grant, reminding him that it is a university program and, as its program coordinator, he should delineate his role as Dean of the Faculty of Agriculture and as coordinator of a university research program.

In a similar move, the Deputy Vice-Chancellor for Administration and Dr. Alvarez were appointed coordinators of two other million-peso research programs, but were not as large as the NFAO program.\* More than 10 other coordinators of research programs have been previously appointed, even in past years, by virtue of their leadership in program development and implementation of their respective research programs.

The position of research coordinator involved additional compensation of ₱800 for programs funded at ₱ 1 million or more and ₱700 for programs

funded at less than P1 million.

Before the end of the year, the Faculty of Agriculture eventually regained the right to exercise primary leadership of the program, in consultation with the Assistant for Research. This included the responsibility of planning, program development and evaluation, and budget control.

The following year, all research programs and budgetary allocations of the NFAO grant were processed at the Office of the Dean and transmitted directly to the NFAO central Office for approval.

With the transfer of leadership of the NFAO research grant, the issue of how far research leadership should be centralized at the university level was raked anew. Various sectors interpreted the development as a sign that matters which were normally brought to the attention of the Assistant for Research could be brought directly to the attention of the Vice-Chancellor, which happened repeatedly. This time, the clouds of doubt hovered over the Assistant for Research.

#### In Retrospect: The Events Past

The return of the program leadership of the NFAO grant was a long and controversial struggle. It became difficult to regain leadership because the facilities, assistants and budgetary appropriations for research administration, mostly from the NFAO budget, were all transferred to the Office of the Assistant for Research. But the administration of the Faculty of Agriculture did not give up.

Dr. Madriage and Dr. del Prado, the new Associate Dean for Research argued with the Vice-Chancellor that the NFAO grant became a university program only because the departments of the new units have continued to pursue NFAO supported studies which they conducted as departments of the Faculty of Agriculture. But the program has essentially remained a food and agriculture program and, as such, its operations are the responsibility of the Faculty of Agriculture.

Dr. Madriaga strongly argued that it is wrong to assume that the responsibilities of the former Director of Research should be elevated when the university was organized. The Office of the Director of Research was a staff arm of the Faculty of Agriculture and, as such, whatever functions related to research operations of the Faculty of Agriculture should remain at the college level and left for the Dean to administer.

Dr. del Prado added, "It does not mean that when you create a new university you take away all the resources of its predecessor."

But the Vice-Chancellor did not agree. He wanted full and direct control of the research funds of NFAO, which at that time amounted to ₡3.7 million, or 27% of the total research grants provided by 24 agencies, and anticipated to increase to ₡8 million the following year. The Chancellor was emphatic that, "any program that is undertaken in the university is a university program."

At this time, 79.5% of the research budget and 80.6% of the number of research projects and studies conducted by the six units of the

university were with the Faculty of Agriculture.<sup>3</sup>

To have full control of the research funds, the Vice-Chancellor favored the administration of the NFAO grant under the Assistant for Research who was directly responsible to him. However, there was no formal agreement to this agreement and the issue was left hanging for quite sometimes.

In the midst of this controversy, Dr. Madriaga resigned to assume the presidency of a new university of agriculture. With the appointment of Dr. del Prado as the new Dean, efforts to regain the leadership of the NFAO grant was renewed.

Gradually, the Vice-Chancellor accepted the contention of the administrators of the Faculty of Agriculture and Dr. del Prado also accepted certain proposals of the Vice-Chancellor to inject new concepts of agricultural research into the program. For instance, the Vice-Chancellor wanted other units of the university to be more actively involved in the extension and socio-economics component of the program. He also wanted a common extension program to serve all the prosecution components of the program, instead of allowing each one to put up its own extension and training program.

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<sup>3</sup> Later, the Department of Agricultural Economics and the Department of Agricultural Engineering seceded from the Faculty of Agriculture to become separate institutes. As reflected in Table 2, this did not affect significantly the distribution of the NFAO grant funds.

Dr. del Prado conjectured that the Vice-Chancellor had begun, at his stage, to see the situation in a better perspective, having been in his office for quite sometime. He began to know the people around him and he began to realize that even if he came from outside, the people were not fighting him.

In resignation to the recent development of events, Dr. Alvarez admitted that it is all right to have different coordinators for the million-peso programs, especially since these coordinators were deans and directors of university units. But he pointed out:

Problems arise when they go directly to the Vice-Chancellor to seek exemption from the rules which my office has been enforcing with the sanction of the Vice-Chancellor. If the Vice-Chancellor reverses my position, this puts me in an embarrassing position. I cannot deal with them directly, except through the Vice-Chancellor because I am only a staff man. In fact, I have often asked myself, "Am I an Assistant for Research or Research Assistant?"

Dr. Alvarez felt that his designation did not carry the authority required to perform his responsibilities. He felt that he needed a more authoritative designation to gain the respect of the coordinators, deans and directors.

He asked the Vice-Chancellor to change his designation to Director of Research which was a more familiar designation to agricultural institutions here and abroad. In his correspondence, he used Director of Research because the officials of funding agencies addressed him as Director of Research.

The Vice-Chancellor created a committee to study the request of Dr. Alvarez. The committee recommended that the designation should be

changed to Assistant Chancellor for Research. The recommendation was not implemented.

Dr. Alvares interpreted this action of the Vice-Chancellor as either of two things: the Vice-Chancellor wanted the position to remain as a staff function in spite of the expanded scope of responsibility and the authority required to disburse its functions; or he was looking for someone else who would deserve the designation better than he.

Describing his relationship with the Vice-Chancellor, Dr. Alvarez said:

A good staff man is one who can say his opinions and has the sincerity to say yes or no. I myself like people to tell me when I am wrong.

Lately, we have disagreed on a lot of things...I have also been outvoted in our council meetings... But only history will justify my actions.

...But even if I don't agree with him, once the matter is settled, I support him. I fight for him.

...He feels I am opposing him on purpose...or I am competing with him. I think he is being defensive and he constantly reminds me that my role is recommendatory and he can overrule me anytime.

...He would say, 'Go ahead and implement this, but I don't see any facilitating document bearing his signature.

...You see... when something goes wrong... and without his signature... I would make a perfect scapegoat.

At the beginning of the Vice-Chancellor's administration, not only a few were convinced that Dr. Alvarez was "the fastest route to the Vice-Chancellor's. In those days, the papers he brought to the attention of the Vice-Chancellor did not pertain to research only.

Later, Dr. Alvarez felt that he should sign papers on behalf of the Vice-Chancellor to lessen his administrative duties because pressing matters other than research called for his daily attention. Besides, Dr. Alvarez felt that the Vice-Chancellor should put more of his time to raising funds. Dr. Alvarez said:

Running the university is routine. The Vice-Chancellor can delegate this function and devote more time to raising funds.

In all land grant colleges, the president is a fund raiser. The executive vice-president serves as the caretaker of the university.

As it is, the affiliate units of the university are more dynamic in fund raising.

Dr. Alvarez began to internalize his role and became more familiar with the research machinery of the university and met more officials of the government and other funding agencies, he became more aggressive in exercising his functions to the point that he wanted immediate action, especially when it came to generating research funds. He regarded himself as an action man, a characteristic which did not always suit the Vice-Chancellor and prompted him to tell Dr. Alvarez numerous time, "You are so fast that I have to put a break on you."

The Vice-Chancellor was strict on being consulted and given time to study matters which he considered crucial to university operations and policies, a procedure which did not suit Dr. Alvarez. The Vice-Chancellor felt that Dr. Alvarez was by passing him in many of his actions.

At other times, the Vice-Chancellor felt that Dr. Alvarez was being persistent in getting his recommendations approved.

Dr. Alvarez said, "If ever I bypassed him, it was because I had to make a move in the interest of the researchers of 560 research projects and studies who are waiting for the decision of the administration before they can make any move."

Dr. Alvarez felt that he did not have to consult his superior on routine matters. Regarding the complaint of the Vice-Chancellor that he is not kept informed on certain developments, Dr. Alvarez said, "I get better results if I don't inform him."

In a span of almost four years, Dr. Alvarez had tried to seek relief from his duties as Assistant for Research three times. He tried to resign as early as last year, but everytime he handed his resignation letter, the Vice-Chancellor told him he was doing a good job. If he continued with his plan to resign, he would be the last of the first set of staff officers of the Vice-Chancellor.

In the past four years that he had served as the Assistant for Research, Dr. Alvarez was able to house in one section of a renovated building the centralized documentation and instrumentation services for university research operations which took him three and a half years to implement from the policy to implementation stages and, finally, the

provision of space for this outfit. He was instrumental in generating several small research grants and he continued the tradition of the Faculty of Agriculture to publish annual reports which he expanded to include all units of the university. Upon the recommendation of the University Research Council, he also instituted and coordinated the Technical Evaluation Group at the university level.

In his staff are one executive assistant, 7 research and editorial assistants, 6 clerk-typists, one illustrator and one driver.

For his part, Dr. del Prado considered the Office of the Assistant for Research important to the university setting, particularly in the light of the viable research programs of the university. Dr. del Prado felt that this office could play an important role in formalizing research policies which could be the sole source of authority in managing research at all levels of the university.

According to Dr. del Prado, Dr. Alvarez and his staff had done a good job of maintaining a centralized documentation system for research management at the university level. It had also assisted the Vice-Chancellor in coordinating research program that call for interunit collaboration.

Somebody had to do the job of bringing together for the Vice-Chancellor the different units to cooperate on university research programs.<sup>4</sup>

Dr. del Prado felt that the Office of the Assistant for Research should be more active in generating research funds.

Rationalizing the decentralization of leadership in managing university research, Dr. del Prado felt that Dr. Alvarez should put more time and resources to planning, developing and overseeing the implementation of the various research programs at the university level. Furthermore, Dr. del Prado felt that the degree of centralization that prevailed in the past two years led to the dissatisfaction of certain sectors. The leadership should not impose too many policies that would eliminate or diminish the interest and enthusiasm of research groups in the university where program development and implementation emanated.

Dr. del Prado felt that there are certain responsibilities in the processing and evaluation of research proposals and reports, and even in transmitting reports to the funding agencies which the units concerned could do. In other words, Dr. Alvarez should not have the primary responsibility in managing all research programs in the university. If a program is primarily a unit program, the unit should be allowed to handle it.

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<sup>4</sup>Dr. del Prado defined a university program as being largely, first, conducted by several units of the university, and second, developed through the machinery of the Office of the Assistant for Research. Dr. del Prado took exception to the first consideration, as far as the NFAO program was concerned.

But actions and decisions would always be coured to the Assistant for Research who endorses it to the Vice-Chancellor for approval.

For instance, not all projects have to be evaluated by the Technical Evaluation mechanism instituted by the offices of Dr. Alvarez. The evaluation of projects proposed by researchers coming from the same unit could be handled at the unit level. The recommendation at the unit level should be endorsed by the Assistant for Research for approval, unless he has serious and compelling reasons to reevaluate the proposal.

Dr. del Prado felt that the Faculty of Agriculture, and not the Office of the Assistant for Research had a better mechanism to evaluate the projects of the NFAO programs. The Faculty had research committee organized according to commodities and problem areas which could work out more effectively as evaluation mechanisms.

In the evaluation of NFAO programs, Dr. del Prado had also involved the officials of NFAO and the Malaga Research Council which is the national policy <sup>of</sup> making body for agricultural research in the country. Thus, the NFAO programs were continually focused not only to the policies of the university but also to those of the national agricultural agencies which had a hand in determining research priorities for food and agricultural research.

Dr. del Prado said that a more pressing concern of NFAO research leadership in the university is the institutionalization of responsibility among the researchers. As a result of his dialogues with the program and project leaders of the various NFAO programs, the researchers have become

aware that the programs are not just another "milking cow" from which they could get additional resources, such as the honorarium or money to hire more assistants for a pet project. Every study must be built on valid objectives and they must be ready to be accountable at the end of the year to deliver results; otherwise, they must be prepared to have their studies terminated.

Considering that the units should exert the primary leadership in managing unit research programs the Assistant for Research would perform ministerial functions of endorsing the recommendation of the units to the Vice-Chancellor and maintaining centralized records of all research projects conducted in the university.

It remained an issue whether the Assistant for Research should name staff functions. Dr. del Prado and several senior faculty members who have opportunities to hold administrative positions think that it should remain a staff function. However, they agreed that the designation should be changed.

Dr. del Prado said that a staff officer has unique responsibilities in the sense that one would never know when he is assuming a "staff responsibility or a delegated line of authority."

One senior faculty member recollected that during his tenure as Director of Research of the Faculty of Agriculture, he always consulted the Dean. While he prepared correspondence and other documents involving institutional policies and commitments, it was the Dean who signed these papers.

His responsibility as Director of Research was that of an implementing arm. He prepared for negotiating and agreements but it was always the Dean who acted, on behalf of the institution, on formal agreements. But then, he said, he enjoyed the trust and confidence of the Dean and that made a lot of difference.

Case Study 9

FRIENDSHIP UNIVERSITY:

- A. THE CASE OF THE CONFLICTING EXERCISE OF AUTHORITY
  - B. THE CASE OF THE DISMISSED RESEARCHER
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Introduction

FRIENDSHIP UNIVERSITY was a Christian institution of higher learning located in one of the Visayan islands of central Philippines. It was relatively small, with a total faculty population of only 200.

Chart 1 FU's major organizational structures:

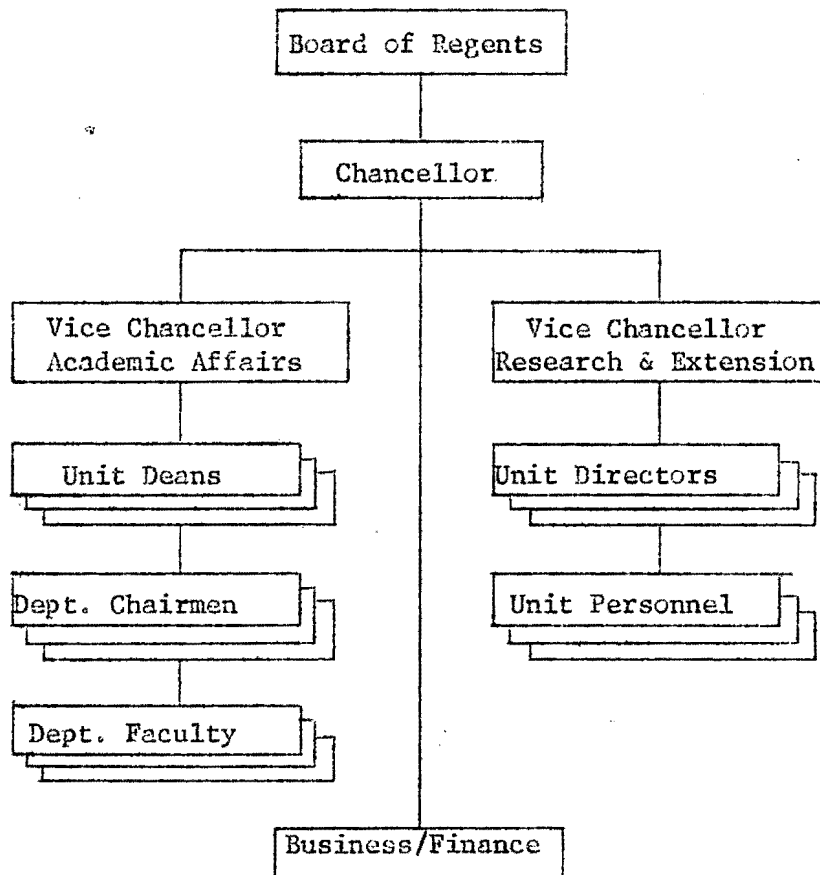


Chart 1  
Organizational Structure

Prepared by Benjamin Malayang; release being negotiated.

Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

The Deans of the College of Arts and Sciences as well as the College of Theology were examples of UNIT DEANS. The Directors of the University Research Center, the University Environmental Center, the University Alumni Affairs Office and the University Extension Program were examples of UNIT DIRECTORS. DEPARTMENT CHAIRMEN included the Chairmen of the Department of Biology as well as the Department of Philosophy. UNIT PERSONNEL included the researchers of the University Environmental Center and the faculty research grantees of the University Research Center.

DR. TEODORO ABALOS was Vice Chancellor for Research and Extension. He was a very busy man: besides being the Vice Chancellor for Research and Extension he was also the Dean of the College of Arts and Sciences, the biggest College in the University. He was also the Director of the University Research Center as well as of the University Environmental Center. As Professor of Biology, he also taught in the graduate program of the Department of Biology.

The focus of these two cases was the Environmental Center. Dr. Abalos managed the integrated bio-physical environmental research of the Center, with the environment of the whole island as its field of operations. The center had a research force of eight (8):

1. Dr. Teodoro Abalos ..... PhD (Biology)
2. Prof. Henry Jose ..... MS (Biology)
3. Prof. Joseph Lacsamana ..... MS (Biology)
4. Mr. Oscar Hinahon ..... MS (Biology)
5. Mr. Jose Urbano ..... MS (Biology) LESS THESIS
6. Ms. Lydia Abad ..... BS (Chemistry)
7. Ms. Aida Lucero ..... BS (Biology)
8. Ms. Zenaida Pedro ..... MS (Physics) ON LEAVE

Ms. Abad provided the chemistry study requirements of the projects of the Center.

At the time under consideration, Dr. Abalos had been granted a sabbatical leave of six months, spending his leave as Visiting Professor of Biology in one of the Universities in Southeast Asia.

In his absence, Dr. Abalos appointed MR. JOSE URBANO as Officer-in-Charge of the Environmental Center. The over-riding reason for the appointment was because Mr. Urbano had been most involved with the on-going construction of the Center's Marine Laboratory, supervising the construction and assisting Dr. Abalos in its administrative work. The construction of the Marine Laboratory was a pet project of Dr. Abalos.

But as Officer-in-Charge, Mr. Urbano of course had to assume some other responsibilities in the Center, like the coordination of the research activities of its researchers and providing for various administrative support to them.

Thus, in his memorandum appointing Mr. Urbano OIC of the Center, Dr. Abalos specified that Mr. Urbano was to "oversee the Administrative requirements in the Center and to coordinate the activities of the Center's researchers (the use of vehicles, schedule of field trips and support personnel assignments)..." (underscoring added).

A. The Case of the Conflicting Exercise of Authority

In order to schedule the activities of each researcher, and in order to "coordinate" the technical efforts of each of them, Mr. Urbano first called for a staff meeting whereby everyone was to acquaint each other of the technical details of each of their current assignments in the various projects of the Center.

At one point in the meeting, first as a matter of clarification, Ms. Abad was asked how she had been sampling for the determination of the Chemical Oxygen Demand of the stations under study by the Center. Ms. Abad explained that she dipped test tubes into the water to get her samples. Titration was conducted upon landing.

In the course of the discussion, it was however learned that Ms. Abad had failed to consider covering the test tubes and making them airtight before they were brought out of the water.

At this point, Ms. Abad raised her voice to angrily ask Mr. Urbano (who did most of the questioning of Ms. Abad's procedure) what he was up to. It was obvious that Ms. Abad thought that Mr. Urbano was out to discredit her. It was also obvious that Ms. Abad resented being 'bossed around' by just this 'one of them.'

Mr. Urbano argued that the  $O_2$  exchange at the surface will alter the oxygen content of samples contained in uncovered test tubes. Ms. Abad, her pride obviously pricked and annoyed of the 'who-does-he-think-he-is' stance of Mr. Urbano, stood firm on her procedure; contending and alleging that such a procedure was one suggested by a "foreign consultant" and that Dr. Abalos had not previously objected to it. Ms. Abad angrily suggested that they all consult Dr. Abalos.

Mr. Urbano decided that there was no time to consult Dr. Abalos. The scheduled activities of the others demanded that such counts be made available within the month. With the agreement of the other staff members (who agreed with the points raised by Mr. Urbano) Mr. Urbano decided that Ms. Abad should change and re-do her counts. Ms. Abad objected. She would not change her procedure.

Irked by Ms. Abad's vehement insistence, Mr. Urbano decided to exert his authority as Officer-in-Charge. He said: "As OIC of the Environmental Center, I order you to change your procedure and re-sample immediately ... within this month."

Ms. Abad objected: She argued that she could not abide by the order as a matter of principle, i.e., that she, being the chemistry researcher of the Center, was alone responsible for her own chemistry study outputs and she was not to be intimidated by an "administrative or any other authority of a different expertise." She

further pointed out that Mr. Urbano's authority as OIC did not encompass and could never include the authority to impugn doubts and corrections on her procedures, much less order her to alter her procedures and do things -- chemistrywise -- which she thought, as a professional chemist and scientist, she should not do. The principle must be upheld: that on matters of chemistry she alone was the authority insofar as the Center was concerned .. especially on her own procedures and outputs.

"In the first place," she ended, "I don't respect you..."

#### B. The Case of the Dismissed Researcher

Mainly as a result of the conflict and clash between Mr. Urbano and Ms. Abad (Case 1: "The Case of the Conflicting Exercise of Authority") a personal friction developed between the two. Mr. Urbano became increasingly wary and critical of the personal and official acts of Ms. Abad and Ms. Abad became increasingly wary and critical of the personal and official acts of Mr. Urbano.

Upon Dr. Abalos' arrival, Mr. Urbano reported that the work of Ms. Abad was of dubious integrity. Not only were her procedures wrong, citing her sampling procedure as a case in point, but that her sampling schedule itself was also questionable. Mr. Urbano reported that Ms. Abad did not sample all the stations under study and that, for the stations under study she had sampled, she sampled only once. Moreover, her field trips were lavish, with so much food preparations "as if they're going on a picnic."

This report of Mr. Urbano prompted Dr. Abalos to confront Ms. Abad. With only ₱45,000.00 per year research budget, Dr. Abalos was so concerned with the cash flow of the Center. He further asked Mr. Urbano to ask Accounting to detail the cash flow of Ms. Abad's reported field trips, her withdrawal of funds for such field trips and her subsequent liquidations. (See Attachment A for the Disbursement Procedure of the Center).

It was found out that Ms. Abad withdrew funds for field trips she did not make. When asked of these, Ms. Abad confessed that she did fail to go ahead with "some" of her scheduled field trips and that some of her data were concocted, i.e. to "cover-up" for trips she reported to have made but actually did not make.

Upon Accounting's more detailed examinations, cross-checking with Approving/Recommending Officers whose signatures appeared in Ms. Abad's vouchers, it was found out that some signatures had been forged. Again when confronted, Ms. Abad conceded that she did some of the forging to "facilitate" her work.

It was found out that a total of ₱ 16,000.00 had been withdrawn by Ms. Abad improperly, taking advantage of her having been known by the personnel of the Business and Finance Office (specifically the Assistant Comptroller who approves cash advances) to push vouchers which had now been found out to be questionable. Because she was that known by the people in the Business and Finance Office, as a matter of confidence in her integrity, they did not crosscheck and verify the signatures in her vouchers. (Said the Assistant Comptroller: "In this place we, or course, do not ordinarily do..")

This apparent mis-use and abuse of funds and confidence by Ms. Abad enraged Dr. Abalos who had now been also informed that the Center had now a credit balance of ₱69,000.00 (₱24,000.00 of which is the total credit balance in its research funds).

Dr. Abalos asked Ms. Abad to sign a notarized statement promising to re-pay the University the amount of ₱16,000.00

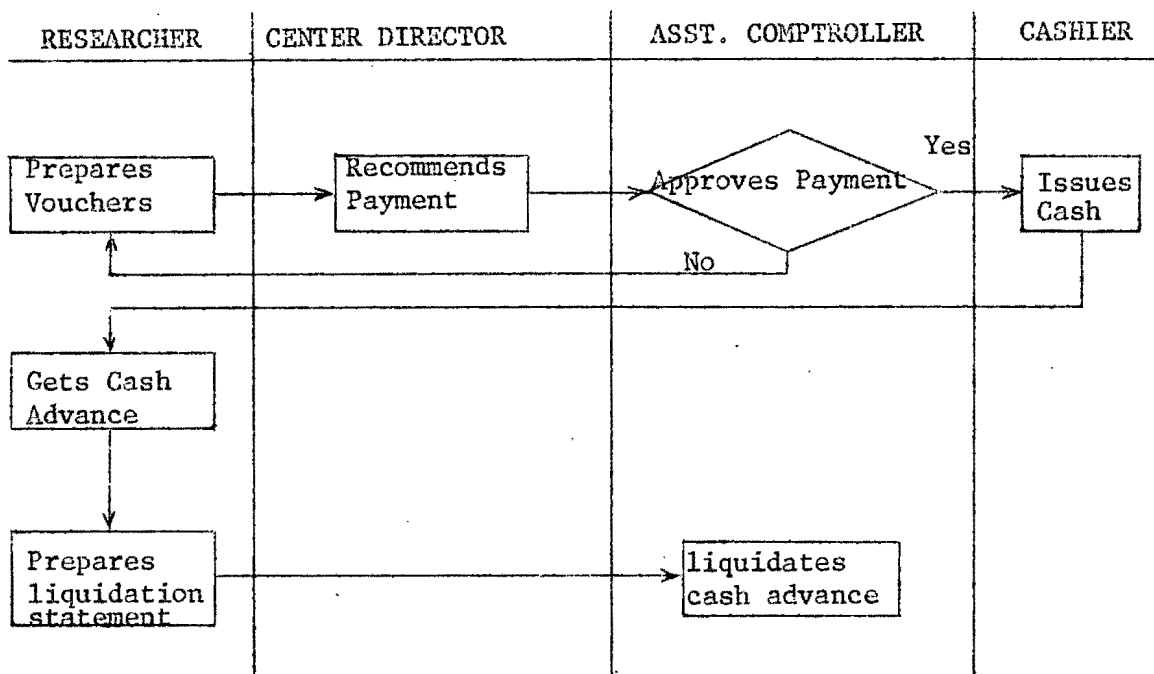
When Ms. Abad made all her admittance of mis-deeds in a private confrontation with Dr. Abalos, with Mr. Urbano confronting her with evidence from Accounting and his own records, Dr. Abalos as Dean of the College of Arts and Sciences, dismissed her from the faculty of the College. Dr. Abalos also readied a memorandum for the Vice Chancellor for Academic Affairs to ask for her dismissal from the Faculty of Friendship University. Reason: mis-use of funds.

Ms. Abad, before she could be dismissed by the Vice Chancellor for Academic Affairs, however, resigned that very afternoon.

Upon learning of the incident, one of the University's research professors, Dr. Estella Estrada, opined that the decision of Dr. Abalos was made so impulsively and that it was not proper as Vice Chancellor for Research and Extension. Dr. Estrada, a member of the faculty of the Department of Chemistry, argued that Ms. Abad's dismissal should not have been officially based on mis-use of funds ("so many researchers are guilty of this ...") but on the "scientifically irresponsible act of concocting data, possibly the most heinous crime in research."

APPENDIX A

DISBURSEMENT FLOW



APPENDIX B

VOUCHER SAMPLE

Pay to _____ the amount of _____ ( ) for _____	
Recommended for Payment	Received:
_____	_____
Approved for Payment	
_____	

## THE UNIVERSITY OF LUZON<sup>1</sup>

### The Situation

The University of Luzon (UL) was an educational institution attended by some 12,000 college students. Its academic and administrative affairs were run by about 800 personnel led by Dr. Ricardo Cruz as President.

Dr. Antonio Mendiola was the Vice President for Academic Affairs of the University. In this capacity, he reported directly to the President.

A young ambitious Ph.D., Dr. Mendiola seized every opportunity to project himself for advancement in rank, position and importance. Thus, he gained some sort of "political" connections which won for the 45-year old Vice President favorable consideration for promotion to the position of Executive Vice President of the University, if and when the chair would be made vacant by the incumbent who had announced an intention to retire the following year.

While the organizational structure (Fig. 1) of the UL indicated that the position of Executive Vice President was equal to that of the Vice President for Academic Affairs, in matters of compensation<sup>2</sup> and practice they were not. In fact, the Executive Vice President ranked next to the President in power and authority, with the sole prerogative to take over the management of the University when the President becomes incapacitated. The position of Vice President for Academic Affairs, therefore, was only third ranking in practice.

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<sup>1</sup>Prepared by Jose P. Leveriza, Assistant Professor of Public Administration and Assistant Director of Research of the Bicol University, Legazpi City. All names in this case have been disguised. Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>The salary of the Executive Vice President was ₱48,000.00 a year, while that of the Vice President for Academic Affairs was only ₱36,000.00

The President, Dr. Ricardo Cruz, was nearing his 63rd birthday anniversary with contentment and satisfaction at his achievements as top official of the UL, and looking forward to his retirement in two more years of active leadership in a respected and venerable educational institution.

As an administrator, President Cruz sadly lacked the capacity for good, efficient management that was required of his position. He exhibited a hazy view of administration, which often gave way to non-managerial activities that mocked his true functions. In such manner, he oftentimes proved himself a discordant note to the demands of university leadership, particularly a state university.

A look at his background indicated that President Cruz had been dean of a graduate school of a private university in Metro Manila for some 20 years before becoming head of the UL. He fared well in "politics" and utilized to good advantage his skill in relationships to make up for his lack of formal training and substantial experience in management to secure the UL presidency.

His leadership was of the paternalistic style in the way he associated with both the old and the young employees of the University. He was practically dependent on "advisers"<sup>3</sup> -- people he put in his staff in whom he developed a particular liking for and trust in -- for opinions that influenced his decisions. He never delegated his powers. His decisions were highly centralized. He expected his subordinate supervisors to be loyal and responsible to him alone. He made them fully dependent to him for information on anything that had to do with people or management.

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<sup>3</sup> His advisers were young, ambitious men in the staff who equally lacked management experiences but who were most willing to do everything to advance their careers in the government service. Called "technocrats" of the University, they used to be former instructors of vocational subjects of the institutions which formed the nucleus of the UL before the latter was created by virtue of a political "fiat."

Dr. Cruz did not manifest the personality of a university president. His personality was common and his bearing and deportment never commanded much respect, except his titles and position. He sported with pride his degrees of B.S.E., M.A. in Education, and Ph.D. in Education without in the least living up to the image of a good leader and administrator. His skill in politics served him well indeed as UL head, but it did not save him at all from the constant harassments of his political opponents.

A Director of Research, Mrs. Sylvia Gomez, helped Vice President Mendiola as a staff assistant on research coordination and services. A good Catholic and of an extensively religious nature, she actively participated in several church, civic and social organizations in the community. With strong work ethics and intense institutional loyalty, she was rated a "model professor" before she was elevated to the rank of directorship.

Already 43, Mrs. Gomez belied her age with her charm and vivacity which gained for her enormous popularity with her colleagues. Not given to subterfuge or known to take advantage of intrigues for their promotional values, Mrs. Gomez was loved by her associates for her honesty. Her homegrown concept of good manners showed in her dealings with co-workers, such that no one would ever conceive her capable of breaking rule just to win a promotion. She was never known to have shirked any duty or responsibility thrown her way. But that did not prove she was equal as well to the task of management.

Of high moral discipline that befitted a good religious leader, Mrs. Gomez was nevertheless a helpless and bewildered hand in the intricacies of a bureaucracy.

On assuming the role of research director, she floundered at the ineptitude of her colleagues in the University which was happily screened from public view by the excellent performance of the institution in its annual reports. Although her honesty rebelled

at the inadequacies of such reports, she never brought out such shortcomings at staff meetings to save herself from hurting her fellow workers. Nevertheless, she confided to Dr. Mendiola how she felt about the performance of some associates and pointed out measures by which the University may improve its research capability.

Vice President Mendiola, on the other hand, proved his weakness in leadership. He succumbed to those who threw their weights around. He interpreted this as a way of befriending both the angel's and the devil's advocates. He could not make himself rise above the workings of politics.

In fact, he said: "Dance with the music of politics.... a jealous master."

He was indeed one of those who supported the idea that conformity was discipline. He was obsessed with the need to please everybody. Even in matters of no consequence, he would go out of his way to help his colleagues just to win their applause or approbation. In this manner, he hoped to prevent anyone from destroying his "good" image with the President.

On September 13, 1973, Mrs. Gomez' husband, a man of means in the locality, joined the Muñoz Lions Club. Also an old member of the Muñoz Lions Club was President Cruz. Not long afterwards, Mr. and Mrs. Gomez soon became close friends of the Cruz family.

As a result of this amity between the Gomez and Cruz families, Mrs. Gomez gained the confidence of President Cruz to the point of unofficial familiarity: she could go to him anytime and worry him no end about her work problems.

Vice President Mendiola became aware of this development in no time. The superior officer of Mrs. Gomez in the University organizational structure, he found the situation quite oppressive. He looked on the familiarity of Mrs. Gomez with President Cruz as an affront to, or a by-pass of, his position in the chain of command in the University.

Forces working in his mind made him analyze oppressions arising from the following points:

1. The "power struggle" between the President and the Executive Vice President. He detected a "cold war" existing between the two University tycoons as a result of misunderstanding in the management of the University. It occurred to the President that his powers were being clipped, if not usurped by the Executive Vice President who commanded more loyalty from most of the "new" staff members because of his closeness to a "political lord."

Most of the assistants to the President (the chiefs of offices) sought the Executive Vice President instead of the President when they need or request for promotions, position preferences, equipment requisitions, etc., to the chagrin and helplessness of the latter.

In this situation, Vice President Mendiola was caught in the "crossfire," being the "confidante" of the President and the "kabayán" (townmate) as well of the Executive Vice President. Both expected a certain amount of loyalty from him. In a manner of speaking, he was torn between the affection of two lovers.

The Executive Vice President was Vice President Mendiola's senior. The latter owed the former a host of "utang na loob" (personal favors) so that he could not possibly side with the President at all times nor give the President his full loyalty without proving himself an ingrate before the eyes of the Executive Vice President. He felt the same way with regard to President Cruz. As a result, he decided to play the role of a bat -- to his disadvantage.

He somehow developed the idea that due to the strained relations between the President and the Executive Vice President, the Executive Vice President might lure Mrs. Gomez to his side and find out so much about how he (Mendiola) really intended to deal with the President and the Executive Vice President.

2. The imagined threat from his staff assistant (Mrs. Gomez).

Vice President Mendiola knew that Mrs. Gomez enjoyed enormous popularity with her colleagues. On the other hand, Vice President Mendiola knew he was considered a "newcomer," having joined the University shortly after his return from Canada where he took his Ph.D. in Education the year before Mrs. Gomez had been with the University for more than 15 years as a professor of no mean caliber. Prior to his assumption of his post in the UL, Dr. Mendiola had been a general education supervisor III of the Department of Education and Culture.

Despite his spectacular academic achievements, Vice President Mendiola felt insecure before the circle of friends of Mrs. Gomez.

Dr. Mendiola recommended Mrs. Gomez to her present position as Director of Research over a former male classmate who held a higher academic rank and administrative position. The move was based on Dr. Mendiola's assumption that Mrs. Gomez' popularity would boost a great deal the weight and value of his position, not to mention the influence of her husband's political connections. He was concerned, therefore, in using Mrs. Gomez to attain his ends of advancing himself, while at the same time taking advantage of her qualifications as an outstanding faculty member and a scholar of note in running for him the academic affairs of the University. In other words, he thought of using her intellectual capacity to his personal glory as Vice President, conscious all the time of his own lack of intellectual strength and chafing at the thought that he was nothing more than an "average student" in his college days. He ruefully recalled that it was only by sheer persistence and diligence that he earned his Ph.D. degree.

