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AID 1024-1 (7-71) (FACE SHEET)
NONCAPITAL PROJECT PAPER (PROP)

I. PROJECT IDENTIFICATION

1. PROJECT TITLE
 Agricultural Income and Production

APPENDIX ATTACHED
 YES NO *104p*

2. PROJECT NO. (M.O. 1098.2)
 492-55-130-259

3. RECIPIENT (Specify)
 COUNTRY Philippines
 REGIONAL INTERREGIONAL

4. LIFE OF PROJECT
 BEGINS FY _____
 ENDS FY _____

5. SUBMISSION
 ORIGINAL 20 May 73 DATE
 REV. NO. _____ DATE
 CONTR./PASA NO. _____

II. FUNDING (\$000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL \$	C. PERSONNEL		D. PARTICIPANTS		E. COMMODITIES \$	F. OTHER COSTS \$	G. PASA/CONTR.		H. LOCAL EXCHANGE CURRENCY RATE: \$ US (U.S. OWNED)			
		(1) \$	(2) MM	(1) \$	(2) MM			(1) \$	(2) MM	(1) U.S. GRANT LOAN	(2) COOP COUNTRY	(A) JOINT	(B) BUDGET
1. PRIOR THRU ACTUAL FY													
2. OPRN FY													
3. BUDGET FY 74	478	345	104	69		64		315	92			302,000	104,000
4. BUDGET +1 FY (75)	668	435	124	77		156		405	112			530,000	112,000
5. BUDGET +2 FY (76)	652	385	122	99		141		355	110			640,000	120,500
6. BUDGET +3 FY (77)	520	345	104	80		95		315	92			730,000	130,000
7. ALL SUBQ. FY	335	220	68	60		55		190	56			Not available	
8. GRAND TOTAL	2626	1730	522	385		511		1580	462			Not available	

9. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT

III. ORIGINATING OFFICE CLEARANCE

1. DRAFTER KFSrith	<i>Frank W. Sheppard, Jr.</i>	TITLE Assistant Director, Agric. Dev.	DATE 20 May 1973
2. CHANGE OFFICER <i>Thomas C. Niblock</i>	<i>Thomas C. Niblock</i>	TITLE Director, USAID/Philippines	DATE 20 May 1973

IV. PROJECT AUTHORIZATION

1. CONDITIONS OF APPROVAL

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF.	SIGNATURE	DATE

3. APPROVAL AAs OR OFFICE DIRECTORS

SIGNATURE	DATE

4. APPROVAL A/AID (See M.O. 1025.1 VI C)

SIGNATURE	DATE

TITLE _____ ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT

492-259
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AGRICULTURAL INCOME AND PRODUCTION PROP



Prepared by
USAID/Philippines

MAY 1973

Republic of the Philippines
Department of Agriculture and Natural Resources
Office of the Secretary
Diliman, Quezon City
Rice and Corn Production Coordinating Council
(NATIONAL FOOD AND AGRICULTURE COUNCIL)

May 18, 1973

Mr. Thomas C. Hiblock
Director, USAID
Manila

Dear Tom:

On behalf of the Philippine Government, I would like to give my personal endorsement to the USAID Agricultural Income and Production Project Proposal which our staffs have jointly prepared over the past few weeks.

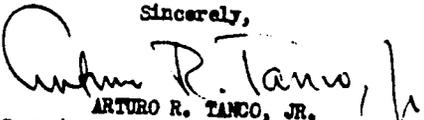
This programming process has been an extremely interesting experience for me, and has resulted in a thorough and comprehensive review of our projects and priorities within the Department of Agriculture. It came at an opportune time, following closely on a World Bank Review Team analysis, the discussions that I and my staff had with Dr. Mike Cox and his associates from AID/Washington last February, and the regular ongoing contact we have with Dr. Sheppard and his staff in the USAID Mission.

As it now stands, the proposal represents support to our highest priority concerns within the Philippine government in a joint team effort of support to our principal agricultural production goals, as well as addressing the social needs of opening up new income opportunities for thousands of small scale Filipino farmers.

When combined with the proposed assistance to the Ricol River Basin Development Project, Agrarian Reform and Agricultural Research, it is apparent that USAID is making a significant contribution to the future development of the Philippines, in helping us to attain our Agricultural Development goals in the next four years.

We look forward to working together with you in the near future on this project.

Sincerely,


ARTURO R. TANCO, JR.
Secretary of Agriculture and Natural
Resources & Chairman-Coordinator
N F A C

Proposed USAID Activities in Small Farmer Income Area

There is an increasing awareness in the Philippine Government of the need to increase the share of the economic product received by the small farmers of the nation. Development in a macro-economic sense has proceeded at a reasonable pace. Economic activity in a few urban areas is modern and sophisticated. However, the rural sector has been largely untouched by this overall growth, and vast numbers of rural Filipinos have seen little or no improvement in their daily lives over the last decade. This is particularly true for the tenant farmer cultivating rice and corn, the national staple crops. For this reason, the Mission has selected Rural Development as one of its two major assistance sectors, as reflected in the Development Assistance Paper prepared by the Mission in July of 1972.

The Philippine Government is presently mounting a complex of programs to attack the problem of low income levels in the countryside. The Mission is now proposing to collaborate with the Government in three of these undertakings, which would be complementary to the Local Development and Rural Electrification activities already underway. One of the undertakings is immediate, one is a combination of immediate and long range, and the third is essentially long range.

Under the Agricultural Income and Production Project, the Mission and the Government are proposing on a nationwide scale to increase significantly the income of the small farmer (primarily and initially rice and corn farmers and irrespective of whether his status is tenant or owner) by increasing his productivity. The anticipated expanded production -- a corollary benefit -- will help to achieve at least national self-sufficiency in the production of rice and corn and enable the Philippine economy to conserve valuable foreign exchange.

The Agrarian Reform Project, the second undertaking, is aimed at altering land ownership patterns and ultimately abolishing share tenancy, felt to be a major root-cause of the small farmer's meager income and a primary productivity constraint. It is anticipated that the agrarian reform program will result in greater income for the land reform beneficiaries and eventually also lead to increased production. The short-term aim of the program is simple land-transfer while the middle to long range objective is the creation of a complex of services and institutions to serve the land reform beneficiaries and make him a productive and viable factor in the economy and the political system.

The third joint Philippine/USAID activity, the Bicol River Basin Development Program, is a longer range effort which represents an innovative approach to rural development. By means of integrating and rationalizing all of the disparate development programs falling within a delimited geographic area and bearing on the income and production of the rural inhabitant, especially the small farm family, it is hoped that both domestic and external donor resources will be maximized and rural development objectives optimized. In the Bicol project, for example, land reform, agricultural credit, water resources, road development, rural electrification and other physical and social infrastructure programs will be meshed and harmonized through a system of unified management and planning.

The Mission finds these three rural development approaches attractive and is anxious to respond to the Government's request for assistance in each area. The attached ERDP represents the proposal for one of these three activities.

AGRICULTURAL INCOME & PRODUCTION PROJECT

OVERVIEW

This is one of four Project Proposals developed for USAID assistance to the Agricultural Sector of the Philippines.

The purpose of this project is to assist the Government of the Philippines in implementing programs which will increase the incomes of some half million small scale farmers, by helping them to improve their capability of producing and marketing key agricultural commodities.

The project will provide technical assistance, some grant commodity assistance, and loan funds as required, directed at creating the necessary conditions for increased production of rice, corn/sorghum, and livestock. A somewhat lower level of emphasis will be directed towards pond fish development. An integrated team approach will be taken on all aspects of these commodities. (These would include extension, credit, processing, marketing, price support, water management and new technology.) The project would target on individual small scale farmers and results would be evaluated in terms of production and income increments.

It is anticipated that the effort on rice will be phased down after three years, by which time the preliminary work will have been laid for a rapid expansion of corn/sorghum. Livestock credit will continue as a pilot effort in several provinces, as an intensive demonstration supplement to a larger program. Fisheries development will continue in the research stage for the first few years.

This project is closely related to three other agricultural projects- the Bicol River Basin Development Project, an integrated and intensive development of agricultural and infrastructure activities within a single geographic area; the Agrarian Reform Project which will accelerate changes in the patterns of land ownership and support to small rice and corn farmers; and Research which will provide the technological data to underpin the whole structure of agricultural development.

These project proposals have been worked out in close cooperation with the Philippine Government at all levels from the Secretary to the farm technician; coordinated with other donor agencies, and jointly refined through extensive review and analysis. They represent the highest priorities of the Philippine Government, and are in a form whereby USAID inputs can be most effectively used.

The chart below outlines the overall conceptual framework of USAID's assistance to the agricultural sector.

AGRICULTURAL CONCEPTUAL FRAMEWORK*

Goals are: Production and Income

Areas of Operation	Policy Support	Commodities	Economic Support	Intensive Application	
	Data and Analysis	Rice	Supervised Credit	Area Development	P R O P
		Feed Grains	Rice		P
Activities		Livestock	Stabilization		
	Adaptive Research	Fish	Marketing	Agrarian Reform	P R O P
			Agri-business		
P R O P		P R O P			

Explanation

The Policy Support items improve the quality of policy decision making; the Commodities column lists priority commodity targets for production programs; the Economic Support column lists basic institutions needed for successful production and improved farm incomes. These all lead to the last column indicating Field Application systems.

*TAB/AID/W:Milo Cox

OVERALL RATIONALE

A. OVERALL RATIONALE

"The miracle of the 'green revolution' may have arrived, but for the most part, the poor farmer has not been able to participate in it. He simply cannot afford to pay for the irrigation, the pesticides, the fertilizer - or perhaps even for the land itself on which his title may be vulnerable and his tenancy uncertain."

Robert S. McNamara
President, World Bank

1. Summary

This project has been designed to extend the green revolution to half a million poor small scale* Filipino farmers by sharply delimiting USAID's scope to a few GOP-selected crops of national priority, but emphasizing the creation and implementation of a "total delivery system" for those crops in particular areas, to serve the small scale farmer.

2. Relationship to Sector Analysis

This project has been developed in consonance with the recent World Bank Sector Analysis - the GOP 4-year plan for Agricultural Development, and the Mission DAP, submitted last year.

3. Background

Agriculture is the largest economic activity in the Philippines. Its condition not only determines the welfare of the people in the rural areas, but also exerts a major influence on national economic welfare. The government and the national economy depend upon the production and distribution of agricultural products as a major source of income. Increases in agricultural production will be the primary means of raising the standards of living of the Filipino.

Programs for strengthening the agricultural sector, therefore, are of utmost importance.

Agriculture in the Philippines has been characterized by extensive land and labor use, low yields per hectare, and low income per capita. Extensive hillside culture is a basic cause of low crop yields in many areas, and improvements are difficult at the present level of technology. Although the plains are fertile, the Philippines is "disaster prone" - situated in the path of the major Pacific tropical storm belt. Thus, the incentive for increasing productivity is low because of risk. Farmers' crops are under constant threat of failure from typhoons, floods, drought, pestilence and disease. The geography of the Philippines adds to the farmers' woes. Numerous islands with isolated alluvial plains, bounded by mountains, hills and/or the sea makes transportation and distribution of agricultural inputs and products expensive and difficult to manage.

Improved development in agriculture therefore, implies greater production and productivity in the face of such conditions and risks. Thus, the concern is to devise a delivery system that reduces risk to the farmer and yet prompts economic rewards.

* (1.5 to 5 hectares)

The U.S. Government has been involved in the modernization of Philippine agriculture since the turn of the century, with varied success. For many years, the primary contribution was in the development of agricultural education institutions. Today, these institutions are well established, and continue to provide skilled manpower for the agricultural sector.

In the decade of the fifties, the U.S. assisted in establishing several basic agricultural support institutions, and in strengthening government service capabilities. Assisting the Philippine Government in the strengthening and expansion of the Extension agencies was a major concern - Bureau of Plant Industry, Bureau of Animal Industry and establishment of the Agricultural Productivity Commission. Two major supporting elements addressed were Cooperatives and Credit. The FaCoMa cooperative system, with one or two exceptions, did not develop as envisaged. Experiences with this failure in the credit arena, however, led to the emergence in the sixties of a Rural Banking System -- unique in that it is a private institution which can also serve as a vehicle to loan government funds to small scale farmers, for the benefit of all. That system is still being refined and expanded.

During the early sixties, the Mission cooperated with the government in formulating a national land reform program; and in the second half of the decade, concentrated on advising on the development of a national rice self-sufficiency program, assisting in its implementation in two pilot provinces. In this program, all efforts were directed toward increasing production within the existing agricultural framework.

Under the new high yielding rice varieties, an integrated production campaign was devised, pilot tested in two municipalities and subsequently became a successful national campaign that achieved near rice self sufficiency in 1968. Similar campaigns were planned and fielded for corn, sorghum, soybeans and swine but a combination of technical production problems, poor coordination among elements of the local support system, marketing difficulties, price risk and weather prevented attainment of production goals in these areas and led to retrogression. A wave of disasters, coupled with a tense social situation, a totally ineffective price support policy and an unstable economy threw most new program efforts into limbo before they were effectively established.

A seed inspection and certification system was established in the latter sixties that is adequate for rice and is now being systematically expanded to include other commercially important crops.

Recent dramatic expansion of vertically integrated banana export business and high level technology domestic broiler production in the private sector have helped favorably to focus policy attention on the potential economic growth in the agricultural sector. USAID has cooperated in setting the stage for mango research and its development as an export crop. Production increases of domestic food crops have grown with the population but local shortages still occur at different seasons of the year. Nationally, the diet is deficient in energy or fat and proteins. Increases in agricultural production for domestic consumption have been made in the past but have merely kept pace with population growth. Productivity has remained low compared to the potential.

In 1970, the Mission agreed to assist the Philippine Government in a pilot program in Nueva Ecija Province to determine whether land reform activities could be accelerated and agricultural productivity simultaneously increased under existing laws and structures. Findings are contributing to the new nationwide agrarian reform effort.

Additionally, under the Local Development Program, coordination of agricultural planning and development within certain provinces was undertaken. This provincial orientation is being stressed in the GOP's new four year Agricultural Plan -- "There will be a shift in program development and implementation. Priorities shall still be determined at the national level, but the preparation of programs will be done at the provincial level, with the participation of the local government and the community."

A long range study (Project ADAM) is currently being undertaken in cooperation with the US Department of Agriculture and AID/W's Technical Assistance Bureau and the Philippine Bureau of Agricultural Economics. The purpose of this research is to generate and analyze data for guidance on alternative land use patterns or crops, when rice yields permit diversion of marginal rice lands to other crops.

5. Future Needs

There is a special need to focus on the small scale farmer. Their number is too great to be absorbed into the industrial sector in the near future and currently they are under and inefficiently employed. Politically they cannot be neglected, but it is also good policy economically to improve their purchasing power, and consequently create greater effective consumer demand for both food and industrial products. The small scale farmer is the principal supplier of rice and corn, and could become so for livestock and fish;-- the principal source of presently deficient food energy and protein.

The goal of this project is to improve the life and the lot of the small farmer. As we define the term, the small farmer represents more than 75% of the country's total population. He is the rural dweller who occupies nearly 90% of the total developed land area. By any standard, he leads a marginal existence. In many cases he is under paid, under employed, under served and isolated. All too often his children are malnourished and receive only minimal educational benefits.

A majority of rural dwellers are small scale farmers, over 50% of whom are tenants. The median small scale farmer is often statistically characterized as a poor man who farms 3-1/2 acres, uses modern crop technology to only a limited extent, shares one carabao, finds truly productive work only about half of the time and has annual family income of about \$350 (P2,200). He lives with his family of five to seven children in a very small, partially weatherproof house without plumbing or electricity, often some distance from an all weather road and public transportation. He consumes about 1970 calories a day, has six years of education, is indebted to the middleman, has little hope for future change and will probably be dead by the age of 55. Nonetheless, experience has shown that he will respond to economic opportunity and to sincere, dedicated leadership.

Despite the pseudo-statistical word picture painted above, we don't know precisely enough for project management purposes what the target small scale rice and corn farmers incomes really are. For the purpose of this PROP submission, a 6% (150 peso) income increment for rice, and 7% (200 peso) for corn seems reasonable at this time. These targets will be adjusted when the results of a base-line survey are obtained.

The two major conclusions from the Nueva Ecija Pilot Project experience were:

- a. Existing support systems are inefficient in meeting the needs of small scale farmers in the required time frame.
- b. The key to accelerating land reform activities is support systems that small scale farmers consider reliable and responsive to their needs.

The key development problem is to open new economic opportunities for the small scale farmer. Substantial progress can be achieved by organizing existing institutional programs and support services, enabling the small scale farmer to more effectively utilize existing technology, and come closer to achieving his potential productivity. At the same time consideration must be given to the fact that at least on paper the productive capacity in basic food grains given the use of modern technology is far in excess of domestic demand. As this program becomes successful, shifting of marginal rice lands to more productive use will take place and crop diversification will become increasingly important.

Unless small scale farmer support services are drastically altered, it is unlikely that the small scale farmers will be better off.

6. The Current Setting

In the last few months we have seen increasing reforms in the Philippines and many new government initiatives are being formulated at the national level to reach out and weave the rural dweller more effectively into the fabric of society. Sweeping reforms of land tenure and government services are announced and beginning to be implemented, and the government is under great moral pressure to meet the needs of the small scale farmers. This in turn means improving the economic climate and bringing pressure to bear on the private sector to serve the small farmer, even though it may be less profitable than the current clientele.

Philippine agriculture has thus entered a period of major transition which now demands an examination of existing government field support programs for agriculture, and restructuring of the total delivery system to make it more effective in meeting the income and employment needs of the small scale farm family.

7. Request for USAID Assistance

USAID has been asked to assist the GOP in this area of support for the small scale farmer. Because both the climate for, and direction of, change accord with our own assessment of the country's future needs for agricultural development, we are encouraged to participate. This proposal is consistent with the needs and priorities identified in both the recent World Bank Agricultural Sector Study, with its 13 annexes, and the updated four year Agricultural Plan. Our role is seen as that of assisting in the overall analytical phase of problem identification in selected key commodities, limited support in terms of financial resource inputs, and limited participation during early implementation to help the Philippine agencies concerned "fine tune" the system. Simultaneously we will help develop systematic project management skills among national, regional, provincial and municipal level implementation personnel.

8. Social/Cultural Environment

The small scale Filipino farmer and lower level staff in the bureaucracy have been conditioned by past experiences to accept disfunctional situations with stoic forbearance. Now that the small scale farmer is expected to become his own master as a land owner, he has a long relearning process to go through. Similarly, the bureaucratic rank and file tend to be sticklers for established procedure, with little if any follow-through to correct anomalous situations, even to the detriment of larger objectives. The new "accomplishment-oriented" manager needs help, to analyze and simplify existing situations to remove bottlenecks.

The "New Society" aims for fundamental attitudinal changes at the highest levels of government. The traditional attitudes of "role playing" and "maintenance of the status quo" are not suited to a dynamic service-oriented and innovative development outlook. But changes do not occur by edict alone, and will not take place overnight. Strong inertia exists. Change will come about by continued pressures to perform, and demonstration by example.

A thin veneer of dynamic management capability exists at the present time, notably at the upper levels of the agricultural institution. It is not sufficient to implement complex programs on a broad scale however.

Under these circumstances, to accomplish meaningful social and economic development in terms of jointly programmed US/GOP objectives, a pattern of joint participatory management is proposed. In this arrangement, the Filipino project manager and his staff are clearly responsible for project implementation. The USAID advisor meanwhile, identifies closely with the project, becomes deeply involved in identifying and solving problems, and devises means for removing bottlenecks, and on the job interaction between Filipinos at all levels, from the Cabinet to the farm, functioning as an assistant to, and professional colleague with the GOP project manager.

The rice production support system for the small scale farmer has undergone appropriate test and refinement in Central Luzon during the 'Palagad 73' disaster relief program and is now being expanded to a massive national program. To assure effective implementation at the provincial level in other commodities, USAID is stressing initial participation in implementation efforts in only a few key commodities in selected municipalities, where activity progress can be closely observed. As approaches are proven in these project areas, they may be adopted for wider application by the GOP.

There is a dearth of middle level personnel in the GOP equipped with both the substantive knowledge of agricultural technology and the managerial skills necessary to implement an action program in the field. Through his presence, the USAID advisor brings an awareness of the importance of blending both aspects throughout the total system.

This role should not be underestimated. Such collaboration supports local managers as they change relatively stagnant institutions to vehicles for dynamic change, and devise means for accomplishing targeted goals. The system only becomes self-sustaining when the participants have been "walked through" their phase several times, with favorable experiences. Once they all learn that the system consistently functions to their personal benefit, they will place demands on each other to perform their respective roles and keep it functioning. Without a constant trouble-shooter/prodder to force the system to function beyond its present level of operation, however, dealing constructively with problems as they arise, there will be no motivation to change. It will be easier to maintain the status quo. No individual or entity within the system can risk failure that change might bring. Only the government can afford to be the force for change and underwrite such risk.

With the new determination to effectively reach massive numbers of small scale farmers, project managers are confronted with a new and insistent pressure to secure performance of subordinate staff. By working closely with a counterpart GOP project manager in several Priority Provincial Development Assistance Provinces, the USAID advisor is able to help demonstrate that planned change is possible. He helps Filipino managers develop appropriate essential management skills while gaining experience and self-confidence. This enables the Filipino to continue the project's future expansion elsewhere, unassisted. One USAID Direct Hire Project Manager will be responsible for the total US project.

9. Special Survey Requirements

Although the small scale farmer is much discussed, and there is much generalization, very little hard data exists on the "Target" small farmer. For this reason, it is highly desirable that a Base Line Survey of the small scale farmer be conducted to determine his income; the characteristics of his production activities, the employment implications of his cropping practices, what he thinks are the principal constraints for increasing production and income, and the additional services he needs most. This will be updated annually during the life of the project. Thus when we complete the project, we will have more than speculation upon which to base our evaluation.

The incremental income to be derived by each small scale farmer reached under this project can be estimated in advance through the Farm Plan and Budget, a prerequisite to making a production loan to an individual farmer. However, the actual incremental income is not a foregone conclusion. A "guaranteed" income or return from a loan does not exist. An element of uncertainty still prevails. Much depends upon the farmer in following recommended management practices, but he is also subject to setbacks due to pestilence and extreme disastrous conditions, which will occur from time to time, despite his best efforts. Therefore it is essential to conduct periodic follow-up statistical surveys of actual experiences, in order to better evaluate the impact of the sub-project, and take corrective policy measures when indicated.

10. Implementation Monitoring

In addition to the continuous monitoring and management efforts by the USAID Project Manager, concurrent auditing of the effectiveness of project implementation by a disinterested third party is highly desirable. Criteria for pre-determining effectiveness standards will be included in the sub-project agreements (Sub-ProAgs).

OVERALL PROJECT DESIGN

B. PROJECT DESIGN AND FUTURE COURSE OF ACTION

Discussions with the Philippine Secretary of Agriculture, the private lending institutions and joint planning reviews between representatives of USAID and the Government of the Philippines have determined that USAID can be most effective by limiting its involvement under this project to assist in strengthening the delivery system of three principal commodities - rice, corn (sorghum) and livestock - at the present, and planning for the future development of pond fish culture, and rural production diversification.

The most obvious reason for USAID to provide assistance as requested in this PROOP is because the Government of the Philippines rates these programs as among its highest priority activities. This section attempts to briefly highlight the arguments which have led the Government to make that decision and for the Mission to concur in it.

The Philippine rural sector is characterized by four interrelated factors:

1. A surplus labor source throughout most if not all of the year;
2. Land productivity well below that technically feasible;
3. An aggregate food grain production somewhat short of national consumption requirements;
4. Low income for residents.

The government views self-sufficiency in food grain production as its highest priority. It similarly views the low income surplus labor problems as areas demanding action.

Given these considerations the immediate problem is one of increasing rice and corn production while at the same time increasing income and employment for those at the bottom of the economic ladder in the rural sector. Not to be ignored in this formulation is the Government's policy position that productivity increases are mandatory to assure that land recipients under the land reform program will be able to achieve economic viability.

Two interrelated programs for achieving productivity increases have been suggested. These are: (1) Increasing the availability of irrigation waters which can increase land productivity for rice by improving the yield per crop, by permitting the achievement of more crops per year and, reducing risk of production and (2) the use of greater production inputs on rice and corn as a means of increasing yield per crop. The Government is addressing both of these alternatives. Irrigation improvement is a long term development. (Current activity in this field will be discussed in the "Rice Sub-Project section.) The quickest response in the production area can be achieved by the use of more modern production techniques on the already irrigated land. Currently, yields on irrigated land average only about 50 cavans per hectare. Well documented field trials indicate that yields of from 80 to 100 cavans per hectare are readily achievable given recommended use of fertilizer, pesticides and appropriate farming methods. With a moderately adequate farm extension service in place, it appears possible to move forward

almost immediately on a program which will induce the small farmer with irrigation to borrow money for the purpose of increasing the productivity of his land. Field tests indicate that investments of about \$30 per hectare in incremental production inputs will result in incremental production valued at about a \$130. Given adequate assurance of a reasonable price at harvest time the farmer should find such an investment highly attractive.

From a national point of view, increased productivity will considerably lessen the demand for importation of basic food grains. For an out of pocket cost of perhaps \$30 the government can produce about a metric ton of rice which in normal years would have a value somewhat in excess of \$100 per ton. The overall return to the nation on a benefit cost ratio basis is in the vicinity of 3-1/2 to 1 and of course there is a considerable savings implied in terms of scarce foreign exchange.

For these reasons this agricultural income and production area appears to be highly attractive. It means assisting large numbers of small farmers who are at the low end of the income scale in the Philippines. It means assisting the Government in one of its major priorities - that of rice and corn self-sufficiency. It is an area in which pilot testing in the last few years has built up what appears to be a workable administrative system. The Mission believes that because of profits for those involved, a self-sustaining system can be established.

The System

Agriculture is a location-specific science. Crops and methods vary widely from place to place, and should be adapted to local conditions. Regardless of location or crop however, several essential elements of the system can be manipulated to influence agricultural development; will, skill, resources, marketing, and infrastructure.

At any given point in time, the system exists in some "state"-- the resultant of the "levels" of each of these variables. As conditions change in each element, the impact is reflected in the system state. In order to move the system state to a more effective level in terms of our objectives, deliberate, conscious action has to be taken by the government to change the levels of one or more elements.

A system will only function to the limits of its weakest component. Viewing each crop enterprise as a total system, the lack of credit reaching the small scale farmer is seen by the GOP and USAID as the principal constraint (i.e. on the "critical path") at the present time. The critical path is not the total project however. It is merely the factor requiring most immediate attention. As conditions in that activity are eased, the other supportive activities must be coordinated to play their part in a timely manner. This is what is meant by concerning ourselves with a total delivery system approach. Thus the mission must remain cognizant of the totality of activities involved, and be able to interact at the operational level as conditions change. The following chart illustrates the general system outline

and its interlinkages. The continuing overall process of agricultural development is outlined, with the contribution of the support elements, such as research to attain the project goal. The system is degraded to the extent that each activity is neglected, or underperforms.

<u>Activity</u>	<u>Description</u>
A - B	GOP Land Reform Program, which generates "customers".
A - C	An improved data collection system established to provide the basis for GOP Policy making and planning in the Agricultural Sector.
A - D	Research to identify new opportunities for production, crop diversification, etc., and economic studies to determine on-farm profitability.
A - E	Field trials to provide data on productivity in local areas, and demonstrate the potential for greater productivity, with economic analysis of costs and returns to small scale farmers.
A - F	Financing development of schemes to support credit programs.
A - G	Development of skills for extension workers - farm management technicians, supervised credit technicians, etc.
A - J	Improvement or establishment, based on economic analysis, of private sector agri-business, distribution systems for inputs - fertilizers, herbicides, pesticides, etc., and retail outlets for small farm machinery, equipment and other supplies.
A - K	Construction and upgrading of feeder, and farm to market roads, and irrigation systems, targeting in priority production areas, as developed through the Provincial Development project.
A - M	Development of approaches to integrate systems for specific locales, and repayment of production loans.
A - O	Survey of rural industrial potential.
B - D	Conversion of tenant farmers to amortizing status.
D - E	GOP Policies developed and implemented to provide incentives and reduce risks to the small scale farmer in terms of price support, crop insurance, import policies, input subsidies, credit and coops.
E - H	Experimental programs to organize farmers into reachable units by Farm Management Technicians (Damayan/Selda/Compact Farm).
F - H	Development and implementation of supervised credit programs.
G - H	Improved mobility of Farm Management Technicians through vehicle support program. (Special vehicle loan fund established by NFAC).

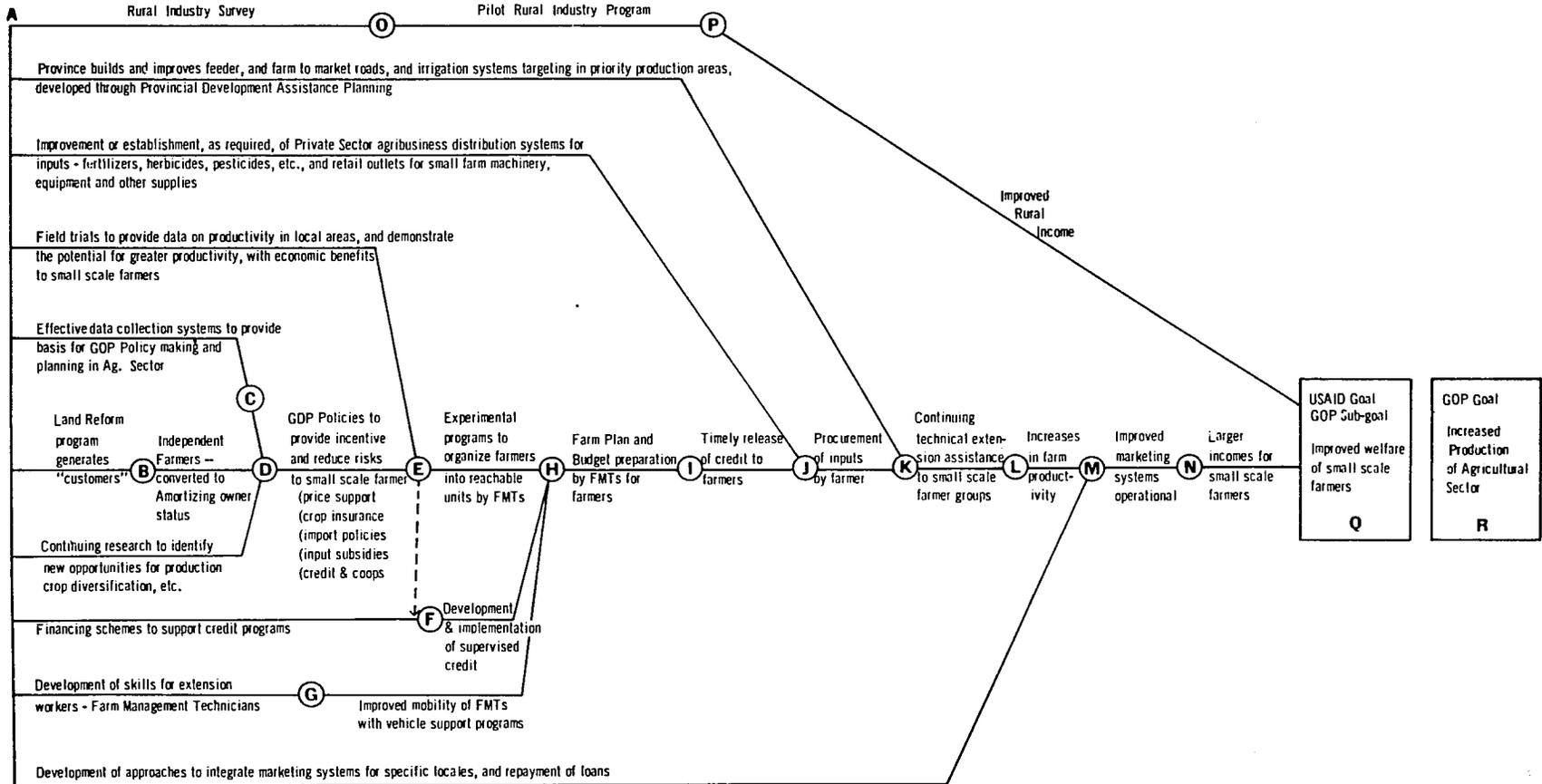
Activity**Description**

- H - I** Farm Plan and Budget preparation by Farm Management Technicians for independent small scale farmers.
- I - J** Timely release of credit to farmers.
- J - K** Procurement of optimum inputs by farmers.
- K - L** Technical extension assistance to small scale farmer groups.
- L - M** Increases in farm productivity.
- M - N** Improved marketing system operational.
- N - Q** Larger incomes for small scale farmers.
- O - P** Establishment of pilot rural industry programs.
- P - Q** Improvement of employment and incomes of rural dwellers.
- Q** USAID GOAL, GOP SUB-GOAL: Improved welfare of small scale farmers and rural dwellers.
- R** GOP GOAL: Increased production of agricultural sector.

These activities are dealt with on a continuing basis by the GOP. The USAID advisory team (Direct Hires, short term and long term technicians and consultants) will work with the GOP on an ad hoc basis to address particular constraints as needed.

The remainder of this document deals in more specific terms with USAID's overall goals, the current state of the system for each of the four commodities identified, and the thrust of the project in improving the situation.