3. His awareness of personal intellectual deficiency which was not compensated by his academic degrees. Conscious of himself as an "average student" who never gained any honor even in a provincial college, he did not feel himself qualified to be bossy or in a

position to order around a B.S. in Chemistry, *summa cum laude*, and an M.S. in Chemistry graduate of the University of the Philippines, even if she were only his staff assistant. That, and his own innate "reverence" of a charming, self-spoken woman of unassailable morality contributed to his unshakable feeling of inferiority and lack of confidence to pursue his own wishes. His awareness as well that Mrs. Gomez was a real favorite of the "political lords," he dared not throw his weight against her despite the superiority of his position for fear of retaliation and ensuing denunciation of his own worthlessness. Recalling her perspicacity, he even dared not argue with her for fear that she might be evaluating him and finding for herself what he knew of himself.

In the end, Dr. Mendiola began thinking that he had brought into his office and nurtured a "spy" in the person of Mrs. Gomez, who might at any moment give him away to the President for what he thought himself to be in comparison with her.

His paranoia hit a high pitch when on one occasion he was called up by the President on what he took as a reaction to an information fed to the President by Mrs. Gomez.

The conversation between them was recorded as follows:

DR. CRUZ: It had come to my attention that our faculty members are not devoting their attention to substantial research work. Their teaching loads have been considerably light, but their free hours are spent more on directing less significant student activities than in research. What do you say about this?

DR. MENDIOLA: I would say not, Sir. I understand from Mrs. Gomez that she has received a lot of research proposals from the faculty members but on analysis they were not listed in the priority fields of study. The proposals must measure up to priority before they can be allowed as projects for undertaking.

DR. CRUZ: Precisely. That's why I told Mrs. Gomez to prepare a plan for an in-service training in research. Especially on the preparation of research proposals. I hope she has discussed with you some aspects of this. I instructed her to be ready with the plan as soon as possible and to show me a list of those whom we could give research assignments shortly. I am very, very interested in coming out with meaningful research work. It seems to me that you are not helping Mrs. Gomez out in this line.

DR. MENDIOLA: Obviously, Mrs. Gomez had discussed with you her work problems....

DR. CRUZ: (Disregarding Dr. Mendiola's comments) I understand you are so engrossed with instruction. I hope you will turn your attention to research. As I say, I am interested in tangible results in research. I want you to help Mrs. Gomez in reviving strong interest in research among our faculty members. Our potential researchers must be allowed full-time in research work, if possible.

DR. MENDIOLA: But that's where our problem definitely lies, Sir. We lack instructors for Biology, Sociology, Public Administration and Economics. Most of our potential researchers have their hands full conducting these courses. We would be forced to sacrifice quality instruction in case we devote more time to research at this stage.

DR. CRUZ: I rely on your resourcefulness to remedy such a situation, if and when it comes. At any rate, I'd discuss this matter with Mrs. Gomez, particularly on what could be a more workable alternative. She hinted at something we could do, just in case, at

the last time we discussed her problems in research. I expect you, however, to support her plans.

DR. MENDIOLA: I am doing my best, Sir. I have no idea what plans she has presently, however. Somehow, I hope what she has in mind would be for the best interest of everybody. I'm glad she goes directly to you, Sir, for whatever she feels important enough for you to know.

DR. CRUZ: (Laughing.) Don't let that upset you. We're all working for the interest of the University. Now, I instructed Mr. Torres (Budget Officer) to see how much we could possibly earmark for research next year. Nevertheless, our budgetary allotment alone should not be the limit of our efforts in this area. We can tap outside resources, can't we?

DR. MENDIOLA: We can, of course, of course. But....as we have said, what we need are presentable proposals. We do not have them at present. At least, that's what Mrs. Gomez has allowed me to know.

DR. CRUZ: By the way (changing the topic), I received these papers (tapping on his desk) from the Provincial Governor. Tell me, where can we place some of these people.... (confidentially). They have poor qualifications... but we can't afford to refuse the Governor (laughing)... could we? And he wants them near enough so he could possibly call them whenever he needs them....

No one in the University was aware of any serious problem cropping up at all.

Then one day, all of a sudden, Dr. Mendiola's wife called up Atty. Jesus Arriola, the Personnel Officer, to report that her

husband had to undergo a medical check-up for a nervous breakdown. It was obvious he was grappling rather unsuccessfully with a grave problem.

### The Problem

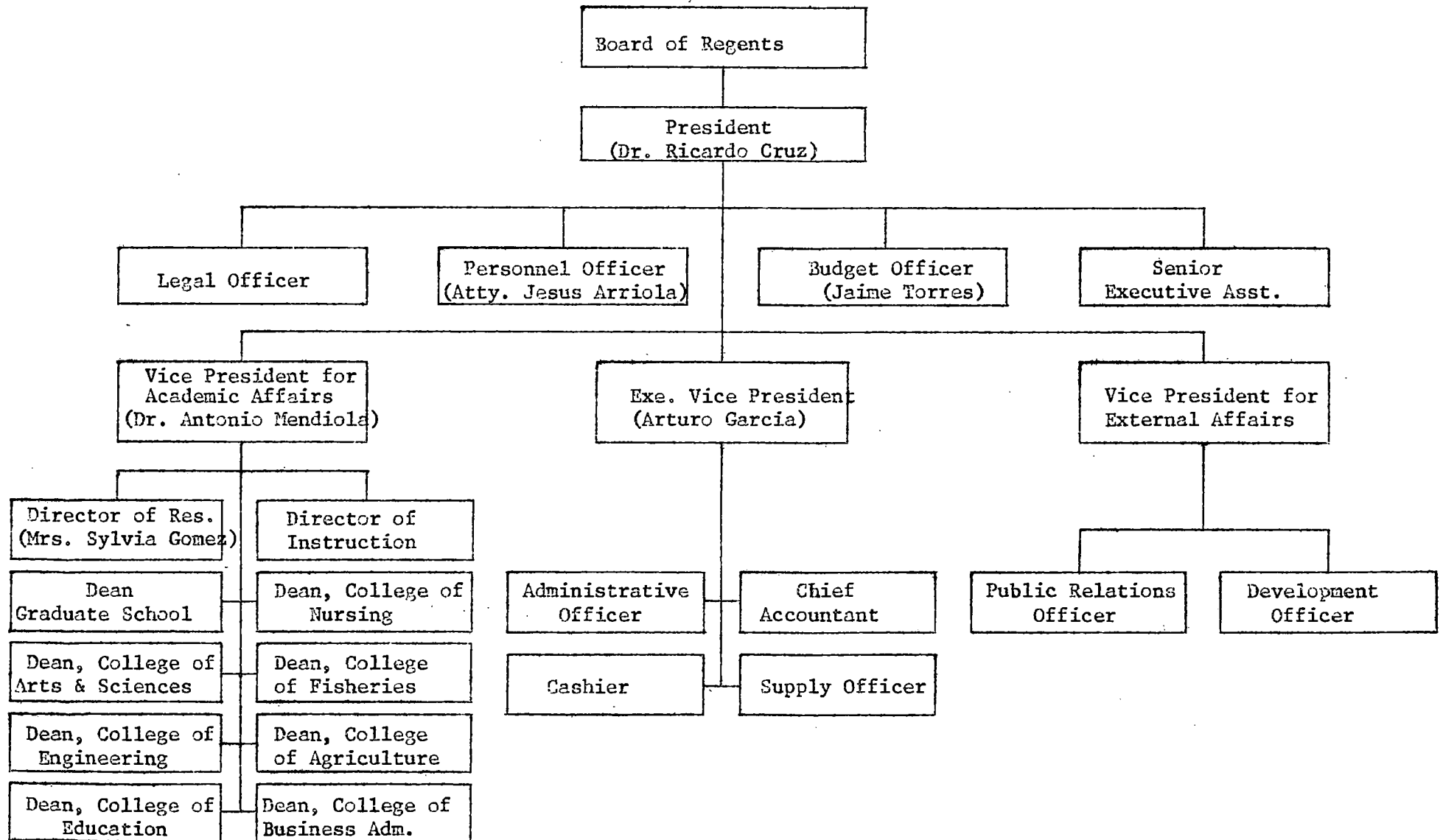
As a university president, Dr. Cruz is concerned with creating within the institution an environment which would facilitate the accomplishment of its objectives. He must, of course, be also vitally affected by the external environment in which the University must operate and over which he has very little if any control. Within the academe, however, he is responsible for the environment in which his subordinates work. He should create conditions conducive to efficiency. In doing this, he should plan the work schedule of his staff, select them for specific roles to play and provide them individually the necessary training required for their respective roles. He should likewise organize their work relationships, direct their respective operations and, most important of all, evaluate their individual performance.

*Assuming that you were President Cruz, who has just been informed by Atty. Arriola that Dr. Mendiola is suffering from a nervous breakdown, what would you do? What upset Dr. Mendiola? Recalling your conversation recently with Dr. Mendiola, you could perhaps assume or divine that it was over the unethical or unofficial manner of Mrs. Gomez in taking up her work problems with you, which is indeed an affront to the Office of the Vice President, if not to the person of the Vice President. It can also be considered a by-pass of a superior and a violation of the usual work procedure.*

*Considering cultural values and organizational goals, what can you do to save the situation?*

FIGURE 1.

ORGANIZATIONAL CHART OF THE UNIVERSITY OF LUZON



## Case Study 11

### UNIVERSITY OF TROPICAL AGRICULTURE Research and Consulting

On the afternoon of February 8, 1977, President Jose Ramos of the University of Tropical Agriculture was trying to weigh in his mind whether he would grant the request of Dr. Mario Cruz, Assistant Professor in the College of Agricultural Sciences, to go on a one-year consultancy stint with the Asian subsidiary of a multinational agribusiness company. He met with his Council of Deans and Directors the previous week to seek their counsel on the matter and evaluate the alternative decisions and their probable consequences. President Ramos was aware that the university faculty considered the request of Dr. Cruz as a "test case" and that whichever way he decided, it would have a "demonstration effect" on the faculty.

#### The University of Tropical Agriculture (UTA)

UTA was a medium-sized university in Sri Visaya, a developing Southeast Asian country. It was located some 100 kilometers from the center of Padongga, the capital city of Sri Visaya.

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Names are disguised to minimize discussion bias.

This case material was prepared in July 1977 by Dr. Geronimo M. Collado, Agribusiness Project Manager of SEARCA and Assistant for Planning and Development at UP Los Baños.

Cases of SEARCA are intended for discussion and training purposes, not to illustrate proper or improper handling of administrative situations and problems.

UTA started out as a School of Agriculture. The School was built by western colonizers in 1920. Since then, the professional staff, facilities and student population had been growing at such a fast rate that in 1968, the College became a full-fledged university by legislation and accreditation.

As a university founded upon agricultural technology, UTA's mission was stated as "to promote agricultural and rural development in Sri Visaya and Southeast Asia in general." The strategy in pursuing this broad goal consisted of a three-pronged thrust:

1. Instruction - production of high-level technical and managerial manpower needed for rural development;
2. Research - production of improved technologies and systems for the small farmers of a dynamically developing society;
3. Extension/Public Service - dissemination of usable new technologies for the benefit of small farmers and small-scale industrialists in the rural areas.

Each academic staff was supposed to embody the above three functions.

In 1976, UTA had seven (7) degree-granting colleges/schools and six (6) training and research institutes. Its total staff on campus consisted of 3,071 persons, of which 463 were doing the teaching, research and extension functions while 1,037 did only research and extension support services and the other 1,571 were primarily administrative staff (Exhibit).

A total of 169 staff members were on study leave while 33 were either on leave of absence or detailed to mostly government agencies.

In 1976-77, the 463 academic (teaching) staff allocated their service time as follows (see Exhibit, item IX):

Instruction	17.9 percent
Research	61.3 "
Extension	20.8 "

UTA's enrollment in the 1976-77 school year reached 5,139 and 5,242 during the first and second semesters. Over the last five years, undergraduate enrollment had stabilized while the graduate enrollment has been growing at 23% annually.

#### Research at UTA

UTA's staff had become increasingly research-oriented based on the functional allocation of their time. A survey of the staff showed that the two main reasons for this were the economic incentives and professional prestige in research. The economic incentives for research consisted of an honorarium system whereby a professor got additional income of up to 100% of his basic salary according to these rates:

Program leader - \$120

Project leader - \$80

Study leader - \$40

In 1976, an Assistant Professor I got about \$170 per month. Moreover, promotion in the academic ladder had been observed to be positively correlated to the number of publications based on research. As one professor in economics commented:

"Let's face it - the name of the game is still 'publish or perish,' despite official pronouncements that teaching is our primary concern. In research, I get more income and I can do what I want. Whereas in teaching, I get subjected to criticisms and boycotts from students who are lazy and want spoon-feeding. And even from a macro-viewpoint, research provides more marginal benefits to the country than teaching especially in the case of our MS and Ph Ds. Teaching can be done by graduate students and young instructors but only MS and Ph Ds can do decent, rigorous research."

The major strength in research at UTA had been in agriculture and related sciences. During the last five years, its staff had turned out breakthroughs in high-yielding and disease-resistant plant varieties and animal species, indigenous farm machineries, small-scale processing technology, and multiple-cropping systems, among others. As such, UTA had no difficulties in increasing its financial and physical resources. Its tangible research outputs had provided UTA and its staff greater visibility and prestige.

A diploma from UTA had become a passport to national government agencies not only in Sri Visaya but also in its neighboring countries. Its staff had been a fertile hunting ground for leadership of smaller colleges, universities and government action programs for agricultural development. It also served as the training arm of the Ministry of Agricultural Development for the latter's technical and managerial personnel.

Dr. Mario Cruz

Dr. Cruz entered UTA as a freshman in 1963. He graduated with a Bachelor of Science in Agriculture, cum laude. Immediately after graduating in 1967, he was recruited by UTA as an instructor in Plant Breeding. In 1969, he left on a Rockefeller Foundation scholarship for the USA. In 1974, he returned to Sri Visaya with a Ph D in Molecular Genetics from a prestigious land grant university in midwestern United States.

Since his return, Dr. Cruz had been doing mostly research in plant breeding for biological resistance - although he always taught at least one graduate course in genetics every semester. Occasionally, he had been invited to lecture on the new plant varieties to farm technicians from the Ministry of Agricultural Development as part of his extension load.

In December 1976, he presented a paper for an international conference of the International Society of Plant Breeders. It was there where he was approached by Mr. Webb, Vice President for Research and Development of a multinational agribusiness company, who offered him a job as a senior scientist. Though Dr. Cruz was attracted by the offer, he did not commit himself to Mr. Webb because of his contractual obligations to UTA. He had to serve UTA two years for every year that he was abroad studying. He promised Webb that he (Cruz) would seek permission to take a leave from UTA and would communicate the result to him soon.

Upon his return to UTA after the conference, Dr. Cruz invited his dean for a dinner and they talked the matter over. The dean, after seeing that the wife and six children of Dr. Cruz were all excited about going abroad, promised to endorse the request to President Ramos of UTA.

#### Council of Deans and Directors (CDD)

The CDD was the highest advisory body at UTA for administrative, policy and operational matters. Its counterpart for academic matters was the University Council.

Every month, the President met the CDD to discuss important policy matters and monitor their performance, plans and problems.

As the name indicated, CDD was composed of deans and directors who were elected by their respective constituencies. No student representative sat in the CDD although some student leaders were invited occasionally if the agenda included student affairs and problems.

#### The CDD meeting - January 30, 1977

One of the agenda in the last meeting was the university policy on leaves of absence and special details of the professional staff. As of that date, there were six applications for leaves and details from professors in various colleges/institutes. President Ramos wanted to take a "reading" of the way his units perceived the university policy on this matter in the face of the six pending cases, one of which was that of Dr. Cruz.

President Ramos read through the relevant portion of the transcript\* of the meeting once again in order to crystallize and refine his decision alternatives:

TRANSCRIPT

Ramos: I have on my table two letters of request for leave of absence and four for special detail, duly endorsed by their department chairmen and by you as their deans or directors. One of those requests came from a professor who still had some contractual obligations to serve the university - Dr. Cruz of Agricultural Sciences. I would like to invite your candid discussions and wise counsel not only on the pending requests but also on the university policy on the matter in general.

EM: I am just an officer-in-charge of our college while our dean is abroad. May I be briefed on the university policy on this matter?

Ramos: For those who have served out their contract to the university, our policy is to allow leaves of absence up to a maximum of two years. Special details don't have maximum length but generally, we also follow two years. For faculty members who are still bound by a contract,

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\*Initials in the transcript stand for the head of the college/institute, e.g. AS means Dean of Agricultural Sciences and AR means Director of Agrarian Reform. Colleges were headed by Deans while institutes/centers were headed by Directors.

we allow special details especially to the Ministry of Agricultural Development. But for leaves of absence, we generally frown upon them so that the university could maximize the utilization of a fresh Ph D.

CP: I would like to remind the body that a year ago, Dr. Villa of our institute was denied a similar request on the grounds that he still had a contract.

Ramos: Yes, that was unfortunate, indeed. We denied his request and as a result, he resigned after paying the money equivalent of his obligation. We lost a good Ph D in plant pathology there.

AS: That's my point in endorsing the request of Dr. Cruz. If we deny his request to go on leave, we might lose him.

Ramos: Yes, it is my policy to try to maintain our good, high-level manpower. That's why I want to reexamine our policy on this matter.

FS: On the other hand, if we approve the request of Dr. Cruz, others might follow. In my college, two of my younger Ph Ds have informally asked me if they could go on part-time consulting with logging companies.

PD: These problems come up because the university salary level for Ph Ds is only about one-fourth of their market rate. At the B.S. and MS levels, we are still competitive

with the private sector. But not at the Ph D level. The difference in pay between a B.S. and Ph D in the university is only \$50/month, which is ridiculous considering the time and money investments in getting a Ph D.

AS: I would like to bring our focus back to the case of Dr. Cruz. He has served my college and the university very well during the last three years. Why can't we allow him to work outside for eight times his university salary - even for only a year. The guy needs to build a house which he could not do on his university salary alone. And we could not even accommodate him in our faculty housing area because there are no vacancies.

CC: If we permit Dr. Cruz for one year, would that mean another two years would be added to his contractual obligation?

Ramos: No - we just defer the rendering of the original service obligation.

DTM: Let us apply the policy strictly. I agree with FS that if we become lenient in the case of Dr. Cruz, we might be faced with more requests from similarly-situated faculty members. If this request involves an MS, we automatically disapprove the request. Why do we hesitate when a Ph D is involved? That's discrimination!

- AS: We invested an average of about \$30,000 for a Ph D. And that's just the money cost. How about the time required to get a Ph D? We only spend a tenth of that amount for an MS because it's local.
- GS: How about those whom we sent abroad but who did not come back? They also have contracts but what can we do about them?
- LA: Maybe we can get our Ministry of Foreign Affairs to go after them and extradite them or at least make them reimburse the university.
- HE: We can do that but do you think that a faculty member would be motivated in working for the university given the circumstances surrounding his return?
- AS: At any one time, our staff's commitment to the university is anywhere along a continuum of 0 to 100%. Many of us in this body, at least I hope, are near the 100%, if not that. But for the typical professors, some are near the 0%. Take the case of Dr. Cruz - he's probably near 0% or else he would not even attempt to write a letter of request to us. If we deny his request, we are in effect pushing him to 0% commitment. Whereas if we allow a one-year leave, we are leaving the room open for increasing his commitment and loyalty towards the 100%.

FS: But in the process, we might push the commitment of others toward the zero point because of the demonstration effect of the Cruz request plus a probable demoralization.

EM: I agree with FS. The other faculty members are watching this case as a precedent-setting test case. We might - - -

PB: Why and how would granting the request of Dr. Cruz demoralize the others?

FS: It would if others follow and we deny their requests. And we cannot avoid inconsistencies here because some colleges, unlike the AS, would suffer in their teaching if their new Ph Ds take a leave. So we have to approve some and disapprove others. That would create dissatisfaction among our staff.

CP: I think we are prostituting the sense of values of our scientists by lending them to private corporations. We are succumbing to pressures of materialism. We might sacrifice our institutional objectivity if we continue this practice.

Ramos: Let me give you a historical perspective on the university attitude toward consulting. In the 1950s, the university policy was no-consulting. Then, in the 60s, consulting was allowed on a case-to-case basis - provided this was done outside office hours. In the early 70s, if you recall, we generalized this case-to-case policy - but still

outside office hours. In 1975, we started allowing under exceptional cases consulting during office hours provided the client is government, and it is covered by a memorandum of agreement which specifies that UTA gets 15% of the project cost to defray administrative overhead, and that the professor does not devote more than one day a week on the project.

PB: I'd like to inform this body that in more prestigious and progressive universities in the US such as Harvard, one-day per-week consulting is not only allowed but also encouraged. The rationale is that if the professor has consulting work, it means he is useful to society, that he is good and that his research and teaching capabilities are enhanced by field experiences. I suggest we consider consultation as extension activity to be credited as service to the university. (Majority were seen shaking their heads.)

CC: But the USA has a well-developed market economy, an active private sector and a surplus of Ph Ds. Our conditions in Sri Visaya, as a developing agricultural economy, are quite different.

Ramos: Can we zero in on our policy options? What are our alternatives and their attributes?

DTM: Option 1 is strict enforcement of the standing policy on people with contracts - stay or pay.

AS: The second option is defer the enforcement of the contract for one year and allow Dr. Cruz to go on leave of absence without pay. We can use his item for a substitute while he's away.

FS: Are you sure he is coming back after one year?

AS: He promised me.

FS: He also promised to render ten years of service to the university but look what he wants to do after just 3 years - - - -

PB: It doesn't say continuous service.

Ramos: Do we have a third option?

HE: Option 3 is let him go but add another 2 years to his obligation.

Ramos: Can we take a preliminary count of how you vote on those three options? I might note that option 3 is really a variation of option 2, right? Only, option 2 does not entail adding another 2 years, right?

(The votes by show of hand were taken on each option.)

Thank you - I will be guided in my final decision by your comments and preferences. Shall we go to the next item in the agenda?

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## UNIVERSITY OF TROPICAL AGRICULTURE (A)

Exhibit  
Selected Institutional Data on UTA

I. Academic Units of UTA

College of Agricultural Sciences (AS)  
 College of Forestry Sciences (FS)  
 College of Liberal Arts (LA)  
 Graduate School (GS)  
 College of Human Ecology (HE)  
 College of Economics and Management (EM)  
 College of Engineering and Technology (ET)

Institutes/Centers (for research and training):

Credit and Cooperatives (CC)  
 Agrarian Reform (AR)  
 Dairy Technology and Management (DTM)  
 Policy and Development (PD)  
 Plant Breeding (PB)  
 Crop Protection (CP)

II. Enrollment at UTA, School Year 1976-77

	<u>First Semester</u>	<u>Second Semester</u>
Undergraduate	3,546	3,536
Graduate		
Masteral	925	1,034
Doctoral	152	170
Others (non-degree)	<u>516</u>	<u>502</u>
Totals	5,139	5,242

III. Annual Growth Rates in Enrollment

	<u>Undergraduate</u>		<u>Graduate</u>	
	<u>Number</u>	<u>Growth rate (%)</u>	<u>Number</u>	<u>Growth rate (%)</u>
1970-71	2,550		448	
71-72	2,509	- 1.6	435	- 2.9
72-73	2,186	-12.9	472	8.5
73-74	2,430	11.2	531	12.5

15

74-75	2,834	16.6	739	39.2
75-76	3,021	6.6	902	22.1
76-77	3,441	13.9	1,131	25.4
Average		5.6		17.5

- Notes: 1. For every 21 students in 1976, 10 were female.  
2. In 1975-76, 880 undergraduate and 516 graduate students had scholarship grants.

IV. Instruction outputs in 1975-76

<u>Undergraduate (BS)</u>		<u>Graduate</u>	
Agricultural Sciences	218	MS/MA	120
Forestry Sciences	38	Ph D	26
Liberal Arts	20		
Human Ecology	42		
Agribusiness/Ag.			
Economics	7		

V. Academic (Teaching) Staff on-campus, as of December 31, 1976

	<u>BS</u>	<u>MS/MA</u>	<u>Ph D</u>	<u>Total</u>	<u>%</u>
Instructor	181	73	-	254	54.8
Asst. Professor	5	42	64	111	23.9
Asso. Professor	1	8	61	70	15.2
Professor	-	-	28	28	6.1
Totals	187	123	153	463	100.0
Percent	40.4	26.5	33.1	100.0	

VI. Distribution of UTA Non-teaching Personnel:

Academic (non-teaching)	1,037
Administrative	1,571
Total personnel on-campus	3,071

VII. Academic Staff On-leave - 202

a) Studying for:

MS/MA	65
Ph D	95
Post-graduate Training	9

b) Leave of Absence/Special Detail in Government  
Agencies - 33 (19 Ph Ds, 6 MS)

VIII. Costs of Education Per Student Per Year at UTA (in US dollars)

	<u>1974-75</u>	<u>1975-76</u>
Undergraduate	437	405
Graduate	970	805
Tuition fee level	53	87

IX. Functional Allocation of Staff Time (in percent)

<u>Staff Time Allocation</u>	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>
Instruction			
Undergraduate	15.4	12.4	19.9
Graduate	9.0	7.5	7.0
Research	44.9	58.2	61.3
Extension	30.7	21.9	20.8

X. Financial Sources for Research, FY 1976

	<u>%</u>	<u>\$ Million</u>
National Government Agencies	90.2	2.4
Foreign sources (foundations)	9.3	1.9
Private companies	.5	.1
	100.0	20.2

XI. Number of Research Projects and Percentage Allocation of  
Research Funds, 1976

Plant Sciences	62.0
Forestry Sciences	4.6
Animal Sciences	11.1
Biological Sciences	3.2

Physical Sciences	8.5
Social Sciences	10.6

Total Number of Research Projects in 1976

On-going	285
Completed	111
Proposed	112

XII. Non-Human Resources of UTA in 1976

Buildings	\$6 million
Equipment	\$2.8 million
Operating Funds	\$9.3 million (operating funds have been growing at 43% in the last 5 years)

Case Study 12

DIVISION OF ECONOMIC RESEARCH <sup>1</sup>

R-i-n-g-g-g! At 8:10 A.M., Monday, it was a phone call to the Chief of the Division of Economic Research (DER) from Mr. Sison of the Cagayan Valley Development Agency. "The Agency wanted a farm management study (for the area) as soon as possible" said the near frantic Mr. Sison, "for a bank mission coming soon to appraise the viability of a proposed project for financing."

Before the Chief could answer back, Mr. Sison continued. "Money is no problem. We are willing to shoulder all expenses - salaries, per diems, travel and supplies. With the good performance of the Division in conducting market research work and related studies for our Agency, we thought that DER would be a good choice for conducting the study."

"Let me check with my key people," said the Chief. We are quite busy now and we have to have people who speak the local dialect. However, I will call you within an hour and give you an answer and a cost if we can do the job."

Please do so," answered Mr. Sison. "If you are not in a position to do the job, we will be forced to give it to some other agency."

The Division of Economic Research was established with its main function being to conduct special studies, especially on marketing of agricultural products, so as to provide "quickie" advisory judgements re critical marketing situations to government agencies. One government official even called it a "strike force."

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<sup>1</sup>Prepared by Mr. E. D. Dosayla; release being negotiated.

Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management.

The establishment of the Division was made possible through a foundation grant of \$30,000 over a two-year period with local counterpart funds of \$80,000 annually, in addition to supplies, equipment and office space. Although the memorandum of agreement called for local financing of ₱80,000 annually, the second-year budget amounted to ₱292,000. In the third year, it amounted to nearly ₱667,000 (See Exhibit 2). The increase in the budget was in part due to additional funding from studies requested by other agencies.

The initial staff consisted of three senior research workers detailed from an educational institution -- one on a full-time basis and two on a part-time basis -- a project consultant and a secretary.

The Project Consultant was in his fifties and a recognized authority on marketing. He had been a professor of marketing in an American university and a consultant to both private companies and several governments. He had conducted many studies, published numerous research reports and authored several books on marketing, including one on Southeast Asia.

The senior research workers were in their thirties and had agricultural backgrounds. One was a livestock marketing expert and had done consulting work besides being a professor of livestock economics. The two other researchers were farm management specialist and a marketing specialist.

As a first step, the senior staff developed a list of priority areas for research activities. This was done through conferences with different government officials. The list of research projects developed covered livestock, consumer economics, fruit, vegetables, fish, cereals and feed grains. Each senior research worker was assigned a certain area or areas of work with the consultant as the over-all coordinator.

The junior staff, composed of market analysts, undertook the surveys, did the data analysis, and prepared the research reports

under the direction of the senior staff members. They were hired on a contractual basis for six months or for the duration of a study. At the start, agricultural college graduates with majors in agricultural economics were hired, the work being related to agriculture and economics. However, as the need for research data grew, graduates from other disciplines (Agronomy, Animal Husbandry, Home Technology, Commerce and Economics) were hired to cope with the expanded activities. Also, in addition to the original detailed personnel, other personnel were detailed to the Division -- a Peace Crop Volunteer, a fish specialist, a livestock man, and a professor of agricultural economics.

The market analysts were paid a starting salary of ₦500 per month. Annual raises of ₦600 to ₦1,200 had been given, based on merit. While on surveys, personnel were given per diems and travel allowances. Additional benefits included two days leave each month, one day off for every week in the field (they work on Sundays while on surveys) and a day-off for every Saturday worked (skeletal force) and 30-minutes for coffee breaks. Women are provided with uniforms at subsidized prices. Detailed personnel are given fixed representation and travel allowances. On surveys, they made use of the Division's funds.

In return for the above benefits, the analysts were required to render 8 hours work per day in one of two shifts, 7:30 A.M. to 4:30 P.M. and 9:00 A.M. to 6:00 P.M. Attendance was recorded with the use of a time clock and log book.

With each research study, the senior staff discussed the project, prepared a budget, assigned a senior or junior staff member<sup>\*</sup> to be the team leader and selected the personnel to undertake the work. The selection of personnel depended upon their experience, capability, college training and place of origin.

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\*An outstanding junior staff member or one of seven involved in a special staff development program.

With the exception of the market analysts assigned to food consumption studies, personnel were re-assigned to other projects upon termination of an existing one. In the case of the nation-wide food consumption surveys, on a quarterly basis, some female personnel were pulled out of their regular work to undertake the consumption surveys. After the surveys, they return to their former projects.

In case there was no available market analyst for a new project, additional personnel were hired. If the need was great and a person without an agricultural background was the only one available, he was first trained in the office by letting him assist others in their work. In this way, he developed a feel of the work. Apprenticeship also applies to agricultural economics majors although to a lesser degree.

As in other proposals, the senior staff sat down to discuss the Cagayan Valley Project and prepared a budget. Being a government agency, the Division charged other agencies at cost. For this particular project, the senior staff felt that the personnel to undertake the work must have a good knowledge of farm management and the local dialect. These requirements were very important to produce good results as the Division desired to maintain a good relationship with its clients. It was decided that seven market analysts were required to undertake the job.

A review of the staffing pattern of the division showed that there were six market analysts with the proper training and who knew the local dialect. However, most of them were tied up in other projects. Even if they could be released from their present assignments, they could not travel on funds from this proposed project. A ruling from the Auditor's office required that employees hired on one account or funding could not use the funds of other projects or offices.

An examination of existing applications showed that most of the applicants were graduates of Business Administration, Animal Husbandry, Agronomy, Soils, Microbiology, Plant Pathology and Education.

One senior staff member, therefore, suggested that DER hire graduates of a recognized agricultural institution but offer them a starting salary of ₦550 or ₦600 a month to be competitive with other recruiting agencies (private and public). He emphasized that the office must hire right away since it is the close of the semester and many companies are recruiting the graduates. However, while there was no problem with funds, the higher starting salaries may cause discontentment among the older staff members who started at lower rates.

The Chief (of DER) believed that DER should get this project not only to maintain a good standing with its client but also the project offered a challenge to DER since it represented an expansion of DER's activities in agricultural research.

EXHIBIT 1. ORGANIZATIONAL CHART

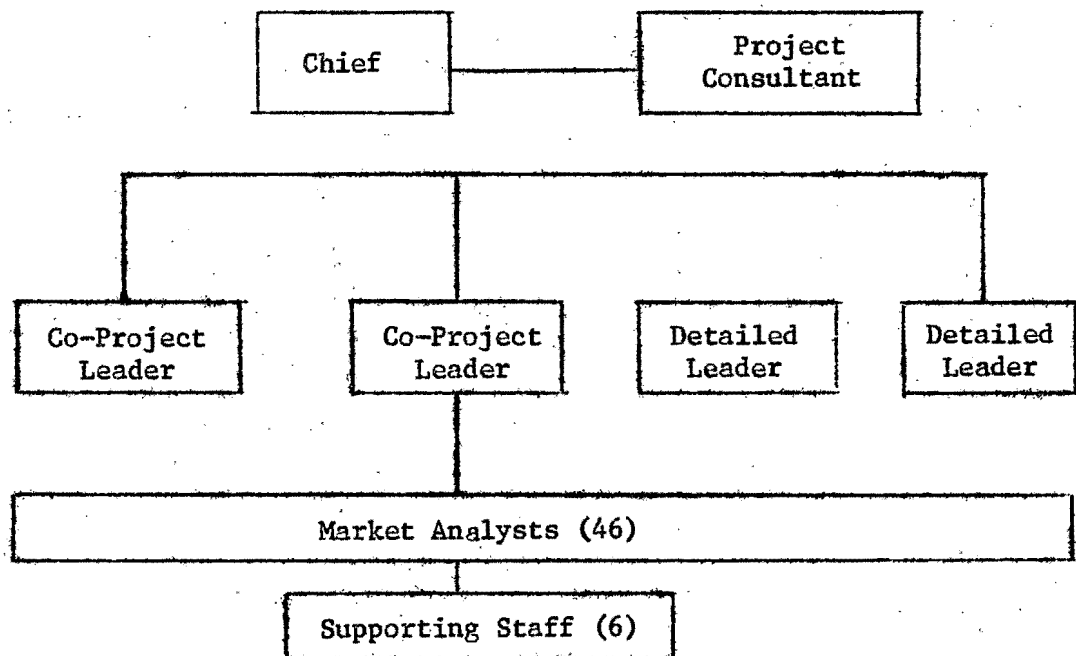


EXHIBIT 2. PROPOSED BUDGET FOR FISCAL YEAR 1974-75,  
DIVISION OF ECONOMIC RESEARCH

Projected Expenses:

Wages	₱ 307,050.00
Supplies, equipment, travel & contingencies	459,878.00
<hr/>	
Total	₱ 766,928.00

Source of Funds:

Local counterpart	₱ 488,528.00
Studies requested	178,400.00
Foreign grant	100,000.00
<hr/>	
Total	₱ 766,928.00

EXHIBIT 3. REGIONAL ORIGIN OF RESEARCH STAFF AS OF  
OCTOBER 16, 1974

<u>Region</u>	<u>Number</u>
Ilocos	7
Cagayan Valley	3
Central Luzon	7
Southern Tagalog	24
Bicol	3
Visayas	3
Mindanao	3
Other	2
<hr/>	
Total	52

EXHIBIT 4. STUDIES THAT HAVE BEEN REQUESTED (AS OF SEPT. 1974)

1. Coffee marketing
2. Mongo marketing
- 3-5. Root crop marketing
  - a. Cassava
  - b. Gabi
  - c. Ubi
6. Marketing of yellow corn
7. Marketing of white corn
8. Value of infrastructure facilities for agriculture
9. Policies for export of breeding animals
10. Price policy: social, support, subsidy aspects
11. Small scale water resources
12. Marketing margins, selected products, continuing basis
13. Marketing intelligence for fish and fishery products
14. Financing of fish marketing
15. Seasonal variation in volume and prices of bangus
16. Dried fish marketing
17. Consumer resistance to frozen fish
18. Production costs for fish-pen operations
- 19-22 Cotton industry studies
  - a. Prices
  - b. Trade
  - c. Production costs
  - d. Marketing costs
23. Feasibility of a feed mill in Bicol area
24. Feasibility of a livestock processing plant in Bicol area
25. Integrated Rural Development Study of Iloilo (Marketing aspects)
26. Feasibility of a livestock processing plant in Iloilo area
27. Feasibility of a feed mill in Iloilo area
- 28-31 Masaganang Maisan
  - a. White corn
  - b. Yellow corn
  - c. Sorghum
  - d. Soybeans
32. Production of soybeans in Davao del Norte

EXHIBIT 5. RESEARCH STUDIES COMPLETED AS OF SEPTEMBER 30, 1974

Field	Number	Percent
Livestock	11	22
Consumer economics	9	18
Fruits	7	14
Vegetables	5	10
Fish	5	10
Feed grains	5	10
Cereals	5	10
Others	3	6
Total	50	100

FUSION OF THE RESEARCH AND EXTENSION PROGRAMS  
INTO THE RESEARCH AND DEVELOPMENT PROGRAM (R & D)

INTRODUCTION

This is a case study on the conceptualization and operationalization of the Central Luzon State University (CLSU) R & D so conceived and organized to meet the needs of its target clientele in Central Luzon (CL). It attempts to picture the processes involved in program formulation and at the same time present briefly its various components reflecting the aspirations of the rural people it serves.