**SIMPLIFIED FLOW CHART OF
INTEGRATED ACTION REQUIRED TO REACH THE SMALL SCALE FARMER
(Non-Scalar)**



OVERALL PROJECT GOAL

C. THE PROJECT GOAL

1. The Goal Statement

- a. The primary goal of this project is to contribute to the development of rural areas in the Philippines, with particular emphasis on lower income groups.
- b. A simultaneous objective is the expansion of the supply of foods that would support improvement of nutritional levels of both the urban and rural population. (A related Nutrition Project is being undertaken by the GOP assisted by USAID)
- c. The improvement of Philippine balance of payments by reducing imports and expanding exports of agricultural commodities, is a secondary goal.

2. Measurement of Goal Achievement

- a. Base-line and periodic follow-up economic surveys of rural low income families will indicate progress towards this goal.
- b. Continuous nutrition follow-up surveys of urban and rural population by the Nutrition Division of USAID could indicate progress towards achieving this goal. (Under this project, AD can assume responsibility for meeting effective consumer demand for key foods at relatively stable prices.)
- c. The National Income Accounting System will identify the expenditures and earnings of foreign exchange for agricultural commodities.

3. Assumptions of Goal Achievements

- a. Continuance of the economic and political stability in the countryside is a necessary pre-condition for rural development.
- b. Continued government support and resource allocation for rural development.

D. THE PROJECT LOGICAL FRAMEWORK

1. Clarifying Comment

This project focuses upon incrementally improving the income of a large number of small scale farmers by strengthening the delivery system for four specific agricultural commodities - rice, corn/sorghum, livestock and later fish. The system for each commodity is different and the inputs required to achieve the outputs are also different.

For this reason, each commodity has been treated as a sub-project, and a separate matrix describing the purpose, outputs and inputs of each, has been developed

RICE SUB-PROJECT

AGRICULTURAL INCOME & PRODUCTION PROJECT PROPOSAL
(A. Rice Sub-Project)

NARRATIVE SUMMARY

OBJECTIVELY VERIFIABLE INDICATORS

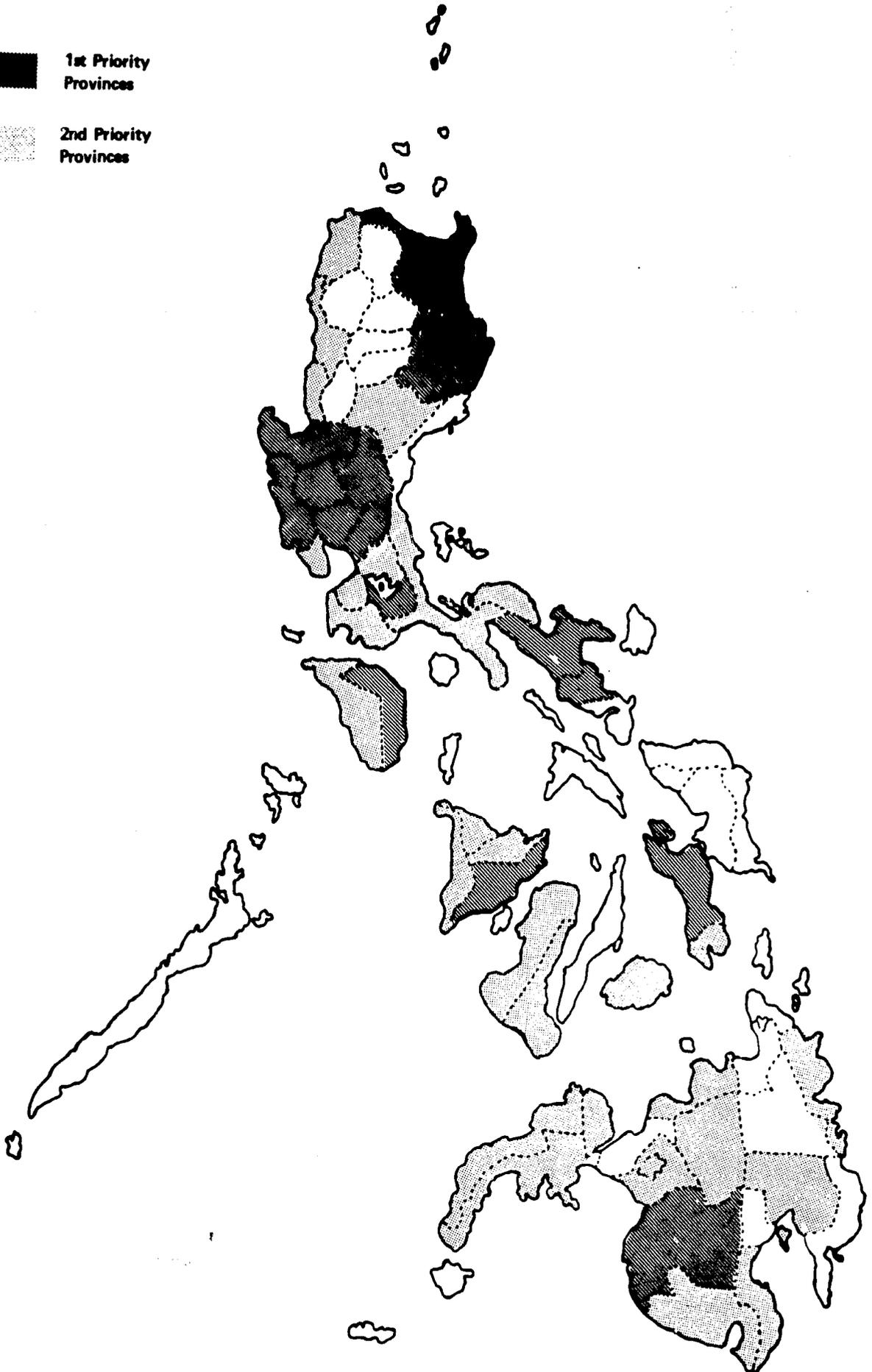
ASSUMPTIONS

A	B	C
Goal	Measurement of Goal Achievement	
I. The Goal Statement:		
Primary		
a. To contribute to the development of rural areas in the Philippines, with particular emphasis on lower income groups.	a. Base-line and periodic follow-up economic surveys of rural low income families will indicate progress towards this goal.	a. Continuance of the economic and political stability in the countryside is a necessary pre-condition for rural development.
b. A simultaneous objective is the expansion of the supply of foods that would support improvement of nutritional levels of both the urban and rural population. (A related Nutrition Project is being undertaken by the GOP assisted by USAID).	b. Continuous nutrition follow-up surveys of urban and rural population by the Nutrition Division of USAID could indicate progress towards achieving this goal. (Under this project, AD can assume responsibility for meeting effective consumer demand for key foods at relatively stable prices.)	b. Continued government support and resource allocation for rural development.
Secondary		
c. The improvement of Philippine balance of payment by reducing imports and expanding exports of agricultural commodities.	c. The National Income Accounting System will identify the expenditures and earnings of foreign exchange for agricultural commodities.	
II. Purpose		
a. Increase income in 43 targeted provinces for small scale farmers whose primary production commodity is rice.	End of Project Status (30 June 76) a. An average increase of 150 pesos per family per year (6%) for 440,000 families in 43 provinces.	1. a. Provinces selected are suitable for small scale rice production.
b. Increase rice production in 43 provinces.	b. Augment annual production of paddy by 200,000 metric tons, plus or minus normal deviations due to climatic and other natural factors.	b. Small scale farmers amenable to borrowing for rice production.
		c. Small scale farmers will be able to produce and sell their paddy at a profit.
		d. Profitable new production practices for specific levels of inputs which lead to increased output and income now exist and will continue to become available in the future. (Note this requires a continuous research input.)
		2. a. Adequate internal demand exists for the increased rice production, or the government will provide the required price support.
		3. a. System will be self sustaining at end of project due to customer demand because both banker and borrower will find it profitable.
		4. Project will concentrate on farmers with irrigated land.
		5. The average small scale farmer in this program will cultivate 2 ha. once a year.
III. Project Outputs		
1. Motivated banks making supervised credit loans for HYV rice production.	1. 850 rural banks and FNB branches participating in ALF Rice program by end of FY 78.	1. Price support policy effective and in-place.
2. Motivated small scale farmers organized into seldas/dansayans or compact farms borrowing for and making repayment of rice production loans.	2. a. 400,000 "Masagana 99" loans made annually by all banks by end of FY 74. b. 2700 million being loaned annually under "Masagana 99" by all banks, at end of FY 7b. c. 94/06 collection/default rate (The Central Bank, through the Agriculture Guarantee Fund is guaranteeing to the lending bank up to 85% of the supervised credit loan.	2. Banking system responsive to government goals.
3. Upgraded agricultural technicians providing higher quality servicing of small scale farmers.	3. 3,500 supervised credit technicians having received up-grading of technical skills.	3. Private sector provides adequate production inputs at "fair trade" prices.
4. Competent and experienced supervised credit counterpart project manager, and 43 provincial program officers for rice production.	4. a. 260 direct counterparts assigned to work with USAID advisors. b. 2 National & Provincial Program managers and staff.	4. MFAC incentive system effective for production technicians.
5. Average per hectare yields of paddy, of participating farmers significantly increased.	5. 80 ca/ha wet season irrig., 70 ca/ha rainfed, 100 ca/ha dry season irrig., average yield of participating farmers.	5. Vehicle Loan Fund effectively operational.
6. Small scale farmer economic base line study.	6. 1 study report.	6. Other donor agency support in research, training and infrastructure development incorporating within a project management of GOP: a. IRRI training and research b. ADB/WB Support to NIA c. PDAP Logistical Support
IV. Project Inputs		
1. U.S.		
a. Direct Hire	Magnitude	(S000)
b. Contract Services:		
Credit Technicians		
Fertilizer Technician		
Marketing/Price Support Technician		
Field Production/Management Technicians		
Rural Broadcasting Extension Technician		
c. Commodities		
Vehicles (new and excess property)		
Education-Information Materials		
d. Development Loan		
2. U.S./Philippines		
Agricultural Loan Fund consisting of regular GOP resources and PL 480 support	P350 M	

RICE SUB-PROJECT PROVINCES

1st Priority Provinces

2nd Priority Provinces



RATIONALE

E. NATIONAL

1. National Need

The Philippines was the birthplace of the "Green Revolution" in rice production, which spread rapidly around the world in the late 1960's. From 1968-70, the country even attained self-sufficiency and exported some rice. The problems of producing enough rice to feed its population had been solved! Discussions focused on "Second-Generation" problems of plenty - handling the abundance, diversification into other crops, etc., and a new era of agricultural development loomed.

The nation's euphoria was short-lived however. Capricious nature successively brought crop destroying weather and pestilence - typhoons, tungro, floods and drought; which coupled with rapid population growth and population migration caused by civil strife, put the Philippines in a net rice deficit position once more.

At the national level, recognition dawned that technology alone was insufficient for a green revolution in the Philippine environment. For the 2 million small scale farmers, farming was still a high risk business venture. In the face of adversity, the small scale farmer tended to opt for a "low input -- low output" combination to minimize his losses. In many cases, he adopted the new High Yielding Varieties, but made only minimal cash inputs for fertilizer, insecticide and herbicide. Thus even those areas that were spared the bad conditions did not produce enough to compensate for the losses elsewhere. Recognition of this situation plus concern for the "little man" fostered by the New Society has led to a resurgence of effort in assisting the small scale farmer to attain higher yields. Nationally, a firm policy has been made to produce enough to attain self-sufficiency despite high potential weather losses.

Since the 1972 Central Luzon floods, several special campaigns have been undertaken by the National Food & Agriculture Council, with USAID cooperating (under the Disaster Recovery and Rehabilitation program) to intensify and accelerate the production of rice by small scale farmers of Central Luzon. Under "Operation Rice Bowl" and "Palagad '73", successively improved models of a management system have been developed to identify and make available to the small scale rice farmer integrated "packages" of inputs to support the existing technology in a timely manner. This effort, although commendable, is limited in scope to the Central Luzon area, and falls far short of the national need. There are four other major rice production areas of the country embracing 43 provinces where these concepts must be applied and can be implemented. This proposal is for USAID to work with the GOP on this massive production program which has been formulated as "Masagana 99".

2. USAID Objectives

This sub-project addresses a prime concern of USAID -- the small scale rice farmer. There are approximately 1 million small rice farmers in the Philippines. He is the major inhabitant of the rural areas, amongst its poorer members and is the nation's principal source of rice. The greatest social and economic impact upon rural society can be made by focusing the opportunity for change upon him.

3. Physical Constraint

The World Bank study highlighted the need for improved irrigation as one of the most critical constraints in increasing rice production. While we fully support this conclusion, USAID is not specifically addressing irrigation in its assistance under this project because it is being addressed on a variety of fronts and by a number of donors, other than AID. Currently there are 800,000 hectares irrigated in the wet season, and 300,000 hectares in the dry.

Other donor agencies concerned with irrigation include the IBRD, currently assisting in the implementation of the Upper Pampanga Multi-purpose project; the ADB who has made loans to the NIA for development of three irrigation systems in the Cotabato regions of Mindanao and which is currently negotiating a loan for upgrading the existing Angat and Magat systems in Central Luzon, and the Japanese who are exploring opportunities for electric pump irrigation especially in the Cagayan Valley.

For its part, AID is participating or prepared to further participate as follows: The AID sponsored Bureau of Reclamation - assisted Magat Multi-purpose Project Feasibility Study is scheduled for completion June, 1973. Included is the study of the year round irrigation potential of some 90,000 hectares (40,000 hectares existing). It is planned to continue BuRec advisory services for an additional year (one full time and short term TDY as needed) to the NIA central planning organization to further upgrade NIA's capabilities, assist in the development of a nationwide water resources development plan and to identify specific project proposals for further detailed feasibility investigation. A second \$2.0 million AID Feasibility Studies Loan will be available to assist in financing such studies, i.e. irrigation and ground water development in the Bicol River Basin area. USAID also plans to work closely with the Provincial Governments and the Department of Local Community Development in the planning and implementation of communal irrigation systems. All the above is, of course, in addition to the irrigation rehabilitation work being done under the Disaster Recovery Program.

Even in those areas where irrigation is available, farmers are not attaining their potential due to other limiting factors. Under this project, therefore, USAID is planning to assist the GOP in dealing with these other constraints. Under the Masagana 99 program, priority will be given to farmers with irrigated lands.

4. Delivery System

The lack of an effective unified system for making essential inputs available to the small scale farmer in a timely manner has probably been the biggest bottleneck to date. The means for moving these inputs has focused around development of a small scale farmer non-collateral credit system - the Agricultural Loan Fund. The ALF is the primary thrust of the program, to give the farmer access to the inputs - fertilizer, pesticides, etc., coupled with technical assistance to assure that he uses them to best advantage (method, sequence and timing).

Various services and institutions exist in many locations of the Philippines at some time of the year in support of agricultural production. The critical management task is to get these activated in a timely, coordinated manner so that a specific small scale farmer may benefit, thereby sharply increasing his production and income. The major elements of the system and their current state is as follows:-

- a. A Seed Production System - To produce and distribute quality rice seed for farmers to purchase and plant in a timely manner. This is generally in place. The system is now operating effectively thru the Bureau of Plant Industry (BPI), the University of the Philippines College of Agriculture (UPCA), and a Private Seed Growers Association under the general guidance and direction of the National Food and Agriculture Council (NFAC). USAID has rendered assistance in the past, culminating in the Maligaya Seed Processing Center in Central Luzon. Proposed new varieties are tested, evaluated and release approved by a National Seed Board. BPI operates a nationwide seed inspection and certification service.
- b. Technology - To identify improved methods of reducing production risks, improving productivity of land and labor and increasing farmer profit. This too is generally in place and operating satisfactorily. The International Rice Research Institute (IRRI), UPCA and BPI are all active in this effort. Adaptive research -- field trials to test response of rice to different combinations of inputs (such as fertilizer, pesticides and herbicides) under different conditions in various geographic areas and the economics thereof, is essential to meaningful production campaigns. In this vein, it is significant to observe that IR-5 and IR-8 -- the "miracle" rice varieties which ushered in the green revolution only a few years ago, -- have almost vanished from the agricultural scene, having been succeeded by new varieties developed by IRRI, UPCA and BPI. And even here, problems continue to arise. For example, a further round of intensive research was generated in order to address the recent resurgence of Tungro virus. Careful field study is underway under TAB funded Project ADAM to determine why commercial rice farmers, in fact, secure yields that are so far below the technical potential of the HYV package of technology.
- c. Training - Communication of the technology to the farmers is another essential element. This requires an extension staff (itself competently trained) to carry the word to the farmer. This needs to be improved. IRRI, UPCA, and the private sector, in cooperation with NFAC can, and are developing plans to upgrade professional competency of the farm management technicians and the credit supervisors.
- d. Inputs - Production inputs such as fertilizer, pesticides, and the wherewithal to procure them are critical elements which are not yet adequately in place.