This case study is part of a continuing effort by the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)/Philippine Council for Agriculture and Resources Research (PCARR) Research Management (RM) group, and that of the CLSU research leaders to help rationalize the planning and programming of agriculture and resource research and extension in this part of the country. Due to the proliferation of research organizations either in response to the demand or desire for a balanced, integrated well-organized rural development programs, in which agricultural research and extension are major thrusts there is need for this kind of study. A sharing of experiences on some aspects of program planning and implementation can bring about the needed insights and direction on how to deal with specific research management problems.

PROBLEM-ORIENTED R & D

As head of an agricultural institution, committed to serve the short-term needs of rural students, small farmers, landless workers, rural women and out-of-school youths in Central Luzon, and the

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<sup>1</sup>Prepared by: Fermina T. Rivera; release being negotiated.

Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

requirements of the Philippine economy as a whole via its research, extension and teaching programs, President Campos had always been beset with multifarious problems. One of these problems which he considered of primordial importance needing immediate action was finding an appropriate social mechanism for channelling packages of technology to the rural households. He believed that the new science and technology should reach and serve farm families directly instead of just being heard around conference tables. From his own observations of the University's Research and Extension activities and through feedbacks from reliable sources he felt that some innovations must have to be introduced in the way they had been implemented. In one of the Executive Council meetings he declared that the Social Laboratory (SL) project was merely duplicating the functions of the Bureau of Agricultural Extension (BAE) and other extension agencies. Furthermore, the CLSU technicians were "extending" something in which the teaching and research groups had limited expertise on. He also noticed that documentation of extension programs and activities undertaken including dissemination of such information was not properly done, and that the SL as implemented was extension per se instead of conducting it as a research/service study project through testing of extension strategies in human resource development.

On the other hand, the Research Unit had developed its own outreach program-training, technical assistance and information delivery system in cotton, freshwater aquaculture and inland fisheries, sunflower, sericulture, and apiculture - for the wider dissemination of the new science and technology developed in its experiment stations and crop research laboratory. From the administration's point of view, the felt need therefore was for a centralized research and development system into which research and extension were integrated.

In June 1977, after much ado about many things - selection of concepts and structures, placement of people, use of facilities and venues of projects, the fusion of the Research and Extension Programs into the R & D was forged. Prior to the merger, two schools of thought developed. The Extension group believed that the traditional separation of Extension and Research was still a viable one for the following reasons: (1) the Extension program (referring to the twin components of SL and Barrio Development School projects) was new (since 1974) and that to drastically change the set-up would demoralize both Extension staff and clientele; (2) the likely impact of the University extension on target communities and barrio associations could not be objectively arrived at due to the short span of time in which it was operative; and (3) certain innovations in program implementation had already been undertaken and leadership efforts in this area, therefore, would go down the drain. Hence, it was suggested that the Extension Unit be allowed to operate as a separate but cooperating unit of the Research department for another set of three years (this duration represents the tenure of a CLSU official). The administration group however was convinced that three years was enough time to test the efficacy of a program, and that the new Extension program being proposed was duplicative of many of the activities of the Research unit. The Research group, meanwhile, thought that the Research and Extension merger was a challenging arrangement and, therefore, did not have any objection to the decision (to merge the two programs.)

#### Background

The CLSU just like any institution of higher learning had three major functions, namely: extension, teaching and research (ETR). Starting as a farm school in 1909 (CLAS) it became an agricultural college in 1950 (CLAC) and in 1964, a University (CLSU), thus, the modest farm school became a state university which "shall primarily give professional and technical training in

agricultural and mechanic arts besides providing advanced instruction and promoting research".

### The Birth of the R & D

Charts 1, 2 & 3 present the organizational structures of the University, reflecting the changes in the status of its research undertakings within a decade, starting 1967, and corresponding changes in other programs. An organizational structure is actually a hierarchy of people and functions in an organization, and represents decisions to make the machinery for carrying out a program meet its objectives most effectively and efficiently. In addition, it is a stratification of people into positions and tasks depending on expertise and priority of needs into the operation of a research organization.

In Chart 1, Research and Extension were two separate programs in 1967 but managed by one head, the Graduate Department Dean. The second chart shows the dichotomy of Research and Extension which is the more classical structure in many institutions of higher learning. Each program, Research and Extension, was managed by a Director, a third man in the University line-up of administrators, the President and the Vice President, being the first and second men, respectively. The present fusion of the Research Program and the Extension Program is pictured in Chart 3. Thus, with these three organizational structures, one can observe the evolvement of the present R & D set-up as shown in this chart; from a two-component program of research and extension in 1967 under the graduate department dean; to a separation of research and extension into two big programs, with the research program consisting of the Central Experiment Station, Crops Research Laboratory and Research Publication unit; and the extension program consisting of Social Laboratory and Barrio Development School projects in 1971; and now to a five-component program in R & D, namely: agriculture and resource commodity researches,

rural development studies (RDS) continuing education, training and technical assistance, and management information service. R & D was headed by one Director and assisted by an Associate Director, the first one being a Geneticist and the second one an agricultural and extension education man. Complementation of the "hard" and "soft" sciences was the principle followed in selecting the R & D leaders.

The merging of the Research and Extension Programs into the R & D was based on a "pipeline" approach to the transfer of learning and technology. This approach considers rural development as a continuum that begins from attempts to help solve the problems of a target community/clientele, leading to the discovery and development of packages of technology, delivery and outreach and finding as much as one can the technological as well as the psychosocial and cultural changes generated in rural settings. Hence, the merger was viewed as a more potent social mechanism for bringing science and technology to the rural households.

Criteria-base for valid organizational management change utilized Figure 1 which presents a behavioral perspective of how research results are to be handled to see to it that they reach end-users.

Agricultural and resource research as a public investment had to be transformed into tangible benefits resulting in improved levels of productivity, income, and living, and simultaneously or subsequently better quality of life. This supports the thesis of rural development as a continuum which starts from a desire to help man attain the good life he wants to enjoy; and R & D as a pipeline approach to the transfer of science and technology so that a life that is individually and socially good to live is fulfilled.

Packages of technology which are supposed to meet clientele needs are developed in the agricultural commodity research unit. The management information center as processing plant and promoters

of the new knowledge, sees to it that the new technology is packaged and transmitted to the target clientele or to extension and communication units. The continuing education, training and technical assistance units provide educational opportunities and advise to selected target groups so that the new learning is reinforced and/or those who are not reached by the formal system and more advanced education, also benefit from the new science and technology through innovative nonformal training schemes.

So as to find out who are being helped by development programs, and what kinds of impact result, the RDS was initiated and further strengthened. It also took charge of testing extension strategies to find out which were most effective in the transfer of new technology. Furthermore, it served as a feedback mechanism for researchers, extensionists and teachers to see what happened to the research/training and technology transfer so that adjustments, modification or drastic changes in the various units of the R & D in particular and the CLSU and other support systems to agricultural and rural development in general were indicated for policy guidance at psychological moments, before any program or project is "blown-up".

Since the establishment of this institutions as a college in 1950, and as a University in 1964, research and extension had been two distinct programs, the separation being a classical one. A review of the performance of the two programs, however, showed that this traditional set-up was both expensive and ineffective. In the case of Extension, it was extending something which the University had very limited expertise on; with Research, it had to develop its own outreach programs for extending the benefits of the packages of technology that it has developed.

For the efficient and effective support service to the agricultural and rural development programs of the country in general, and Central Luzon & the University in particular, the integration of the

Research and the Extension Program was forged. This strategy assures complementation of activities for impact on the target clientele through priority projects. The integration further assures efficient management and maximization of resources.

In the 1976 Budget Structure, the Research Program had 3 major thrusts, namely: The Central Experiment Station, the Crop Research Laboratory and the Research Publication Unit.

As a result of the merger, the R & D had 5 major projects, namely: Project 1.0 Agricultural Commodity Researches, Project 2.0 Rural Development Studies; Project 3.0 Continuing Youth and Adult Education; Project 4.0 Training and Technical Assistance; and Project 5.0 Management Information Services.

The thrust of Project 1.0 is the conduct of researches on local, regional and national priorities: cotton, freshwater aquaculture, sunflower and apiculture, sericulture, soil and water resources, vegetables, grains and livestock.

The thrust of Project 2.0 was the conduct of studies on the social laboratory as a pilot project in human resource development and extension approaches, poverty and agrarian reform, population and distribution of support services/systems to priority clientele; irrigation management; and agricultural education/extension innovations. It operated an ETR interchange which was a tripartite involvement of extension agents, teachers and researchers in a forum on the wider & efficient dissemination of the new science and technology. Just like all R & D components, this project is in direct support of countryside development and research priorities consistent with pressing problems primarily of Central Luzon.

The thrust of Project 3.0 was the operation of formal and non-formal education schemes for selected target clientele - small farmers, rural women, landless labor, illiterate adults, and out-of-school youths, with the latter and the young married couples as top priority groups to be reached.

The thrust of Project 4.0 was to design and implement training programs for priority groups and change interventionists, for the wider and more effective transfer of technology. It envisaged technical assistance to help accelerate and sustain changes generated by such training and/or diffusion of science and technology. The approach in Project 3.0 & 4.0 was to concentrate on well-selected activities within a few barrios so as not to spread resources too thinly.

In research, the aim was to help identify and study certain aspects of rural development problems, evolving a collection of curious facts about the idiosyncratic characteristics of the Central Luzon population, poverty conditions, and means to alleviate them. Thus gazing into the crystal ball of the future and conceptualization of alternative futures for the people was somewhat supported by insights gained from the descriptions of human variability and access of population to development programs. This effort was complemented by the simultaneous development of packages of technology which were packaged by and disseminated through outreach services the training and technical assistance, the continuing youth and adult education, and ETR projects. The impact of the use of such packages of technology is also the object of intensive research via the social laboratory concept the purpose of which is to develop and mobilize human resources and test extension approaches that would be most effective in channelling social change.

In teaching/extension/interchange the aim was to bring to the attention of rural households and the interventionists of change-students, farmer leaders and other subprofessionals like barefoot extension agents of the BAEx, extensionists, policy makers and scientists - the present status and profiles of rural development clientele and the corresponding existing alternative for enhancing the desired quality living or what might be termed as the perceived good life. Thus, both the so-called catalysts of change and the target group stood to benefit from human development endeavors through

results of researches, teaching and extension. The simultaneity of growth of both object and agent of change was the principle followed here.

Research & Extension - coordinated, intensified and made more responsive to rural needs had become imperative to the acceleration and sustenance of rural development. A central authority like the R & D was needed to operationalize the pipeline approach to this development of Central Luzon which the University was committed to serve. The ultimate measure of its effectiveness as an engine of change in social processes especially as these related to agricultural development, is its contribution to and impact on the educational, economic, social, cultural and political well-being of the people it served.

Criteria-base for valid organizational management.

Agricultural research as a public investment has to be transformed into tangible benefits resulting in rural development. This supports the thesis of rural development as a continuum and R & D as a pipeline approach to the transfer of science and technology.

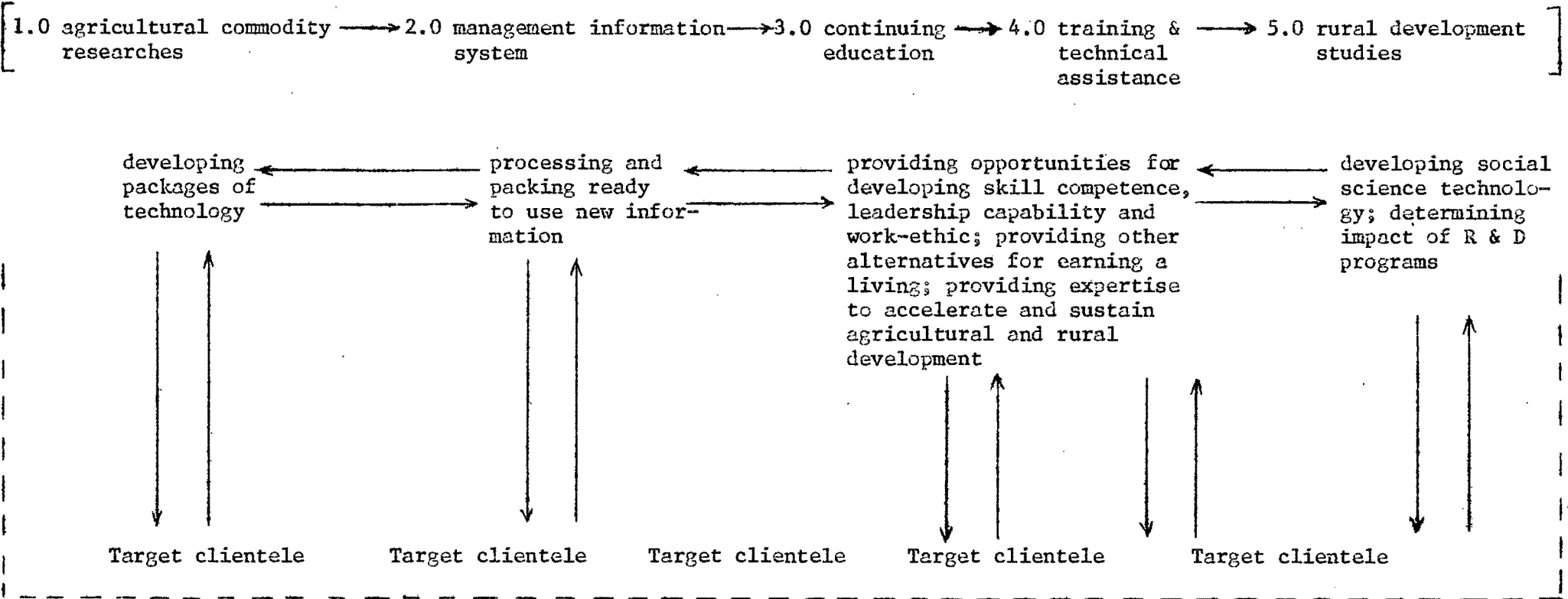


Figure 1. A behavioral perspective of how research results reach end-users.

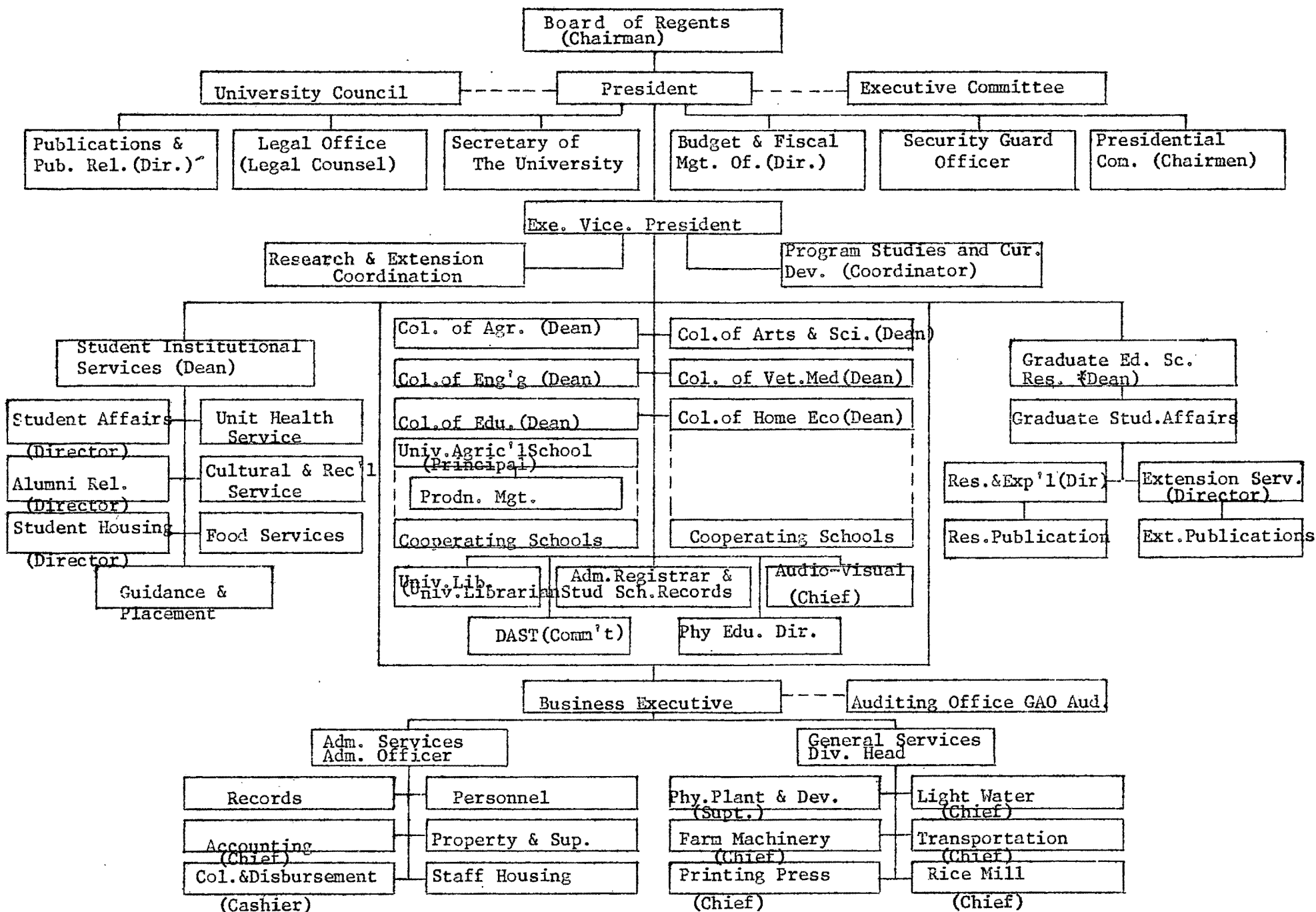


CHART I. ORGANIZATIONAL STRUCTURE OF THE CENTRAL LUZON STATE UNIVERSITY 1967

Chart 2. Organizational Chart of the Central Luzon State University, 1971

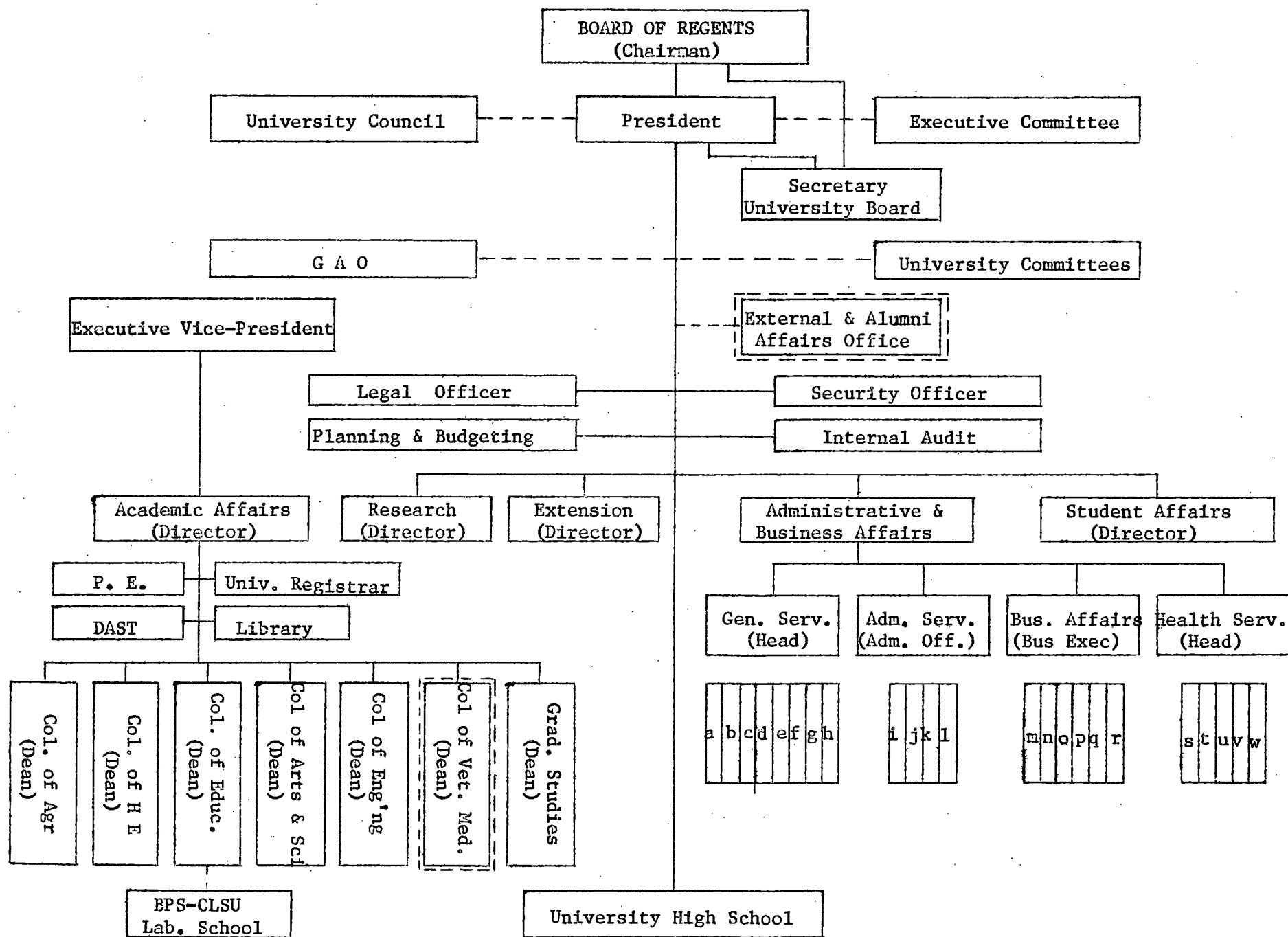
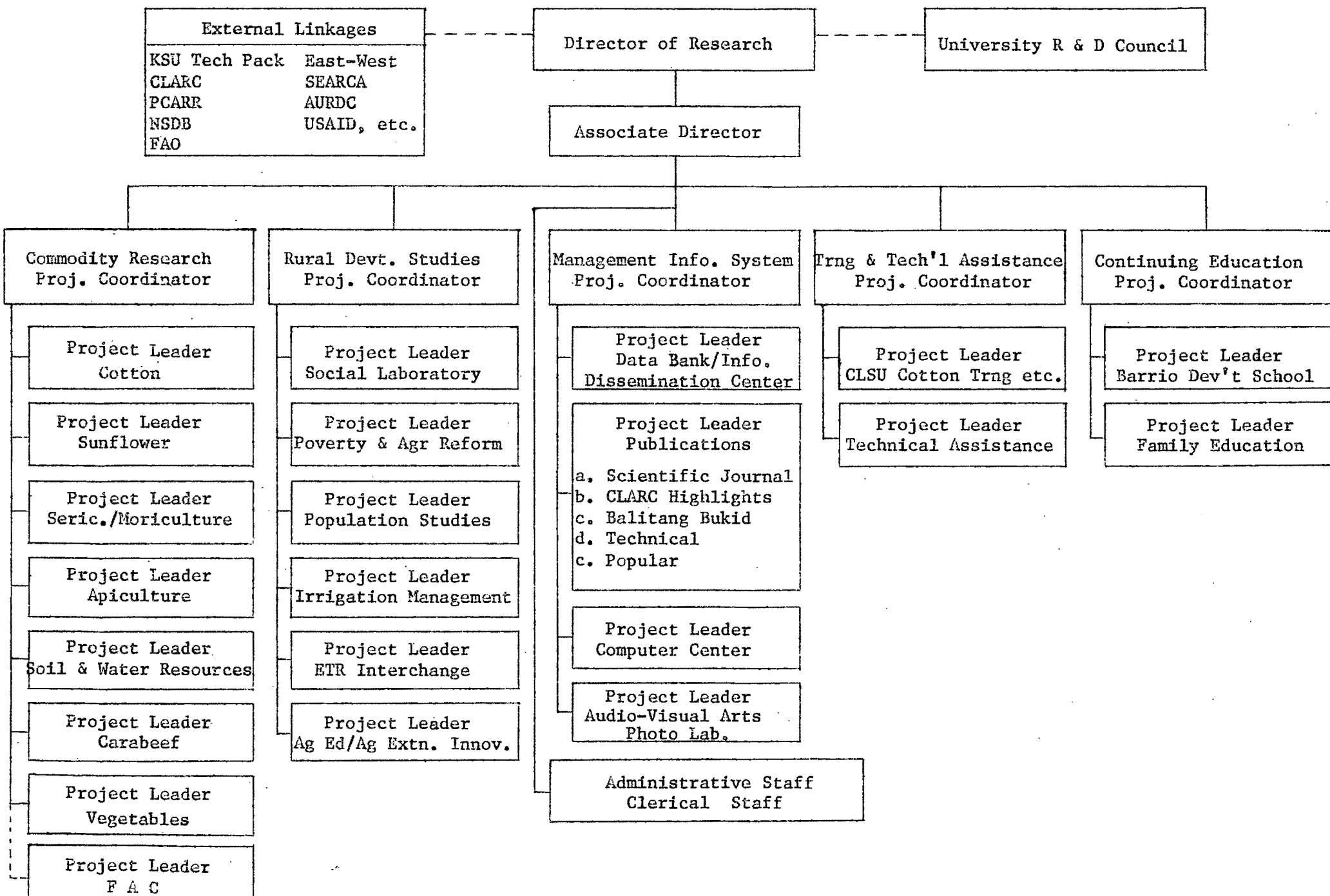


Chart 3. Organizational Structure of the R & D Program, 1977



## Case Study 14

### CASE HISTORY OF IRRI'S RESEARCH MANAGEMENT DURING THE PERIOD FROM 1960 to 1972<sup>1</sup>

#### INTRODUCTION

This is an account, in retrospect, of the way I, and my colleagues in administration, managed the research program of the International Rice Research Institute (IRRI) in the Philippines, while I served as Director during its first 12 years.

Those who read it may or may not agree with the way we administered the research program. Certainly there are other methods of achieving the objectives that we sought. Nevertheless, for the record, here is the story, which - for reasons of simplicity and directness - I have chosen to write in the first person.

#### FORMULATING AND GUIDING THE RESEARCH PROGRAM

The background of the general formation of IRRI has been recorded in my article entitled, "IRRI - the First Decade", which appeared in 1972 in IRRI's 10th anniversary publication, "RICE, SCIENCE AND MAN".

In fact, there is little in this Case History that does not appear somewhere in that paper. However, in order to provide a readily available reference for SEARCA's "Institutionalizing Research Management" project, I shall attempt to chronicle here the way, as I recall it, that IRRI formulated and guided its rice research program during the 12-year period from 1960 to 1972.

The persons involved in making the early decisions about the program included Dr. J. George Harrar, originally Vice President and later President of the Rockefeller Foundation, and the first Chairman of the Board of Trustees of IRRI; Dr. Sterling Wortman, the

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<sup>1</sup>Prepared by Robert F. Chandler, Jr.; release being negotiated.

Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management.

Assistant (and later Associate) Director of IRRI from February, 1960 to April, 1964; Dr. F. F. Hill, the Vice President of the Ford Foundation and Vice-Chairman (later Chairman) of the Board of Trustees of IRRI; and, of course, myself as Director of IRRI.

Our first thoughts were of a general nature. We believed that we should have a complete plant science institute devoted exclusively to rice. For such we needed plant breeders, entomologists, plant pathologists, statisticians, soil scientists, crop management experts (agronomists), cereal chemists and agricultural engineers.

We knew from individual past experience what space would be needed to accommodate the various laboratories and other facilities. Based on such experience and, at one stage, using the services of Dr. Sterling Hendricks of the U.S. Department of Agriculture, we developed, with the architects, a set of floor plans that would accommodate the scientists we needed. This was done in 1960.

In June of that year, we felt that we had floor plans that were ready for final approval. The architect for the research center buildings (A. J. Luz of Manila) and I went to New York and discussed the plans with Dr. Harrar and Dr. Hill, who approved them with minor changes.

Later that month, the architect returned to the Philippines and immediately started to prepare the working drawings and detailed specifications. These were completed in November, 1960 for both the research center and the staff housing area (C. D. Arguelles and Associates, of Manila, were the architects for the housing area).

Some 5 or 6 qualified contractors were identified by the architects and were invited to submit bids. These were received in January, 1961, and that same month construction started. One year later, IRRI's buildings were completed and occupied.

During the last half of 1960, Dr. Wortman and I spent much of our time identifying appropriate candidates for the scientific staff

positions. We felt that in general we needed bright young scientists who appeared to have the potential for developing into true leaders in their fields of speciality. As I recall it, with 3 exceptions all the scientific staff were in their late 20's or early 30's when they were first hired. Our theory was that these men and women were anxious to establish their reputations as scientists and that in the process they would create the reputation of the Institute.

We considered the world to be our market for scientific talent and paid little attention to nationality. Naturally, Asia had the more experienced rice specialists. The original staff consisted of scientists from India, Ceylon, Japan, China, the Philippines, Australia and the United States. Later, senior scientists from Thailand and Canada were added.

As each candidate was interviewed, we explained that the ultimate objective of the Institute's research program was to increase the yield and quality of rice on farmers' fields. The research program would be problem-oriented; there would be a practical reason for each research project undertaken. Those who wanted to do pure research would have no place at IRRI.

We did tell certain scientists, however, that there would be a need to study the rice plant as a living organism - its physiology, its biochemistry, its metabolism.

By the end of the first year of operation (1962) not only had we acquired a first-rate staff but they had their research programs well under way.

We, the administrators, attempted to keep constantly before our staff the objectives of IRRI. We did this by attending all seminars (two a week), continually asking questions, showing a keen interest in what the scientists were doing. We talked of their findings not only in seminars but in social gatherings, in the corridors, in visits to their experimental plots and their laboratories.

It seems to me that each of them "caught the gleam." We encouraged all scientists with field experiments to take yield data on their plots. We stimulated the agronomists and plant physiologists, for example, to compete with each other for the highest grain yield on their experimental plots. We encouraged senior scientists to work in the fields rather than spending undue amount of time in their air-conditioned offices.

Somewhat exceptionally, we did not require that the scientists submit project outlines. We kept in such close touch with them that we were always aware of what they were doing, and they knew it.

Every six months, at first, and later once a year, we had 5-day sessions which we called "program reviews". To me, these sessions were extremely important. Each scientist told us what he had achieved since the last review and what he planned to do during the next year. Most of the senior staff and quite a few of the junior staff attended these meetings (which were open to everyone at IRRI). Thus, each man's work was judged by his peers.

We attempted to give our scientists as much freedom as possible to exercise their powers of imagination and ingenuity, yet keep within the framework of the major objective of increasing the yield of rice through plant breeding and crop management.

The scientists were encouraged to travel throughout the rice-growing parts of Asia. By so doing they not only got to know their colleagues in the national research programs in the various countries, but also became acquainted with the principal barriers to increased rice production in these regions.

In my 10 years of helping to guide IRRI's research program, I cannot recall ever having declined to authorize a travel request. The administrators, of course, also travelled.

I believe it is vital that the administrator of any research organization keep himself fully informed of the highlights of the research program. This is important not only because he has to be able to present the story of his organization to the public and to possible donors, but also because it helps to maintain staff morale

at a high level. Everyone needs to feel that he is appreciated and that his efforts are recognized. Even though I was often critical of certain aspects of the work of IRRI scientists, it did not seem to downgrade our relationship, for the staff knew that I was truly and deeply concerned about the progress we were making.

I have tried here to describe the environment we attempted to create for the scientists. We aimed to maintain a balance between keeping their work within the framework of our main objectives and allowing them as much freedom of action as possible.

I have not gone into detail as to just how we settled on a given set of problems to be investigated. The results of our decisions, of course, can be seen by reading IRRI's annual reports. However, to show that we did consider the nature of each program seriously and in some detail, let me describe, as examples, what we went through in the early days to establish two programs - rice breeding and plant pathology.

Rice Breeding - The first consideration was to get as broad a germ plasm base as possible. Dr. Peter R. Jennings and Dr. T. T. Chang, the first senior members of the varietal improvement department at IRRI, set about making a world collection of rice varieties. Soon these numbered several thousand (eventually IRRI acquired 30,000 entries). Each of these was grown once during the wet season and once during the dry, with about 40 different characteristics recorded for each accession. Naturally, however, the rice breeders could not wait to acquire a comprehensive world collection before starting their breeding program.

From travelling throughout Asia, from reading the literature, from talking with other scientists, our breeders knew that short, stiff straw was necessary to provide lodging resistance and fertilizer responsiveness and that the lack of those characteristics limited yield. Therefore, during the first year, semi-dwarf

varieties principally from Taiwan, were used in the breeding program. They were crossed with tall local varieties. It was this decision to breed first for lodging resistance and heavy tillering capacity that made it possible to name IR8 (the eighth cross that IRRI made) only 4 years later (1966).

It was evident at the start that in Southeast Asia those short varieties from Taiwan (Taichung native 1, Dee-geo-woo-gen, 1-geo-tse, and several ponlai varieties) were highly susceptible to disease and insect attack. Therefore, as the world collection was assembled, it was continually screened for disease and insect resistance. It had been an early policy decision that we would make every effort to breed for varietal resistance and to resort as little as possible to the use of insecticides and fungicides for insect and disease control.

Thus we initiated a major rice-breeding program with the primary, fundamental objective of producing new varieties that had lodging resistance, high yield potential, fertilizer responsiveness and resistance to insect and disease attack.

Although this constituted the initial rice-breeding program, we continually looked at the problems of the farmer and varied our research program in accordance with his needs. Now IRRI's rice-breeding program is broader. It includes, for example, an increased tempo of breeding deep water rice, of creating drought-resistant varieties for rain-fed conditions and developing varieties with tolerance for both deficiencies and excesses of soil minerals. Later in this case history, I shall summarize a few results to show how the breeding program paid off.

Plant Pathology - Here is a second example of how IRRI organized and developed a research program.

Our first pathologist was Dr. S. H. Ou. He was nearly 50 years old, an exception to the rule of hiring only younger men. He was then on an FAO assignment in Thailand. As we became

acquainted with him we concluded that he knew as much about the rice blast disease as anyone whom we had encountered. We offered him the post and he accepted.

At that time (and in many places still today) rice blast was the most serious disease of the rice plant. Dr. Ou's experience allowed him to go immediately into a research program to identify the most common races in Asia of the fungus that causes the blast disease and to select varieties from our world collection that were resistant to most of the known races. By establishing uniform rice blast nurseries throughout Asia, he was able to achieve these objectives during his first few years at IRRI. It is from this work that such broad-spectrum resistant varieties as Tetep, Careon, and Tadukan were identified for use in the breeding program.

At the time IRRI started its research program, it was thought that virus diseases were of little practical importance. However, this shortly proved not to be the case. The tungro and grassy stunt virus diseases increased in prevalence in 1963 and 1964. We soon had to add a virologist to our staff. Since then we have gained a rather complete understanding of the nature and distribution of the rice virus diseases. More significantly, the pathologists have identified varieties in the world collection that have resistance to both diseases. Concurrently the entomologists screened the world collection for varieties that were resistant to the insect vectors of the virus diseases. These cultivars were passed on to the varietal improvement department and were used as parents in the crossing program.

In addition, the plant pathologists at an early stage worked on the bacterial blight and the bacterial streak diseases. They developed simple ways of inoculating and screening large collections for resistance.

The plant pathology program was organized to identify the important diseases of the rice plant, to characterize them thoroughly, and to work with the rice breeders in identifying resistant varieties and genetic lines.

#### THE RESEARCH PAY-OFF

As the saying goes, "The test of the pudding is in the eating". The proof of the success of a research program is whether or not the original objectives are being achieved.

To complete this admittedly sketchy case history, I shall mention a few of IRRI's major research achievements and reemphasize some of the more important factors that helped bring them about. This is in no way an attempt to chronicle IRRI's progress in a complete manner, but, rather the simple citing of a few of the more significant results and their potential impact on the rice-growing world.

Let us first examine the order of events in creating non-lodging, fertilizer-responsive varieties with resistance to insect and disease attack.

It was in 1965 that IR8-288-3, a selection from the progeny of a cross between Peta and Dee-geo-woo-gen, was identified. The selection was widely tested throughout tropical and subtropical Asia and in 1966 was named IR 8.

This variety had a yield potential essentially double that of most varieties then being grown by rice farmers. It set a new standard for productivity under ideal conditions. Its grain quality, however, was inferior, and it was too susceptible to diseases and insects.

The rice breeders continued to work toward the creation of varieties without the defects of IR8. As IR 20, 22, 24 and 26 came off "the assembly line", there was steady improvement. Moreover, the best is yet to come.

In Los Baños in September, 1974, I saw the newest genetic lines that have been selected from the segregating populations, and I was deeply impressed. The IRRI rice breeders now have a group of selections (some of which soon will become varieties, I am sure) that are resistant to most of the major insect pests and diseases. For example, IR 2035-260-3 is short, thick-stemmed and fertilizer responsive. It has resistance to the tungro and grassy stunt virus diseases and to their respective insect vectors, the green leaf hopper and the brown plant hopper. It has broad-spectrum resistance to the rice blast disease and medium resistance to the rice stem borer. In addition, it is resistant to bacterial blight.

Certainly, this is a major advance. It represents the beginning of a real pay-off - 12 years after IRRI's research program started.

In my view such achievement was made possible by following the policy of first collecting the world's germ plasm to provide a broad genetic base for the breeding program; by carefully selecting parents screened from this large world collection; by planting large numbers of progeny from the crosses of these selected parents; by making many careful observations of the segregating populations and selecting only the most promising ones (all this being done by the senior scientists themselves - not their less-experienced junior scientists); by testing the IRRI-made selections over wide areas of the rice-growing world; by having close working relationships between the rice breeders, the plant pathologists, the entomologists, the physiologists, the agronomists and other scientists.

Of course, the whole research program of IRRI and its outreach activities throughout the world could never have been achieved without the sponsorship originally of the Ford and Rockefeller Foundations, and without the degrees of freedom that those organizations gave the IRRI administrators and scientists to move ahead

as they saw fit. Financial constraints almost did not exist. However, it is a fact that we never asked for anything that we did not believe to be highly important. We fought "Parkinson's Law" and tried to keep the number of our professional staff at minimum levels consistent with a program designed to have a definite impact on rice production.

I believed that IRRI should be a relatively small organization, but with emphasis on excellence and achievement. We continually examined our research efforts. If it looked as though we were going down a blind alley, we backed off and tried another approach.

Our outreach programs, the training of both research scientists and production technologists, our information services, our library, our experimental farm management, the work on grain quality by our cereal chemists, the studies of the chemical dynamics of flooded rice soils, the work in soil microbiology, the significant work in crop management, including chemical weed control, all made highly important contributions to the success story of IRRI. Some day when the work has progressed further and rice production has been significantly increased in the tropics and sub-tropics, the story of IRRI should be written in detailed book form, for it provides an example of what can be achieved if the appropriate financial support, facilities and staff are assembled.

#### THE ERRORS OF IRRI

If a case history is to have value, it should mention not only the successes but the errors of a research program. Therefore, as a final statement, I would like to cite some of the things I believe we would have done differently if we had had, at the beginning, the experience we have since gained. Some of these points may seem trivial; others are rather important. If other IRRI staff members - present or past - were writing this, they might well include items which I have not. I take full responsibility for these opinions and sought no one's advice before stating them here.

At the start of IRRI's rice-breeding program, we place a great deal of emphasis on high-amylose, dry-cooking rice. After all, this was the type preferred in the U.S.A. and Europe, and most of the long-grain rice varieties of Thailand were of this kind. However, we soon began to realize that many of the Southeast Asians preferred a softer, stickier rice. Therefore, IR3, IR5, IR20 and IR22 came under severe criticism for their grain quality. I am sure the IRRI rice breeders would agree that early in the program we should have bred varieties that had a medium-amylose content, and that had the grain quality of C4-63, put out by the College of Agriculture of the University of the Philippines.

I believe that IRRI should have put more effort into breeding rice varieties that combined tolerance for deep water and short stature in shallow water. H.M. Beachell, IRRI's experienced and successful rice breeder, in his 442nd cross introduced the dwarfing gene into a deep-water rice variety from Thailand. The resulting IR442 lines showed that it was possible to create a rice variety that would be reasonably short under normal conditions but which would elongate if the water rose to depths of 20 to 100 cms. This was a major achievement and to my knowledge, a first in the field of rice breeding. It was a method of building into a rice variety a certain amount of insurance against the hazard of high water in times of excessive rainfall. Although IRRI's rice breeders proved that this was possible, they did not follow through to build the necessary insect and disease resistance into such varieties. Furthermore, other deep-water varieties from Thailand, Bangladesh, India, and Vietnam should have been tested as parents.

Of course, there is some excuse for IRRI's not expanding this effort. The Institute did not possess good facilities for testing varieties at varying water depths up to one meter. Understandably, also, its breeders had many other important objectives to achieve. Fortunately, IRRI is now entering into a cooperative arrangement with Thailand to expand greatly its deep-water rice studies.

As I look back on IRRI's first decade of work, I feel that we should have been a little closer to the Asian farmer. I may be wrong about this because, of course, one needs some solid facts before involving the farmer too deeply and these facts are usually accumulated through concentrated research at the home base.

On retiring from IRRI in 1972, the only real disappointment I felt (other than a reluctance to leave such an exciting adventure) was that somehow we did not understand sufficiently why the Asian farmer who had adopted the new varieties was not doing better. Somehow I felt that the rice scientist who had obtained yields of 5 to 10 metric tons per hectare on the IRRI farm still could not explain why so many Filipino farmers (for example) obtained, on the average, less than one metric ton per hectare increase in yield after shifting from the traditional to the high-yielding varieties. All of us were a bit mystified as to why no more than 25 per cent of the rice land in the less-developed Asian countries was planted to the new varieties.

More information is being added yearly and gradually we are understanding such matters better. I was pleased to learn on my visit to IRRI in September, 1974 that the agronomy and agricultural economics departments are attacking this problem jointly in an attempt to identify the social, economic and technological constraints to higher yield.

#### CONCLUDING STATEMENT

I concede that in the interest of brevity this case history does not explain fully the research program of IRRI, nor does it give sufficient credit to all the factors that made IRRI succeed. No mention has been made of the "non-scientific administration," headed so competently by the Executive Officer, (J.D. Drilon, during the first 10 years) which relieved the scientists of many details and allowed them to devote more time to their professional work.

I have not given due recognition to the many people who contributed so much to the research and training program in terms of sound judgment and hard work. I refer particularly to Dr. Sterling Wortman, Dr. Colin McClung, Dr. D. S. Athwal, and Dr. Marcos Vega. During my frequent absences from IRRI, I never worried about what might happen because I knew that the Institute was in capable hands.

In recapitulation, I believe that IRRI's success was due primarily to the following factors:

1. Adequate financial support, which meant good research facilities, sufficient travel funds and competitive salary scales.
2. Freedom given to administrators and scientists by the Board of Trustees and the principal donors, to develop and carry out a program of research without political or other interference.
3. The decision to keep the research program problem-oriented, including the selection of the practical goal of increasing rice production through increased yields per unit area of land.
4. The selection of able young scientists from the international community.
5. The massive approach to assembling world collections to making crosses, to testing widely (IR8 was tried in 87 countries) and to training young scientists and extension workers.
6. The setting of high standards and the instilling in the staff of a sense of pride, dedication and enthusiasm.
7. The capacity to have the scientific and administrative staff act on a truly worldwide basis, thus carrying IRRI's findings to all continents.
8. The policy of IRRI to allow its germ plasm collection, its segregating populations and any other findings, to be freely used by any national program without necessarily giving credit to IRRI.

## Case Study 15

### THE NATIONAL AGRICULTURAL RESEARCH SYSTEM IN MALI<sup>1</sup>

#### The Problem

##### Background

Earlier, Mali was self-sufficient in cereal grains — millet, sorghum, rice and corn. Since 1965, grain deficits had occurred each year due to poor cultural practices, growing populations, and changing dietary habits. Deterioration in food production in the Sahelian area of Mali reached a climax following six years of drought which resulted in erosion of soil productivity, reduction in livestock herds, denuding of forest lands, malnutrition and starvation of people, and deterioration of the economy in general. Normal rainfall returned in 1974. Since then, agricultural production had improved, stimulated by intensive development operations and financial assistance by many donor agencies. Yet, vulnerability to drought still existed and meager production was still the rule. These conditions were due to low rainfall, impoverished soils, outmoded production methods, unproductive varieties, and high cost of fertilizer, pest control chemicals, and transportation. Research directed toward solving these problems in Mali's particular soils, climate and culture is sorely needed.

Agriculture research in Mali was initiated through the colonial agriculture service of France. Later the Institut de Recherche Agronomy Tropical (IRAT), Institut de Recherche Fruites Outre-Mer (IFAC), Institut de Recherche Coton et Textiles (IRCT), and other autonomous institutes conducted research programs. After Mali became independent, these institutions have continued to function, but now expatriate directors were being replaced by Malian nationals as the latter became trained and available.

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<sup>1</sup>Prepared by John M. Poehlman, Professor of Agronomy, University of Missouri, USA. Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management. Release being negotiated.

Research conducted at the experimental stations had several weaknesses. Most critical was that the nature of the research was not always directed toward the most apparent needs of the farmer in a manner that would cause him to improve his agricultural practices. Since the research units were concerned with separate commodities, as well as being physically separated, communication among the research workers themselves was infrequent. Some of the research was directed toward export or plantation crops and the fruits of this research did not always benefit the most impoverished farmer. While livestock represented a major input in Malian economy, research on livestock improvement, livestock management, grazing management and integration of livestock and crop production research to improve feed production was essentially nil.

Agricultural research in Mali was directed through the Institute of Rural Economy (IER), a Division of the Ministry of Rural Development. (See Appendix I and II. Not all of the units shown in the organizational diagram of the IER had been implemented.) The major research effort was in agronomy and was concerned with food grain crops, but increased emphasis was being placed on livestock research. Research on cotton and ground nuts made useful contributions because they were closely tied to export operations. Forestry and fisheries were potential export crops but received almost no research input. Research on the economics of improved cultural practices or livestock management was meager, at best, and there was no Malian research on the social and cultural problems attendant with development.

#### Constraints to Upgrading Agricultural Research in Mali

There were many constraints to structuring and maintaining an adequate agricultural research program in Mali. Some of these constraints were:

- a. Inability of the Government of Mali (GOM) to finance the kind of agricultural program that would provide the technological inputs needed to build a viable agriculture.

Current research units were underbudgeted and seldom received the amount budgeted; research staff were poorly paid in relation to Operations' units; budgeted money might be received too late to perform research on seasonal schedules, or staff members might go unpaid for periods of time; research staff had no means of transportation away from the station so they could not visit or conduct experiments in farmers' fields.

- b. Inadequate staffing. There was a critical shortage of senior and junior level Malian staff that were adequately trained in research and were committed to conducting adaptive research that would solve farmers problems.
- c. Autonomy and physical separation of research units. The autonomy and physical separation of research units isolated the research workers, hindered communication and exchange between researchers in different disciplines; prevented the efficiency that would be obtained through utilization of a common library and analytical laboratory, or by sharing equipment; and most important, discouraged collaborative research efforts.
- d. Lack of communication between research workers and extension workers or farmers. Except for some of the research stations now associated with specific operations (for example, Operation Mills Mopti, Operations Riz Mopti, Tea Research Station) communication between the research worker and the extension worker or farmer needed to be improved.
- e. Lack of an analytical facility. Only meager analytical laboratory services were available to the research worker. For example, the cotton research station was sending samples to France for analyses for which they paid shipping as well as costs of the analyses. Currently, money was not available even to pay shipping costs.

- f. Lack of library facilities. A glaring deficiency was the practically total lack of library facilities. Research stations had only a few books at most. Many received no scientific journals.
- g. Inability to read or speak English. Most scientific journals and books were published in English and for most scientific meetings, English was the official language. Although Malian students now received training in English in secondary schools, this continued to hinder communication with scientists internationally.
- h. To date, research efforts had given little or no consideration to the role of women in agriculture.

#### Opportunities for Upgrading Agricultural Research in Mali

Although the constraints for upgrading agricultural research were imposing, there were opportunities that gave rise for optimism. Most important were:

- a. Agriculture potential. The land area was large. While 60 percent of the land was unsuited for cultivation, cultivable land was not a factor limiting agricultural production. It was estimated that 500,000 hectares were suitable for irrigation and for which sufficient water was available. But the total potential for irrigation would be much larger if adequate surveys were to be made. Vast areas of grazing lands have received essentially no research consideration.
- b. Malian agricultural research workers. The youth and enthusiasm of the Malian research workers who have received training abroad are encouraging. Ways need to be found to maintain their motivation.
- c. Dearth of practical or adaptive research. The low level of farmers yields was indicative of the wide range of production practices that needed to be solved. As an example, pilot rice farmers increased yield from 1400 kg/ha with broadcast

seeding and no weeding to 2500 kg/ha by planting in rows and cultivating.<sup>2</sup> Crop spacing, insect control, multiple cropping, grain legumes to supplement the protein in the diet, grazing management, stockpiling feed for the dry season, marketing — the list of needed research which could contribute to increased productivity and improve the lot of the rural poor is innumerable.

- d. Willingness of Malian farmers to accept new practices. Where research had been closely tied to the Operations, it had been shown that reluctance of Malian farmers to accept new practices could be overcome where it can be demonstrated that the practice would not increase his risk, but would, in fact, increase his returns.
- e. More efficient utilization of rainfall received. A large area of Southern Mali normally received in excess of 1000 mm. Though rainfall diminishes as one went northward, there had been no research directed toward the best utilization of the rainfall received, particularly regarding production of feed for livestock during the rainy season and storing it for utilization during the dry season.
- f. Vegetable and fruit production. Excellent vegetables and fruits might be produced with a ready export market in Europe. Limited research was available on production and marketing of these products.

#### Donor Agencies

The Government of Mali cooperated with research efforts of a large number of donor agencies in addition to USAID. These included FED, ICRISAT, IRAT, IRCT, IRRI, ILCA, ILRAD, TPI, Club des Amis du Sahel, FAO, UNDR, World Bank, African Development Bank, Arab Emirates, and others. As examples, IRAT had three major research stations; and

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<sup>2</sup> Mali Agricultural Sector Assessment. Center for Research on Economic Development. University of Michigan, Ann Arbor.

several smaller stations; WARDA was establishing a rice station at Mopti; ILCA was locating a livestock research center at Niono; the multistate Senegal River basin development organization (OMVS) had a research station near Kayes. Integration of these efforts into a unified National Agricultural Research System was essential to avoid duplication of work and further fractionization of research.

### Extension

The Agricultural Extension Service in Mali was under the supervision of the Ministry of Rural Development and included 1908 senior, middle and junior level staff persons in 1973-74.<sup>3</sup> Research information must be gleaned from separate research station reports and passed down through a cadre of extension workers to the farmers. Ineffectiveness of this system in communicating research results to the farmers compounded the weakness of the research organization in providing practical research results. In addition, the village level extension worker was responsible for distributing seed and supplies and collecting loans from farmers, thereby reducing time available for educational activities. Effective delivery of research results required that educational activities and service be separated.

### Development Operations

Development was carried out through more or less autonomous regional development projects called Operations. Original emphasis on development and marketing of a single crop was being broadened to an integrated approach to include crop and livestock production and different aspects of rural development. Extension programs disseminate available research information to the farmers within the Operation. In a few specific cases, such as the cotton and groundnut research, and the IRAT and proposed WARDA rice research, research workers have not been able to respond to these problems and direct research efforts to a solution of the farmers problems to the extent needed.

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<sup>3</sup> Mali Agricultural Sector Assessment. 1976. Center for Research on Economic Development. University of Michigan, Ann Arbor.

### Agricultural Educational Institutions

Development of capable research personnel depended upon their receiving a good educational background. Agricultural education was provided by the Rural Polytechnical Institute (IPR) at Katibougou under the Ministry of Higher Education. Ingenieurs des Sciences Appliquees received a four-year, specialized training program in agriculture, forestry, livestock, or rural engineering. Only limited research conducted at IPR and research personnel did minimal teaching at present. Integration of teaching and research needed to be improved. Projects had been developed for improvement of training institutes (CAA'S) but these were not formally linked to research efforts.

### Proposed Response

A viable strategy to upgrade the agricultural research of Mali required long range planning. The rapidity with which the plans might be implemented, considering the present financial status of the GOM, will be contingent upon the assistance received from donor agencies, the acceptance of GOM and the donors to integrate the various research components into an efficient and unified system, and the ability of GOM to accept a larger share of the financing as their economy improved. To develop an effective research system will require long range planning and implementation over a 20-year period.

### Objectives for Developing a Strategy to Improve Malian Agricultural Research

The objectives of the strategy to upgrade Malian agricultural research embodied these goals:

- a. Emphasize the kind of adaptive research that will benefit the farmer as quickly as possible.
- b. Establish demonstrations and lines of communication that will get research results to the farmer promptly and encourage acceptance in his particular cultural-economic position.
- c. Develop communication among researchers in different disciplines so that they may exchange ideas and foster collaborative research.

- d. Promote efficiency by multiple uses of facilities, equipment, library, and eliminate unproductive research units.
- e. Develop close coordination with teaching, extension and operations activities.

#### Plan for a National Agricultural Research System

The research system would consist of three components:

- a. National Agricultural Research Center. In order to unify the research efforts, senior research personnel of the Institute of Rural Economy (Agronomy, Livestock, Forestry, Fisheries, and Socio-economic), research laboratories, analytical services, library, and attendant facilities would be brought together at Sotuba and Katibougou and integrated with the IPR teaching and the extension training programs. The development of a central integrated research center for senior staff would remove much of the current isolation, foster communication among disciplines, encourage planning of collaborative research, and permit sharing of equipment and skills. Senior research staff could then share in teaching, particularly as M.S. programs develop, and teachers and students could participate in research. Donor research groups would integrate their research activities into the unified Malian research program. Senior staff would be selected with research experience in the field and trained to the M.S. or Ph.D. level.
- b. Regional Research Stations. A small number of regional research stations would be developed as an outreach of the National Agricultural Center in different agro-climatic areas. Research on crops, livestock, forestry, fisheries, and socio-economic problems appropriate to the area would be combined at each station. Staff members would be given training to the M.S. degree or at an International Research

Institute. In general, the staff would be small and selected to combine the disciplines needed to solve the local problems. Coordination and supervision of research among stations would be from the National Agricultural Research Center, but sufficient autonomy would be given to the Regional Research Station staff to initiate and conduct experiments appropriate to the region. The number of Regional Research Stations would be kept small (perhaps 5 to 8). An example might be MOPTI where research would be combined on rice, millet, vegetables, pulses, seed production and livestock; or at NIONO where research would be combined on livestock, millet, forages, and pulses. Research workers on the Regional Research stations would be brought into the Center for joint discussion and planning and their experiences utilized wherever possible in teaching students. Superior staff would be selected for additional education and filling senior staff positions in the National Research Center.

- c. Field Research Staff. The third component of the research program would include a Field Research staff who conducts innovative, adaptive research on farmers' fields within the Operation. The training of these research workers would be similar to those on the research stations. They would test research results from the stations in the farmers field where the results would be visible to the farmer and the extension worker. By using assistance of the extension worker in conducting trials, they could serve as the link between the research and the extension worker. Experience gained in adaptive research would qualify the Field Research Staff to assist in teaching the extension worker. Field research staff would be paid by and be responsive to the research system. Cost of conducting research would be borne by the Operation as a means of keeping the research relevant to the needs of the farmers in the Operation.

### Financial Requirement and Plan

The project was developed in four five-year phases over a 20-year period. While all three components of the program would be initiated during the first phase and their implementation carried forward simultaneously, concentration of efforts would be directed as follows:

Regional Research Stations would receive highest priority during the first phase in order to accelerate the research efforts urgently needed for increasing food grain and stabilizing livestock production. Staff training would start immediately and be continued through the second and third phases to replace superior station research workers who may be selected for additional education and moved into the national Research Center as the latter develops. Station development would be concentrated in the first phase but operational costs would not reach a peak until the second phase when larger numbers of research workers return from training and become active researchers.

Field Research Staff training would begin immediately in order to get research workers conducting experiments in the farmers fields as soon as possible. Equipment and operational costs would be divided over the first three phases of the project.

National Agricultural Research Center planning would start immediately with the long range goal of concentrating major research and teaching at Sotuba and Katibougou. (One location would be preferable but commitments already made appear to make concentration at one location impractical.) Training of staff for the National Research Center would proceed slowly, reaching a maximum in the second and third phases of the project. This would permit providing education to the Ph.D. level for superior regional research station staff after they had obtained experience and had demonstrated research ability. Development of a library would start immediately and be continued throughout all four phases of the project in order to add current books and periodicals. Development of an analytical service laboratory and equipment for present laboratories would start in the first phase. Development of new and upgrading of old facilities would

reach a maximum during the second and third phases of the project as the staff was expanded with more highly trained and experienced personnel.

A Development Fund would be established within the project to pay USAID contributions to those donor research projects, such as those of WARDA or ICRISAT, which complemented and contributed to the research components of this project.

Technical Assistance would be limited to a small component staff located at Bamako which would facilitate the selection of persons for training, assist in coordination of collaborative research at the regional research stations and the field research staff, and assist in coordination and development at the National Center. They would be assisted by short-term consultants for specific assignments as expertise in specialized fields is needed. When Malian researchers are sent to the U.S. for M.S. or Ph.D. training, their major professor would first visit Mali to get a feel for the problems and would then develop thesis research relevant to a Malian problem to be conducted either in the U.S. or in Mali wherever possible. Follow-up visits would be made by the Professor to assist the Malian student after he returns to his research position in Mali.

The financial requirements of the plan could be found in tabular form on the page following.

### Development of the Project

#### The PRP

In developing the PRP, the following steps will be required:

1. Examine the research component in the five-year GOM Development Plan;
2. Make an inventory of staff, facilities, and financial support of current agriculture research in Mali;
3. Make an inventory of current and potential research assistance to Mali by donor agencies and discover ways to link and integrate it into a unified Malian National Agricultural Research System.

# Financial Requirements of the Plan for Mali Agricultural Research System

ITEM	PROJECT PHASE				Total
	I Year 1-5	II Year 6-10	III Year 11-15	IV Year 16-20	
<hr/>					
<u>Regional Research Stations (8 Stations)</u>	( In Million Dollars)				
a. Staff training (120 person years)	1.0	1.0	0.25	0.25	2.5
b. Development (buildings, equipment)	3.0	1.0			4.0
c. Operations (expendable items, transportation)	1.0	3.0	1.0		5.0
 <u>Field Research Staff</u>					
a. Staff training (100 person years)	1.0	0.5	0.25	0.25	2.0
b. Equipment	0.5	0.3	0.2		1.0
c. Operations (expendable items, transportation)	0.5	1.0	0.5		2.0
 <u>National Agricultural Research Center</u>					
a. Staff training (150 person years)	0.5	1.0	1.0	0.5	3.0
b. Library	2.0	1.0	1.0	1.0	5.0
c. Service Laboratory	1.0	0.5	0.5		2.0
d. Development (buildings, equipment)	2.0	5.0	4.0	1.0	12.0
<u>Development Fund</u>	2.0	2.0	1.0	1.0	6.0
 <u>Technical Assistance</u>					
a. Technical specialists (80 person years)	3.5	3.5	3.5	1.5	12.0
b. Short-term consultants (70 person years)	2.0	3.0	2.5	1.0	8.5
 TOTALS					
	20.0	22.8	15.7	6.7	65.0

NOTE: Figures given indicate millions of dollars.

The project review team will require the following personnel:

- a. Team Leader/Project Design Officer;
- b. Research Specialist in Agronomy-Cereals; cotton, peanuts
- c. Research Specialist in Agronomy-Range Management
- d. Research Specialist in Livestock Production; cattle, goats
- e. Research Specialist in Horticulture; fruits, vegetables
- f. Research Specialist in Water Management
- g. Research Specialist in Agricultural Economics; systems analysis, marketing
- h. Research Specialist in Cultural-social problems attendant to development
- i. Civil Engineer

A minimum of 60-90 days will be required to develop the PRP due to the complexity of existing Malian and donor research activities and distance to be traveled in examining facilities. All team members may not be needed for the entire period. Ability to speak French would be helpful, at least for part of the team. Assistance of an AID procurement officer would be valuable.

Development of the project will require continuous collaboration of the CDO with the GOM.

The PRP for this project will be submitted in \_\_\_\_\_ with the PP projected for submission in \_\_\_\_\_.

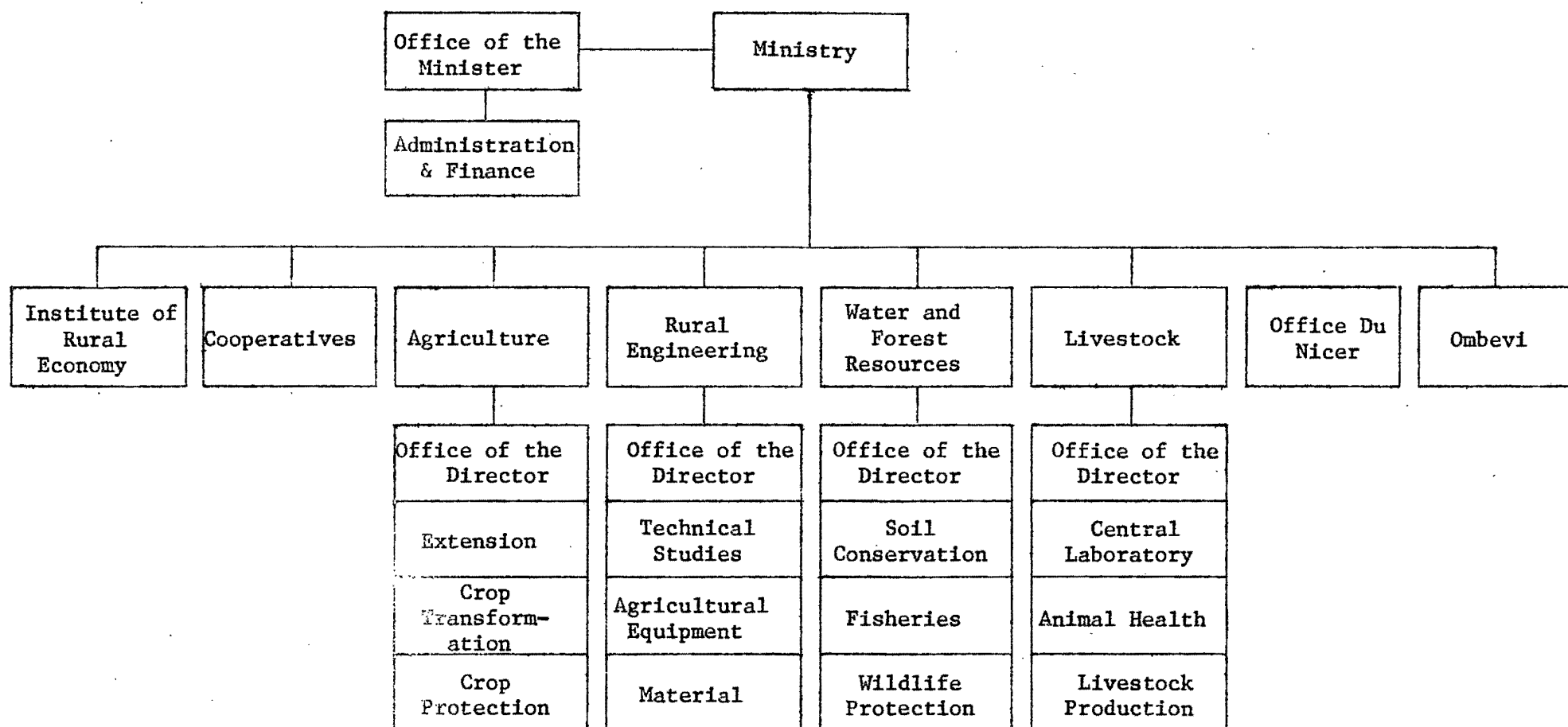
#### Utilization of U.S. Land Grant University Assistance Through Title XII

The project is suited for utilization of assistance from U.S. Land Grant Universities through Title XII. There is a crying need in Mali for adaptive research as well as research workers committed to solving Malian farmers' problems. This has been the distinguishing feature of the U.S. Land Grant University. In addition, Malian research workers need to be trained to the M.S. and Ph.D. levels. Title XII permits the U.S. University more latitude to give the trainee an educational program relevant to Malian needs.

#### Issues

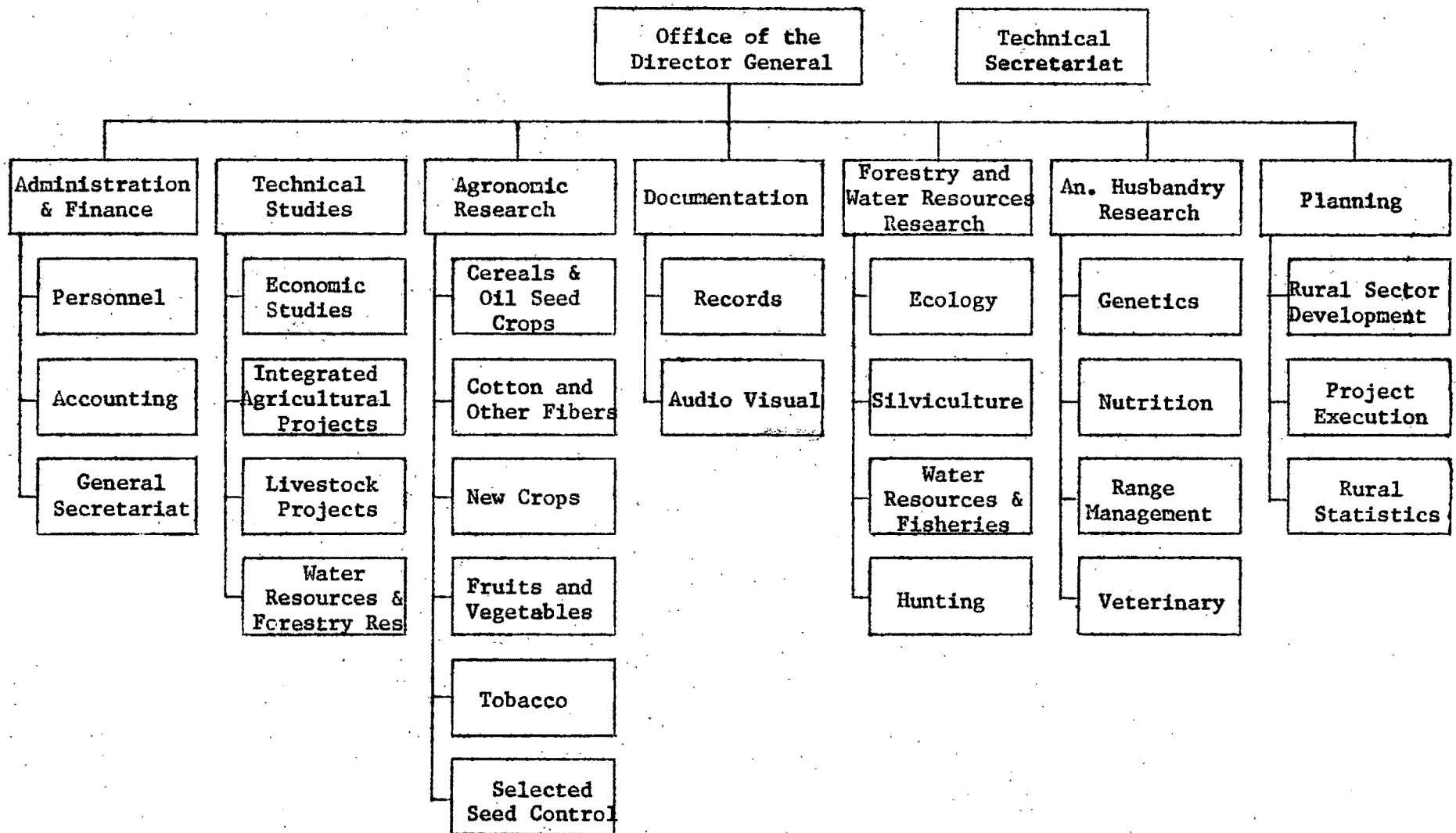
There are no issues because Mali meets the criteria set forth in the Congressional guidelines.

# MINISTRY OF RURAL DEVELOPMENT



\*From "Mali Agricultural Sector Assessment." 1976. Center for Research on Economic Development, University of Michigan, Ann Arbor, Michigan.

# INSTITUTE OF RURAL ECONOMY



\*From "Mali Agricultural Sector Assessment." 1976. Center for Research on Economic Development, University of Michigan, Ann Arbor, Michigan.

FOR WANT OF THE COVETED PIE<sup>1</sup>

Introduction

The desirable mix of resources of inputs — money, people, physical facilities and materials — is essential and vital in our "drive toward more food for more people." However, "resources do not come like obedient servants, when called." Hence, the perennial quest for scarce resources had become a continuing function of all organizations.

In the strategic campaigns for the needed inputs, the most sustained and crucial mobilization efforts are those budget battles waged by organizations to get a bigger share of the budgetary pie. All organizational units vie yearly to increase, whenever possible, the size of the pie, well aware that it is somewhat easier to satisfy human interests and organizational needs and achieve a higher quality of performance when the pie is bigger. In the struggle, some organizations suffer a shortage of certain resources despite active and concerted efforts taken for the procurement of the needed resources. The nature of this competition for financial resources and the consequences of its limited or inadequate output for the Bureau of Plant Industry (BPI)<sup>2</sup> and its experimental stations provide the setting and materials for this case study.

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<sup>1</sup>Prepared by Pilar D. Kalaw, Management Specialist, Administrative Development Center, UP College of Public Administration. Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>The Bureau of Plant Industry (BPI) is one of the agencies of the Philippine Government engaged in increased and improved production of agricultural crops in our country. Its primary objective is to develop and improve the plant industries of the Philippines through research and experimentation.