National fertilizer and pesticide production, importation and distribution is inadequate. A rapidly expanding supply of appropriate fertilizer is essential to service an increasing number of farmer users to attain both the rice and corn production goals. Expanded imports of fertilizer elements

and perhaps some mixed fertilizers will be required. A National Fertilizer Authority was recently established by the GOP. A "social pricing" policy was established to permit sales of fertilizer to export crop producers at normal prices but require the setting of special discount prices for food crops such as rice, subsidized by the government. The NFA can charge customs duties, authorize imports and negotiate with the four domestic fertilizer producers and distributors to gain economies in production and distribution.

e. Credit

Much more developmental work has to be done with the Central Bank and Rural Banks and the Philippine National Bank to strengthen the small scale farmer credit program. The Agricultural Loan Fund has proven to be the best model devised to date, in this regard, but it is still not totally accepted by the rural banking community. Furthermore, the Central Bank tends to compartmentalize credit on a one crop one loan basis. The Total Farm Financing concept whereby the farmer's total financing needs are integrated into a single package, with a "line of credit" has not yet reached the "acceptance in principle"/"experimental trial" stage. This concept is the key to reducing the small scale farmer's production risk, and increasing his ability to make repayments.

The US Peace Corps is planning to bring in between 55 and 60 volunteers in August and September 1973, to work with supervised credit programs through rural banks. About 80% of the volunteers will be assigned to the rice program and the remainder will be assigned as livestock and vegetable specialists. Each volunteer will be assigned to a rural bank and they will work with the borrowers of the bank and under the direction of the rural bank manager. The banks will be required to hire their own technicians within 1-1/2 years, to replace the volunteer. The PCV's will work within the system, not at the policy level.

f. Production is carried out by the farmer. Extension work is continually needed to help the farmer to get the most out of his efforts. Under the Supervised Credit concept, government and rural bank technicians must be organized to concentrate their efforts on farmers who have borrowed money and pledged to follow their technical guidance.

g. Infrastructure Development - Farm to market roads are in poor shape, nationally. USAID is helping the GOP address this problem with construction in selected provinces through the Local Development project. Farmers living in barrios not served by all weather roads will continue having to pay higher prices for required inputs and experience difficulty in securing supplies of inputs when needed, as well as further difficulty in selling their crop.

Lack of farmer capacity to control flood waters, and his inability to bring suitable quality and quantity of irrigation water to the rice crop when needed, add to his production risks and make the farmer reluctant to use a complete package of HYV production practices. NIA of the GOP is addressing this problem through support from various international efforts, as mentioned earlier.

- h. Processing and Marketing - Harvesting, drying, storage, milling transporting and other processing are carried out by the private sector. Each of these areas still needs systematic development and management improvements. UNDP/FAO is providing technical assistance for a national grain handling training program complementing IBRD grain storage and processing loan being administered through the Development Bank of the Philippines.

IRRI has been involved, with AID/W support, for a number of years in a program of small scale machinery development suited to tropical conditions, for use by farmers tilling from 2-10 hectares.

- i. Price Stabilization - Farmers can sell palay at any barrio at any time, but the price offered is often well below the central market level plus transportation. The new National Grain Authority (NGA) was created last October to operate a price stabilization program and support the orderly development of grain storage business in the private sector. The need for a strong price support policy is crucial for all grains and a workable system will have to be developed.

successful operation of the NGA price stabilization would reduce price risks presently confronting the small scale farmer providing another incentive to use a full HYV package of practices. The authority may set a minimum price for rough rice and through local agents make purchases to keep the local market up to the minimum support level. When national shortages occur, NGA may import, and, should surpluses exist, may export.

- j. Utilization and Consumption - Basically a GOP concern. AID and other donors are not involved in this aspect.

The National Price Control Council sets and enforces retail price ceilings on milled rice. A national nutrition program provides training in food preparation.

- k. Reporting and Evaluation - To set policy direction and monitor on-going operations. Basically a responsibility of the Bureau of Agricultural Economics, and the NFAC. This is still inadequate. USAID has assisted in a pilot effort to outline a concept and test it under field conditions. This is now ready for implementation with some further assistance from AID.

- l. Project Management - A Philippine government responsibility. Met by national, provincial and municipal campaign leaders to link the above elements together more effectively so that credit is available in the form, time and amount that enables the farmer to take action; the input supplies are available to the farmer on demand; the marketing system will enable the farmer to sell what he produces at a price that gives him further incentive to produce, considering the high risks involved; and for the banker, linkages will be operating that facilitate recovery of loans and encourage additional capital involvement.

**IMPLEMENTATION PLAN
HIGHLIGHTS**

F. IMPLEMENTATION PLAN HIGHLIGHTS

The overall schedule for the Masagana 99 Rice sub-project is as follows:

	FY : 74	:	75	:	76	:	77
R I C E	: Phase in	:	Fully operational	:	Fully operational	:	Phase out

The detailed schedule for each crop season is as follows:-

Wet Season May-November Planting

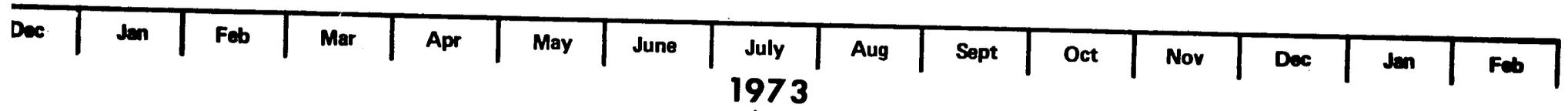
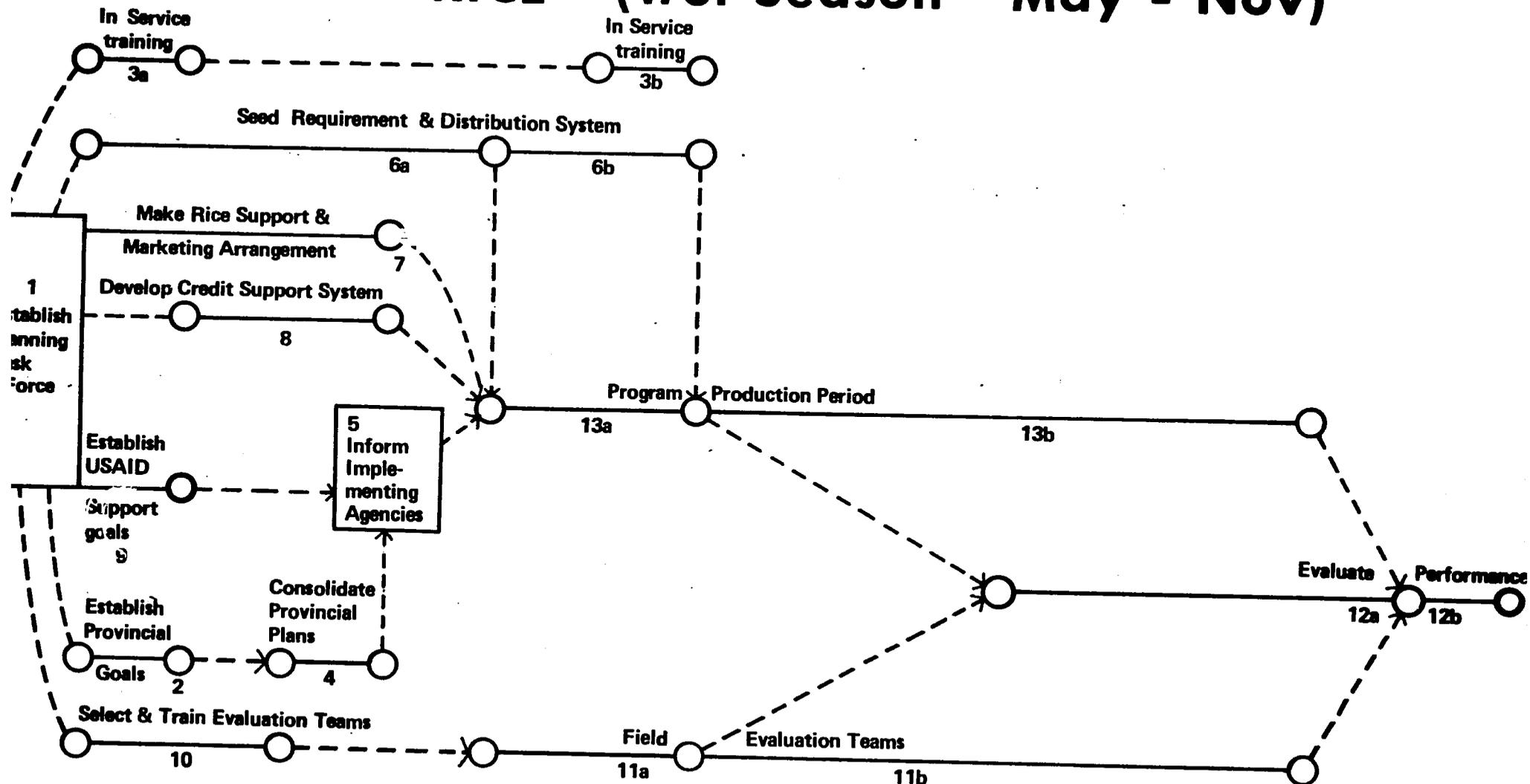
1. Establish planning task force at national level - December
2. Provincial goal statements prepared production goals including planting schedule seed requirements credit requirements/institutional participation training requirements technician staffing and assignment - January
3. In-service training for technical staff (at IRRI-UPCA-~~other~~) - January/June
4. Consolidate provincial plans, establish criteria for support (public and private sector). Obtain approval by Secretary of Agriculture and council for program. - March
5. Inform all concerned agencies implementing approved procedures - March
6. Develop seed requirements and distribution system - January-June
7. Price support policy and marketing arrangements defined - March
8. Devise credit management support system and define peso requirements - February-March
9. USAID support goals verified related to program
 1. Technical assistance
 2. Commodities
 3. Training
 - January
10. Evaluation teams selected and trained - January-February
11. Evaluation teams commence operation - May-November
12. Project evaluations wet season performance with summary report - September-January
13. Program production period - May-November

Palased Season (dry) October-May Planting

1. Establish planning task force at national level - July
2. Provincial goal statements
production goals including planting schedule
seed requirement
water systems information
credit requirements/institution participation
training needs
technical staffing and assignment - August
3. In-service training for technical staff (at IRRI-UPCA-other) - August-January
4. Consolidate provincial plans, establish criteria for support (public and private sector)
Obtain approval by Secretary of Agriculture and council for program. Inform all agencies implementing approved procedures - September
5. Develop seed requirements and distribution system - July-January
6. Price support policy and marketing defined - September
7. Devise credit management support system and define peso requirements - August-September
8. USAID support goals verified related to overall program
1. Technical assistance
2. Commodities
3. Training - August
9. Evaluation teams selected and trained - August-September
10. Evaluation teams commence operation - October-May
11. Project evaluation dry season performance with summary report - February-May
12. Program production period - October-May

IMPLEMENTATION PLAN HIGHLIGHTS

RICE (Wet Season May - Nov)



NARRATIVE

G. NARRATIVE

The Masagana 99 Rice Program is a cooperative effort of the Philippine government, USAID, IRRI and the private sector aimed at increasing rice yield per hectare to meet the requirements of an over-increasing population and in the first year, to minimize an expected rice shortage. Thereafter, it will be directed at attaining absolute self-sufficiency.

Masagana 99 helps farmers in irrigated areas to increase their average yield to at least 99 cavans per hectare in the dry season by getting them to adopt the complete package of modern HYV technology of rice growing. Expected yields are 90 cavans per hectare in the wet season, 70 cavans per hectare on rainfed land and perhaps 40 cavans per hectare on upland rice.

In the five year life of the program, the Masagana 99 campaign plan covers 1 million hectares in 43 provinces.

Masagana 99 will coordinate:

- a. Adoption of appropriate package of rice technology, or the correct use of recommended rice production methods such as the use of high yielding rice varieties (HYV's) use of weedicides/herbicides and fertilizers, and the adoption of good cultural practices;
- b. Intensification of agricultural extension methods and a massive information campaign;
- c. Expansion of applied research projects on rainfed rice culture which will serve as demonstration plots and which later will serve as a basis for future recommendations;
- d. Linkage of crop production loan (under a supervised credit scheme) with marketing, as an incentive to farmer-cooperators to produce more. This will be achieved through tie-ups with rural banks, the Philippine National Bank (PNB) and the National Grains Authority (NGA) under the price support program.

1. Strategy of Implementation

The USAID advisor will operate as an integral member of the NFAC management team in planning, implementing and evaluating Masagana 99. In addition, consultants and technicians will perform specialized roles to address particular aspects of the rice project as outlined below.

The "Masagana 99" Rice Production Program will utilize the recommended package of technology consisting of tungro virus resistant high yielding varieties (HYV's), fertilizer, pesticides and herbicides extended to selected farmer-cooperators through the supervised credit scheme of participating Rural Banks (RBs), PNB Branches and Agencies, and Agricultural Credit Administration (ACA) Farmer Cooperatives. The farmer-cooperators will be closely supervised and properly guided by the government, RB's and PNB's hired technicians.

NFAC will implement the program through the existing field organization, to be complemented with any other additional manpower, and assure their continued and uninterrupted services with RB's and PNB for a more effective program implementation. A national committee composed of representative from government, business and private sectors, will manage the program. Provincial Action Committee (PAC) and Municipal Action Teams (MAT) will be formed to organize production groups of farmer-cooperators through massive promotional-educational campaigns. They will be responsible for the planning, coordination and implementation of the program in their areas. A key target audience are those farmer cooperators who have been agricultural tenants and are expected to be transformed into amortizing owners through the Department of Agrarian Reform; particularly those with irrigated land.

The farmer-cooperators will be granted crop/production loans at the recommended rates as prescribed in the Farm Plan and Budget section of the Loan Application (LA) prepared by the farmer-cooperators with the assistance of the NFAC, DAR, or RB/PNB technicians. Seeds will be procured by NFAC through BPI, and distributed through RB/PNB and ACA. Inputs of fertilizers, pesticides and herbicides shall be supplied by accredited dealers in farm areas.

Repayment of crop/production loans will be linked with marketing as an incentive to farmers through a tie-up with RBs, ACA, PNB and the National Grains Authority (NGA) under its price support program.

Twelve, 3-man Program Audit teams will observe, inspect, gather information and evaluate the operations of the delivery system and the applications of the inputs at the field levels. USAID will provide assistance in training the NFAC program audit teams and making them operational. The teams will basically be composed of a production technician, program analyst and auditor/evaluator.

2. Organization and Management

The Program will be implemented at two levels, as follows:

a. National Level

Management Committee - headed by the NFAC, composed of both government and private sectors. It will outline strategies developed by a Technical Staff to follow through the Program in the field.

Information Committee - headed by the Office of the Secretary, Department of Agriculture and Natural Resources (OSEC/DANR); Bureau of Agricultural Extension (BAE), Bureau of Plant Industry (BPI), U.P. Los Baños with representatives from the private sector as members. It will conduct a massive promotional-information campaign using all forms of media in order to create awareness about the program, to popularize it and get public endorsement, and to bring to the farmers needed information concerning credit, seeds, water management, technical advice, etc. USAID will participate as a member providing technical advise in preparation, and fund publication of selected portions of the material. A commercial advertising firm is lending its technical expertise to this effort.

USAID will provide audio visual equipment and technical consultant assistance to assist with preparation of a training film and broadcast for both irrigated and rainfed rice. Principal dialects will be used.

b. Provincial Level

The Governor will be the Chairman of the Provincial Action Committee. The Provincial Rice Program Officer (PRPO) will be Executive Vice-Chairman, with the provincial heads of the BPI, BAE, NGA, ACA, PNB and the president of the Rural Bankers Association as members.

The PRPO is held directly responsible for the implementation of the program. He consolidates the master list of eligible farmer-cooperators by municipality as confirmed by the Municipal Action Teams (MATs), including RB and the PNB managements. This master list serves as reference for the granting of production loans but the financing institution is fully responsible for deciding to make a loan, and make collection when due.

c. Municipal Level

On the municipal level, the MAT will be headed by the Mayor with the Rural Bank Manager as co-chairman and the NFAC production technician, barrio captains and production group leaders as members.

Production groups composed of 10 to 15 farmers, called "selda" "damayan", or "compact farms" will be organized by the MAT and headed by an aggressive farmer-leader to strengthen the implementation base. He will eventually become a member of the MAT. Selda members are expected to sign jointly and severally for production loans.

3. USAID Supporting Activities

a. Reporting and Evaluation

USAID has been asked to assist in the development of a more effective information management system for agricultural policy and decision making in rice and other key agricultural commodities. USAID will provide the services of a Management Systems Advisor, part-time, to assist in identifying and structuring statistical data, establishing reporting formats, collection and processing requirements and training GOP personnel. In addition, some commodities will be furnished to the BAECON to strengthen their collection and processing capability.

b. Technology

USAID will fund some applied economic research field trial activities to determine, a) why some farmers adopt complete HYV packages, and others do not, b) correlation between various levels of production and profitability.

c. Training

USAID consultants will assist GOP and IRRI personnel in organizing and conducting training seminars to upgrade the professional competency of farm management technicians, credit supervisors and program analyst/auditors.

d. Fertilizer Consultant

The Secretary of Agriculture has requested USAID to provide short term consultancy assistance from TVA. He will assist the NGA in policy planning to assure an adequate supply of chemical inputs to support the Masagana 99 program.