Its activities are directed toward the attainment of increased food self-sufficiency and are focused on its three cardinal functions of research, production and regulation. Researches, both basic and applied, are undertaken to determine the best varieties and methods of production to attain maximum production. Research findings and outputs in the experiment stations and seed farms are communicated or distributed to farmers throughout the country hopefully to increase their yield, improve the quality of their crops and generate higher income from farming operations.

### The Annual Budget Battle

The budget battle for Philippine Government Offices and agencies for Fiscal Year 1977 was formally heralded by the issuance by the Commissioner of the Budget of Budget Circular (BC) No. 259, dated June 4, 1976. The document required the submission of budget estimates for Calendar Year (CY) 1977 and long and medium range budgets<sup>3</sup> by agencies no later than July 31, 1976. Upon receipt of this document by the BPI Budget Officer, in the first week of June, 1976, the information contained herein was circularized to the chiefs of major divisions and experimental stations, for compliance. (Please see Appendix A for the BPI organization chart). Accordingly, the various BPI units including the Paradise Experimental Station (PES)<sup>4</sup> stated their resource goals in "budget requests." These budget estimates moved from the experimental stations to their respective divisions at the BPI Central Office and upward through hierarchical channels of communication and decision centers as shown in Appendix B. At each point in the budgetary ladder, especially during the budget hearings conducted at the BPI, the Department of Agriculture (DA)<sup>5</sup> and the Budget Commission, the budget personnel and top executives of agencies tried hard to justify their specific requests or "build up their case," in order to get their desired enlarged

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<sup>3</sup> One of the guidelines in BC No. 259, dated June 4, 1976 specified that the budget for CY 1977 should reflect long-term plans of agencies and should be developed as one of the stages of implementation of a long-term strategy for agency development. The medium-range fiscal plan would include budget estimates for CY 1976-1985; long-range fiscal plans for CY 1976-2000, to be prepared in multiples of five years.

<sup>4</sup> The Paradise Experimental Station (PES) is a disguised research experimental station. It is typical of other research stations of BPI located in strategic places all over the country. They are the implementing arms in the BPI's agricultural research system where the production and improvement of breeder, foundation and registered seeds are effectively carried out.

<sup>5</sup> The BPI is one of the five bureaus under the Department of Agriculture (DA): the other four are the Bureau of Agricultural Economics, Bureau of Agricultural Extension, Bureau of Animal Industry, and the Bureau of Soils. The DA is the primary policy, planning, programming, coordinating and administrative agency of the Republic of the Philippines entrusted with the dual tasks of accelerating increased food productivity and promoting higher farm incomes to improve the well-being on the farms and in the rural areas of the Philippines.

share of the coveted pie. Meanwhile, hierarchic decisions were made at various intervals on the amount to be allocated to each unit.

A closer look at Appendix B shows two significant variations from previous budgetary procedures.

Before the Martial Law administration, the line-item National Budget was reviewed by the defunct Congress of the Philippines. However, the CY 1977 National Budget was presented to the Batasang Bayan, a transitory legislative body composed of a cross-section of the population. At its first session in September 1976, the Batasang Bayan passed a resolution recommending budgetary priorities, budgetary levels, and a functional allocation of expenditures.

A second point of variation was the adoption by the BC of the comprehensive release system wherein funds allotted to each agency for the fiscal year were released under one advice of allotment, broken down by quarters. However, cash disbursement ceilings (CDC) were still issued quarterly and constitute the go signal for actual expenditure of funds.

While the PES and other BPI units involved in agricultural research had carefully planned their budgets within the requirements of their main objectives, availability of research funds, however, depends upon several variables or constraints such as the income, general economic conditions and policies of the government. Despite their all-out efforts to justify their budget requests, they did not emerge victorious in their uphill fight for a sufficient slice of the pie.

Thus, out of the ₱19,245,629.00\* requested by the BPI for agricultural research for FY 1977, only ₱10,760,000.00 was approved and covered under the General Appropriations Act for January 1 to December 31, 1977. The effects of this budget slash seeped down to the regional offices and experimental stations like the PES where the

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\*US\$1.00 = ₱7.50.

implementation of national agricultural programs directly related to the activities of the farmers and other agricultural products. In Appendix C, the size of the pie allocated to the PES for wages and operating expenses was shown in the comparative figures by the quarter as per sub-allotment advices received at the PES for FY 1976 and 1977. The amount for wages was reduced by ₱11,925.00; for maintenance and operating expenses by ₱17,706.00.

While the copy of the advice for allotment for the first quarter of FY 1977, was received by the BPI and its various units including the PES during the first week of January, 1977, news about the budget slash had circulated among some of the units affected as early as November of 1976.

#### PES Superintendent Breaks the News

At the PES, the first news on the budget slash was picked up by the station superintendent, Mr. Alex Botor, during one of his official trips to the BPI Central Office in Manila in mid-November.

Obviously, he was badly struck by the report for he was silent in the station jeep practically throughout the return trip home. Having the interests of the station personnel<sup>6</sup> at heart, he was saddened by the prospects of how the impending crisis would affect them, especially the laborers who performed the manual operations in the five research and three production projects conducted in the close to a 50-hectare station area of undulating terrain. This was the first time this kind of crisis had fallen upon the PES since Mr. Botor assumed the superintendency eight years ago. Suddenly, he was jolted from his deep reverie with happy reminiscences of how he had risen from the ranks as a daily-waged research assistant in 1971 to his present position of station superintendent which he had been holding for the past eight years.

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<sup>6</sup>The PES has a personnel complement of 103 employees -- 43 monthly paid and 60 casuals.

Mr. Botor was still preoccupied with thoughts on his effective leadership in the station researches on crop improvement, better cultural practices and economics of crops production when their jeep turned right from the highway into the station area. He had hoped that he could get others to share their perception of the crisis, but it was after dusk and the station was quiet and dark.

Early the following morning, a call for a special staff meeting was made through the telephone and intercom systems connecting the various project/units in the station area. Mr. Botor wanted to have an immediate widespread assessment of the 1977 finance resource scarcity from the project leaders, technical staff and the station foreman. He opened the meeting with the announcement of the almost 50% cut for wages in their 1977 budgetary pie and the ₦17,706.00 reduction in their operating funds. He continued to point out that only one-half of the labor force could be retained with the meager funds for wages. However, as a resourceful leader, he was quick to add that their limited funds should not deter them from remaining productive. Rather, the group agreed that the constraint of meager resources should provide them the rationale for increased manpower efficiency through the rational management of existing personnel and resources. The project leaders and the station foreman were asked to meet their labor forces for suggestions on how to cushion the impact of the budget slash on the station personnel and operations.

To give the station personnel more time for adjustments, news about the budget cut and the impending lay-off or rotation in the labor force by January, was announced after the flag ceremony the third Monday in November.

#### Labor Force Goes on Rotation

In consultation with the project leaders and the labor force, no layoffs were made in January the following year. However, the project leaders and the station foreman were constrained to rotate the laborers subject to the availability of funds and the exigencies of the service.

The following table shows the number of days a laborer could work with pay during the four quarters of CY 1977.

Schedule of Working Days  
Paradise Experimental Station  
Labor Force  
CY 1977

<u>Quarter</u>	<u>Number of Working Days per Laborer</u>	
	<u>Total</u>	<u>Funded</u>
I. January to March	64	30
II. April to June	61	27
III. July to September	65	28.08
IV. October to December	<u>63</u>	<u>28.08</u>
TOTAL	253	113.16

In effect, out of the total of 253 working days during CY 1977, each laborer could work with pay in the PES for 113.16 days only. The rest of the year he had to fend for himself and his family for support from sources other than the PES.

Laborers out of station duty undertake carpentry, plumbing, gardening and/or contractual jobs in the neighborhood. One source of temporary local employment are the station development projects financed by the Philippine Council for Agriculture and Resources Research (PCARR). Some laborers apply and are taken in for work in a nearby agricultural college, an international organization, a regional institution, private gardens and other job opportunities. There are some laborers, however, who for lack of any special qualification, are unable to land a job. Some of them were allowed to utilize portions of the station area not planted to any crop.

Labor Pool Complement  
Paradise Experimental Station  
Project/Units

<u>Unit/Project</u>	<u>Number of Laborers</u>		
	<u>1976</u>	<u>1977</u>	<u>Desired</u>
Project A	12	5	30
Project B	6	4	8-10
Project C	5	2	15
Labor Pool	57	27	100

Note : The names of the units are disguised. Figures for the other projects were not available during the interviews. Two project leaders were out for rural service, one was busy harvesting his experimental crops and a third one, was on sick leave.

Obviously, the strength of the labor force was far from ideal. The reduction in labor force for Projects A and C, and the Labor Pool was more than 50% and in Project B by 33%.

III Effects of Inadequate Funds

The depletion in the labor force due to inadequate funds had had untold effects upon the station personnel and operations.

The time of the technical and research staff was valuable and should be used properly. However, at the PES, these people perform multiple roles in order to keep the experimental and other crops alive and to cope with other pressing station needs and demands. The station had only two drivers for four vehicles and one operator for three tractors. Their lone tractor operator had resigned and was now employed in Clark Air Base. With this acute personnel shortage, Mr. Botor, his assistant station superintendent, Mr. Leo Perez, and two other station personnel had been authorized to pinch-hit in the absence of the drivers and the tractor operator. As per Special Order No. 11, Series of 1977, dated 28 July 1977 from the Regional Director, Mr. Botor was designated Deputy for Administration in a regional research project of the station and Mr. Perez as Deputy for Research in the same

project. The latter also acted as project leader for one of the BPI research projects being conducted at the PES. Project leaders who should be performing planning, supervisory, coordinating, and technical functions are from time to time involved in weeding, planting, watering, spraying, harvesting and other manual operations of laborers. Saddled with these multifarious overloads of other involvements and responsibilities, they were left with not much time for research.

The insecurity of tenure of the labor force had driven some of them to seek other job opportunities elsewhere. The training of their replacements would eat up valuable time of project leaders that could otherwise be effectively channeled to research.

Still on the personnel side, the psychic and economic costs to laborers temporarily rotated and especially those who are unable to land substitute jobs, are incalculable.

On the station operations aspect, weeding problems were encountered. Because labor for weeding operations was not available when needed in September 1977, 1/3 hectare of crops was destroyed by weeds. According to Mrs. De Sales, one of the assistant project leaders, out of the 120,000 plants and seedlings targetted for 1977, as of October 17, 1977 only 64,000 had been planted.

#### What/Who Keeps the PES Going

With a greatly reduced slice of the budget pie and the resulting personnel shortage, one wondered who/what kept the station going for it had remained to be one of the leading show windows of the BPI, attracting visitors, local as well as foreign.

#### Station Leadership

Mr. Botor was a tall, dark man with the right kind of personality that at once made him the stimulator, facilitator, and conciliator, not only in the research process but also in the human relations aspect of the station.

As station superintendent, Mr. Botor had vested authority, which, however, was equally matched with authority by competence. His B.S.A.

academic background, extensive training, and productive experience combined to give him a well of experience and knowledge that commanded the respect of his subordinates.

He was an energetic person who was all over the place, making the rounds especially during those trying years when on occasions there were neither security nor labor force available. Then, he served as a jack-of-all-trades, alternating round the clock as superintendent, driver, tractor operator and security guard. The situation was much improved now that they have two drivers, an acting tractor operator and monthly salaried security guards. He had direct contact with the day-to-day transactions in the PES through his daily rounds to see for himself how the people were faring and to make them feel that he was interested in their activities. He was well aware that an occasional "pat on the back" to deserving personnel could go a longer way than a salary increase.

Mr. Botor was an active exponent of leadership by example, which he demonstrated, as related in the preceding paragraph, by his direct participation in station operations. He was easily one of his men in group activities and this he had found to be an effective, though often overlooked form of activation.

He had long learned the secret of modern-day charisma by not merely telling or showing people what to do but by establishing an emotional link of chain with their deeper interests. Mr. Rey Flores, the assistant station foreman related how approachable and helpful Mr. Botor had been to station personnel who needed assistance, financial or otherwise. Mr. Flores continued, "You will not have to go far as long as it is within Mr. Botor's capacity to help."

#### Pooling of Resources and Scheduling of Services

In an experimental station with different research projects simultaneously conducted by different project leaders under constraints of meager resources, the pooling of resources and scheduling of services were imperative. At the PES, laborers, supplies and materials, equipment, typists and accounting personnel were pooled or centralized for

use by or servicing of different projects. Each project leader prepared a program of activities indicating the areas they were going to plant and the labor requirements for each activity. Supplies requisitioning and equipment use were also centralized. A bookkeeper and an accountant took care of the ledgers and handled all financial statements of all the projects. The typists were pooled together to service all projects according to a schedule of requests for typing. Such activities as weeding, planting, land preparation, use of common equipment like the tractor and motor vehicles, and harvesting were scheduled to allow the shifting of laborers from the activity or project to another.

These pooling and scheduling arrangements promoted the development of a united working staff and enhanced the full utilization of resources. Moreover, station personnel had found these techniques effective in forestalling working irritants and ensuring that facilities and equipment are ready for use at the right time and place when needed.

#### Commitment and Loyalty

The PES had a good record of performance and was one of the show windows of the BPI often visited by its guests and visitors. Station personnel had developed a sense of commitment or involvement that impelled them to preserve such a good public image of the station. Week-ends and holidays were not working days, but some of the staff come on these days without extra pay, to tend their experimental plants or projects.

During periods of crisis that required the performance or completion of rush jobs or the preservation or survival of projects or plants, the station personnel could be galvanized into quick and concerted action. As a matter of fact, during such trying conditions, even those laborers who were not supposed to be on duty in the rotation schedule, continue to work without pay on a "bayanihan system."\* Quite

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\*The bayanihan system was a collective effort or endeavor where colleagues or a group of people perform a job through a spirit of cooperation and without benefit of remuneration or compensation.

a number of them have developed that sense of commitment to continue working because they want to, not because they have to.

Many of the station personnel interviewed had developed a sense of loyalty to their job and the station. Despite more attractive job opportunities and higher salaries outside, some of them had preferred to stay. The reasons given for staying were security of tenure, nearness to their residence, love for the place, and dedication to the service. Mr. Botor and one of the project leaders both feel that at the PES, they could be more useful to the community, giving up-to-date information to farmers, students, trainees and foreign visitors, than if they occupied desk-jobs in the Central Office or in some private firm.

#### Team Work

To help alleviate their resource shortages, Mr. Botor and his staff have found it necessary and beneficial to work together as a team with members coordinating their activities and cooperating with each other.

Daily rounds conducted by Mr. Botor and the project leaders kept them continually in touch with the work and progress of each project or unit. Open lines of communication and a system of staff members and consultations took care of both vertical and horizontal communications and internal linkages. The station personnel were kept regularly informed about current station development, happenings and requirements through their project leaders, staff meetings and the station bulletin boards. They claimed that this practice gave purpose and meaning to their jobs, gave them a sense of belonging and consciousness of their involvement in the team effort.

The various mechanisms and situations requiring mutually cooperative endeavors, encouraged and facilitated interaction, team work and interchange of information and ideas. Through these joint efforts, available manpower and facilities could be mobilized or used to cope with emergency conditions or rush jobs that need the immediate attention or action of many people at the same time.

### Consultative Management

One of the most effective ways to promote self-activation and harmonious working relationships was to involve people in the process of determining the desired course of action. The PES was run through a system of democratic or participative management. The station superintendent knew his people and delegated to them responsibilities commensurate to their capabilities. Project leaders were given independence in making technical decisions and solving problems in their projects. The station personnel, including the laborers, were consulted when top decisions would affect them and their work. The decision to go on rotation rather than lay-off 50% of the laborers was arrived at in consultation with the project leaders and the labor force.

This system of broad participation in decision-making and planning had provided opportunities for development of staff confidence and capabilities, more harmonious working relationships, and more time for more substantive and important station activities.

### Postscript

The PES received a greatly reduced budgetary pie in calendar year 1977 and had therefore operated under constraints of meager resources especially for wages and operating expenses.

However, the flexibility with which its superintendent responded to existing realities augured well for the station. Under his leadership, the station was able to correctly husband its resources, put up the necessary priorities, and still remain productive.

The rotation of the labor force and its concomitant ills shall persist until such time as the station receives its appropriate share of the pie. "High in every organizational hierarchy there sits a Resource Allocator who considers 'claims' and acts upon them through the inscrutable processes of rational calculation and control."

What was in store for the PES in 1978 year? How could it make the Resource Allocator(s) enlarge its share of the pie?

What other measures, besides those given in the case, could be taken to cushion the impact of inadequate funds?

Besides the regular budgetary support, what other external sources of funding could be tapped by the BPI and its experimental stations?

## Appendix B

### Paradise Experimental Station Bureau of Plant Industry Budget Preparation for Calendar Year 1977

<u>Date</u>	<u>Activity</u>
Week I June 1976	BPI Budget Officer received Budget Circular (BC) No. 259 dated June 4, 1976, giving instructions for the preparation and submission of budget estimates for CY 1977 and long- and medium-range budgets. <sup>1</sup>
Week II June 1976	Preparation by the PES and other BPI units of Budget estimates based on target goals and proposed activities to be performed for CY 1977.
Week III June 1976	BPI conducted its Second Annual Research Review to develop new approaches, priorities and directions in research efforts; evaluate experiences, accomplishments, constraints and problems; discuss remedial measures and lay the foundations for BPI research activities for CY 1977.  Unit budgetary estimates were submitted to their respective divisions which in turn consolidated and submitted integrated division proposals to the BPI Budget Officer.  Budget hearings were conducted by the BPI Director and Budget Officer for the Chiefs of divisions. BPI Budget Office started integrating budget estimates submitted by chiefs of divisions for submission to DA.
Week I July 1976	Budget hearings were conducted by DA for agencies under it, even before formal submission of the agency budget proposals. The BPI was represented by its Director and Budget Officer.
Week IV July 1976	BPI submitted its integrated budget proposals to the DA.
August 24, 1976	The Budget Commission conducted budget hearings for the DA.

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<sup>1</sup>The medium-range fiscal plan would include budget estimates for CY 1976-1985; long-term fiscal plans for CY 1976-2000, to be prepared in multiples of five years.

September 1976	The BC recommended a national budget with sectoral and agency ceilings to the DBCC/OP/BB <sup>2</sup> for approval.
November 19, 1976	The President issued Presidential Decree 1050 appropriating funds for the operation of the Government of the Republic of the Philippines for FY 1977, and for other purposes.
	The BC finalized and printed CY 1977 budget.
December 1976	The BC issued approved CY 1977 with regional breakdown and sent the DA notice of its budget ceilings together with the Appropriations and Obligations Analysis Form, for accomplishment.
December 13, 1976	The BPI submitted its Work and Financial Plan with regional breakdown to the DA.
January 4, 1977	The BPI Budget Officer received its Advice of Allotment for the First Quarter of CY 1977 together with Cash Disbursement Ceiling (CDC).
Week I January 1977	Sub-allotment notices were sent by the BPI Director to the Regional Offices which in turn notified the experimental stations in their allotments.
Week II April 1977	The BC sent the BPI its Comprehensive Advice of Allotment with obligation authority for the second to the fourth quarter together with the Cash Disbursement Ceiling (CDC) for the Second Quarter of CY 1977. <sup>3</sup>

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<sup>2</sup> DBCC stands for Development Budget Coordination Committee; OP for Office of the President; and BB for Batasang Bayan, a transitory representative body composed of a cross section of the population.

<sup>3</sup> The advice of allotment received by the BPI on January 4, 1977 covered only the first quarter of CY 1977. However, because of the adoption of the comprehensive release system of fund allotment, funds allotted for the second to the fourth quarters were contained in one advice of allotment received in April 1977. The accompanying CDC, however, covered only the second quarter.

# Appendix C

## Paradise Experimental Station Wages and Maintenance and Operating Expenses As per Sub-Allotment Advice Fiscal Years 1976-1977

<u>Quarter</u>	<u>FY 1976</u>	<u>FY 1977</u>	<u>Differences</u>
I	₱ 13,763	₱ 12,520	(₱ 1,243)
II	13,763	11,268	( 2,495)
III	13,763	11,268	( 2,495)
IV	<u>16,960</u>	<u>11,268</u>	<u>( 5,692)</u>
	₱ 58,249	₱ 46,324	(₱11,925)

### Maintenance and Operating Expenses

I	₱ 20,000	₱ 20,286	₱ 286
II	20,000	18,268	( 1,732)
III	27,060	20,282	( 6,778)
IV	<u>36,158</u>	<u>26,676</u>	<u>( 9,482)</u>
	₱103,218	₱ 85,512	(₱17,706)

Source : Sub-allotment Advice received by the PES for FY 1976 and 1977.

THE RESEARCH PROPOSAL MAZE<sup>1</sup>

The Los Baños weather on that November morning in 1974 was nice enough, not too warm nor too cold for a busy working day. To Reynaldo Pacis<sup>2</sup> the weather seemed just right and suited well his work schedule -- no backlogs, taking assignments as they came and scheduling them for action and future attention. A few minutes after he sat behind his desk, Rey Pacis' weather suddenly became stormy. He was fuming mad and felt furious with what he read from his incoming correspondence.

Rey Pacis was a training specialist in the Agrarian Reform Institute (ARI). He had an M.A. from Siliman University and at that time, he was assigned as the prospective leader of a study entitled "An Evaluation of Land Transfer Procedures;" in addition to his other assignments in the Institute. Rey was happy and thankful when he was informed of the assignment. He felt the job was important and challenging enough aside from the fact that the study was an important component of three research projects comprising the research program of the Institute. ARI then had only two major organizational structures, the Research Division and the Training Division where Rey was working.

Rey recalled that early in 1974 during the months of January and February, two of his colleagues; namely Dr. Claro Villasor and Mr. Andres Prieto, worked on the research proposals. Dr. Villasor handled the conceptualization and development of the research ideas and formulation of the research design. Mr. Prieto assisted him in gathering preliminary data from existing literature and took charge of preparing the project budget. The senior staff of the Institute

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<sup>1</sup>Prepared by Mr. Alejandro B. Ibay, Management Specialist, Administrative Development Center, UP College of Public Administration; release being negotiated.

Cases of SEARCA/PCARR are intended as materials for class discussion and are not meant to illustrate good or bad management.

<sup>2</sup>All names of persons in this case study have been disguised

met several times to discuss and refine the package research proposal then consisting of three research projects having a total of seven studies.

Rey and his colleagues at ARI knew only too well the difficulties researchers would encounter before their proposals were finally approved and funded. They were aware, for instance, of a previous incident that resulted in serious disagreement and hurt feelings between the proponent and the members of the Review Panel. As a consequence of this incident, the review process was modified somewhat to make the reviewers incognito or unknown to the proponent.

Although the ARI research projects were to be funded by PCAR<sup>3</sup> the Institute as a matter of policy had to submit the proposals through the office of Assistant for Research of the University of the Philippines at Los Baños (UPLB) which conducted a preliminary review and evaluation. The package research proposal was submitted in August 1974. Early in October, Dr. Villasor made representations with the Office of the Chancellor to speed up the evaluation of the Institute's proposals. By October 15, 1974 the office of the Assistant for Research completed the necessary evaluation and had endorsed the proposal on the same day to PCAR.

Over at PCAR, the ARI proposal was endorsed to Dr. Ramon Liwanag, the Director of Socio-Economics Research Division. Dr. Liwanag reviewed and studied the proposal and later sent it to the Review Panel for evaluation.

It was the result of the evaluation of the Review Panel that made Rey Pacis angry and furious. He felt stung and insulted by the very first comment: "The Study Leader, Mr. Pacis, apparently has his

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<sup>3</sup>The Philippine Council for Agricultural Research (PCAR) created by Presidential Decree No. 48 on November 10, 1972 became Philippine Council for Agriculture and Resources Research (PCARR) by virtue of Presidential Decree No. 864 dated December 29, 1975.

background in the teaching of English. I wonder whether the more appropriate Study Leader for this project might be Mr. Estrada?" At the back of his mind, Rey was thinking and was not sure of the implications of the comment on his future performance and participation in ARI's major projects. He was not aware that in the guidelines issued by PCAR to the members of the Review Panel, the number one item was to determine the research capability of the proponent(s) and/or project leader(s) based on their research experience(s) and their bio-data.

A few months before this incident happened, significant changes were already being planned about ARI's organizational structure and functions. Dr. Julio Mendoza, PCAR Director for Technical Services who assumed in concurrent capacity the Deanship of the Institute, was thinking of a reorganization plan that will adopt structural and functional arrangements found effective in other University of the Philippines Academic units. To him, the present set-up and operations could still be improved if the major functions of teaching, extension and research would cut across and could be performed by all major units of the Institute.

He also felt that the present set-up more or less constrained and restricted personnel in the training division to undertake only training activities and for those in the Research Division to be confined to research work. He felt that this arrangement would not be conducive to increasing ARI's productivity as an organization. He was convinced that the level of competence of ARI personnel in these two functions and the need to match the limited number of personnel with the increasing demands for ARI's services were sufficient justifications for the proposed reorganization. The organization might likewise stop "raised eyebrows" when an employee from the training division is proposed to head a research project and vice-versa.

The reorganization plan was submitted to the UPLB Chancellor on September 6, 1974. This was submitted to the Board of Regents on November 10, 1974. The Board of Regents' approval came 18 days later.

The reorganization created three departments in ARI namely: the Department of Land Tenure and Management, the Department of Agrarian Institutions and the Department of Agrarian Reform Legislation and Administration.

ARI in a sense followed the suggestions and comments of the PCAR evaluators. Thus, Alfredo Estrada, an MPA graduate from the University of the Philippines and who was then acting chairman of the Department of Agrarian Reform Legislation and Administration, became the study leader of Operation Land Transfer. Prof. Estrada studied the evaluation sheet to determine the necessary revisions he will have to make in the returned proposal. He noted the following items needed in the revision:

- 1) include the problem of landlord opposition, falsification, etc.
- 2) include the problem of the large number of undelivered certificates, pending certificates and certificates under contention
- 3) membership in the Samahang Nayon as a requirement before a farmer can receive certificate of Land Transfer
- 4) make the objectives of the study more specific
- 5) on methodology, indicate personnel of the Department of Agrarian Reform to be interviewed, the coordinating agencies involved and the sample regions
- 6) on the study budget, reduce the number of research assistants, Honorarium of Statistician/Programmer was not allowed.

On November 22, 1974, Prof. Estrada submitted the revised (first revision) proposal to the PCAR Division of Socio-Economics Research. Almost a month had passed (December 19, 1974) when he was invited by Dr. Liwanag to discuss the proposal. Along with the other aspects of the suggested changes, Dr. Liwanag took up and clarified the analysis of data particularly the statistical aspects on measures of dispersion. Prof. Estrada left the office of Dr. Liwanag happy and confident since he felt that the substantive aspects of the research has already been

covered and chances were greater now than before for its approval.

Dr. Liwanag sent a short note to Prof. Estrada on March 4, 1975 reminding him to submit the revised proposal incorporating the results of their previous discussions. On June 9, 1975, the second revision of the proposal was sent by Prof. Estrada to PCAR. Upon receipt and review of the revised proposal, Dr. Liwanag thought the scope of the study to be broad enough to be divided into three components. Thus, the study became a research project with three areas of study requiring three study leaders. The budget was also reduced from ₱126,476.00 to ₱105,287.00.

At about this period, PCAR was getting feedback on the length of time research proposals usually took before approval. Perceptions of slowness, circuitous and inadequate procedures before funds were eventually released to researchers were some of the information reaching PCAR. This had caused some degree of frustrations among researchers.

Dr. Ricardo Castro, PCAR Director General, recognizing the immediate need to remedy the situation, created on May 6, 1975 an inter-agency committee to review and improve PCAR's research proposal evaluation mechanism. Designated chairman of the Committee was Dr. Crispin Ramos, Director of PCAR's Livestock Research Division. He was assisted by five members coming from UPLB, National Research Council of the Philippines, Bureau of Plant Industry, the Forest Research Institute and PCAR.

Thus, while Prof. Estrada was busy making final revisions of his proposal for submission to the Governing Council, the inter-agency committee was also seriously studying the evaluation procedures. The committee noted that the record number of days for processing proposals was 473 days, averaging 363 days before a proposal is finally approved.

The ad hoc inter-agency committee submitted its recommendations on June 24, 1975. The main feature of the report was the strategy to reduce the time lag in processing proposals to within 100 days (please see Exhibit A for details).

On August 1975, the PCAR Directors' Council scheduled for discussion Prof. Estrada's proposal. The Directors' Council was a reviewing body composed of seven Directors in the fields discipline of crops, livestock, fisheries, soils and water, socio-economic, forestry and technical services. Prof. Estrada attended the Council meeting to present and defend his proposal. He anticipated further revisions on his proposal and was glad that the change they recommended was for him to increase the number of respondents which include the landowners. The project budget was also increased to ₱110,151.00. He was given by Dr. Liwanag enough time to revise the proposal for submission to PCAR's Governing Council. The proposal was approved by the Governing Council during its September 1975 meeting.

Prof. Estrada learned about the approval of the project through a telephone call made by Dr. Liwanag. He was also informed that the Governing Council was convinced of the importance and urgency of the research project. A Council member, however, suggested that in view of the urgency of the project and the immediate value to the government program of the results of the project, the time frame of twelve months should be reduced to six months. Prof. Estrada was given two days to incorporate the final changes in his proposal.

Knowing that the approval of the Governing Council would be immediately followed by a discussion of the Memorandum of Agreement between UPLB and PCAR and that the project was more or less assured of implementation, Prof. Estrada pre-tested his questionnaire using ARI's funds. Sure enough, the Memorandum of Agreement was signed on January 13, 1976 and was approved by the UP Board of Regents on January 30 of the same year. Implementation of the project officially started January 5, 1976 with ARI receiving the first advice of allotment on February 6, 1976.

When this case writer asked Prof. Estrada about his experiences in implementing the project, he just smiled and said, "That will probably be a longer story. The shortest version you will find in some sections of our report."

#### EPILOGUE

Operation Land Transfer which started as a research project consisting of three major studies in January 1974 thus finally wound up in January 1976 as a research project subsuming three studies. The time period was also reduced from twelve to six months. Numerous detailed changes were also made in its substantive aspects as it ran its course in the research proposal maze.

Between November 1, 1975 and June 30, 1976 an audit was made by PCARR on the usefulness and effectiveness of the implementation of changes recommended by the inter-agency committee (see Exhibit A) created on May 6, 1975. The audit results showed marked improvements in the processing of research proposals. A proposal which usually took from an average of 363 days to as long as 473 days was now processed for an average of 167 days.

Four months after the publication of the audit results in the Monitor,<sup>4</sup> PCARR announced in the same publication the adoption of a new procedure on the submission of research project proposals. The new procedure required the submission of all research proposals in agriculture and natural resources during a specified period (see Exhibit B). This new procedure arising from the synchronization of the PCARR proposals review mechanism with the budgeting process of the Budget Commission was deemed advantageous to PCARR and its various clients because of the following improvements.<sup>5</sup>

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<sup>4</sup>PCARR's monthly publication.

<sup>5</sup>Monitor, Vol. V, No. 2, February 1977, page 7.

1. The Budget Commission could now appropriate more realistic research allocations since there would be a solid basis: research proposals approved by PCARR.
2. The new simplified procedure reduced drastically the time spent by the PCARR evaluators in research proposal processing thus giving them more time to devote to other equally pressing research aspects like the evaluation of on-going research projects, studying the research manpower capability and evaluating and planning commodity research programs, and
3. Isolated studies would be discarded and instead, packaged research projects would be encouraged.

Another good feature of the new system included the need for flexibility to provide for urgent and emergency researches. Five percent of the total budget for research operations were set aside by PCARR for this purpose. Urgent and emergency proposals needed to be certified by either the Secretary of Agriculture, the Secretary of Natural Resources, or the Chairman of the National Science Development Board whichever was the agency of the research proponent.

The objectives of and steps taken by PCARR to improve its operations in all its aspects did not by all means end with the events discussed in the case. The beginning of a case on the same subject seemed to have already emerged when PCARR hired a private consultant group -- at the time the new system was adopted -- to study the different units of PCARR to make it more efficient, relevant and responsive to the demands of its research management environment.

Exhibit A

REPORT OF THE AD HOC INTER AGENCY COMMITTEE  
CREATED TO REVIEW AND IMPROVE THE PCAR  
RESEARCH EVALUATION MECHANISM

OBJECTIVES: To revise and streamline the present PCAR research proposal evaluation procedures in order to shorten the present processing average period of 363 days to only 100 days i.e., from the time acceptable proposal is received by the office of the Director General to the time the check is released to the project proponent.

After a lengthy review and deliberation on the present PCAR evaluation procedures the Committee agreed to make the following suggestions/recommendations:

1. A routing slip should be attached to the research proposal being evaluated to serve as a reminder to those concerned the importance of the expeditious action required of them in processing/evaluating the project proposals.
2. In the case of research proposals with a total cost of ₦50,000 or less, evaluation may be made directly by the Team Leader, as chairman with the Director of the Research Division as member without necessarily constituting the Research Review Panel. If the Team Leader happens to be the Proponent, the Director of the Research Division may designate any member of the Commodity Research Team to act as chairman of the Review Panel.
3. Research proposals with indicated cost of ₦200,000 or less, in terms of personal services and maintenance and operating expenses for the duration of the project, an alternative evaluation mechanism maybe adapted whenever feasible, i.e., while the Research Review Panel is normally constituted "Confrontation Evaluation" is recommended. "Confrontation Evaluation" means allowing the Research Review Panel members a maximum period of 15 days to prepare his/her comments on the proposal. Within 7 days later, members of the Research

Review Panel, the Proponent and Director of the Research Division concerned shall convene at a place and time to be designated by the latter, to resolve on the spot any problem about the proposal so that if changes are needed, final draft of the proposal may be prepared in acceptable form.

4. Presently, Memorandum of Agreement is executed between PCAR and the proponent agency as project proposal(s) is approved by the PCAR Governing Council. The PCAR Governing Council meets once a month. Therefore, if a proponent agency has research proposal(s) approved every now and then by the PCAR Governing Council, Memorandum of Agreement has to be executed between PCAR and said agency. In view of the cumbersome nature of this procedure, the Committee suggests that a "Blanket Memorandum of Agreement" be executed between PCAR and the proponent agencies with already on-going projects encompassing all approved research project proposals both current and in-coming projects. It is believed that this "Blanket Memorandum of Agreement" will speed up the early implementation of said approved project(s).
5. To achieve the target of research proposal evaluation for a maximum period of 100 working days (from receipt of acceptable research proposals to release of fund to project proponent). Strict observance of the following time-limit for each of the following various steps involved are suggested.
  - a) Receipt of acceptable proposals by the office of the Director General, and constituting the Research Review Panel by the Research Division Director . . . . . 5 days
  - b) Research Review Panel evaluation of the research proposal including required revision by the proponent and the preparation of the final draft proposal . . . . . 30 days

c) Action on research proposal by Directors' Council, PCAR . . . . .	21 days
d) Action of the PCAR Governing Council . . . . .	30 days
e) Signing of Memorandum of AGreement and actual release of check to the proponent . . .	<u>14 days</u>
TOTAL	100 days

6. The recommended number of consultants constituting the Research Review Panel and honoraria on a flat rate basis to be paid each consultant as approved at the 12th meeting of the PCAR Governing Council on 26 October 1973 are as follows:

<u>Type of Proposal</u>	<u>No. of Consultants<sup>a</sup></u>	<u>Token Honorarium Compensation for Each Consultant</u>
Program	5	₱100.00
Project	3	100.00
Study	2	100.00

The Committee feels that the present flat rate of honoraria for "Project" and "Program" indicated above are quite unfair to the members of the review panel considering the time and volume of work involved in analyzing research proposals under these categories. For this reason, the following realistic rates are recommended.