In addition, possibilities will be explored for assuring a development loan for financing the foreign exchange costs of expanded imports of fertilizer elements and mixed fertilizers, necessitated by the program.* In turn, pesos generated through sales to the four privately owned manufacturers will be added to the rural bank Agricultural Loan Fund.

e. Credit

Expanding timely non-collateral credit for small scale leaseholder farmers is the major thrust of USAID's effort under this project. USAID will continue to work with the Central Bank towards this end, with a full time credit consultant. For the immediate future, a direct hire technician who helped bring the ALF into being will continue efforts in this direction. Thereafter, short term consultants will be required from time to time to assist in continuing evaluative studies of the ALF operation.

f. Price Stabilization

USAID will provide short term consultant services to the NGA in relation to price stabilization operations, and guiding policies.

g. Project Management Evaluation

USAID will contract for the services of a local management audit firm to train the special project audit teams to make independent verification of program performance.

* The World Bank Economic Survey of the Philippines, prepared for this year's Consultative Group Meeting, also states that there is justification for providing external loan resources for fertilizer. (Page 39, Section 86)

APPENDICES

B. PROJECT OUTPUTS

<u>OUTPUTS</u>	<u>INDICATORS</u>	<u>TARGETS</u> Total Number
1. Motivated banks making supervised credit loans for HYV rice production.	1. The number of rural banks and PNB branches participating in ALF Rice program by end of FY 78.	<u>850</u>
2. Motivated small scale farmers organized into seldas/damayans or compact farms borrowing for and making repayment of rice production loans.	2.a. Number of "Masagana 99" loans made annually by all banks by end of FY 78.	<u>400,000*</u>
	b. Amount being loaned annually under "Masagana 99" by all banks, at end of FY 78.	<u>P 700 million**</u>
	c. Collection/default rate (The Central Bank, through the Agriculture Guarantee Fund is guaranteeing to the lending bank up to 85% of the supervised credit loan.	<u>94/06%</u>
3. Upgraded agricultural technicians providing higher quality servicing of small scale farmers.	3.a. Number of supervised credit technicians having received upgrading of technical skills.	<u>3,500</u>
4. Competent and experienced supervised credit counterpart project manager, and 43 provincial program officers for rice production.	4.a. Direct counterparts assigned to work with USAID advisors.	<u>260</u>
	b. National & Provincial Program managers and staff.	<u>9</u>
5. Average per hectare yields of palay, of participating farmers significantly increased.	5. Average yield of participating farmers.	<u>80 ca/ha wet season irrig.</u> <u>70 ca/ha rainfed</u> <u>100 ca/ha dry season irrig.</u>
6. Small scale farmer economic base line study.	6. Study report.	<u>1</u>

ASSUMPTIONS

1. Price support policy effective and in-place.
2. Banking system responsive to government goals.
3. Private sector provides adequate production inputs at "fair trade" price.
4. NFAC incentive system effective for production technicians.
5. Vehicle Loan Fund effective and operational.
6. Other donor agency support in research, training and infrastructure development incorporating within a project management of GOP:
 - a. IRRI training and research
 - b. ADB/WB Support to NIA
 - c. PDAP Logistical Support

* By the end of the period, many farmers may not be borrowing to finance rice production, or may be borrowing from other sources. Thus evaluation of Masagana 99 impact may be difficult in equating borrowers with "participants".

** Estimated P700 per hectare per crop.

C. PROJECT INPUTS

<u>KINDS OF INPUTS</u>	<u>MAGNITUDE</u>	<u>DATE SCHEDULED FOR DELIVERY</u>
1. U.S.		
a. Direct Hire	1	FY 74 & for life of project
b. Contract Services:		
Credit technicians*	1 long term consultant 1 short term consultant	4 yrs full time Approx 1 man month per year
Fertilizer Technician*	1 short term consultant	3 man month per year or 1 yr for life of project
Marketing/Price Support Technician*	1 short term consultant	18 months over life of project
Field Production/Management Technicians*	4 long term consultants (4 Agricultural Economist)	4 yrs full time
Rural Broadcasting Extension Technician*	1 short term consultant	1 yr over life of project
c. Commodities		
Vehicles (new and excess property)	\$70,000 150 jeeps 50 trucks	Over life of project
Education-Information Materials	\$ 5,000	Over life of project
Radio equipment	\$25,000	Over life of project
d. Development Loan**	To be determined	
2. U.S./Philippines		
Agricultural Loan Fund consisting of regular GOP resources and PL 480 currency.	P 350 M (P60 M)*** (P40 M) minimum	FY 74 FY 75 - 78
3. Philippines		
a. Personnel		
1. Rural banks supervisory credit technicians.	850	
2. GOP extension technicians in rice production and performance audit teams.	3,500	Full time for life of project
3. Incentive pay for participating technicians.	P40 M	
b. Commodities		
1. Education-Information Materials	P 1 M	Over life of project
2. Opportunity for Farm Management Technician to purchase motorcycle through Special Vehicle Loan Fund.	n/a	Over life of project

* Shared with corn/sorghum and livestock sub-project.

** For Grain Rice Stabilization & importing fertilizer to generate funds.

*** Includes Disaster Relief Grant. PL 480 input for ALF Fund for all sub-projects.

KINDS OF INPUTS**MAGNITUDE****DATE SCHEDULED FOR DELIVERY****c. Training**

- | | | |
|--|--------------|----------------------|
| 1. In-country training for supervised credit technicians of rural banks and rural bank managers; Philippine National Bank branches and managers. | <u>1,000</u> | FY 74 and continuing |
| 2. In-country training for rice production extension technicians. | <u>3,500</u> | FY 74 and continuing |
| 3. Management training for provincial and municipal action officers - getting performance. | <u>260</u> | FY 74 and continuing |

ASSUMPTIONS

1. Personnel and funding support will be available in a timely manner from AID/W and USAID.
2. ALF will be adequately capitalized to meet the anticipated demands of the project.
- 3.a. Central Bank and Philippine National Bank will cooperate in intensive development of the rural banking system in the priority provinces selected.
- b. Priority Province Agricultural Staffs will provide field staff for technical and administrative follow-up.
- c. GOP and PL 480 pesos available for project support.

U.S. BUDGET ESTIMATE

Rice Sub-Project (\$000's)

	<u>FY 74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>
Direct Hire	30	30	30	30	30
Contract					
Long-term	120	120	75	50	-
Short-term	10	10	5	5	5
Commodities	30	30	25	10	5
Participants	<u>--</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL	190	190	135	95	40

GOVERNMENT OF THE PHILIPPINES

FUNDING SUPPORT TO PROJECT

(in million pesos)

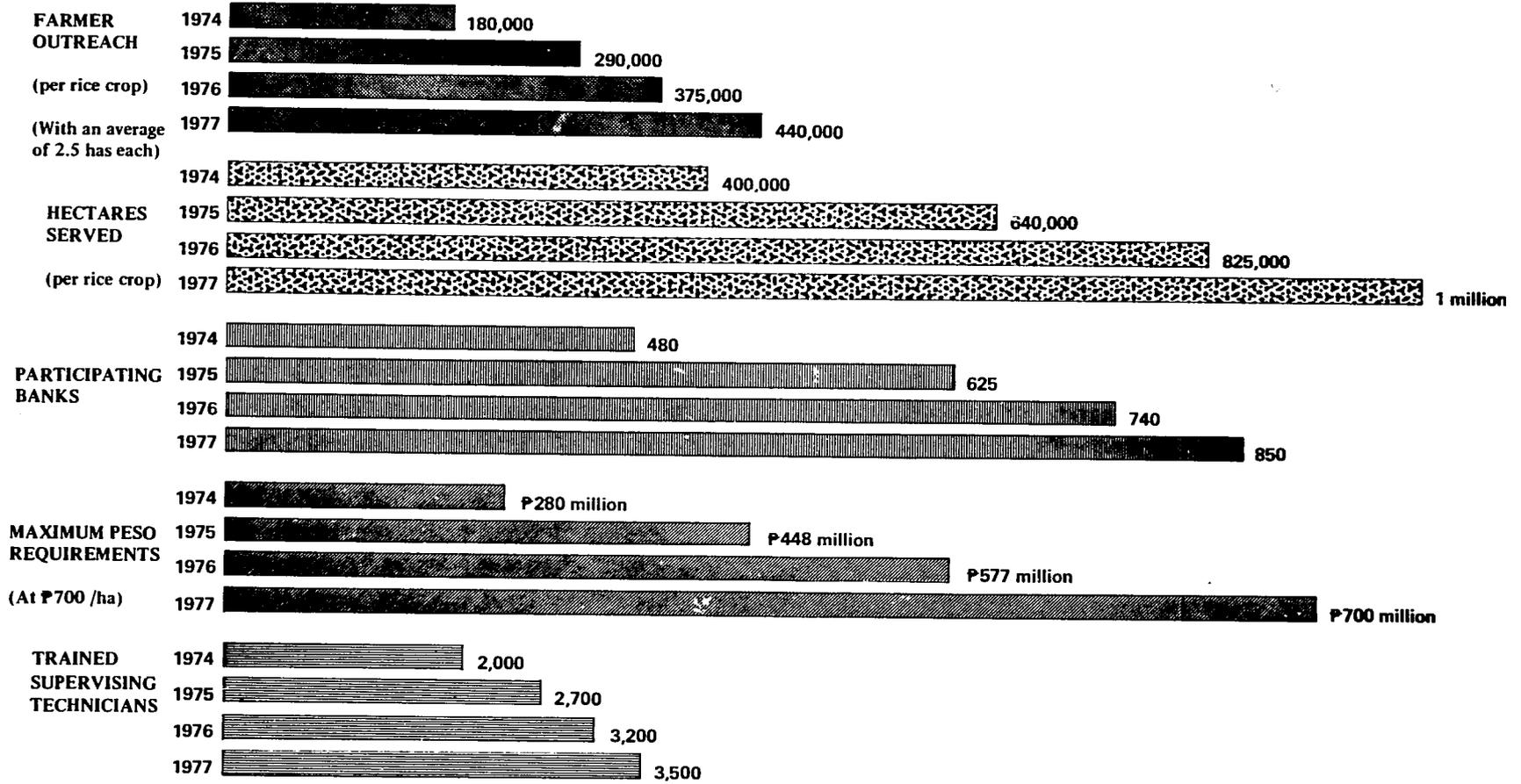
	<u>FY '74</u>	<u>FY '75</u>	<u>FY '76</u>	<u>FY '77</u>
<u>National Food and Agriculture Council (NFAC)</u>				
Support Allowances for Technical Staff including travel, incentives, gasoline	14.0			
Seed Production, Procurement, Distribution	4.7			
Applied Research and Research Analysis	1.8			
Demonstration, Farmer Education	4.0			
Disease and Pest Control	2.5			
Evaluation/Feasibility Activities	.5			
Training and Information - Technical Staff	1.5			
Manpower	.5			
Administrative Support	2.5			
NFAC Support - Local Government and Provincial Operations	3.0			
Agricultural Guarantee Loan Fund	30.0			
Special Vehicle Loan Fund	<u>3.0</u>			
	68	75	83	90
<u>Department of Agriculture and Natural Resources (DANR)</u>				
General Operational Support	36	37	38.5	40
<u>Credit Institutions</u>				
Philippine National Bank Agricultural Credit Administration Central Bank/Dept. of Rural Banks Peso requirements for credit (includes joint U.S.-GOP PL 480 and others)	<u>302</u>	<u>530</u>	<u>640</u>	<u>730</u>
TOTAL (in million pesos)	406	642	184.5	860
<u>SUPPORTIVE FUNDING</u>				
<u>National Grains Authority (NGA)</u>				
Price Stabilization Support	200	250	350	500
<u>National Irrigation Administration</u>				
Infrastructure/Maintenance Operation	253	278	270	300

**AGRICULTURAL INCOME & PRODUCTION PROJECT
PERSONNEL REQUIREMENTS SCHEDULE**

<u>STAFF</u>	FY: PROJECT	<u>1974</u>				<u>1975</u>				<u>1976</u>				<u>1977</u>				<u>1978</u>				
		QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<u>DIRECT HIRE</u>																						
1 Project Manager			x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
<u>CONTRACT</u>																						
1 Credit Technician*			x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
1 Credit Technician*			x					x					x					x				
1 Fertilizer Technician*			x					x					x					x				
1 Marketing/Price Support Technician*			x					x					xx					x				
1 Field Production Economist/Management Technician.			x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
1 Rural Broadcasting Extension Technician*			x					x					x					x				
3 Field Production Agronomists			x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
4 Livestock/Credit Technicians (2 Filipinos)			x	x	x	x		x	x	x	x		x	x	x	x						
1 Fisheries Technician			x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	

* To work project-wide (i.e. across sub-project lines)

RICE OUTPUT INDICATORS



FARMER PREPARES FARM PLAN & BUDGET WITH PT



1



2

FARMER APPLIES FOR LOAN WITH RB/PNB/ACA AND SIGNS:
 ● LOAN AGREEMENT
 ● PROMISSORY NOTE
 ● MARKETING AGREEMENT
 ● FARM PLAN & BUDGET

3



RB/PNB/ACA MANAGER ISSUES CHITS OR PURCHASE ORDERS TO PT. RB/PNB/ACA RETAINS PORTION 1 OF CHITS



4

PT RETAINS PORTION 2 OF CHITS AND ISSUES PORTION 3 TO FARMER ACCORDING TO HIS FARM PLAN WHEN FARMER NEEDS INPUTS

MASAGANA 99

LOANING PROCEDURE

5



FARMER BRINGS PORTION 3 OF CHITS TO RB/PNB/ACA FOR VALIDATION

6



FARMER GOES TO ACCREDITED DEALER. SIGNS DEALER'S INVOICE AND/OR DELIVERY RECEIPT. SURRENDERS CHIT PORTION 3 AND WITHDRAWS CORRESPONDING INPUTS

7



EVERY THURSDAY, DEALER SUMMARIZES CHITS SERVED BY HIM. SUBMITS SUMMARY AND SUPPORTING CHITS TO RB/PNB/ACA ON FRIDAY

8



RB/PNB/ACA PAYS DEALER, CHARGED AGAINST FARMER'S LOAN



P **Planters**
Products
The total agriculture company

RICE SUB-PROJECT PRODUCTION GOALS

	National Yield Data (All Areas)	FY 73 Estimates Based on Preliminary Field Data in Super- vised Credit Areas	<u>PROJECT AREA (Cavans/Ha)</u>				
			FY 74	75	76	77	78
Wet Season Irrigated	54 cavans/ha	61 cavans/ha	65	70	73	73	75
Rainfed	40 cavans/ha	55 (very limited hectarage)	50	58	62	62	65
Dry Season Irrigated	51 cavans/ha*	75	75	84	84	90	95

* Farmers have traditionally overestimated the capacity of their irrigation system to deliver water during the dry season, and have not utilized optimum inputs (fertilizer, herbicides, pesticides) which are higher for the dry season than the wet season.

COST/BENEFITS OF RICE PRODUCTION
(Tungro Resistant HYVs - Estimated 1973)

Inputs (cash)

Fertilizers	P 180 to 220	
Insecticide	75 to 125	
Herbicide (granulars)	40 to 80	
Sub-Total	P 295 to 425	(usual range 320 to 380)

Culture (labor)

Flowing, harrowing, dikes,) seedbeds, applying fertilizers,)	250
pesticides, drying, storage) Transplanting	50
Seed (own crop or cash)	40
Irrigation fees (in kind or cash)	<u>0 to 30</u>
Sub-Total	340 to 370
Harvesting and threshing (14%, in kind)	<u>300 to 400</u>
Sub-Total	P 300 to 400

Interest (max. loan P700, range 425 to 450)* 6 mos/12%	<u>25 to 42</u>
Sub-Total	P 25 to 42

TOTAL PRODUCTION COSTS .P 985 to 1,188

* Average size loans under government sponsored programs prior to 1973 were P300/ha on rice. Loans throughout FY 1973 range P425 to 450 in the improved supervisory credit programs.

Project Expected Yields Cav/Ha: Gross Income, Costs, "Labor" Income

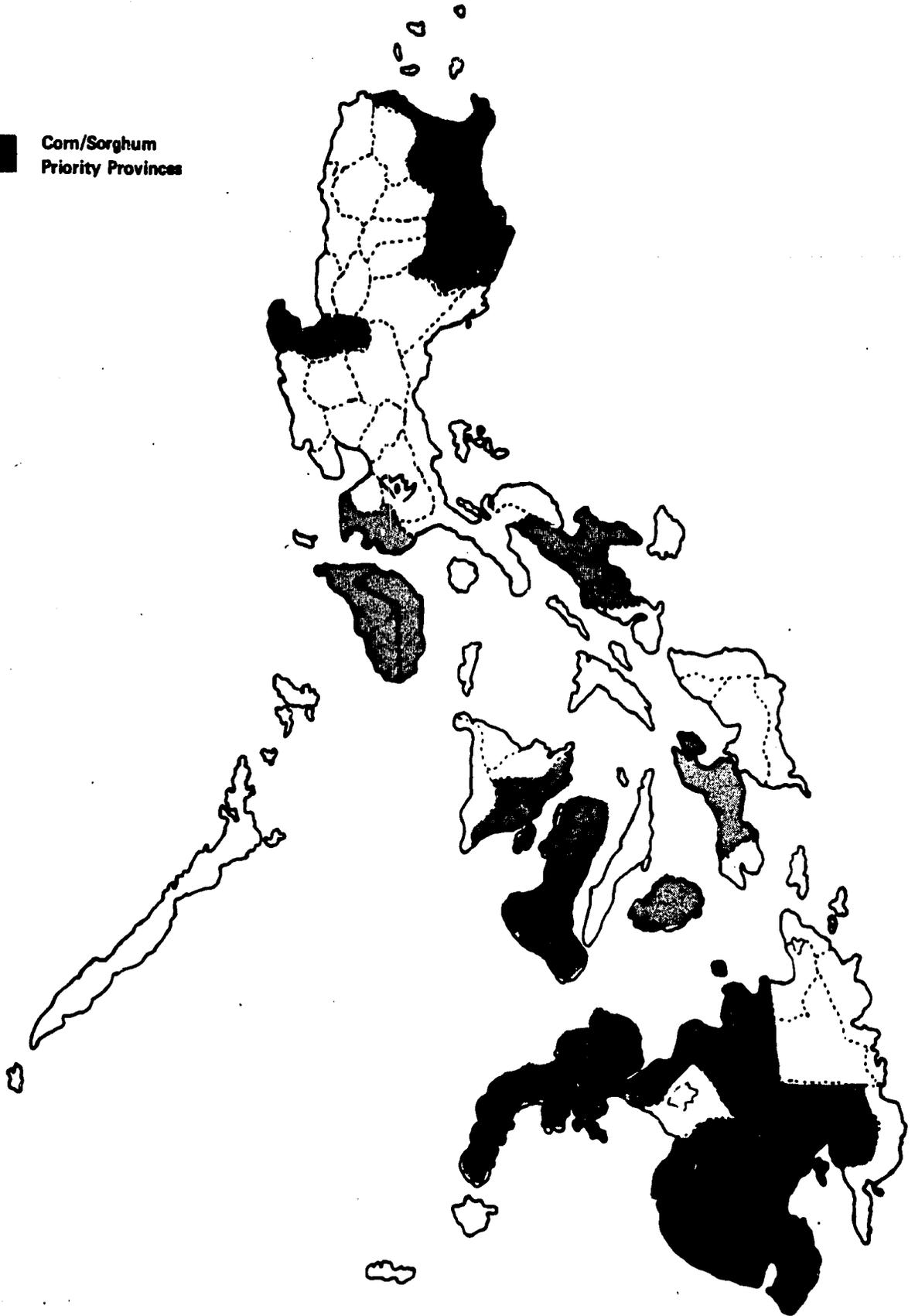
	: <u>Seeded</u>		: <u>Wet Irrig.</u>		: <u>Dry, Irrig.</u>	
	: 70 cav	: 80	: 80	: 100	: 100	: 100
Specified Price Levels	: P 25	P 30	: P 25	P 30	: P 25	P 30
Gross Income/Ha	: 1,500	1,800	: 2,000	2,400	: 2,500	3,000
Costs/Ha	: 1,000	1,000	: 1,100	1,100	: 1,200	1,200
Net Profit (Labor Income)/Ha	: P 500	800	: 900	1,300	: 1,300	1,800
Av. Ha/Farm	: 2.3		: 2.3		: 2.3	
Net Profit (Labor Income)/Farm Crop	: P 1,150	1,840	: 2,070	2,990	: 2,990	4,140
Cost/Benefit	1:1.5		1:2.5		1:3.17	

CORN / SORGHUM SUB-PROJECT

**IMPLEMENTATION PLAN
HIGHLIGHTS**

CORN/SORGHUM SUB-PROJECT PROVINCES

■ Corn/Sorghum
Priority Provinces



Primary

- a. To contribute to the development of rural areas in the Philippines, with particular emphasis on lower income groups.
- b. A simultaneous objective is the expansion of the supply of foods that would support improvement of nutritional levels of both the urban and rural population. (a related Nutrition Project is being undertaken by the GOP assisted by USAID).

Secondary

- c. The improvement of Philippine balance of payment by reducing imports and expanding exports of agricultural commodities.

- a. Base-line and periodic follow-up economic surveys of rural low income families will indicate progress towards this goal.
- b. Continuous nutrition follow-up surveys of urban and rural population by the Nutrition Division of USAID could indicate progress towards achieving this goal. (Under this project, AD can assume responsibility for meeting effective consumer demand for key foods at relatively stable prices).
- c. The National Income Accounting System will identify the expenditures and earnings of foreign exchange for agricultural commodities.

- a. Continuation of the economic and political situation in the countryside is a necessary pre-condition for rural development.
- b. Continued government support and resources for rural development

I. Purpose

- a. Increase small corn/sorghum farmer income in 25 targeted provinces.
- b. Increase corn/sorghum production in 25 targeted provinces.
- c. Demonstrate the general feasibility of increasing small corn farmer income through improved management practices with a supporting delivery system.

End of Project Status (30 June 1978)

- a. An average increase of 200 pesos (7%) per family per year for 40,000 families in 25 provinces.
- b. Augment production of corn/sorghum by 230,000 (14% of national production) metric tons, annually.

- 1.a. Provinces selected have suitable soils, rainfall level and distribution for small scale corn production.
- b. Adaptive research will continue technical developments of the package of production practices growers are offered improved returns to labor during the project period.
- c. Small scale farmers are amenable to borrowing corn/sorghum production. (production and risks are acceptable).
- d. Small scale farmers will be able to produce and sell their corn/sorghum at a profit.
- e. Adequate drying and storage facilities to insure quality and freedom from harmful molds.
- 2.a. Adequate market demand exists for the increased sorghum production.
- 3.a. System will be self-sustaining at end of project to customer demand, because both banker and farmer will find it profitable.
- 4. A small scale corn/sorghum farmer growing corn as principal product for sale, farms 2-1/2 ha. and may produce up to 2 crops per year.

II. Project Outputs

- 1. Adaptive research/field trials system established for corn/sorghum.
- 2. Selected small scale on-farm tests with farmers to verify technical and economic feasibility.
- 3. Average per hectare yields of corn/sorghum, of participating test farmers significantly increased.
- 4. Effective seed multiplication and distribution system in place.
- 5. Motivated rural banks making supervised credit loans for corn/sorghum production.
- 6. Motivated small scale farmers borrowing for and making repayment of corn/sorghum production loans.
- 7. Upgraded agricultural technicians providing higher quality servicing of small scale farmers.
- 8. Competent and experienced supervised credit counterpart project manager, and provincial program officers for corn/sorghum production.
- 9. Average per hectare yields of corn/sorghum, of participating supervised credit farmers significantly increased.
- 10. Small scale farmer economic base line study.

- 1. 200 lines of studies conducted.
- 2. 10,000 corn/sorghum kits distributed for on farm testing. Cost and returns analysis.
- 3. 45-50 cav/ha. average yield for participating test farmers.
- 4. Operational seed inspection, processing, and distribution system operating so that high quality seed available for all growers.
- 5. 250 rural banks participating in ALF corn/sorghum program by end of FY 73.
- 6.a. 40,000 loans made annually by all banks by end of FY 78.
- b. P16 million loaned by all banks by end of FY 78.
- c. 94/CS% average collection/default rate.
- 7. 725 technicians having received upgrading of technical skills.
- 8. 3 direct counterparts assigned to manage project with USAID advisors.
- 9. 40 cav/ha. average yield for participating supervised credit farmers.
- 10. 1 study report.

- 1. Price support policy in place.
- 2. Banking system responsive to government goals
- 3. Private sector provides adequate production in "fair trade" price.
- 4. Other donor support committed by agreement:
 - a. IRRI operational and responsive (or CIAT,)
 - b. ADB/WB infrastructure support (Mindanao)
 - c. UNDP Grain Storage Marketing responsive
- 5. PCAR operational and responsive.

Project Inputs

- 1. U.S.
 - a. Direct Hire
 - b. Contract Services:
 - Credit Technicians *

Magnitude	FY. 75	76	77	78
	0	0	0	0
	85	170	170	85

- 1. Personnel and funding support will be available in a timely manner from AID/W and USAID.
- 2. ALF will be adequately capitalized to meet the anticipated demands of the project.

RATIONALE

Principal Constraints

A similar delivery system is required for corn as for rice, however, the corn production system is far less developed. Practically every element of the system needs strengthening and expanding to support the production goals described here. Thus the extent of coverage and optimism expressed in the rice sub-product cannot be repeated here. A more comprehensive effort has to be launched for a much more modest target income group.

Price Stabilization Support

The crucial factor to increase corn production in the Philippines is an "on farm" assured cash support price for ear corn, that will enable the farmer to make a profit.

Extreme price fluctuations of corn and sorghum, particularly during harvest time have discouraged farmers. Even those using HYV technology have failed to capture increased income without special marketing arrangements. Stabilization of prices at a minimum profitable level will encourage use of HYV technology by reducing price risk. A system has to be developed to assure a minimum support price at the farm for good quality, on the ear, field dried corn, (adjusted for estimated moisture) with payments to be made in cash upon delivery.

Research

Continuous adaptive research is needed to further improve the recommended HYV package of practices, guiding the extension, promotion and improvement of local production of corn and sorghum. A Research Council (PCAR), supported by USAID under a companion Research Project has been recently organized to concentrate and coordinate all efforts in order to effectively utilize the limited available technical, physical and financial resources of all government agencies and agricultural institutions. Under PCAR, research work on the various aspects of production of these crops will be continued by agencies such as UPCA, BPI, Mindanao Institute of Technology and the Bureau of Soils.

Recently, strategic regional research stations for corn and sorghum were established under the UPCA Upland Crops Program. These stations are manned by technical workers and specialists and are located in the major corn producing areas.

Research is required on major problems such as: 1) varietal improvement especially breeding for good quality, resistance to pests and diseases, 2) cultural practices to optimize production and income, (herbicides, pesticides and fertilizer) 3) animal and human utilization, 4) assembly processing and storage, and 5) marketing.

Seed Supply

A chronic lack of HYV seeds has always hampered progress in feedgrains development. Ordinary (traditional) seeds need to be replaced by Downey Mildew high-yielding varieties that already exist. Further refinement can be made as better seeds are developed. Of particular significance is the recent development of "downey mildew" resistant, HYV varieties.

Many new small scale local corn seed growers need to be established in the corn growing areas, under the direction and guidance of BPI seed inspectors. Each seed grower should have 1 to 5 hectares in production for local sales only.

be supplied with initial seed stocks from BPI stations for multiplication and distribution to local farmers as "good" seeds.

This seed production program is under the seed inspector or deputy seed inspector to be assisted by the different production technicians. More seed cooperators will be encouraged to participate to ensure seed requirements to deficient areas.

To guide the BPI stations and the seed cooperators on the volume and varieties to produce, the technicians and seed inspectors will determine the targets and seed requirements prior to the production phase.

Extension

To bridge the gap between the program planning and program implementation, catalytic agents have to work. This extension activity is the most sensitive phase of the program where the receptiveness of the farmers to adopt the modern technology will be explored. There must be strong national program and subject matter leadership. Modern technology is quite complicated. Therefore, it needs to be explained carefully and demonstrated to be profitable (with assured minimum support price of ₱0.40 per Kg, at the farm, cash,) by credible and knowledgeable people if the package of technology is expected to be adopted. Extension workers, to be well equipped, must undergo regular training not only on the production phase but also on marketing. With the results from the adaptive research/field trials, intensive extension teaching effort on "profitable corn culture" can be mounted, addressing the following needs:

- a. different levels of input combinations.
- b. commercial production only on adapted deep, well drained, nearly level soils.
- c. special emphasis on "on the farm" drying of ear corn to assure good quality and avoid aflatoxin contamination.

Extension teaching materials must be prepared by the different agricultural institutions in simple and easy terms to be easily understood by the farmers.

The extension agents coordinate with the production and marketing technicians in setting demonstrations and meetings, so that their activities do not conflict, thus affecting smooth implementation of the program; all under the extension leader agronomist/economist.

An outside motivator, teamed with appropriate BAE, BPI, RB, UPCA personnel (NFAC umbrella) could serve to spark a vigorous campaign of corn production. An extension leader oriented agronomist - economist for a two year assignment via CIMMYT contract could fill this need.

Credit

As the present and proposed packages of technology call for intensive input requirements to achieve increased yields per hectare, credit is a critical item and must be planned and released on a timely basis. The credit requirements will be provided through the Agricultural Loan Fund by Rural Banks and all branches of the PNB under a supervised credit scheme, similar to the model worked out for rice financing.

Infrastructure and Marketing

An efficient market structure is required to provide incentive for increased productivity on the part of farmers. The establishment of grain driers, storage and processing facilities in strategic places is essential to bring this about, and is now being undertaken through concerted efforts with financing institutions, assisted by the UN Development Program and World Bank Loans. Corn currently being produced in the Philippines is almost universally contaminated with mold toxins which can be controlled most economically through improved drying facilities. Transportation facilities are needed, as are improved roads, to assure timely access to markets. The Asian Development Bank and World Bank are addressing selected infrastructure support projects. In addition, USAID is assisting the GOP in selected provinces under the Provincial Development project.

Farmers are being encouraged to organize themselves so that they can procure supplies at lower prices and sell their produce thru marketing agreements with feedmillers and other buyers. The government has also set favorable policies on loaning privileges to promote farmers associations.

Several special marketing programs will also be mounted thru finance-marketing schemes between the marketing cooperatives, Rural Banks and ACA. Marketing agreements with the private millers are also to be established, so that thru this, the private sector can see the potentialities of farmers cooperatives as contract suppliers.