- Study - ₱100.00 per consultant per study
- Project - ₱200.00 per consultant for project with two (2) studies and for each additional study ₱50.00 will be given but not to exceed a total honorarium of ₱300.00 per consultant
- Program - ₱300.00 per consultant for program with at least three (3) projects and for each additional project ₱50.00 will be given but not to exceed a total honorarium of ₱500.00 per consultant.

It is also the consensus of the Committee that for effective and greater efficiency regarding the role of the Team Leader in updating/ implementation/evaluation of the national commodity research program, it would be desirable for the Team Leader to hold office at PCAR at least once a month on schedule.

## Exhibit B

REVISED PROCEDURE FOR THE PROCESSING  
OF RESEARCH PROPOSALS

Activity	Period of Implementation	Period during transition CY 1977
Receiving of research proposals; preliminary review by Program Specialists of proposals earlier received	January-February (Until Feb. 28)	January-April 15
Compilation of research proposals and integration into the National Commodity Research Program taking into account the priority research areas of the commodity (done in the respective Division)	March	April 16-30
Program review of each commodities by the Director's Council. Prior- ity areas, duplications and budget will be the points for discussion	April	May
Presentation of summaries to the TPPRB and Governing Council for overall program review	May	June
Submission to Budget Commission of recommended research budgetary requirement for the succeeding calendar year	June	July
Technical evaluation by Research Review Panel of research proposals included in the research program approved by the Governing Council, by the Review Panel	June-September	July-September
Collation of review panel reports and preparation of detailed proposals for review by the Governing Council	October	October
Presentation of evaluated research proposals to the Governing Council for micro analysis	November	November
Preparation of Memoranda of Agree- ment by agencies and recommendation of specific release of budget to the Budget Commission for agency funded projects. In case of PCAR grants in aid, time for preparation of checks	December	December

A CASE OF DECOMPOSING SUCCESSFUL PROGRAM<sup>1</sup>

Introduction

Rice is the staple food in the Philippines. It plays such a vital role in the country's total development efforts that up to the present time, extensive rice research activities, training and extension are the primary concern of the government. Different agricultural research agencies undertake activities such as crop protection, effective pest control, fertilizer application and continuous development of high yielding tropical rice varieties. Likewise, these agencies have also their own training and information divisions.

The need to go into extensive rice research activities was started with the enactment of Republic Act No. 2080 (Appropriation Act for Fiscal Year 1958-59) implementing the rice and corn program. In the same year, Congress enacted Republic Act No. 2084, the Rice and Corn Production Act, creating the Rice and Corn Production Coordinating Council (RCPCC). It was composed of the Secretary of Agriculture (as Chairman-coordinator), the directors of the Bureau of Plant Industry, Bureau of Public Works, Bureau of Soils, Bureau of Agricultural Extension, Bureau of Animal Industry, Bureau of Lands and Bureau of Mines, the Dean of the University of the Philippines College of Agriculture, and a representative of the Department of General Services.

The Rice and Corn Authority (RCA) was created on January 14, 1964 under Executive Order No. 62 to coordinate the implementation of the Rice and Corn Program. On October 7, 1966 under Executive Order No. 50, RCA was abolished and RCPCC was reactivated. Due to the recognized need of the government to have a multi-agency coordinating and policy-making body to efficiently and effectively implement the rice and corn production program and a coordinating body with a wider scope, jurisdiction

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<sup>1</sup>Prepared by Ma. Clasisa R. Sia, Research Associate, Administrative Development Center, College of Public Administration, University of the Philippines.

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and authority over all the food program, the RCPCC was changed into the National Food and Agriculture Council (NFAC) on May 6, 1969 under Executive Order No. 183.

National Unified Rice Applied Research, Training and Information Program

In spite of the several rice research undertakings being done and the existence of a coordinating body for food production, it was found that up to 1969 rice shortage was still a major problem in the Philippines. One of the major reasons was that the scientific information developed by the different agricultural research agencies was not being fully utilized. Some researchers claimed that most of the time their research findings and recommendations were kept on file in their respective agencies and if ever they were disseminated, they did not reach the farmers. Another problem was that some research findings reaching the farmers were usually inconsistent with each other; furthermore, some of the recommendations were not adaptable in their areas. Rather than helping the farmers increase their production, the research findings only brought confusion to them. Thus, the farmers retained their cultural practices. Lack of trained manpower to teach the farmers the new technology was also one of the problems.

In response to all these problems, the National Food and Agriculture Council created in 1970 the National Unified Rice Applied Research, Training and Information Program (URARTIP) which was an inter-agency program that coordinated the preparation of technical recommendations and accelerated the flow of knowledge and practices of new rice technology from the researchers to the farmers.

Since the establishment of URARTIP, all its operations were geared exclusively to the technical needs and problems of our national rice production program. In fact, it had already developed practical and profitable technology in rice production and accelerated the adoption of such technology by the farmers. In 1973, it became the technical supporting program of Masagana 99. It has already solved many of the M-99 field technical problems. The Secretary of Agriculture recognized

that URARTIP had helped in making the rice production program successful.

#### URARTIP in 1970-1972

During its initial years, the program executive officer who was in-charge of the program tried to tie-up the research and demonstration activities of the different agencies such as the International Rice Research Institute (IRRI), the Bureau of Plant Industry (BPI), the University of the Philippines, College of Agriculture UPCA), the Bureau of Soils (BS) and the Bureau of Agricultural Extension (BAEx). So, from time to time, he went to the different agencies to gather information and discuss research findings. Since there was no formal agreement between URARTIP and these agencies, it was very difficult for him to get their cooperation. As a result, he was not able to get the necessary feedback from these agencies.

#### URARTIP in 1973-1976

In 1973, a new executive program officer was designated by the Chancellor of the University of the Philippines at Los Baños. Upon assuming office, he redefined the objectives, program functions and activities and made clear the organizational set-up, administration and coordination of the program. (See Annexes 1, 2, 3, 4).

1. Program functions, objectives and activities
  - a. On-the-job research

To evolve a complete package of technology for rice production, the IRRI, BPI, UPCA, and ACAP (Association of Colleges of Agriculture in the Philippines) developed rice varieties, the Seed Production and Pest Control Divisions of the Bureau of Plant Industry and the Soil Fertility Division of the Bureau of Soils with some agricultural colleges as cooperators plan, prepared and conducted scattered on-farm trials to determine the most appropriate recommendations on rice varieties, fertilizer application, pest control and crop protection for different localities and regions of the country. The specific research activities of the said agencies were as follows:

1. IRRI, BPI, ACAP and the UPCA — development of high-yielding tropical rice varieties.
2. BPI — Farmers' Evaluation on New Selection Applied Research Trial (FENSART), Insecticide Variety Applied Research Trial (IVART) and Herbicide Variety Applied Research Trial (HVART).
3. BS — Fertilizer Variety Applied Research Trial (FVART).

After every cropping season, results of farm trials which were consolidated by the regional research coordinators of the different agricultural agencies were then summarized by the URARTIP project leaders. The summarized findings were discussed by the Executive Committee composed of the different project leaders. Research findings considered promising were combined into a package of technology for demonstration.<sup>2</sup> The recommendations were then forwarded by the Executive Program Officer to the Planning Council for endorsement to the M-99 Management Committee.

b. Extension

To disseminate the technical recommendations verified by the technical/executive committee of the URARTIP, the package of technology was demonstrated by M-99 rice specialists, the Bureau of Plant Industry and the Bureau of Agricultural Extension rice specialists and technicians in different localities and regions. The Chief of the Agricultural Program Division of BAEx coordinated all demonstration activities. In relation also to extension activities, URARTIP undertook the preparation/updating/revision of technical information and guidelines on cultural management, pesticide use, crop protection and fertilizer application which were being followed by the rice specialists and technicians and supported other technical, semi-technical and popular publications as well as other mass media such

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<sup>2</sup>The promising recommendations are packaged into mini-kits. India got the idea of preparing mini-kits from URARTIP.

as radio (through the Agricultural Information Division of the Department of Agriculture). Likewise, it also coordinated with the Philippine Council for Agriculture and Resources Research (PCARR)<sup>3</sup> on the preparation of "The Philippine Recommends for Rice"<sup>4</sup> which was very useful in integrating the results of the applied research projects of URARTIP and that of PCARR. URARTIP also published the Manual for Rice used by rice extension workers.

### c. Training

To upgrade the technical capability of rice specialists, extension supervisors, trainers, rice seed farm technologists of the various government agricultural agencies involved in the government rice programs, several training programs were designed, conducted and coordinated by URARTIP through UPLB. Rice production extension specialists' training was conducted at UPLB since the experts and advance technologies were there. It had already trained 90% of the Masagana 99 rice specialists. Since 1975, technicians training had been conducted by local inter-agency staff which used to be held at UPLB in 1973-1974. Farmer leaders training was conducted locally by the rice specialists and technicians. They had already trained 2,000 farmer-leaders.

### 2. Organization

The projects and activities were implemented practically as additional functions of personnel of the member-agencies. The member-agencies were as follows: NFAC, UPLB, BPI, BS, IRRI, PCARR and ACAP. The Planning Council, composed of the NFAC Deputy Executive Director as chairman and directors/representatives of the member-agencies as members, set up policies and program directions, recommended program activities and budget to the NFAC and endorses technical recommendations to M-99 Management Committee.

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<sup>3</sup> Inasmuch as PCARR performed the role of clearing house for results of agriculture and natural resources, it had established close linkage with the mass media to minimize sensationalism in reporting research findings.

<sup>4</sup> This was originally a publication of URARTIP in 1970-1972.

An executive program officer was designated by the Chancellor of the UPLB upon the recommendation of the Dean of the College of Agriculture. His main function was to lead and coordinate the planning and implementation of projects and activities. A senior staff of IRRI was designated as applied research extension coordinator to oversee field projects. Project leaders who were senior staff members designated by the member-agencies undertook particular on-farm-trial projects for effective rice production. All of them were on honorarium basis detailed full-time at the URARTIP. They were assisted in their work by a full-time technical staff. The regional coordinators, rice specialists and technicians also received honorarium.

Due to the expansion of applied research projects to achieve the program's objectives, the Planning Council submitted to NFAC in October 1976 a detailed reorganization proposal. The proposal was not carried out since there was a change in the operational strategy for CY 77 in some of the member-agencies.

### 3. Administration

The administering institution and the headquarters of URARTIP was UPLB. Offices, working areas and facilities were availed by UPLB.

Philippine funds were allocated by NFAC, Department of Agriculture to URARTIP through UPLB since URARTIP had no auditing staff of its own. Member or non-member agencies might give monetary and material contributions to the program through UPLB. International organizations might also support the program through the IRRI in terms of equipment, supplies or personal services.

The main problem of the set-up was lack of funds and personnel to do the voluminous work.

#### c. URARTIP in 1977-1978

Starting CY 77, the preparation of the applied research and demonstration materials which were done at UPLB would be undertaken in various agencies. BPI had a new division (Field Trials Services) which would

undertake the expanded field trials on rice and applied research on other crops.

With the change in the operational strategy and plans, URARTIP intended to undertake the following activities in 1978.<sup>5</sup>

1. Development and demonstration of intensive rice cropping scheme<sup>6</sup> (Lorenzo Jose's Method of Rice Production or the Japanese Rice Garden) and efficient cultural technologies for maximum income and profit for the farmers.
2. Training for different levels of rice technical personnel which will be conducted in cooperation with different extension agencies. Specifically, the courses are for rice production and extension management specialists, production technologists and farmer leaders.
3. Development of effective communication strategies for dissemination of new rice technologies.

The cooperating agencies/offices of this reorganized inter-agency program (URARTIP) were the National Food and Agriculture Council (NFAC), the University of the Philippines at Los Baños (UPLB), the Bureau of Agricultural Extension (BAEx), the Agricultural Information Division of the Department of Agriculture (AID-DA) and the International Rice Research Institute (IRRI) (See Annex 5 for the new Organizational set-up).

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<sup>5</sup> All the projects and activities of the URARTIP were still part of Masagana 99 Rice Program.

<sup>6</sup> Two methods of intensive rice cropping would be explored. Farmers operating small ricefields in fully irrigated areas would be encouraged to adopt staggered cropping (weekly planting) scheme. Farmers of partially irrigated and rainfed lowland would be encouraged to raise at least two crops of rice by using very early maturing varieties and planting early in the rainy season.

PCARR was questioning if this was a research project, it could only be implemented in 1978 on a pilot basis since the deadline for the submission of all research proposals to them has elapsed. The executive program officer identified it as an action project, the same as the applied research projects undertaken in the past years.

### Field Trials Services

In 1976, during one of the meetings of the governing council of a coordinating body for research, the idea of having a separate division for applied research not only on rice but also on other crops in the Bureau of Plant Industry was brought up. Since there was really a need to have a bigger budget for applied research to cover a wider area for field trials, the Crop Development Services (Field Trials Services) was created on January 15, 1977. (See Annex 6). The Bureau of Plant Industry was trying to persuade the Bureau of Soils to let them handle the applied research on fertilizer use since they could easily package the technology which URARTIP need to do.

The functions of this division were as follows:

1. to collect and collate all the relevant and up-to-date information and research findings on crop improvement and production management practices.
2. to organize them into package of technology in orderly sequence.
3. to prepare plans and programs of activities to verify the validity of those packages of technology in farmers' field which would provide the bases for regional or even area of provincial recommendations on the development and production of particular crop commodity.

Unlike the applied research undertaken by the URARTIP, this division needed to submit research proposals to PCARR.<sup>7</sup> A BPI authority commented that unless a good proposal was submitted it would take a long time to start a particular applied research.

In an early morning of October 1977, the URARTIP executive officer was reminiscing the successful encounters he had with the project leaders

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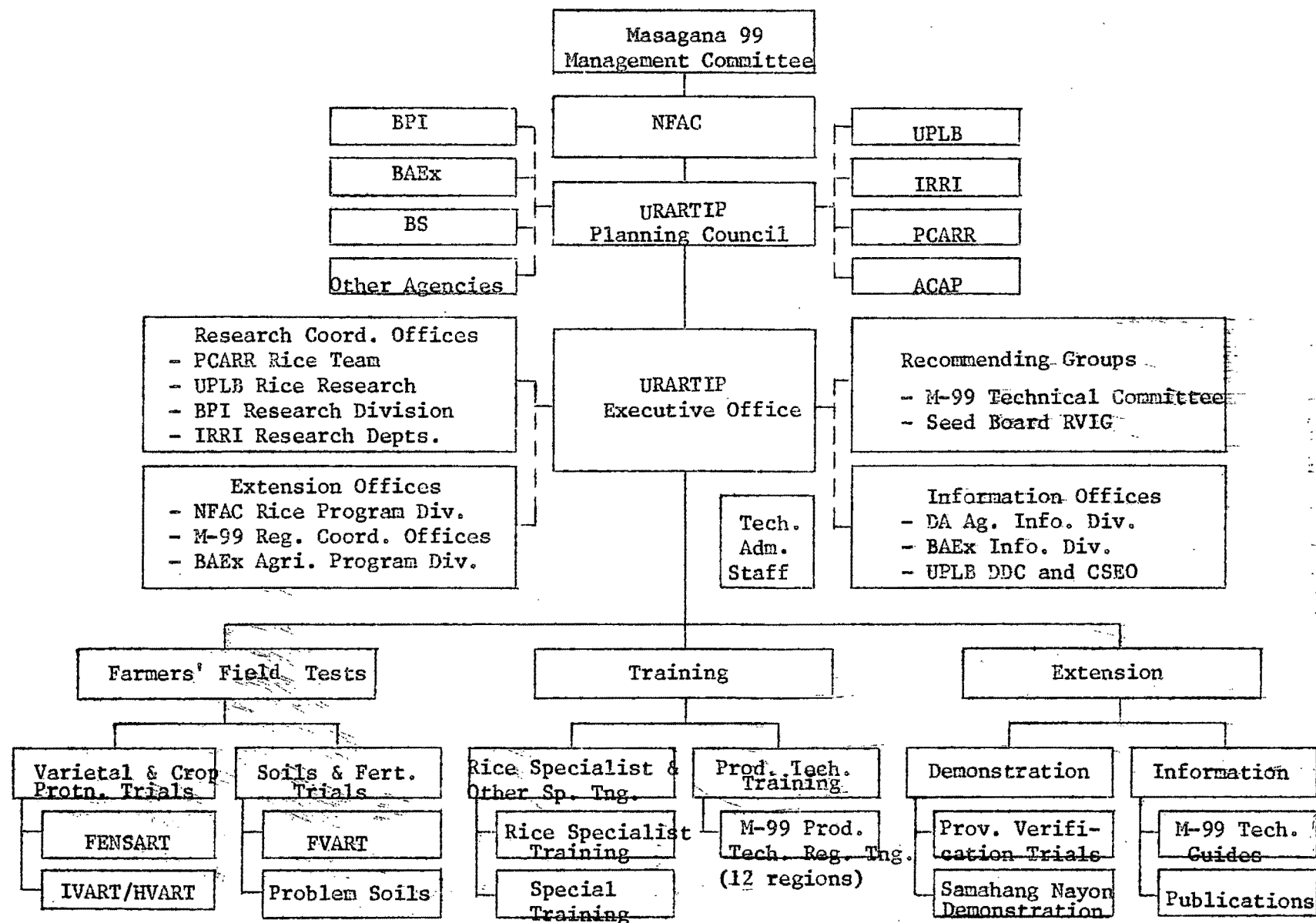
<sup>7</sup>PCARR is the agency created on November 10, 1972 by virtue of PD No. 48 to coordinate and evaluate all research activities of the government/private agencies with regard to agriculture and natural resources to avoid duplication of activities. Just recently, it was given the authority by the Budget Commission to scrutinize all research projects before any funds will be released. Now they are formulating auditing procedures to be used by all research agencies under their jurisdiction.

in planning the program and discussing problems of rice production. He also recalled the difficult times when they were coordinating the farmer leaders training programs in some remote areas of the country like Eastern Samar. Now little by little, the activities of his program was being institutionalized.

Questions:

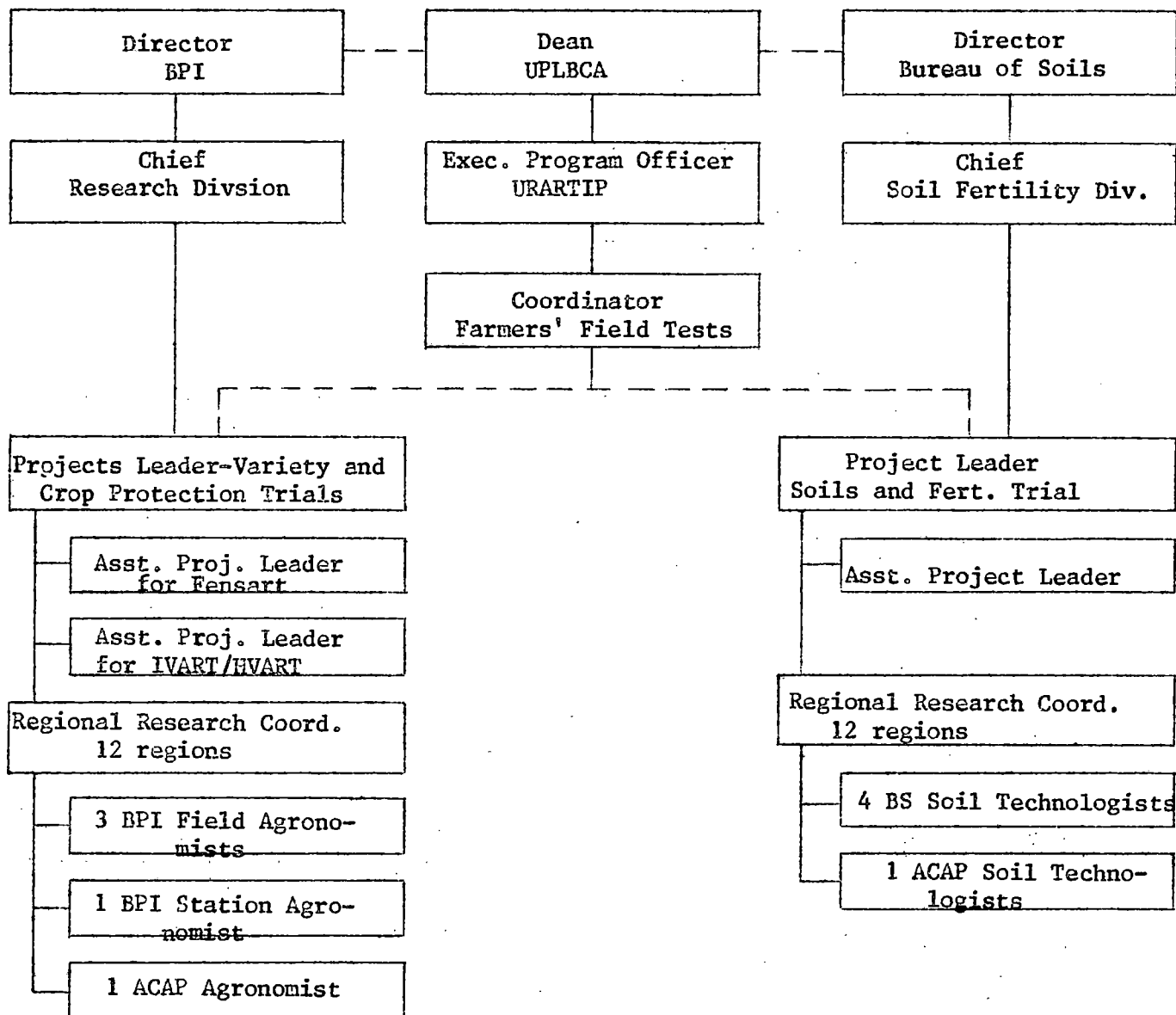
1. With the institutionalization of the different agricultural activities basic and applied research, training and information campaign -- what strong justification could be given for the continuous existence of a program that laid the foundation toward a successful rice production program?
2. In what way did the URARTIP contribute to the success of the rice production program?
3. What were the possible problems in the institutions established for the different agricultural activities?
4. Would it be better if URARTIP's reorganization proposal submitted to NFAC in 1976 was approved rather than creating Farm Trials Services under the umbrella of PCARR?

## URARTIP Organizational Chart



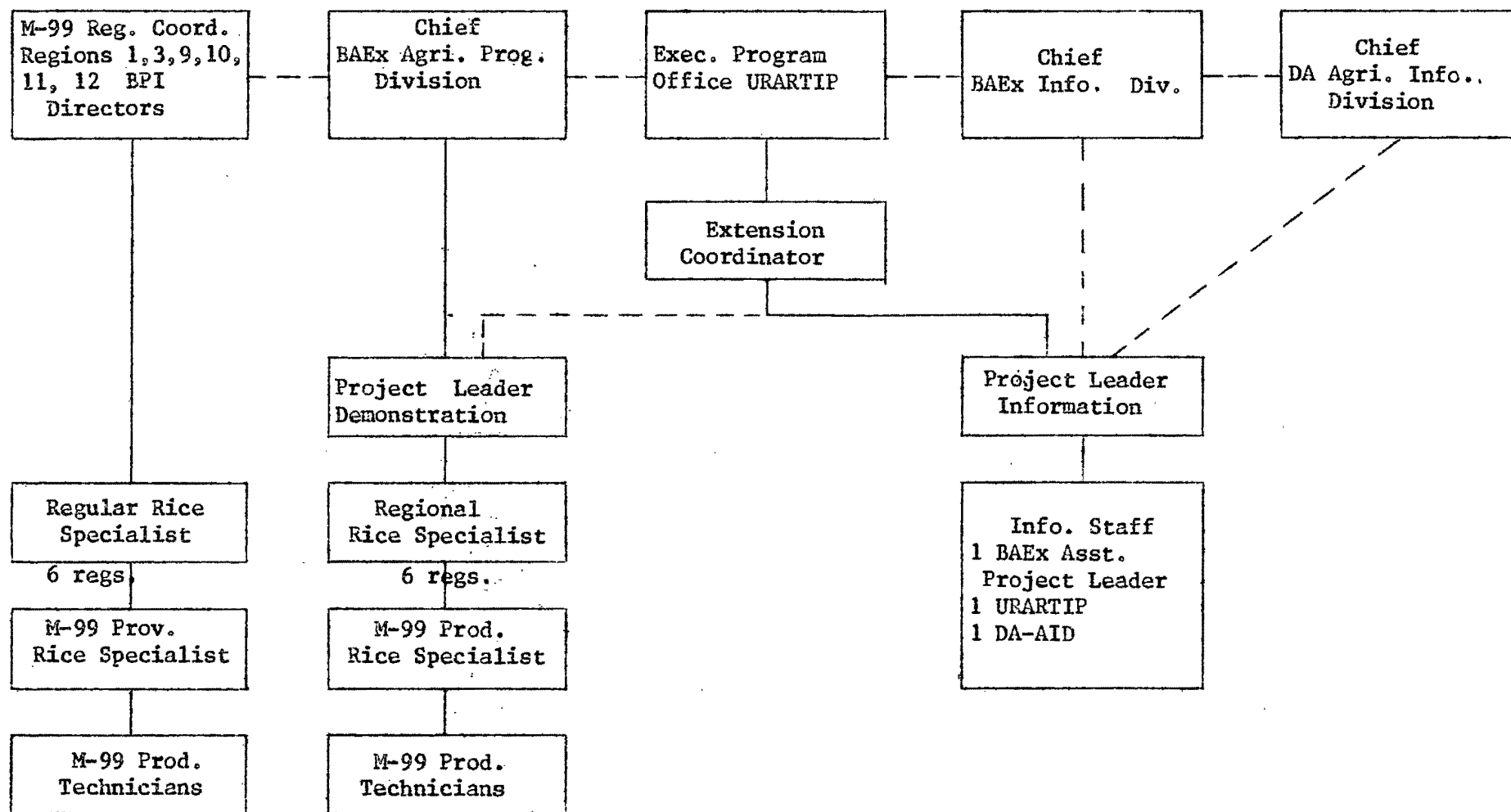
Annex 2

Administrative and Personnel Chart  
URARTIP Farmers' Field Trials

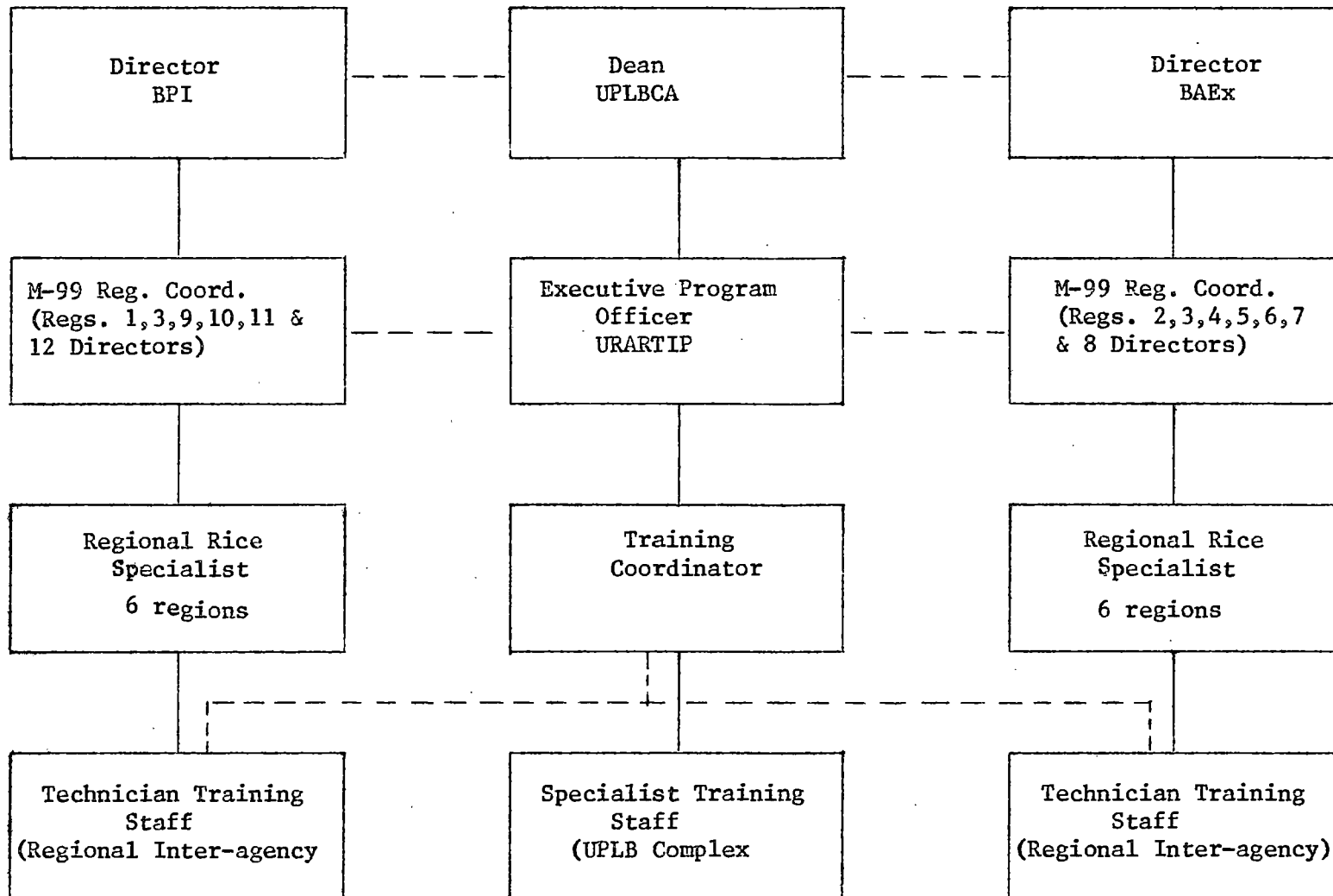


Annex 3

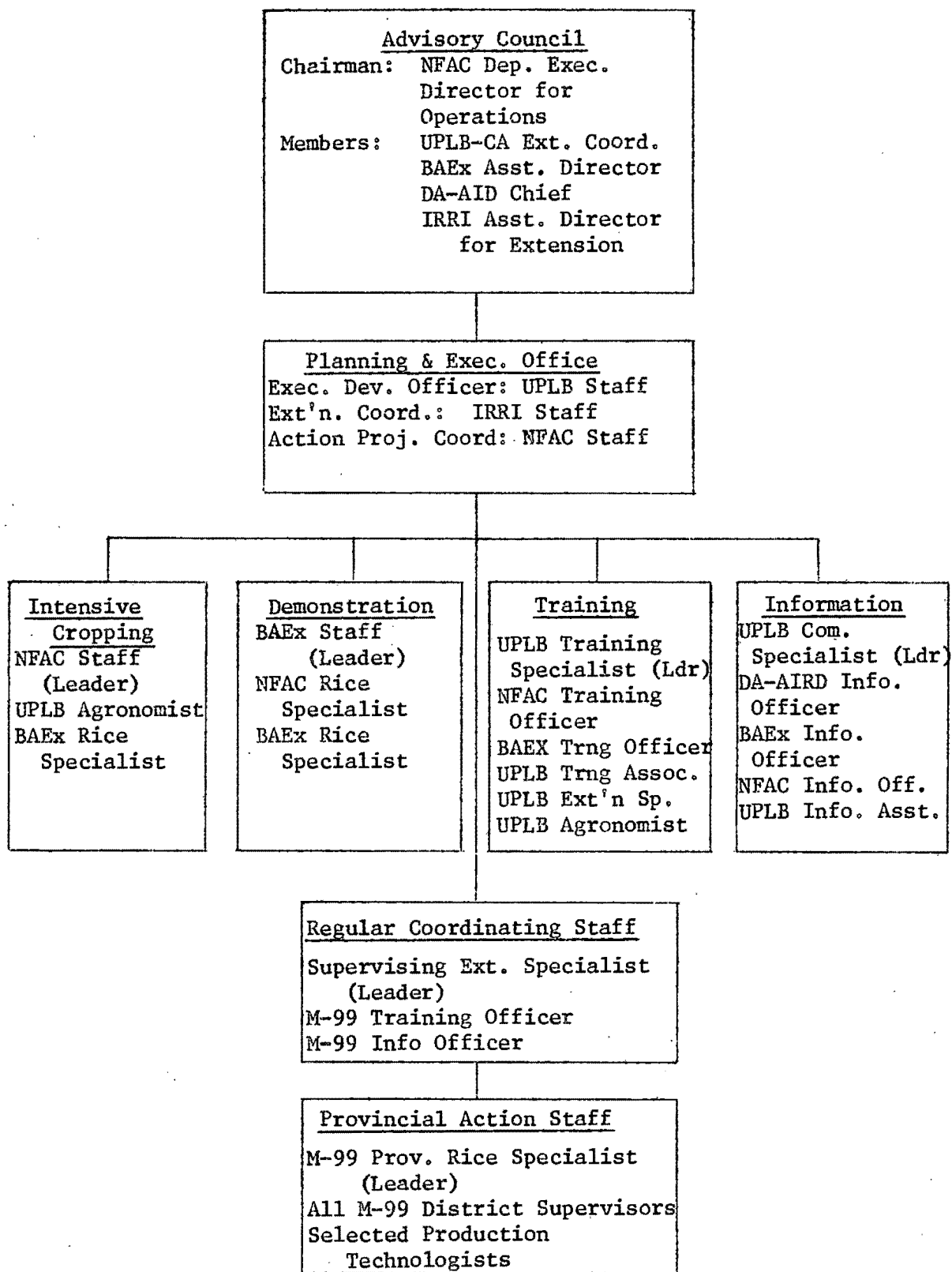
Administrative and Personnel Chart  
URARTIP Extension



Annex 4  
Administrative and Personnel Chart  
URARTIP Training



Annex 5  
URARTIP Organization  
and  
Personnel Chart



JUSTIFICATION FOR THE CHANGE OF NAME FROM  
CROP DEVELOPMENT SERVICES TO  
FIELD TRIAL SERVICES

The change of name from Crop Development Services to Field Trials Services was conceived of by no less than the Secretary of Agriculture. He, however, instructed us to further study the matter, and to recommend later on, an appropriate name to replace the present nomenclature of this Division.

A closer scrutiny of the subject reveals that the word development pertained more to basic research, which did not conform with the main function of the Division, which was essentially and substantially applied research. Functionally, the Division should provide an effective mechanism for narrowing the technology gap between basic research in experiment stations and extension, hence, the change from Crop Development Services to Field Trials Services.

## RICE STRATEGIES<sup>1</sup>

J. D. Drilon Jr., a consultant, had just discussed his report on "Dominican Rice Strategies." (Copy of the report is attached as Appendix 1)

Those who listened to him included Jose Miguel Cordero Mora, Undersecretary of Agriculture, Department of Agriculture, Dominican Republic; Dr. Y. T. Hsieh, Plant Breeder, Estacion Experimental, Arroceros Juma, and Miguel Brache, Technical Job Director, also of the Estacion Experimental Juma.

The Juma Experiment Station was the principal rice station of the Republic, and it was at this station that most of the research for the improvement of rice had been conducted.

During the period 1967 to 1977, Dr. Hsieh had worked at the station as the leader of a rice mission from Taiwan. As a breeder, he had contributed much to the breeding of high yielding varieties which became widely used in the Republic. He estimated that as of mid-1977, about 28% of the rice crop hectareage of the Republic was planted to the varieties developed at Juma. But this did not seem enough. Dr. Hsieh said that Juma had been criticized for "not doing enough."

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<sup>1</sup>Prepared by J. D. Drilon Jr., Director of the Southeast Asian Regional Center for Graduate Study and Research in Agriculture.

Cases of SEARCA are intended for discussion and training purposes, not to illustrate proper or improper handling of administrative situations and problems.

Dr. Hsieh confessed that Juma had been operating on a shoe-string budget. In his opinion, everything that could possibly be done had been accomplished.

In spite of the criticism, he was glad that the Republic had at long last decided to mount a food campaign concentrating on rice.

Undersecretary Cordero Mora had been appointed as the head of the Fomento Arrocerero, the implementing arm of the Rice Commission, a cabinet level collegiate body charged with the function of developing the rice industry.

The country had been importing rice for many years and the government decided that something should be done about this problem by creating the Rice Commission.

Drilon was requested by the Department of Agriculture to take a look at the situation, determine the nature and extent of the problem and assess the possibility of solving it.

Cordero Mora asked Drilon "What might be our strategy for rice research?"

"How about platanos," he asked quickly, following up with the assertion that platanos were the second staple food item in the Republic.

DOMINICAN RICE STRATEGIES\*

I. Introduction

1. Self-sufficiency in rice in the Dominican Republic is desirable. This would improve the socio-economic well-being of the rice sector, contribute to a stronger economy and help ensure food security for the people in a world that is facing the prospect of substantial shortages in cereals in the years ahead.
2. The Republic has experienced rice shortages in recent years but it seems there is evidence that it has the capacity to solve this problem. Land available is sufficient -- at least for the present -- and can be improved. New rice technology that can be relied upon in the immediate years has been produced. The infrastructure exists for the supply of inputs that would make possible the application of the technology. There is a mechanism for ensuring markets for the produce of the rice farmers. And there is political will to solve the problem.
3. This capacity to solve the problem should be demonstrated in a sustained rice campaign that will muster and marshal

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\*Prepared by Dr. J. D. Drilon Jr., Director of the Southeast Asian Regional Center for Graduate Study and Research in Agriculture, Santo Domingo, Dominican Republic, September 23, 1977.

the technical, physical and manpower resources of the agricultural sector and utilize them with a sense of urgency.

4. The time has come for such a demonstration. On September 21, 1977 the Government launched a rice program never before attempted in the history of the country.
5. This rice program will be managed by a Rice Commission composed of leaders of the major components of the Department of Agriculture. The Fomento Arrocerero will be the implementing arm of the Commission.
6. What follows is a presentation of (a) the rice problem, (b) the strategies for solving the problem, and (c) some policy and operational recommendations to enhance the chances for success of the rice strategies.

## II. The Problem

7. The yearly importations of rice by the Republic give a summary indication of the extent of the rice problem of the Republic. In 1972, these imports totaled almost 190,000 quintals, rose to 1.4 million quintals in 1974 and stayed at just above 1 million quintals in 1975. In 1977, rice imports have been reported to be at just about 800,000 quintals.
8. With a population expanding at the rate of 3% a year, consumption of rice has correspondingly increased and in

recent years exhibited a marked increase on a per capita basis, indicating other reasons than population expansion for part of the increase in consumption requirements.

9. Rice production increases have not kept pace with population expansion and from a situation of virtual self-sufficiency in 1971, the rice industry steadily plunged to bigger deficits in the following four years, after which spurts in productivity and total production diminished rice imports by about 20% (see Table 1).
10. The rice imports of 1974 and 1975 required an outflow of foreign exchange in the vicinity of \$78 million from 1972 through 1975.
11. An analysis of the contributions of area expansion and productivity to increased production reveals that rice production volume increased from 1970 to 1976 by 39.8% or a yearly average of 5.66%. The cultivated area during the same period registered a yearly average growth rate of only 1.1% while yields registered a yearly average growth rate of 4.01% (see Tables 2 and 3).
12. Although population has been increasing at close to 3% a year only, up to a 30% increase in per capita consumption has been observed between 1970-1972 on the one hand and 1973-1975 on the other. Apparently, this phenomenon has overcome and outpaced improvements in production. Part

Table 1. Rice Supply and Consumption  
Dominican Republic, 1970-1977

	1970	1971	1972	1973	1974	1975	1976	1977
Cultivated Area (TAS)	1,318,992	1,200,000	1,280,000	1,324,992	1,257,776	1,150,000	1,460,233	
White Rice Production (qqs)	3,009,306	3,037,966	2,882,629	3,916,240	3,460,397	3,360,000	4,208,247	
White Rice Importation (qqs)	51	9	189,640	654,465	1,406,020	1,014,125	710,000	800,000
Total Supply (qqs)	3,009,357	3,037,975	3,072,269	4,570,705	4,866,417	4,374,125	4,918,247	
Population	4,068,000	4,189,000	4,313,000	4,439,580	4,570,986	4,708,116		
Per Capita Consumption (LBS)	73.98	72.54	71.25	91.96	109.48	93		

Source of basic figures: Yin-Tien Hsieh, "Informe, Mission Technico Agricola De China En La Republica Dominicana," Marzo, 1976.

Table 2. Rice Production, Cultivated Area & Yields  
Dominican Republic, 1970-1976

	1970	1971	1972	1973	1974	1975	1976
White Rice Production (qqs)	3,009,306	3,037,966	2,882,629	3,916,240	3,460,387	3,360,000	4,208,247
Cultivated Area (TAS)	1,318,992	1,200,000	1,280,000	1,324,992	1,257,776	1,150,000	1,420,233
White Rice Yield $\frac{\text{qqs}}{\text{TA}}$	2.28	2.53	2.25	2.96	2.75	2.92	2.92

Basic figures: See Table 1.

Table 3. Increases in Rice Production,  
Cultivated Area and Yields

Dominican Republic  
From 1970 to 1976

	PERCENT	
	1970-1976	Yearly Average
Rice Production	39.8	5.66
Cultivated Area	7.68	1.1
Yield	28.07	4.01

Note: The contribution of area expansion to increased production was about 269,455 qqs. in 1976. The contribution of yield increase was about 3.45 times or about 924,486 qqs.

of the explanation lies in the fact that rice is not the only staple item in the diet of the people (see Tables 1 and 4).

13. Given the rate of population increase at 3% and using the per capita consumption rate of 110 pounds per year, the projected consumption requirements of the country would move from 5.3 million quintals in 1976 to about 6.2 million quintals in 1981. These levels of consumption requirements would be far above the projected production output for a number of years if such output increased merely at the rate of 5.7%. The average output increased during the period 1970 through 1976 (see Tables 5 and 6).
14. Assuming that consumption requirements would grow as projected above, rice production output must generate a growth rate of about 10% in order to cope with such growing requirements during the period 1978 through 1981 (see Table 6).
15. How can the rice industry of the Republic generate an output growth of about 10% or better? The strategies for solving the rice problem should answer this question.
16. The question suggests that other complimentary solutions such as the reduction of population growth and modifying or stabilizing the dietary patterns of the people may be useful but should not be counted on for critical effect.

Table 4. Population Trend  
Dominican Republic,  
1970-1975

Year	Population	Percentage Increase
1970	4,068,000	
1971	4,189,000	2.97
1972	4,313,000	2.96
1973	4,439,580	2.93
1974	4,570,896	2.96
1975	4,708,116	3.00

Table 5. Projected Population and Rice  
Consumption Requirements  
Dominican Republic, 1976-1981

Year	Population	Consumption Requirements (qqs)
1976	4,849,359	5,334,295
1977	4,994,810	5,494,291
1978	5,144,654	5,660,219
1979	5,298,994	5,828,893
1980	5,457,964	6,003,408
1981	5,621,703	6,183,873

Table 6. Rice Consumption Requirements  
and Production Targets  
Dominican Republic, 1978-1981

Year	White Rice Consumption Requirements (qqs)	White Rice Production (qqs)	
		at 5.7% Growth Rate	at 10% Growth Rate
1978	5,660,219	4,701,660	5,091,979
1979	5,828,893	4,969,654	5,601,177
1980	6,003,408	5,252,924	6,161,294
1981	6,183,873	5,552,341	6,774,424

17. The question also suggests that the strategies must not only achieve self-sufficiency in rice as soon as possible but it must also be capable of sustaining that position.

### III. Strategies

18. As may be gleaned from available literature and from discussions with selected officers of the Department of Agriculture, the elements of the national rice production improvement strategies include the following:
- (a) The improvement of irrigation and drainage, including the lay of the land.
  - (b) The improvement of research and extension services and bringing them to bear more effectively upon problems of increasing rice production.
  - (c) The development of a seed program that will make available and encourage the use of new high-yielding varieties.
  - (d) The establishment of the Rice Commission and its implementing arm, the Fomento Arrocerero, to manage the national rice program.
19. Analyzed and related to the central objective of increasing the national output of rice at desirable levels, the strategies have the following thrusts:

- (a) The improvement of irrigation and drainage services is apt to expand land devoted to rice in terms of new land in certain instances but more importantly in terms of double cropping and/or appropriate water regimes for existing rice farms. In this regard, proper land preparation as a concomitant measure is regarded as an important factor in increasing yields as it would optimize water use.
- (b) Research has produced new technologies principally in terms of new varieties and the accompanying cultural practices and these technologies are sufficient instruments for immediate use in a national rice program. But the research system must be improved to enable it to respond to the long-term challenge of sustaining productivity at high levels. The main constraint that must be given attention in this regard appears to be manpower. There is an apparent need to train more scientists and technicians.
- (c) The extension service is a fledgling organization. It should be reinforced and prepared to serve as a more effective vehicle for the delivery of technology turned out by research. The present force

has a coverage ratio of 1 extension technician to farms of close to 16,000 tareas (1,000 hectares) in area.

- (d) Given the packages of productive technology, the inputs that will make it possible for farmers to adopt the technology must be made available. Pure seed of improved varieties must be ready before each planting season at the right places. Similarly, other inputs such as fertilizers and pesticides should be available.
- (e) The establishment of the Rice Commission and the Fomento Arrocerero will make possible the conduct of the national rice program in a unified manner with more facility for coordinated action both at the policy and implementing levels.

20. Figure 1 shows the functional structure of the organization expected to manage the national rice program.

21. There are a number of factors which have strategy implications:

- (a) The structure of the rice industry may be illustrated as in Figure 2.
- (b) The input suppliers mostly belong to the private sector. However, recently, the Department of Agriculture set up retail outlets of its own to ensure distribution at reasonable prices.

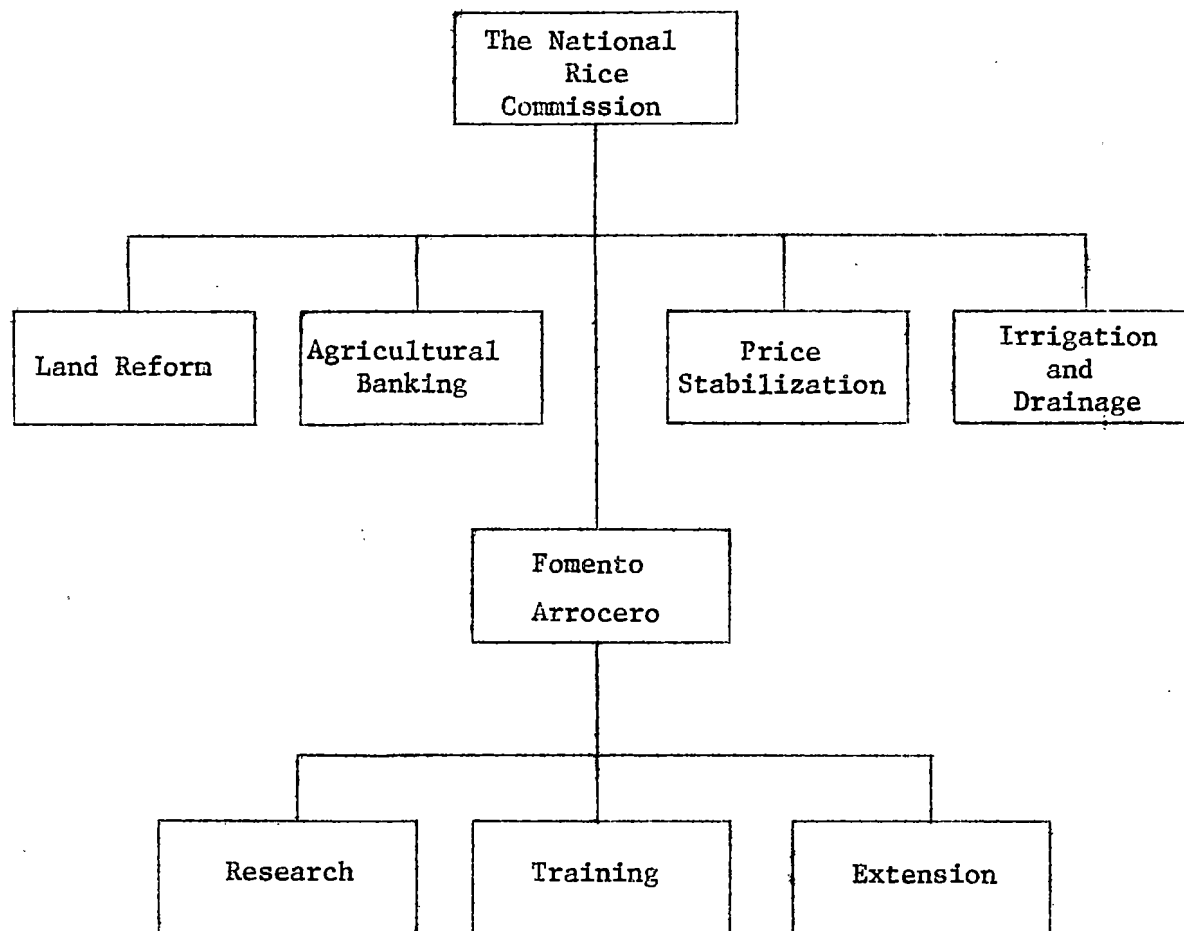


Figure 1. Functional Set-Up of the Organization Expected to Manage the National Rice Program

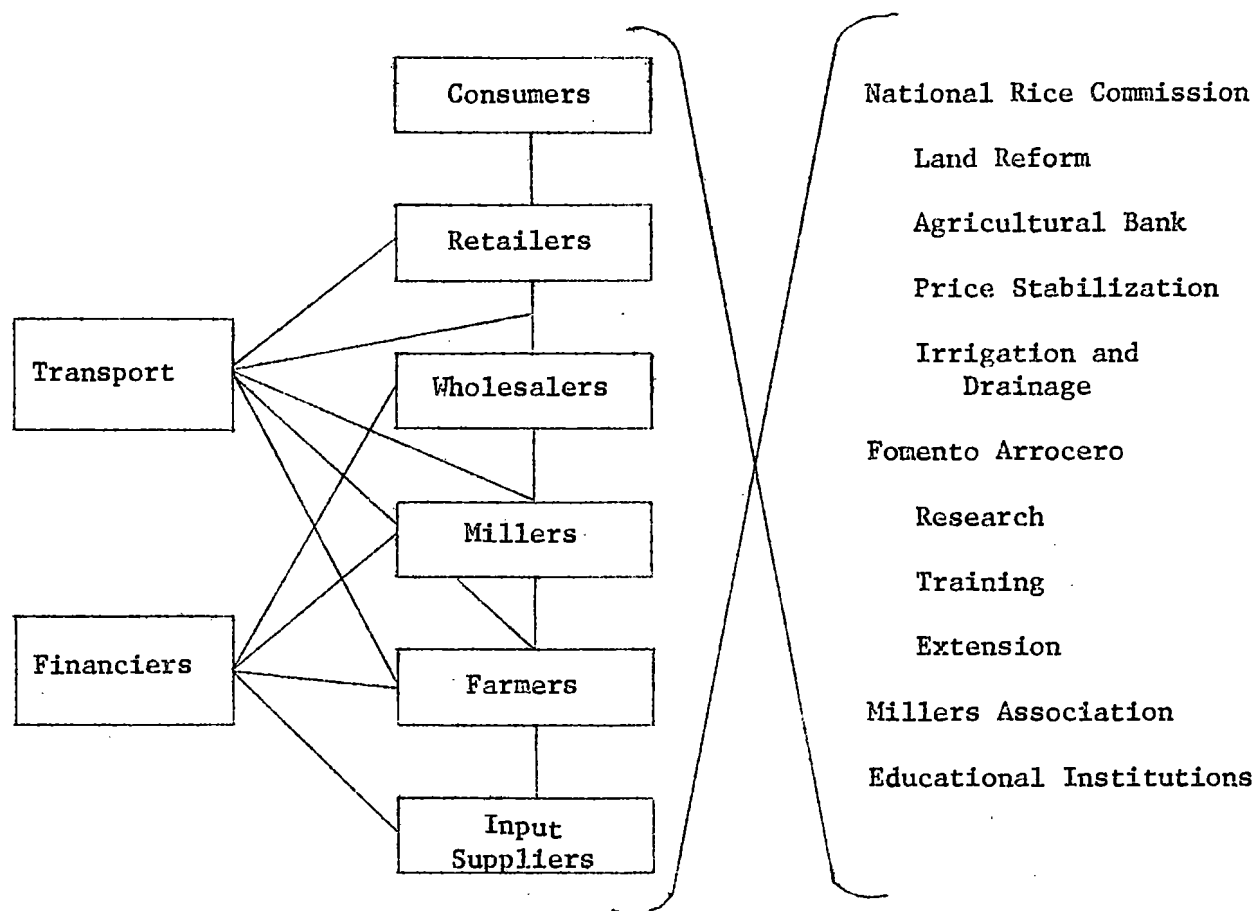


Figure 2. Illustrative Components of the Rice Industry as may be Viewed from the Standpoint of the National Rice Program

- (c) There are three types of farmers in terms of categories of farms :

- (1) Land reform collectivized farms
- (2) Land reform non-collectivized farms
- (3) Non-land reform farms

Strategies for pushing the national rice program will differ for each of these categories in some aspects.

- (d) The millers are a well-organized group. Their total milling capacity is more than sufficient.
- (e) There seems to be no real problem with rice distribution. Generally, all the output is sold almost immediately after harvest to the millers at prices usually better than the official floor prices and are in turn sold by the millers to the channels at prices generally within ceiling ranges. The trading space, price-wise, appears to be adequate.
- (f) Transport is generally adequate to move the supply from one sector to the others within the industry structure.
- (g) Some financing is supplied by millers and the cooperatives, but the agricultural bank (Banco Agricola) is the main financing arm of the rice industry.

- (h) It is fortunate and desirable that research and extension will both be under the direction of the Fomento Arrocerero. This will minimize the problem (so prevalent in many other countries) of coordinating research and extension and promoting a closely interacting relationship between the two.
- (i) To prepare leaders for the research and extension systems, training abroad for selected individuals is needed.
- (j) The country is divided into 5 agro-climatic zones, with marked differences in soils, precipitation and hydrological conditions. These zones and the distribution of rice areas among them are shown in Figure 3.

#### IV. Recommendations

- 22. The government's will to achieve the objective of the strategies for solving the rice problem should be made more manifest in order to give such strategies the character of a mandate that must be implemented with the cooperation of every entity or individual concerned. One way of manifesting such a will is to enunciate policies at the highest levels of government, preferably through appropriate directives issued by the Chief Executive of the land.

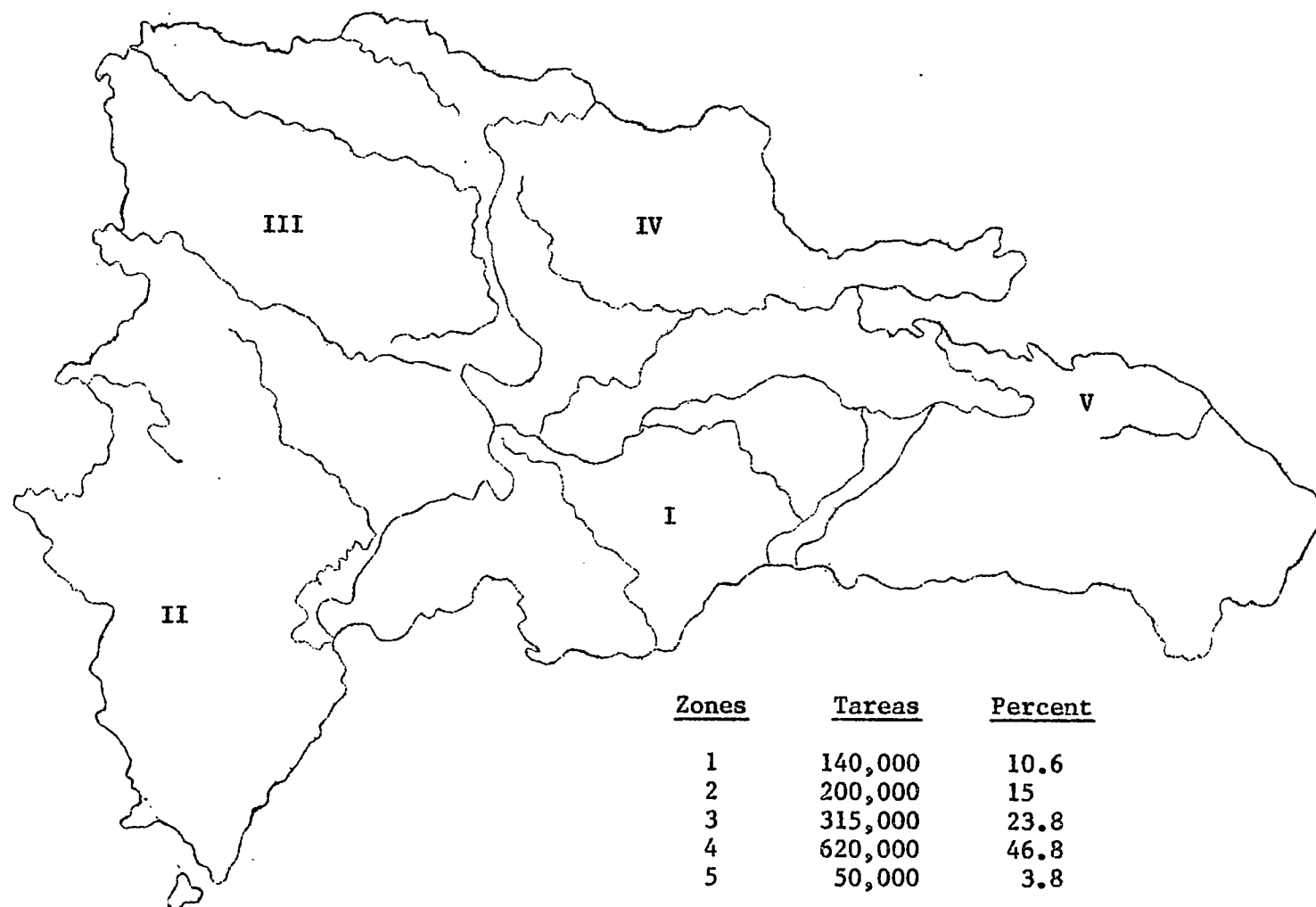


Figure 3. Agricultural Zones and Distribution of Rice Areas,  
Dominican Republic

This has been found to be effective in the case of Korea, the Philippines and Indonesia. It could well be as effective in the case of the Dominican Republic.

The rice problem, an important problem of long standing, can be solved with a sense of urgency only if it receives the attention of the top-leadership of the land.

23. It is suggested that the following policies or similar mandates be enunciated:

- (a) The attainment and maintenance of self-sufficiency in rice shall be a national policy of the Dominican Republic as it is important to the national security, the well-being of the rural population, and the strength of the economy as a whole.
- (b) To implement this national policy, there shall be a sustained campaign to achieve rice self-sufficiency to be waged by the Rice Commission and the Fomento Arrocero. Such a campaign shall be aimed at (1) the expansion of the land area devoted to rice in absolute area and/or in terms of crop-tareas, and (2) the development and application of research-based technology.
- (c) Credit, principally through the Banco Agricola, shall be used as a policy instrument to encourage

the spread and use of productive research-based technology. To this end, the credit system shall provide incentive schemes that will sufficiently differentiate the desirable and preferred technology from the traditional technology sought to be changed.

- (d) In collaboration with the Rice Commission and the Fomento Arrocero, the Land Reform Institute and the Hydraulics Institute shall work in close cooperation to make possible at the earliest time the expansion of rice land through additional areas and/or infrastructures that will enable rice farms to double-crop.
- (e) To emphasize its pressing importance and to provide it an adequate resource base, the national rice program shall be provided a budget to support its operations. The Rice Commission and the Fomento Arrocero shall see to it that the yearly proposal for such a budget is prepared well in advance.
- (f) The profits derived by the Price Stabilization Institute from rice importations shall principally be devoted to the support of the rice program in order to improve local production and to finally eliminate rice importations.

24. Given the policy instruments, the rice program's success would depend upon its operational effectiveness. The following operational strategies are suggested:

- (a) Relate the elimination of rice imports to the development of specific production units. Where will the incremental supply that will fill the deficits come from? The answer to this question will identify volume targets, priority areas of concentration, and sequence of program expansion as well as focus the application of program resources. Also, it will facilitate monitoring of progress and achievement. Table 7 offers helpful information for the formulation of a running program for the development of production units.

Table 7 gives an idea of how needed rice production increments may be allocated to three levels of program areas. It also gives (in quintals) the simulated target increments per tarea at the different levels of program areas. These increments are equivalent to a production increase of 10% annually as shown in Table 6 which indicates that with a 10% increase, self-sufficiency could be achieved in 1980, and after that, the growth

Table 7. Allocation of Target Rice Production  
Increments, Dominican Republic  
1978-1981

Year	Target Increment (qqqs)	At 160,000 TAS qqqs/TA	At 320,000 TAS qqqs/TA	At 480,000 TAS qqqs/TA
1978	462,907	2.9	1.4	.96
1979	509,197	3.2	1.6	1.06
1980	560,117	3.5	1.8	1.17
1981	616,129	3.9	1.9	1.28
Average	537,088	3.4	1.68	.88

rate of production increase could go gradually down without violence to self-sufficiency.

A schedule of targets of program coverage which seems feasible is as follows:

<u>Year</u>	<u>Program Coverage (TA)</u>
1978	80,000
1979	320,000
1980	480,000
1981	560,000

The priority of areas of program concentration could be arranged sequentially as follows in order to give attention to areas where it is easier to make an impact:

Zone

4  
2  
3  
5

The initial target area of 80,000 tareas will give the program an opportunity to test, modify if necessary, and stabilize operational strategies and procedures, and plan on expansion for subsequent cropping periods. The initial target area operations should, therefore, involve the three

types of farms: the land reform collectivias, the land reform traditional areas and the non-land reform areas.

- (b) Plan for every decision level, translating and bringing down strategies to detailed operational plans at the farm level. The clarity and timeliness of farm operations in terms of inputs and activities at the front lines will make possible faithful implementation and meaningful monitoring. Planning at all decision levels should be geared toward ensuring effectiveness at the farm level.
- (c) Train more technicians for extension. If success is not achieved in this regard, the extension force could prove to be the major limiting factor. To provide adequate coverage of the present and anticipated rice areas, the present extension force of about 80 should be increased to about 400 over a period of 4 years.

To make this possible, the Juma Experiment Station training facilities should be improved so that they would be adequate for one month training sessions in order to train the most number of trainees at the earliest possible time. Participants so trained could later be retrained for longer periods when

the urgency of the rice program abates and new knowledge will have to be imparted. "Complete" one month training sessions would be possible if the training plots would be so utilized as to make available all phases of rice growing operations within one month at any one time.

There is a plan to integrate land reform and Fomento technicians to unify supervision, avoid duplication of coverage and thus maximize such coverage. To make such integration effective from the standpoint of supervisory motivation and discipline, it would be useful to consider administrative arrangements to unify the channels for the flow of compensation.

There is also a plan to equip all field technicians with motorcycles to improve their mobility. It should be realized, however, that even with motorcycles, the present force of extension technicians is clearly inadequate for a national rice campaign.

- (d) Conduct an intensive information campaign using radio, the newspapers, TV and extension field hand-outs. This will help make up for the inadequate number of technicians at the initial stage. Even after the training of additional technicians, an

intensive information campaign would still be needed to sustain the motivation and participation of farmers.

The major constraint in research is manpower.

This constraint will continue to exist if it is not given conscious attention. (See corollary operating strategies - 25).

The agricultural research system should be able to develop its own leaders to ensure indigenous capability on a continuing basis.

Rice research should extend to the farms to better ensure recognition of research problems germane to the farmers and to better enhance the technology adoption process of the farmers.

In addition to the Juma Experiment Station, testing and demonstration farms should be established on selected farmer's fields. These testing and demonstration farms would lend themselves well to -

varietal testing

yield trials

seed purification

cultural management tests

land management techniques

- (f) Set up a mechanism for rice seed production and marketing to ensure that seed requirements are met and to ensure as well that seed produced is purchased and utilized. Formal contracts between the seed producing agency and the rice production units should be encouraged to promote an orderly process of producing and marketing rice seed. The growth of private seed companies should be encouraged by integrating their participation into the national rice program.
- (g) Set up a machinery pool that would concentrate on developing and demonstrating for farmers useful technology for land preparation that would optimize water utilization. Such a machinery pool could be multiplied as may be justified by experience. The use of private sector machinery pools during the expansion stage should be considered to minimize capital outlays on the part of the government.
- (h) Relate irrigation and drainage development to specific rice production units. The objective is to increase effective crop area. While yield increases through the use of technology would be the principal instrument for expanding production, it cannot be solely relied upon in the long run and there will come a time, perhaps beginning with the

third year of the rice program, when expanding crop area will play an increasingly significant role.

- (i) Ensure availability of needed inputs at the right time and places and at reasonable prices.

There is now a mixture of the use of private firms and the government in the procurement and distributions of inputs. The planning of procurement and distribution should be coordinated to prevent shortages or gluts.

- (j) Use the government's credit capability, not only to meet the rice program requirements but also to provide incentives for the adoption of new technology. There should be sufficient differentials in credit privileges for farmers, with such differentials heavily in favor of those willing to adopt recommended technology.

- (k) Maintain a rice marketing system that will provide an adequate trading space, price-wise, to ensure gainful returns for farmers and millers.

25. There are corollary operating strategies that should be pursued. These are:

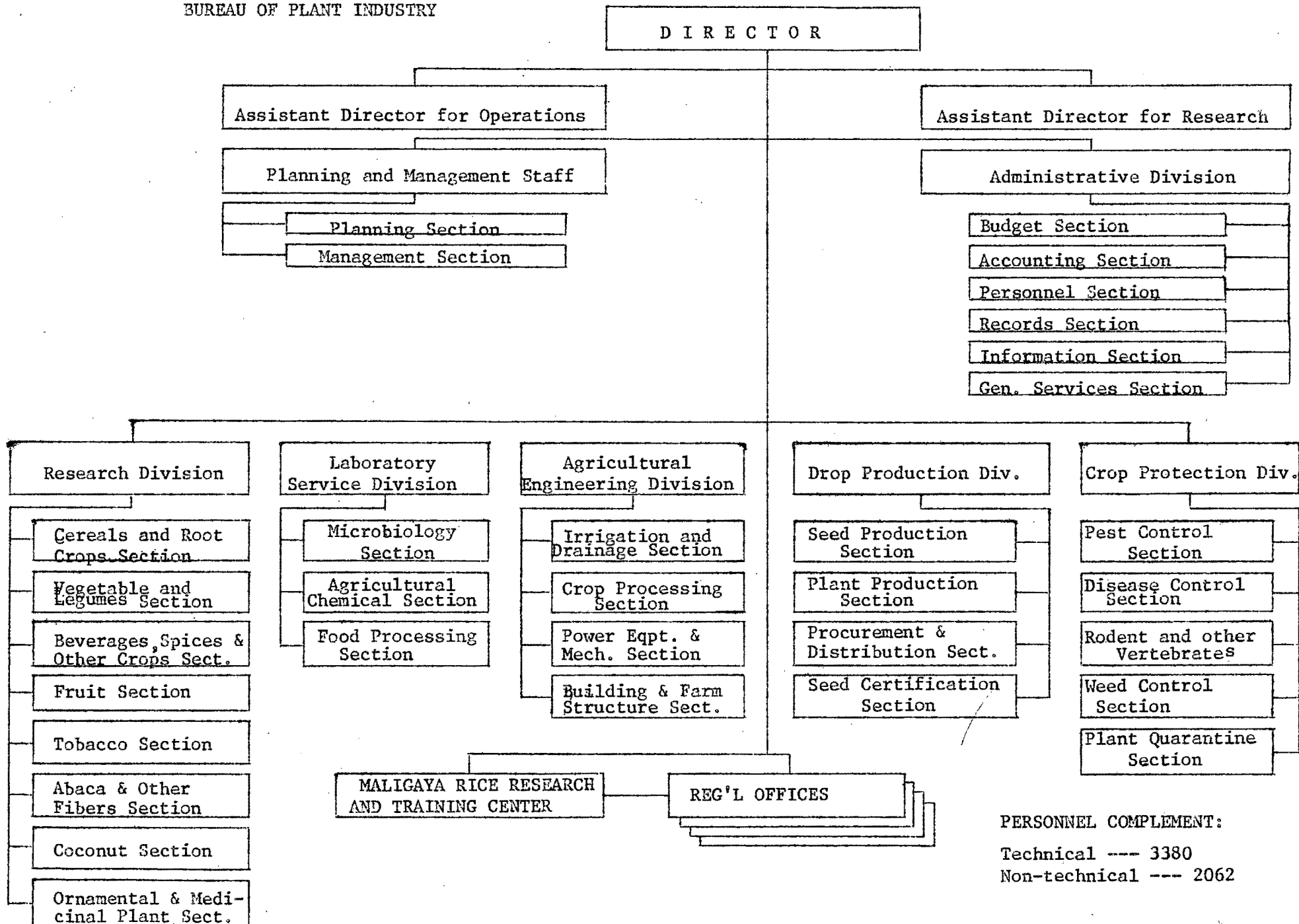
- (a) A manpower development program. Manpower for research, extension and the other sectors of the government bureaucracy is likely to be limiting.

Special training programs should be planned. Funds from local sources and foreign assistance agencies should be sought to take care of the training of available manpower and to generate additional manpower. Scholarship programs should be established at the agricultural colleges and institutes of the Republic in order to attract students to agricultural careers and a systematic effort to develop these colleges and institutes should be launched in order to develop indigenous capability to generate manpower to meet increasing needs.

- (b) The development of the platano industry. Platano is generally utilized as a staple item for at least one and a half meals a day. A drop in platano production, as shown by available evidence, may be accompanied by a rise in per capita consumption of rice. Significant increases in rice consumption traceable to drops in platano production in addition to the effects of population expansion could unduly raise rice consumption requirements, perhaps beyond the reach of a realistically feasible rice campaign. The per capita consumption of rice in the Dominican Republic is less than 1/2 of the per capita consumption of rice in a number of Asian countries. The main

ORGANIZATIONAL CHART  
BUREAU OF PLANT INDUSTRY

APPENDIX A



PERSONNEL COMPLEMENT:

Technical --- 3380

Non-technical --- 2062

explanation for this is the fact that the Republic has another major staple crop. It is terribly important to the control of rice consumption requirements that production of this other staple be kept at correspondingly high levels.

- (c) The development of other crops that could be grown in addition to rice. Legumes are an example and these have an export market. The purpose of this corollary strategy is to increase the total annual income of the rice farmers and these further improve their economic and social well-being.