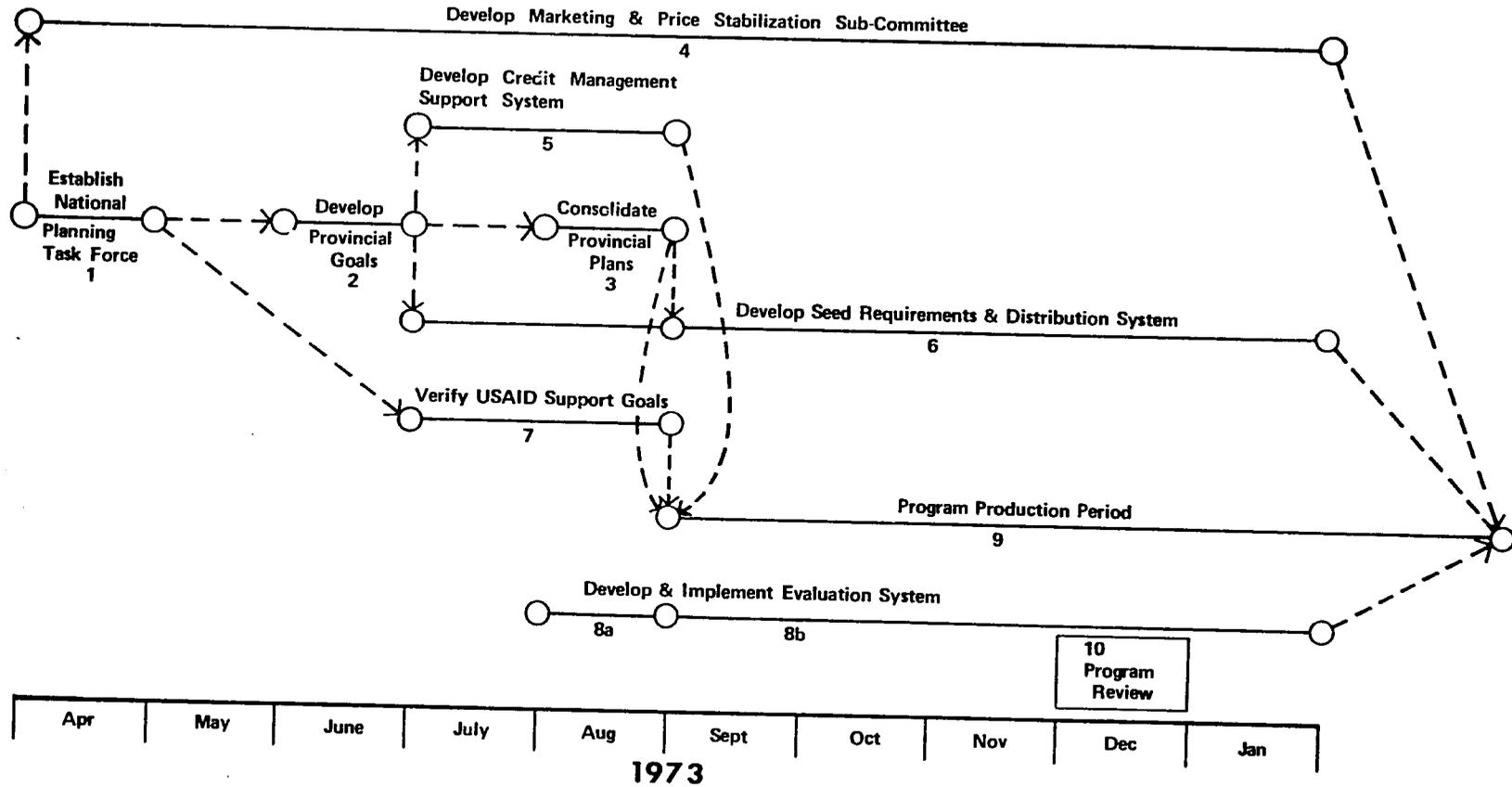
F. IMPLEMENTATION PLAN HIGHLIGHTS

- | | | |
|---|----------------------|------|
| 1. Establish planning task force at national level. Determine priority production areas | - April | 1973 |
| 2. Provincial goal statements (priority provinces) production goals including planting schedules
seed requirements
credit requirements
training needs
technical staffing and assignment
applied field trials | - June | 1973 |
| 3. Consolidate provincial plans, establish criteria for support with emphasis on supervised credit program area
Obtain approval by Secretary of Agriculture and NFAC council | - August | 1973 |
| 4. Develop marketing and price stabilization sub-committee as key part of planning task force | - April-Jan | 1973 |
| 5. Devise credit management support system and define peso requirements | - July-Aug | 1973 |
| 6. Develop seed requirements and distribution system | - July 1973-Jan 1974 | |
| 7. USAID support goals verified related to
1. Technical assistance
2. Commodities
3. Training | - July-Aug | 1973 |
| 8. Develop and implement evaluation system | - Aug-continuing | 1973 |
| 9. Program production period | - Sept-continuing | |
| 10. Primary program evaluation review including assessment of evaluative tools | - December | 1973 |
| <u>Repeat Planning Cycle</u> | | |
| 1. Develop enlarged planning task force for expansion effort | - January | 1974 |
| 2. Establish provincial goals statement for programs that commence July FY 75 including wet season, dry season and 3rd corn crop where appropriate
production goals
seed requirements
training needs
technical staffing and assignment
applied research trials | - February | 1974 |
| 3. Consolidate provincial plans establish criteria for support (private and public sector)
Obtain approval by Secretary of Agriculture and NFAC council | - March | 1974 |

- | | | |
|---|--------------------------|------|
| 4. Hold Program Seminar 4 days for provincial program officers, support system personnel and research committee. Evaluation of program to date and submitting approved implementing guidelines. | - April | 1974 |
| 5. Establish and implement training programs for technical personnel | - Jan-July | 1974 |
| 6. Assess marketing and price stabilization systems by sub-committee and make appropriate recommendations to project management | - March-April | 1974 |
| 7. Develop credit management system and define peso requirements for FY 75 crops | - April -May | 1974 |
| 8. Develop seed requirements and distribution system | - Feb 1974-Feb 1975 | |
| 9. USAID support goals verified related to
1. Technical assistance
2. Commodities
3. Training | - March-April | 1974 |
| 10. Establish framework project evaluation system for FY 75 program | - April | |
| 11. Implement project evaluation system for FY 75 program | - July 1974 to June 1975 | |

Repeat all procedures for FY 76 and FY 77 on a replanned basis.

IMPLEMENTATION PLAN HIGHLIGHTS CORN/SORGHUM



NARRATIVE

G. NARRATIVE - CORN

Price Support Stabilization and Marketing

Based on experiences to date, two key issues are an economically sound price support program that motivates farmers to produce more, and a viable marketing system. These two are not in place and are hampering development.

The short term price stabilization consultant provided NGA by USAID under the rice sub-project can also assist the Filipino staff develop plans for a corn program.

Research

USAID will provide the services of a contract specialist from CIMMET to assist in guiding supplemented applied and adaptive research and farm trials on a national scale, cooperatively as follows:

new selections	:	BPI
fertility, esp. soil tests	:	BS
spacing, timing, herbicides	:	BPI with UPCA
farm trial pkgs.	:	

Applied Field Trial

HYV corn "kits" will also be developed with USAID assistance for initial expansion of the "on farm trials". USAID will supply support funds. Staff and equipment can be contracted from UPCA. A 100 sq. meter corn kit produces 20 kg. corn seed which is enough for planting 1+ha. Recommended fertilizer, insecticide and herbicide will be placed in the kit to introduce to thousands of corn growers the "super corn technology". A follow up study of the kit is needed to determine farmer results and investigate the economics of these varieties. This will provide information with which to: 1) determine the profitability and input requirements of these varieties and 2) to predict probable rates of adoption, and 3) predict the impact on aggregate supply.

Strategy

The basic strategy is to carefully evaluate the ongoing feedgrain production effort over the 1st year of the project, devise a more intensive small farmer campaign considering all elements of the corn production system during the 2nd year, pilot test in several municipalities in the 3rd year and then expand on the 4th and 5th years to cover - major corn producing provinces. Emphasis will be placed in developing accompanying services and facilities such as rural banks, farmers' cooperatives, milling, processing, warehousing and other institutions as required.

White corn is generally concentrated within the Visayas and Mindanao regions primarily to supply the requirements for human consumption and a growing starch industry located in the area. The program covers four provinces in the Visayas and 12 Mindanao provinces. Yellow corn/sorghum areas are more widely distributed. Prime areas for concentration are Bicol, Cagayan Valley, Central Luzon, Southern Tagalog and Western Visayas.

This corn/sorghum feedgrain production is designed to supply the basic requirements for feeds of the animal and poultry industry. Sorghum will be planted in Mindanao where momentum has already been gained in establishing a marketing system.

APPENDICES

A. THE PROJECT PURPOSE1. Statement of the Purpose

The purpose of this project is to:

1. Increase small corn/sorghum farmer income in 25 targeted provinces.
2. Increase corn/sorghum production in 25 targeted provinces.
3. Demonstrate the general feasibility of increasing small corn farmer income through improved management practices with a supporting delivery system.

2. Conditions at the End of the Project (30 Jun 78)

1. An average increase of 200 pesos (7%) per family per year for 40,000 families in 25 provinces.
2. Augment production of corn/sorghum by 230,000 (14% of national production) metric tons, annually.

3. Basic Assumptions

1. a. Provinces selected have suitable soils, rainfall level and distribution for small scale corn/sorghum production.
b. Adaptive research will continue technical refinements of the package of production practices so that growers are offered improved returns to land/labor during the project period.
c. Small scale farmers are amenable to borrowing for corn/sorghum production. (production and price risks are acceptable).
d. Small scale farmers will be able to produce and sell their corn/sorghum at a profit.
e. Adequate drying and storage facilities to insure quality and freedom from harmful molds.
2. Adequate market demand exists for the increased corn/sorghum production.
3. a. System will be self-sustaining at end of project due to customer demand, because both banker and borrower will find it profitable.*
4. A small scale corn/sorghum farmer growing corn as his principal product for sale, farms 2-1/2 ha. of land and may produce up to 2 crops per year.

* See Appendix _____

B. PROJECT OUTPUTS

<u>OUTPUTS</u>	<u>INDICATORS</u>	<u>TARGETS</u>
1. Adaptive research/field trials system established for corn/sorghum.	1. Lines of studies conducted.	200
2. Selected small scale on-farm tests with farmers to verify technical and economic feasibility.	2. Corn/sorghum kits distributed for on farm testing. Cost and returns analysis	10,000
3. Average per hectare yields of corn/sorghum, of participating test farmers significantly increased.	3. Average yield for participating test farmers.	45-50 cav/ha.
4. Effective seed multiplication and distribution system in place.	4. Operational seed inspection, processing, and distribution system	HYV seed available for all growers.
5. Motivated rural banks making supervised credit loans for corn/sorghum production.	5. The number of rural banks participating in ALF corn/sorghum program by end of FY '78.	250
6. Motivated small scale farmers borrowing for and making repayment of corn/sorghum production loans.	6. a. Number of loans made annually by all banks by end of FY '78.	
	b. Amount loaned by all banks by end of FY '78.	
	c. Average collection/default rate.	94/06%
7. Upgraded agricultural technicians providing higher quality servicing of small scale farmers.	7. Number of technicians having received upgrading of technical skills.	725
8. Competent and experienced supervised credit counterpart project manager, and provincial program officers for corn/sorghum production.	8. Direct counterparts assigned to manage project with USAID advisors.	3
9. Average per hectare yields of corn/sorghum, of participating supervised credit farmers significantly increased.	9. Average yield for participating supervised credit farmers.	40 cav/ha.
10. Small scale farmer economic base line study.	10. Study report.	

ASSUMPTIONS

1. Price Support policy in place.
2. Banking system responsive to government goals.
3. Private sector provides adequate production inputs at "fair trade" price.
4. Other donor support committed by agreement:
 - a. IRRI operational and responsive (or CIAT, CIMMYT)
 - b. ADB/WB infrastructure support (Mindanao)
 - c. UNDP Grain Storage Marketing responsive
5. PCAR operational and responsive.

G. PROJECT INPUTS

<u>KINDS OF INPUTS</u>	<u>MAGNITUDE</u>	<u>DATE SCHEDULED FOR DELIVERY</u>
1. U.S.		
a. Direct Hire*		
b. Contract Services:		
Credit Technicians)	See Rice Sub-Project	
Fertiliser Technician)		
Marketing/rice)		
Support Technician)		
Field Production/)		
Management Technician)		
	3	FY 74 and continuing for live of project
c. Commodities:		
Excess Property Vehicles	\$120,000	Over life or project
Education-Information Materials	\$ 80,000	
Demonstration Equipment	\$ 75,000	
d. Training:		
CIMMYT and/or Thai Corn Project		
2. <u>U.S./Philippines</u>		
Agricultural Loan Fund)	See Rice Sub-Project	
consisting of GOP resources and)		
PL 480)		
Participating Training - study development Thai corn industry - 4 weeks.	To be determined	
3. <u>Philippines</u>		
a. Personnel		
1. Rural Banks and PNB supervisory credit technicians	250	
2. GOP extension technicians in corn production	75 to 725	
b. Commodities		
Education-Information Materials	\$1.2 M	
Demonstration Equipment		
c. Training		
1. In-country training for supervised credit technicians or rural banks and rural bank managers.	250	FY 74
2. In-country training for corn production extension technicians.	75 increasing to 725 over life of project	FY 74

* One direct hire for overall production and income project.

ASSUMPTIONS

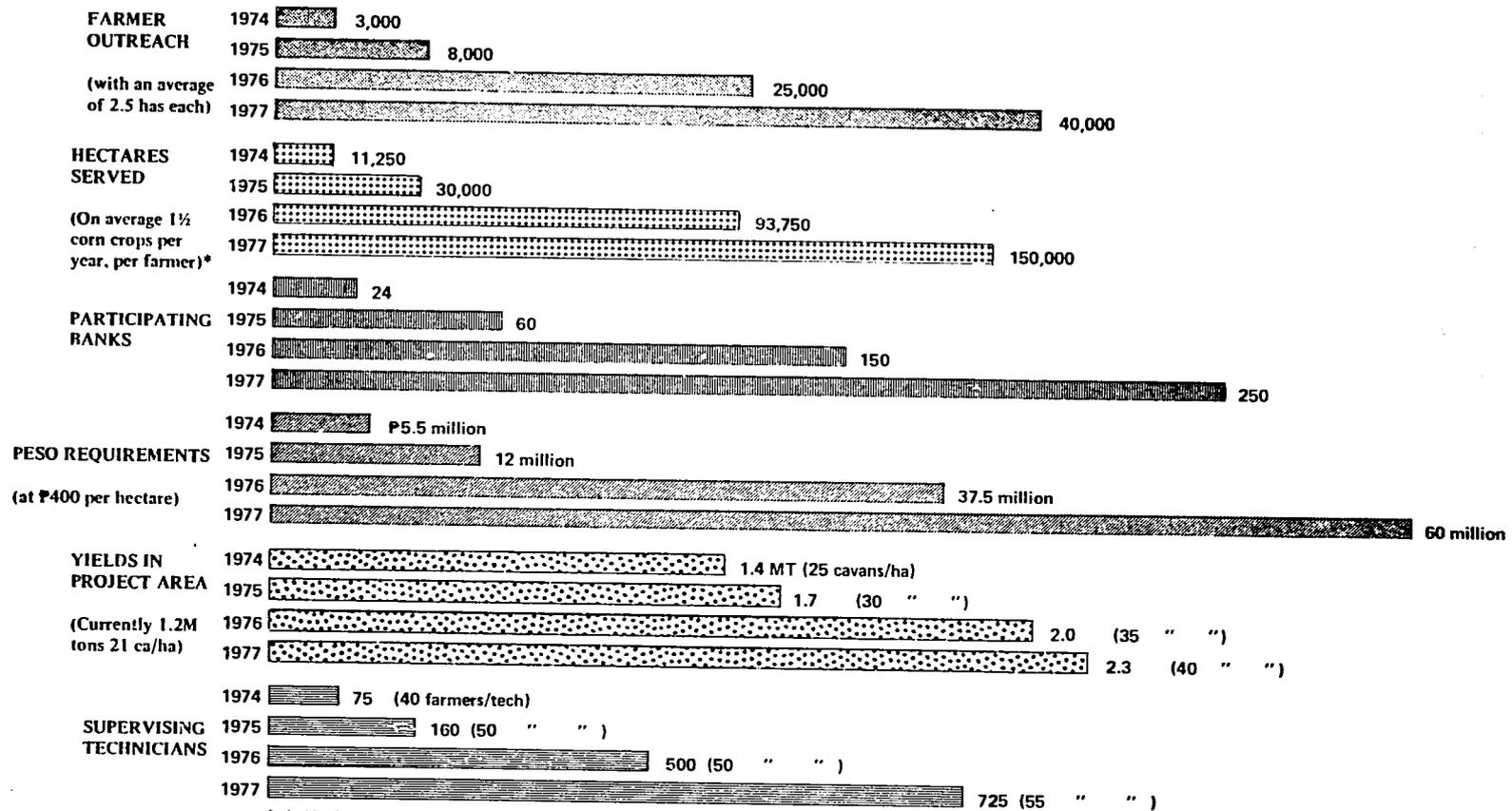
1. Personnel and funding support will be available in a timely manner from AID/W and USAID.
2. ALF will be adequately capitalized to meet the anticipated demands of the project.
3.
 - a. Central Bank will cooperate in intensive development of the rural banking system in the priority provinces selected.
 - b. Priority Province Agricultural Staffs will provide field staff for technical and administrative follow up.
 - c. PL 480 resources available for project support.

U.S. BUDGET ESTIMATE

Corn Sub-Project (\$000's)

	<u>FY 74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>
Contract					
Long-term	70	150	150	150	75
Short-term	15	20	20	10	10
Commodities	20	80	80	65	30
Participants	<u>45</u>	<u>60</u>	<u>60</u>	<u>50</u>	<u>30</u>
TOTAL	150	310	310	275	145

CORN /SORGHUM OUTPUT INDICATORS



* In Mindanao, generally 2 crops of corn, or more are grown annually
 In Visayas and Luzon, generally 1 crop of corn grown, plus 1 cash crop such as tobacco, or mung beans

NATIONAL PRODUCTION ESTIMATES
CORN (SORGHUM)

	<u>Now</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Total Production Hectares	2.40 million	2.43	2.45	2.48	2.50
Total Production Cavans (57 kilos/cavan)	34.0 million	35.1	36.8	39.7	43.8
Metric Tons (17.5 cavans/MT)	1.92 million	2.06	2.10	2.27	2.50
Average Yield Cavan/Hectare	14.2	14.5	15.0	16.0	17.5
Project Participation	-	0.8%	2.4%	7.8%	13.7%

This project plus the productivity obtained outside the programmed area at end of project will augment approximately 230,000 MT annually to national production.

COST/BENEFITS OF CORN PRODUCTION
(HYVs, downey mildew resistant) 1973

Input Costs (cash)

Fertilizer (60+30+01)	P	180
Insecticide		50
Herbicide (band application over row)		50
Seed 1/4 cavan		10
Sub-Total	P	300±

Land Preparation and Culture (labor)

Plowing, harrowing, planting,)		
cultivation (middle of row))	P	200±
spraying, supplying fertilizer, herbicide)		
harvesting, husking, drying)		
Interest (P400/6 mos/12%)	P	24
*Sub-Total	P	24

PER HA TOTAL PRODUCTION P 500±

*Less than 300 corn supervised production loans made to end of 1972.

Present Estimated Corn Yields and Costs (Current Practices)

	HYV @ 28 cav/ha		Ord. @ 14 cav/ha	
	@ P20 cav	@ P25	@ P20	@ P25
Gross Income	P 560	700	P 280	P 350
Estimated Costs	300	300	200	200
Net Profit (Labor Income)/Ha	260	400	80	150
Net Profit (Labor Income) 2.5 Ha/Crop	600	1,000	200	475
Net Profit (Labor Income) 1-1/2 Crops	750	1,500	300	712
Cost/Benefit	1:1.87	1:2.34	1:1.40	1:1.75

Project Expect Corn Yields (HYV, DMRs)/Ha = 40 cavans

Farm Price	P 20/cavan	P 25/cavan
Gross Income	800	1,000
Costs	500	500
Net Profit (Labor Income)	P 300	P 500
Cost/Benefit	1:1.60	1:2.00
Net Profit (Labor Income) Av Corn Farm = 2.5 ha/season	750	1,000
Net Profit (Labor Income) Av Corn Farm per year 1-1/2 crops	P1,125	P 1,500

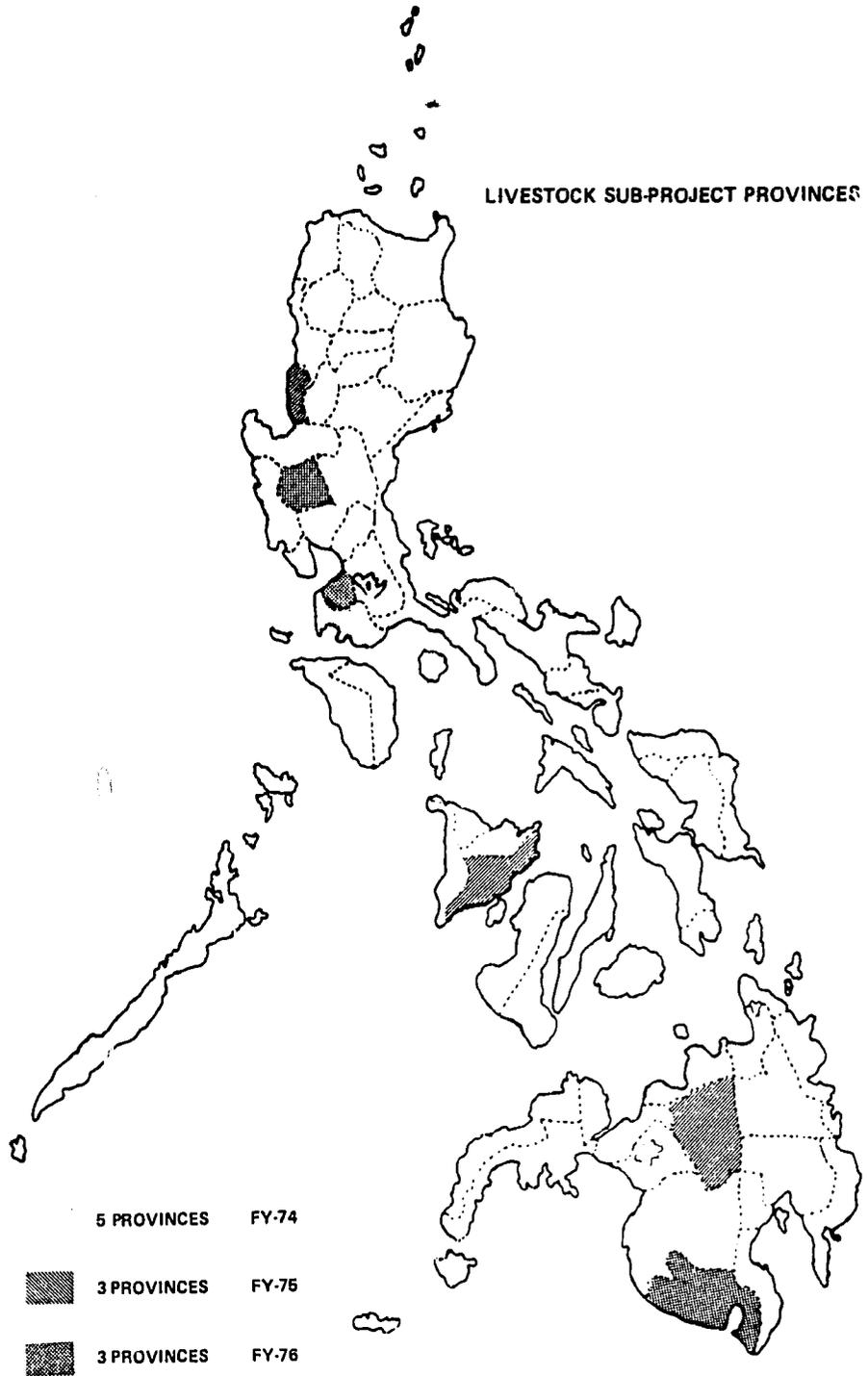
**LIVESTOCK
SUB-PROJECT**

AGRICULTURAL INCOME & PRODUCTION PROJECT PROPOSAL
(C. Livestock Credit Sub-project)

NARRATIVE SUMMARY

A	OBJECTIVELY VERIFIABLE INDICATORS	B	C
NARRATIVE SUMMARY	MEASUREMENT OF GOAL ACHIEVEMENT	ASSUMPTIONS	ASSUMPTIONS
I. Goal			
The Goal Statement:			
<u>Primary</u>			
a. To contribute to the development of rural areas in the Philippines, with particular emphasis on lower income groups.	a. Base-line and periodic follow-up economic surveys of rural low income families will indicate progress towards this goal.	a. Continuation of the economic and political stability in the countryside is a necessary pre-condition for rural development.	
b. A simultaneous objective is the expansion of the supply of foods that would support improvement of nutritional levels of both the urban and rural population. (a related Nutrition Project is being undertaken by the GOP assisted by USAID).	b. Continuous nutrition follow-up surveys of urban and rural population by the Nutrition Division of USAID could indicate progress towards achieving this goal. (Under this project, AD can assume responsibility for meeting effective consumer demand for key foods at relatively stable prices.)	b. Continued government support and resource allocation for rural development.	
<u>Secondary</u>			
c. The Improvement of Philippine balance of payment by reducing imports and expanding exports of agricultural commodities.	c. The National Income Accounting System will identify the expenditures and earnings of foreign exchange for agricultural commodities.		
<hr/>			
II. Purpose			
The purpose of this project is threefold. It is to:	<u>End of Project Status</u> (1 Jul 76)		
a. Increase small scale farmer income in selected provinces.	a. An average increase of 150 pesos per family per year for 20 thousand families in 23 provinces from backyard sales.	a. Provinces selected are suitable for small scale poultry and livestock production.	
b. Increase production of poultry and livestock (swine and/or beef) in those provinces.	b. Augment production by 13,000 MT of poultry meat, 55,000 MT pork and 5,000 MT of beef annually.	b. Small farmers are amenable to borrowing for poultry and livestock production.	
c. Demonstrate the general feasibility of increasing small scale farmer income through backyard livestock production.	c. The number of new Agricultural Loan Fund (ALF) livestock provinces increased to 23, and the total amount of ALF loans in existing ALF livestock provinces increased to 30 M pesos.	c. Small farmers will be able to sell their poultry and livestock at a profit.	
		d. An adequate effective consumer demand exists for the increased poultry and livestock production.	
		e. The system will be self-sustaining at the end of the project, because both banker and borrower will find it profitable.	
		f. Improved practices and breeds exist which can increase output and are profitable to the farmer.	
<hr/>			
III. Project Outputs			
1. Motivated rural banks making non-collateral loans for livestock production.	1. 150 rural banks participating in the livestock program by the end of FY 76.	1. Rural banks can be convinced of the logical of making non-collateral loans for livestock on a timely basis.	
2. Motivated small farmers borrowing for and making repayment of livestock production loans.	2. a. 20,000 loans made annually by all banks by end of FY 76. b. P30M loans made by all banks by end of FY 76. c. 92/08 - average collection/default rate.	2. Small farmers can be convinced that borrowing for livestock purpose is profitable.	
3. Upgraded agricultural technicians providing higher quality servicing of small farmers.	3. a. 150 supervisory agricultural technicians having received upgrading of technical skills. b. 150 per year farmer information meetings held specifically for the livestock program. c. 6,700 per year farmers attending meetings.	3. Borrowing for small scale livestock production is potentially profitable.	
4. Competent and experienced supervised credit Philippine counterpart project managers in CR/BAL.	4. 2 Direct counterparts assigned to work with USAID advisor.	4. Marketing systems can adequately handle the increased livestock production.	
5. Extension teaching materials for use of technicians and guidance of producers.		5. Adequate amounts of feedgrain will be available at the time, place and price which will not preclude farmers from engaging in swine and poultry production.	
<hr/>			
IV. Project Inputs			
1. U.S.			
a. Direct Hire	Magnitude	FY 74	FY 75
b. Contract Services:	0		
Livestock/credit specialists		30	30
c. Commodities:	4		
Excess Property Vehicles		14	16
Education-Information Materials	4		
d. Training:			
Third-country (Taiwan) short term orientation visit.		9	9
(1) Rural Bank Managers	14		
(2) Central Bank Tech.	6		
2. US/Philippines			
a. Agricultural Loan Fund consisting of GOP regular resources and PL 480 local currency.	See Rice Sub-Project		
		TOTAL	53
			55
			55

LIVESTOCK SUB-PROJECT PROVINCES



1. FY-74 emphasizing backyard beef cattle fattening thrust. Other types of livestock will not be discouraged, however, these provinces lend themselves to ruminant livestock production with minimum dependence on pre-mixed, high cost, concentrates.

2. FY-75 new areas which need to be encouraged. Some beef cattle breeding stock farms are in these areas. Iloilo is a swine production province and shows great potential for rapid expansion of small farmer loans for backyard projects.

3. FY-76 South Cotabato has high potential for livestock production. By 76 a meat processing plant may be in operation at General Santos. This would greatly stimulate small farmer coop's for meat prod. - (Pork & Beef). Cavite and Tarlac are seen as additional areas for beef production in certain portions of each province.

By 76 this should be spreading to other provinces not listed here. At this time AID should have final evaluation of project and then step out of an on-going successful project.

RATIONALE

LIVESTOCK SUB-PROJECT

E. RATIONALE

In reviewing the livestock situation in the Philippines, and analysing USAID's potential involvement, the following factors emerge:

1. National Priority - Increasing domestic livestock production, of cattle, swine and poultry, is one of the top three national agricultural production priorities of the Philippines, closely following rice and feedgrains.
2. Demand - The present domestic production of livestock in the Philippines is not expanding as rapidly as effective demand for meat products, and the gap is being partly filled by imports.* Meat production for 1973 is projected at 485,000 M Tons - about the same as last year. Imports are about 8,300 M tons. Increased domestic production could reduce the foreign exchange expenditures in this area, which currently amount to \$5.5M a year. The demand is very elastic.** As meat production increases, and/or retail costs to the consumer fall, the effective demand will increase considerably. No potential problem of overproduction is anticipated for the immediate future, nor is there a "selling requirement" to "educate" the consuming public to a new taste, as production volume increases.
3. Technology - The technology of small scale animal raising in the Philippines is well known by the agricultural extension technicians and generally understood by the farmers. No new research findings are required in order to implement the project. The finer points of animal husbandry can be readily communicated to the small farmer, and his technological livestock services provided through a well managed supervised credit program. The risk is extremely low compared to field crop production. Pre-service and in-service training in the general principles of supervised credit and specific responsibilities under this project, supported with intensive in-service training for technicians and appropriate informational materials, is necessary however to reaffirm the extension worker's role as a service-oriented field agent.
4. Advantages - The livestock supervised credit concept has no geographic limits in the Philippines. Practically every province, municipality and barrio has favorable conditions for growing some form of livestock, and can benefit thereby. Likewise almost every farmer has the general knowhow to raise a few chickens, some pigs or a cow for either added income, and/or house use to reduce family peso expenditures. Backyard animal raising by small farm holders is feasible as it does not require extensive hectarage or conversion of present cropped lands. Currently unused feed materials around the farm (such as grass, rice straw and other vegetative fodder) can be utilized by ruminants (cattle, carabao, goats) for roughage, in addition to household scraps to supplement readily available commercially prepared feed concentrates. Furthermore, livestock production can be carried on independent of time and weather conditions, - the primary risk element of the principal field crops, such as rice. The care and feeding of animals will also absorb currently under-

* IBRD Agricultural Sector Survey, Philippines, Dec. 72, Annex 4 Livestock.

** Meat Consumption Patterns. UPCA Dept of Agric. Econ. Nov' 71.

employed family labor. More important however is that by integrating livestock production into his present cropping practices, the small farmer can diversify away from rice, markedly reducing his total risk exposure to weather. Livestock raising will provide an additional off-season source of income and/or income substitute, alleviating the farmer's total dependence on seasonal field crop harvests.

5. USAID Objectives - This sub-project complements other agricultural projects by affording targeted small farmers the opportunity for additional avenues of income. It provides leadership stimulation, focus and direction to the Government of the Philippines for an existing credit program -- the Agricultural Loan Fund. The mission has previously devoted much effort, committed its support, and already invested money in establishing this credit program. Apart from the emphasis is channelling the available funds to accelerating rice production however, the Fund has been underutilized. Without this renewed impetus, the original objective of establishing a viable diversified agricultural credit system for small farmers through the private sector (the rural banking system) - will not be met.
6. Principal Constraints - Conceptually, the Agricultural Loan Fund (ALF) is a sound program. The need for small farmer credit exists, and the essential institutional elements of the system (capital, rural banking structure, and field extension workers) are generally in place, and/or capable of being expanded without too much difficulty. Thus, policy formulation and institutional conceptualization does not present any significant obstacle at this stage.

The difficulties are more operational. The details of the ALF policies pertaining to livestock are not generally understood and are not yet functioning in many localities.

Despite the availability of funds, small scale livestock growth and development has been constrained by the lack of a functional system, reducing to a trickle financing actually reaching the small farmer. The utilization of available monies by the private rural banking sector has simply been inadequate and ineffective in addressing the need.

Credit, and particularly the practice of private banks to make unsecured agricultural production loans to small farmers for profit, is still in its infancy in the Philippines. Because of an overwhelming national need, and the combined drive of various Philippine Government agencies and USAID, many private bankers have been led to "test the water" in financing rice production in the past. The system has been constantly refined over the years, and tremendous strides have been made in the past few months. This is now starting to take effect.

Some lending has taken place for small livestock development, but most rural bankers are still hesitant to venture into this new area of lending without some substantial assurance that it will be profitable. Since the present rate of diversification and expansion is too slow to make much impact upon the agricultural scene, an intensified program is required to make the system "go".

The job of helping the small farmer to diversify into other farm enterprises, as originally intended, can best be done through the ALF with a new educational emphasis upon livestock -- the next priority crop ready for expansion.

7. Relationship to Other Donors

The International Bank for Reconstruction and Development (IBRD) has granted two livestock loans to the Philippines. The one being processed by the Development Bank of the Philippines (DBP) is for US\$7.5 million, but with counterpart requirements some US\$15 million is available for loaning. This is a supervised production loan aimed primarily at medium scale commercial farmers with the required collateral and equity. While it was designed for medium scale loans, loans up to US\$50,000 can be made without referral to World Bank/Washington. This loan is limited to specified provinces which are large livestock producers.

A second IBRD Loan Program with the Central Bank of the Philippines of \$17.5 million, is also heavily collaterally oriented and also designed to service semi-commercial and commercial farmers to meet their livestock capital development needs, such as pen construction, animal housing, breeding animals, equipment, etc. It is not available for production loans however.

The US Peace Corps has approximately 35 volunteers attached to the Philippine Bureau of Animal Industry (BAI), working in various provinces throughout the country to supplement the livestock extension service to small farmers. Their immediate social impact is great. As a force for national change however, they are limited. Usually their efforts and influence is confined to one or two towns. They are immobile, work only within the system, have no funds or commodities to implement innovations, and have no role in policy formulation.

The Japanese Volunteer Services have several technicians in the Philippines working with backyard piggeries and poultry. Again the scope of influence is narrow and they also lack mobility. The difficulty most often experienced is lack of English on the part of the volunteer and a resultant lack of communication.

No other foreign assistance is available for small farmer producers.

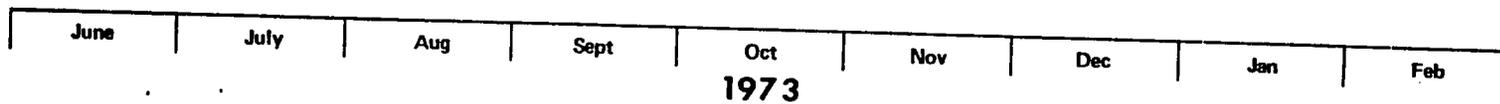