Annex A

Persons Met, September 15-24, 1977  
Dominican Republic

1. Jose Miguel Cordero Mora  
Undersecretary of Agriculture  
Department of Agriculture  
Santo Domingo, Dominican Republic
  2. Lic Horacio Ornes  
Secretariat of State for Agriculture  
Santo Domingo, Dominican Republic
  3. Juan A. Nunez  
Undersecretary of Planning  
Department of Agriculture  
Santo Domingo, Dominican Republic
  4. Honorable Pedro Breton  
Secretary of Agriculture  
Department of Agriculture  
Santo Domingo, Dominican Republic
  5. Miguel Brache  
Technical Job Director  
Juma Rice Station  
Bunao, Dominican Republic
  6. Dr. Y. T. Hsieh  
Plant Breeder  
Estacion Experimental  
Arrocero Juma  
Bunao, Dominican Republic
  7. Dr. L. G. Peterson  
Area Research Administrator  
Lily Research Laboratories  
Elanco Products Co.  
Greenfield, Indiana 6414
- Dr. Lynn R. Guse  
Area Research Administrator  
Lily Research Laboratories  
Elanco Products Co.  
Greenfield, Indiana 6414

Melvin Muse  
Representante Tecnico  
Elanco Products Co.  
Apartado Postal 334-2  
Santo Domingo, Dominican Republic

8. Sr. Luis B. Crouch  
Instituto Superior de Agricultura  
Apartado 77-2  
Santiago de los Caballeros  
Dominican Republic
9. Sr. Raul Barrientos  
Director, Land Reform Institute  
Santo Domingo, Dominican Republic
10. Sr. Hilton Cabral  
Sub-Director  
Land Reform Institute  
Santo Domingo, Dominican Republic
11. Sr. Pacifico Lopez Taveras  
Sub-Director  
Hydraulics Institute  
Santo Domingo, Dominican Republic
12. Sr. Jose Ferias Cabral  
Director  
Hydraulics Institute  
Santo Domingo, Dominican Republic
13. Sr. Manuel Burgos  
Rincon la Vega  
Hydraulics Institute  
Santo Domingo, Dominican Republic
14. Sr. Jose Antonio Fabelo  
Field Administrator  
Limon del Yuna (Duarte)  
Dominican Republic
15. Mr. William Jansen  
USAID Mission  
Santo Domingo, Dominican Republic

Annex BLiterature Reviewed

1. Secretaria de Estado de Agricultura, "Diagnostico del Mercadeo del Arroz en la Republica Dominicana," Santo Domingo, Republica Dominicana, Junio, 1976.
2. Secretaria de Estado de Agricultura, "Breve Introduccion Sobre la Estacion Experimental Arroquera Juma-Bunao," Junio, 1976.
3. USAID Mission/Dominican Republic, "Statistical Data Book," June, 1977.
4. Yien, Tieh Hsieh, "Mision Tecnico Agricola de la Republica de China en la Republica Dominicana," Marzo, 1976.
5. Secretaria de Estado de Agricultura, Departamento Fomento Arroquero, "Situacion Nacional Arroquera - Diagnostico de la Produccion," Santo Domingo, Republica Dominicana, September, 1976.
6. "Evaluacion Sobre Cultivo de Juma 57."
7. Instituto Agrario Dominicano, "Oficina de Programacion Y Pidagro," Santo Domingo, Republica Dominicana, May, 1972.
8. Instituto Agrario Dominicano, "Documentacion Sobre Algunos Aspectos Generales de la Reforma Agraria en la Republica Dominicana," Santo Domingo, Republica Dominicana, Mayo, 1977.

Annex CRandom Notes Taken During Observation Trips and Interviews

## 1. The members of the National Rice Commission:

Agriculture  
 Banco Agricola  
 Land Reform Institute  
 Hydraulics Institute  
 Price Stabilization Institute

## 2. Seed program

It is considered sufficient except for some operational problems traceable to lack of firm contracts between supplier and buyer.

Juma is producing the basic seed material and contracts with private seed growers including the land reform collective farms.

There is (according to L.C.) a private seed company which is now well established. Will its participation in the rice program be considered?

The rice varieties being used in the country are principally the following:

<u>STV</u>	Juma 57
	Juma 58
	IR 5
<u>Tra/V</u>	Toño Borea
	Mingolo
	Ingles Largo

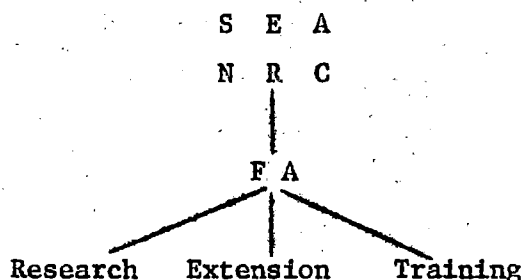
## 3. Cibul Central is considered the most important rice growing area.

## 4. The Chinese Mission headed by Dr. Hsieh started working at Juma Station in 1963.

Juma began as a general experiment station and has developed into the country's only rice station.

There is another research station about 20 miles from Santo Domingo: The Centro Nacional Investigaciones Agropecuaria. It is working on all agricultural crops except rice.

5. Research in the Secretariat Estado de Agricultura is a responsibility of a sub-secretaria de investigacion.
6. In varietal improvement, Juma relies upon the cooperation of IRRI and CIAT.
7. The Toño Barea is the most popular among the traditional varieties.
8. Movements in the supply of other basic food affects demand for and consumption of rice. For example, an increase in the price of bananas (platano) may be accompanied by an increase in the demand for rice.
9. Seed production is about 52,000 quintals, about 80% of the total (theoretical) needs.
10. It is estimated that 90% of the requirements in credit is supplied by the Banco Agricola. Other sources include the cooperatives and the millers.
11. Rice is usually sold to millers immediately after harvest. The millers sell to the National Price Stabilization Institute. The price: 20.50 to 26.50/100 kg. (WR).
12. The Fomento Arrocero is organized as follows:



13. Fertilizers and pesticides are imported by the private sector. There is some form of import control through open bids. The private sector has its own distribution channels. Recently, however, Agriculture established its own retail input distribution channels to ensure supply flow and reasonable prices.
14. There are about 86,000 crop hectares.

15. The Juma Experiment Station technical divisions:

- (a) Breeding
- (b) Soils
- (c) Pathology
- (d) Agronomy
- (e) Irrigation
- (f) Seed Production

16. The northern area is semi-arid. Its precipitation is 644 to 900 mm. It does not have enough water for two crops.

17. Cibul Central has a precipitation of up to 2000 mm. Two crops are possible.

18. The southern area is similar to the northern area with precipitation of 900 to 1800 mm. It is one of the highest yielding areas. Here, rice is rotated with beans. Sometimes, it suffers from water shortage. A dam is being built in the area.

19. The eastern part is swampy and has poor infrastructure. Its yields are low (2 to 2.5 tons per hectare).

20. The national average yield is 3.2 tons/hectare (paddy).

21. The largest land reform settlement is located in the Juma Delta.

22. The planting seasons are:

January to February (main)  
July to August (minor)

23. The eastern zone includes wide pasture lands.

24. The area in the vicinity of Santo Domingo is mostly high plain devoted mainly to sugarcane.

25. The flow of rice is so quick after harvest that the capabilities of silos built by the Price Stabilization Institute in the rural areas have not been used to advantage.

26. There is a greater capacity for milling than is required.

27. Some of the Price Stabilization Centers:

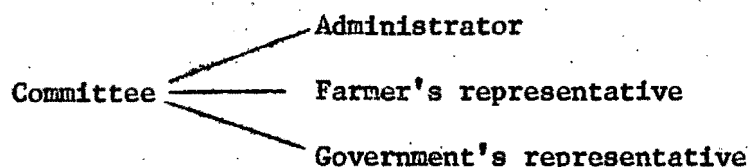
- |               |                 |
|---------------|-----------------|
| (a) La Vega   | (d) Santiago    |
| (b) Villariva | (e) San Juan    |
| (c) Angelina  | (f) Sto Domingo |

28. Rice imports are purchased at 13 to 14 dollars per quintal, F.O.B. and sold at 25 dollars/quintal and reach the retail market at 28-29¢ per pound.
29. The rice millers are strongly organized.
30. The Land Reform projects are each ranging from 850 tareas to 2,000 tareas. There are two kinds:
  - (a) The collectivias, and
  - (b) The traditional land reform farms

An individual is allowed to till up to 50 tareas. Almost 26 tareas are equal to 1 hectare.

31. The land reform areas total about 40,000 crop hectares.
32. Although land reform has a history which dates back to 1945, the collective farms were started only in 1973.
33. It may be expected that the collectivization of land reform areas will be pushed harder after May 1, 1977, the election month.
34. The government owns the land in a land reform area and the parcelarios work and are given a loan of 3 dollars for a day's work. This is true with the collectivias. In the traditional land reform areas, there is no such loan but the parcelarios obtain production-and-consumption loans.
35. There are about 80 extension agents.
36. In 1970, the country was self-sufficient in rice.
37. Seven to 8 tons per hectare yield could easily be obtained (paddy).
38. In 1974-75, there was a serious drought. For about 8 to 9 months, there was no rain.
39. It is estimated that about 28% of the rice area is planted to the new high-yielding varieties.
40. Credit made available to rice farmers reached \$45 million last year. This year the credit target is about \$60 million.
41. Credit extended to farmers is about \$35 per tarea although actual expenses may be 45-50 tarea in some places.

42. Administrative set-up of a land reform colectiva:



43. Geographical and physical characteristics of the land influence actual allocation of land areas to the parcelarios.

44. The overall administration of a land reform colectiva controls water distribution in the colectiva.

45. Credit obtained by land reform colectiva - \$26-33/T  
 m, plus subsistence  
 of \$3/day

by traditional land  
 reform farmers - \$38.82/T

46. Yield differences:

Traditional land  
 reform farms - 2 SKS x 90 K = 180 K/Tarea

Collectivas - 3.5 SKS x 90 K = 315 K/Tarea

47. Credit repayment of land reform (traditional) farmers - roughly 70%. What happens to the 30%? "No way out" as of the moment, it seems.

48. Traditional land reform area yields are difficult to determine allegedly because of "diversions."

49. The limited water supply makes it imperative that the land be levelled and prepared properly.

50. A lot of labor is necessary for the improvement of irrigation.

51. There is no clear plan yet for the expansion of crop areas through irrigation and drainage improvement.

52. Said one administrator of a land reform colectiva project:

"It is important that a colectiva be provided the supportive infrastructure; otherwise, it would be better to have the traditional LR system." Apparently, the traditional land reform system spreads the risks traceable to lack of infrastructures."

53. In some quarters, some concern was expressed over the following:

- (a) Technical knowledge and equipment of the extension agent.
- (b) The controls for ensuring that the farmers do not waste water which is insufficient in supply.
- (c) The dangers of adopting a policy of rice self-sufficiency and relating the effort to solve the problem to the elimination of rice imports. If rice imports continue, the program might be labelled a failure.
- (d) The adequacy of the pricing mechanism for rice versus other crops.

54. An aerial survey revealed extensive areas planted to platanos.

55. The same survey disclosed two dams being built but there seems to be no clear idea yet as to how wide an area they would be able to irrigate.

56. The following are the rice areas, existing and potential, in tareas:

	<u>Existing</u>	<u>Potential</u>	<u>Difference</u>
Norte	263,100	335,600	72,500
Central			
La Vega	221,700	296,000	74,300
Cotui	113,000	121,100	8,100
San Francisco	94,000	129,800	35,800
Bajo Yuna	185,000	433,000	248,000
Sur	176,500	175,500	1,000
Este	75,000	104,000	29,000

57. Areas planted to platanos have been decreasing as follows:

<u>Year</u>	<u>000 Tareas</u>
1973	607
1974	599
1975	531
1976	555

58. The average yields of white rice per tarea from 1943 through 1972 are as follows:

<u>Year</u>	<u>Yield in lbs/Tarea</u>
1943	175
1950	215
1960	225
1970	225
1972	285
1973	295
1976	320 (main crop)

59. The comparative rice yields of selected countries in 1976:

<u>Country</u>	<u>White rice in lbs./tarea</u>
Columbia	399
Brazil	160
Ecuador	219
Panama	160
U S A	450.4
Japan	488.7
Taiwan	450
Costa Rica	235
Mexico	207
El Salvador	232
Guatemala	227
Dominican Republic	320

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From the files of the Rice Mission, Juma Station.

THE BUDGETARY MAZE\*

It was a tranquil Monday morning at the Research Division of the Bureau. The researchers, busy organizing the collected data from their field work, sat quiescently at their desks. Only occasional whispers could be heard until the busy typewriter started tapping to disturb the silence. Mr. Antonio Reyes,\*\*\* the Acting chief of the Research Division was seriously reading an article on the "Farmer's Role in the Rehabilitation of the Agricultural Industry."

Antonio had been working at the Bureau for almost ten years, starting work four years after the creation of the Bureau of Agricultural Economics. The Bureau was created to centralize and assume responsibility for the collection, compilation and official release of statistics, to undertake researches in agriculture and to provide for all purposes adequate and reliable data and information on all aspects of agriculture and natural resources. Mr. Reyes started as a Research Aide in 1967 and he had spent all these years in the Research Division. Now he headed the Research Division, a very challenging and perplexing task.

The Research Division, which was concerned mainly with the research activities of the bureau, planned, directed and coordinated

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\* Prepared by Ma. Soledad F. Sta. Romana-Reverente, Research Assistant, Administrative Development Center, U.P. College of Public Administration; release being negotiated.

Cases of SEARCA are intended as materials for class discussion and are not meant to illustrate good or bad management.

research activities dealing with the collection, analysis and interpretation of agriculture and natural resources. The Division itself prepared the research project proposals specifying the coordinating and funding agencies. Research project proposals, however, were usually submitted to the Philippine Council for Agricultural and Resources Research (PCARR) for evaluation and determination as to whether they were in the research priority areas. This was done for all research projects except for special projects.

Antonio, reading the paper he and his research team had written, stopped to reflect how fulfilling it was to be given a task, a project for instance, labour through it, accomplish it and finally have the results at hand. He thought of the gratifying experience such an accomplishment could offer.

"Yet, accomplishing a task is not easy and it does not always turn out very smoothly," he once exclaimed.

He recollected the morning sometime in 1975 when Mr. Simeon Rivera, the Chief of the Division then, made him the project leader of the Study on Abaca Farms. He finished the research proposal for this project and submitted it to the Department of Agriculture. Since this project was a special project of the Office of the Secretary (OSEC) of the Department of Agriculture, it was not required to pass through the usual rigid evaluation procedures by the PCARR. Special projects like these were considered in the priority status because of their importance in the implementation of the Government's economic development programs.

On February 17, 1975, the project proposal submitted by Antonio Reyes for the study on Abaca\* Farms was approved. The purpose of this project was to provide policy guidelines to decision-making in the Abaca Industry. It was designated to determine the Farm size for profitable abaca growing and determine the desirable farm-enterprise that could give the farmers maximum returns. The project started in February 1975 and was envisioned to be accomplished by the end of 1975. The more sophisticated portion which involved the utilization of linear programming and the projection function approach started on January 1, 1976 and was planned to end on December 31, 1976.

Antonio, after the approval of the research proposal, conducted the study starting from the preparation of the survey questionnaire and manual of operation through the preparation of the analysis and submission of the results. He was assisted by twenty research aides, eight researchers, and four senior researchers.

These personnel started working during the first stages of the project. The four Senior Researchers, Andy, Linda, Joy and Lester helped each other in formulating the questionnaire and manual of operation. They supervised the field work and were assigned to assist in the preparation of the analysis and submission of the results. Everything went on smoothly.

until July 1975, when the employees of this project were not given their salaries. July, August and September passed and the employees waited for their remunerations. As a result, two Senior Researchers, Joy and Lester, three researchers and eight Research Aides resigned in August and September 1975. Recruitment to fill the vacancies began and Antonio did not have any difficulty in selecting new employees for the project. Antonio's only regret was that the employees who left were the ones who actually started the project and had already gained proficiency whereas the incoming staff still had to learn the job.

The employees of the project received their salaries for July in October and thereafter, salaries would come one or two months late. A series of personnel turn-over followed.

Andy Diaz, one of the Senior Researchers of Antonio Reyes who coordinated the Researchers and Research Aides, was a masteral graduate of the University of the Philippines. He had worked with the Bureau for quite a long time and was well-liked by his colleagues, subordinates and superiors. Antonio Reyes noted that he was not only efficient by also had good relations towards his subordinates. He was always concerned with the Researchers and Research Aides under him.

Antonio recalled how Andy would go to him and ask him when the researchers and Research Aides would be given their salaries.

He usually asked "Is the budget with us already?" or "Where is the budget now?" and "When will it be ready?"

"It seems that our workers have lost their enthusiasm. They have been very dissatisfied and this has greatly affected their accomplishment. They have lost their initiative to work harder and finish their tasks ahead of schedule," Andy would complain.

Antonio was very much bothered by this and he inquired about the possibility of getting funds from other projects or from the funds of the Bureau.

This was done occasionally, but only partial salary would be given in the form of cash advances. Still, the situation had not improved and Antonio Reyes was aware of this.

The Study on Abaca Farms, assigned to Mr. Antonio Reyes, was just part of a bigger program called the Abaca Program. For several years, the Abaca Industry had been faced with a highly contracting market, declining prices and diminishing production. The unfavorable market situation squeezed the already meager income of the abaca farmers, prompting the conversion of Abaca plantation to other more profitable crops such as corn, banana, coconut, sugarcane and rice. It had also greatly affected the income-generating capacity of the government. In the 1950's, the country earned US \$41M in export of abaca fiber. This income declined progressively. By 1973, the total export of unmanufactured abaca fiber was only US \$20M.

Abaca used to be major dollar-earning crop for the Philippines but stiff competition from other fibers and excellent synthetic used in the manufacture of cordage has resulted in depressed abaca prices in the world market. This, in addition to production problems, had affected the

local abaca industry, sending production to low levels and forcing a number of abaca growers to shift to other more profitable crops. Further, information on costs and returns as well as farm practice are still inadequate. In addition, it needed certain benchmark information on optimum requirements as well as the necessary credit needs that would push the industry toward higher productivity and profit among others.

To revive the industry, the government pooled its resources and drew up a realistic and implementable Abaca Program.

In 1973, the Department of Agriculture recommended an agency to take care of abaca production. In effect, the Abaca Program (AP) was created as a project of the Office of the Secretary (OS 2), Department of Agriculture. The AP was approved in 1974 with an initial appropriation of ₱10M, ₱5M of which was programmed and ₱5M unprogrammed.

This program was created in FY 1974-75 to lay the groundwork to developing a more organized and systematic abaca sector. Specifically, its objectives were the following:

1. Rehabilitate selected existing Abaca plantation.
2. Embark on massive production and distribution of Abaca planning materials.
3. Promote and establish economic and efficient production units that will not only increase production but assure quality in production as well.

4. Initiate remedial short-term measures to assist the widening gap between supply and demand.

The primary objective of the AP was to provide continuous support to the abaca industry that it might again become one of the premier exports of the country and be in a more stable position. To carry out this objective, the Program worked toward increased production by:

- a. Undertaking measures that will insure quality and quantity of abaca fiber.
- b. Encouraging the establishment of suitable organization: multi-purpose cooperatives for ensuring better prices for their produce; better marketing facilities, fairer treatment in grading and baling of fibers.
- c. promoting biological, cultural, socio-economic researches and other measures necessary to enhance the ability of the industry in a highly competitive field.
- d. initiating measures that shall enhance professional competence and efficiency of the personnel engaged in the Program.

To implement the program, various agencies, namely: the Bureau of Plant Industry (BPI), Bureau of Agricultural Extension (BAEx), the Bureau of Agricultural Economics (BAEcon), the Bureau of Soils (BS) and the University of the Philippines Los Banos (UPLB) had been assigned specific tasks while the National Cottage Industries Development Authority (NACIDA), the Bureau of Fiber Development and Inspection Service (BFDIS) and the Development Bank of the Philippines (DBP) and a host of other government

agencies had acted as coordinating agencies for the development program.

The BPI was assigned researches on seed production and distribution. The BAEx worked directly with the abaca farmers. It served as a direct link to the farmers for the dissemination of information on the status of the different researches and projects being undertaken by the AP. The BAEcnm researches on farm management marketing surveys. These two surveys, whose primary objective was to strengthen farm management, production processing and marketing practices of the abaca farmers, complemented each other.

The Bureau of Soils conducted projects involving soil analysis in specific farms in order to determine the right kind and amount of fertilizers to be applied so as to increase soil and crop productivity.

The UPLB, with its laboratory and field facilities for advance experimentation, made possible the undertaking of more extensive researches on the development and uses of abaca plantation.

The Governing Board, which acted as liaison and adviser of the AP was the policy-making body of the program. It was composed of representatives from the different cooperating agencies under the Department of Agriculture. (See Appendix A). The functions of the AP Governing Board were as follows:

1. Formulation of policies to guide the development of the industry.
2. Effective coordination of the activities of all government agencies concerning the promotion of the development of the industry.
3. Over-all implementation of the Program objectives.

The policies made by the Governing Board were generally in consonance with the policies of the Department of Agriculture. The Secretariat of the Program, headed by the Program Director, implemented whatever policy was dictated by the Governing Board. The Project Director of the study on Abaca Farms was also a member of the Governing Board. He reported the activities of the project during the meetings of the Governing Boards. He, thus, acted as a liaison between the policy making Governing Board and the projects being implemented by the agencies.

There was also created a Planning Committee composed of twelve members from the different cooperating agencies which discussed the operational plan of the program, including its budget and other activities. It was the Planning Committee of the AP that discussed the program priorities and budget requirements of the projects of the different cooperating agencies under the program. With the approval of the Governing Board, the plan was presented to the OSEC, Department of Agriculture.

The Department of Agriculture through the Budget Officer of the Abaca Program submitted the proposed Budget allocation to the Budget Commission for its approval and this was done quarterly in FY 1974-75 and in FY 1975-76. In 1977, the procedure was changed so that each agency would submit their funding requirements for the year to the Budget Commission. Budget allocations would then be released at the beginning of the Calendar Year but actual releases of funds were still done quarterly. In this procedure, the departments and bureaus of the government would be informed on how much was allocated and will be released for each quarter.

This procedure gave these agencies enough time to program their activities in advance since they would know the budget allocation they would receive for each quarter. Also, delays in the release of funds for each quarter of the Calendar Year were expected to be minimized.

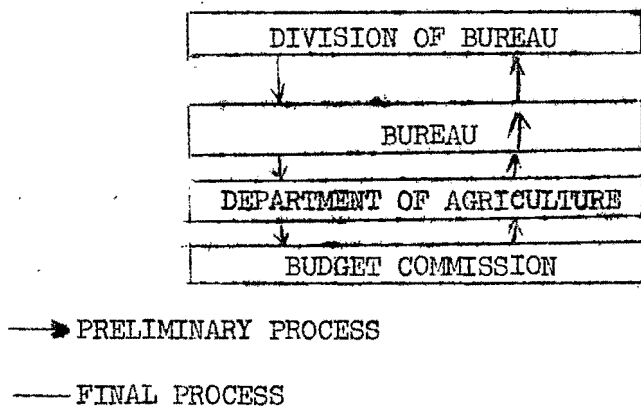
The AP was a special project of the Department of Agriculture not included in the regular budget released to the departments quarterly. Because of the large number of special projects and the paperwork required in releasing funds, there were delays that occurred in budget approval and fund releases. Another reason for the delay at the Budget Commission was the submission of an incomplete set of paper requirements and information which were requested from the divisions of the bureaus handling an AP project. These papers were sent to the Department of Agriculture, particularly to the Abaca Budget Officer, for submission to the Budget Analyst of the Budget Commission. Occasionally, the paper requirements submitted by the Divisions of the Bureaus under the Department of Agriculture were incomplete, thus, delaying the approval and releases of the budget allocations.

Shown below are instances where there were a month or two delay in the release of AP funds from the Budget Commission:

<u>DATE OF RELEASES</u>	<u>PERIOD COVERED</u>	<u>AMOUNT</u>
November 14, 1974	October-December 1974	₱1,374,000
October 15, 1975	July-September 1975	2,200,000
	October-December 1975	
February 18, 1977	January-March 1977	750,000

On other occasions, allotments were released by the Budget Commission on time but the procedure following the budget release tend to delay further the release of funds. The many points and channels in the procedure of releasing funds played a part in its delay (See Appendix 2). In this bureaucratic process, papers were prepared, checked, analyzed and signed by a multiple number of people.

The process was a cycle which went this way:



Within each stage of the process, the budget and supporting papers passed through a great number of people (See Appendix 2). This process took a week to a month depending on the availability of the persons concerned or which officials did processing.

Instances where there was a delay in the release of funds even after the timely release of the Budget Commission were:

<u>DATE OF RELEASE FROM THE BUDGET COMMISSION</u>	<u>DATE OF SUB-ALLOTMENT AT THE BUREAU</u>	<u>DATE COVERED</u>
June 28, 1976 (P1,816,757)	July 13, 1976 (P145,000)	July-Sept. 1976
	Sept. 6, 1976 (P20,000)	
Setp. 22, 1976 (P2,225,130)	October 4, 1976 (P200,000)	Oct-Dec. 1976
	November 26, 1976 (P90,000)	
	February 22, 1977 (P21,200)	
	(Equipment outlay)	

The effects in the delay in the release of funds were varied. Personnel turn-over, personnel dissatisfaction which greatly affected the accomplishment of their work, loss of initiative of employees, delay in payments of salaries, delay in the implementation of the project which delayed the release of the results or data were factors that could be attributed to the delay in the release of funds.

The Study on Abaca Farms was envisioned to be over by December 1976. However, due to factors such as the delay in the release of funds which resulted in the delay in the implementation of the project and personnel turn-over, and other factors, the Governing Board in December 16, 1976 met and decided to extend the funding and duration of this project for completion until March 1977.

In May, upon Mr. Antonio Reyes' request, another extension was made for the 15th of May 1977. Since as of May 4, 1977 the research team was still finishing the mathematical analysis of the project, additional months were needed to complete the project.

Previous to that, Mr. Reyes had sent a memo on March 10, 1977 to the Director of the Bureau stating that all contractual employees of the Study on Abaca Farms were to be terminated effective March 16, 1977 due to lack of funds.

In July 26, 1977, Mr. Reyes received another letter giving the project an extension of two months upon the request of Mr. Reyes and the remaining number of the research team. This extension was needed for the verification of certain information and the preparation of the mathematical analysis at the national level.

From June 20 to July 6, 1977, an evaluation was conducted to assess the efficiency of the operations. The Governing Board created four evaluation teams consisting of 12 members. The members of the Planning Group of the program were the principal members of this team. The Evaluation wrote as part of its findings:

The main purpose of the Study on Abaca Farms was to provide benchmark information for the use of the Program and cooperating agencies in designing and implementing projects to develop the industry. The findings of the studies have not yet been released fully. The publication of the results of the survey is already very late. It should have been made early enough so that it could be used as benchmark information for other agencies involved in the development of the industry. The earlier and immediate dissemination of whatever data compiled was needed to guide the other agencies whose role is to extend services to the farmer clientele.

And Antonio would remember how he would repeatedly say to Andy, "Well, you see Andy, I really don't know what we can do about the delay in the release of funds."

The words of Antonio seemed to have reverberated ineffectually through the corners of the room where research was carried out. There he also sat silently with thoughts roving the depths of inquiry. The research room remained unaffected that Monday morning, everyone occupied with their present tasks and anticipating the next.

QUESTIONS:

1. Analyze the procedure in the budgetary and allotment process and pinpoint points of bottlenecks and delays?
2. What could Antonio Reyes and Andy Diaz do to help remedy the situation of delay?
3. How could the Budget Commission and Department of Agriculture on the one hand, and the Department of Agriculture and the Bureaus concerned on the other work more efficiently with each other with regard to the releases of funds in the program?
4. What suggestions could you give to improve the budget procedure?
5. How feasible do you think would the change in the budget procedure for Calendar Year 1977 be? Would it solve the problem of delay?  
(refer to page 10 please).

APPENDIX A

The members of the Executive Committee were as follows:

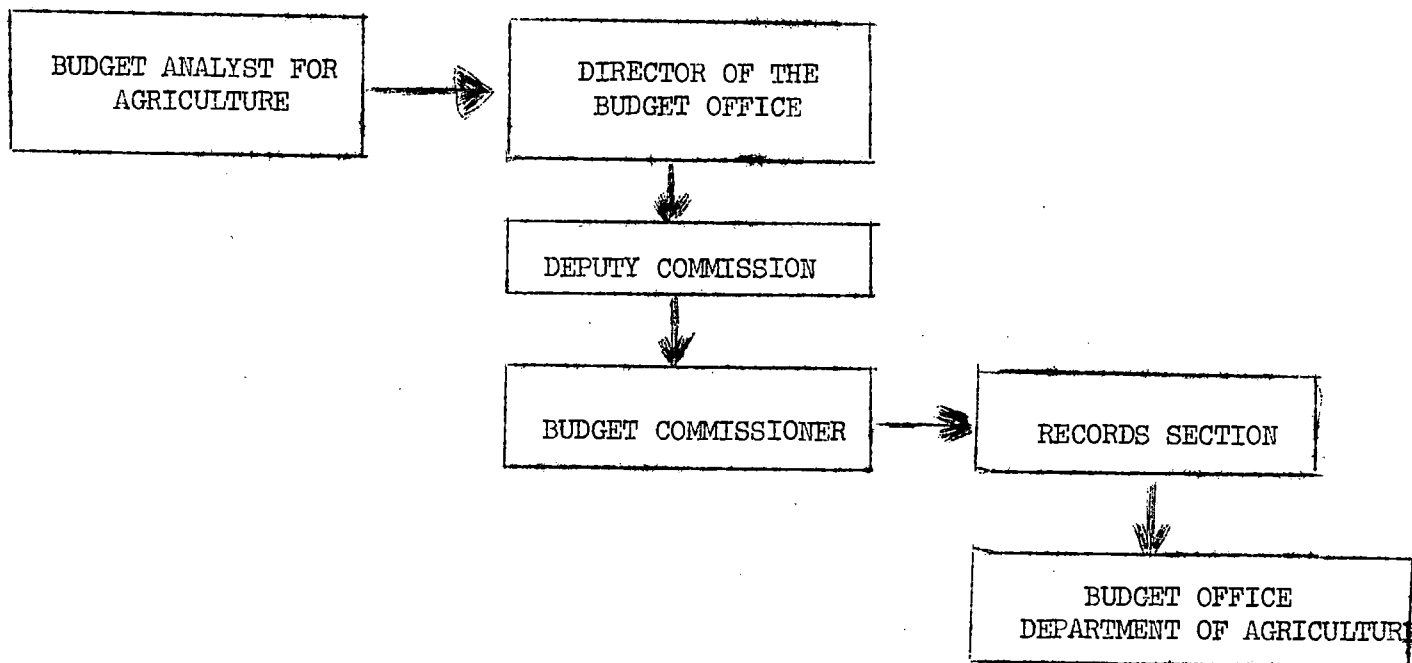
1. Director \_\_\_\_\_ Bureau of Plant Industry Chairman
2. Director \_\_\_\_\_ Bureau of Fiber Development Vice-Chairman  
and Inspection Service
3. Director \_\_\_\_\_ Bureau of Agricultural Economics Member
4. Director \_\_\_\_\_ Bureau of Soils "
5. Asst. Secretary \_\_\_\_\_ Foreign Trade "
6. Administrator \_\_\_\_\_ NACIDA "
7. Asst. Director \_\_\_\_\_ Bureau of Agricultural  
Extension "
8. Atty. \_\_\_\_\_ Trade Assistant Center "
9. Mr. \_\_\_\_\_ Department of Industry "
10. Professor \_\_\_\_\_ UP Los Banos "
11. Mr. \_\_\_\_\_ Planning Service OSEC, DA "
12. Mr. \_\_\_\_\_ Budget Officer, DA "

APPENDIX B

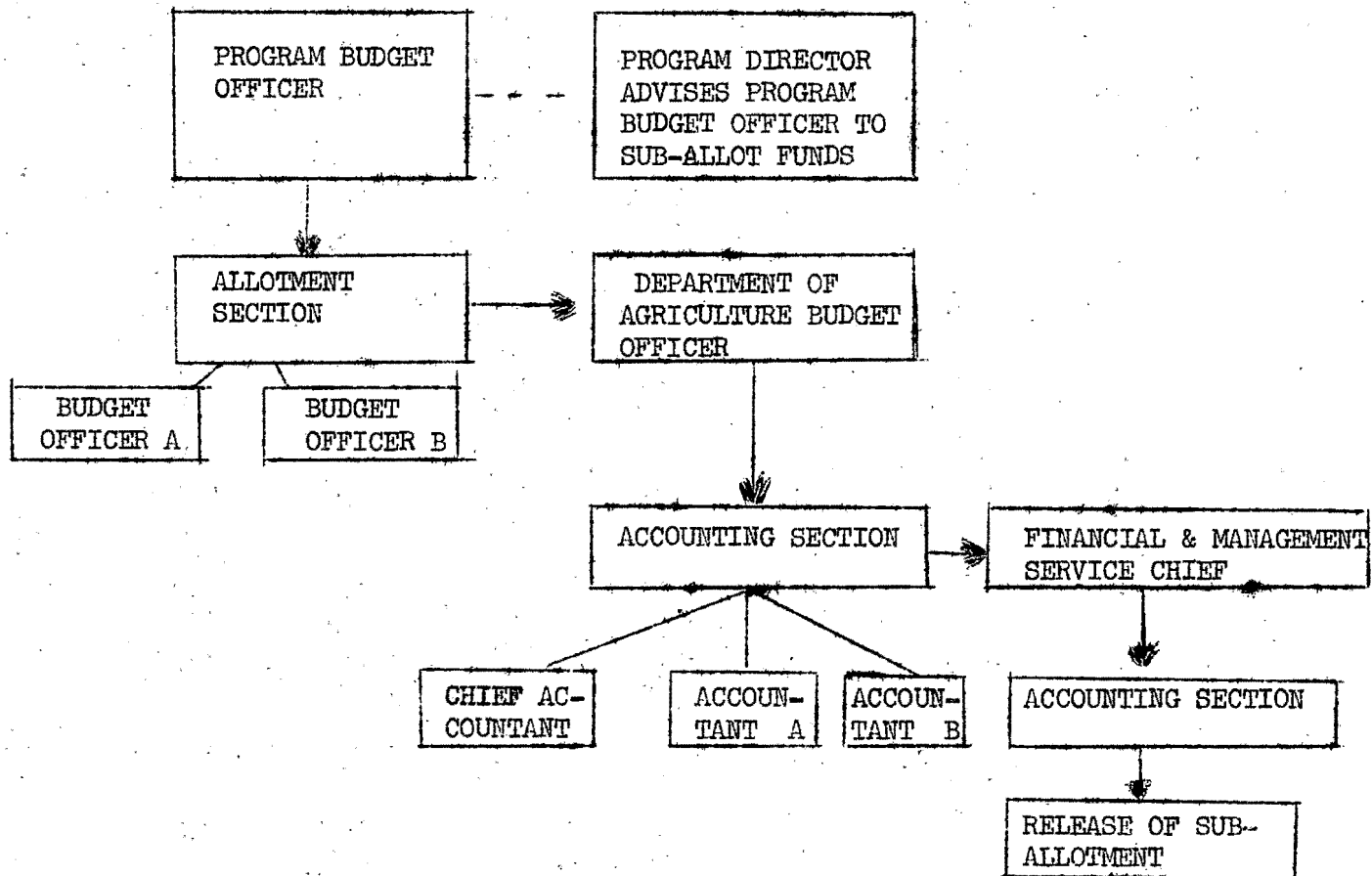
PROCEDURE IN RELEASING FUNDS FOR THE ABACA PROGRAM (AP)

The Division of the Bureau handling an AP project submitted a quarterly budget requirement for FY 1974-75 and FY 1975-76 to the Bureau Director for the approval of the governing Board and for submission to the Budget Commission.

The procedural flow of budget and supporting papers in the Budget Commission is illustrated below:



At the Department of Agriculture, the Budget and supporting papers were processed as follows:



At the Bureau, the Budget and supporting papers were processed as follows:

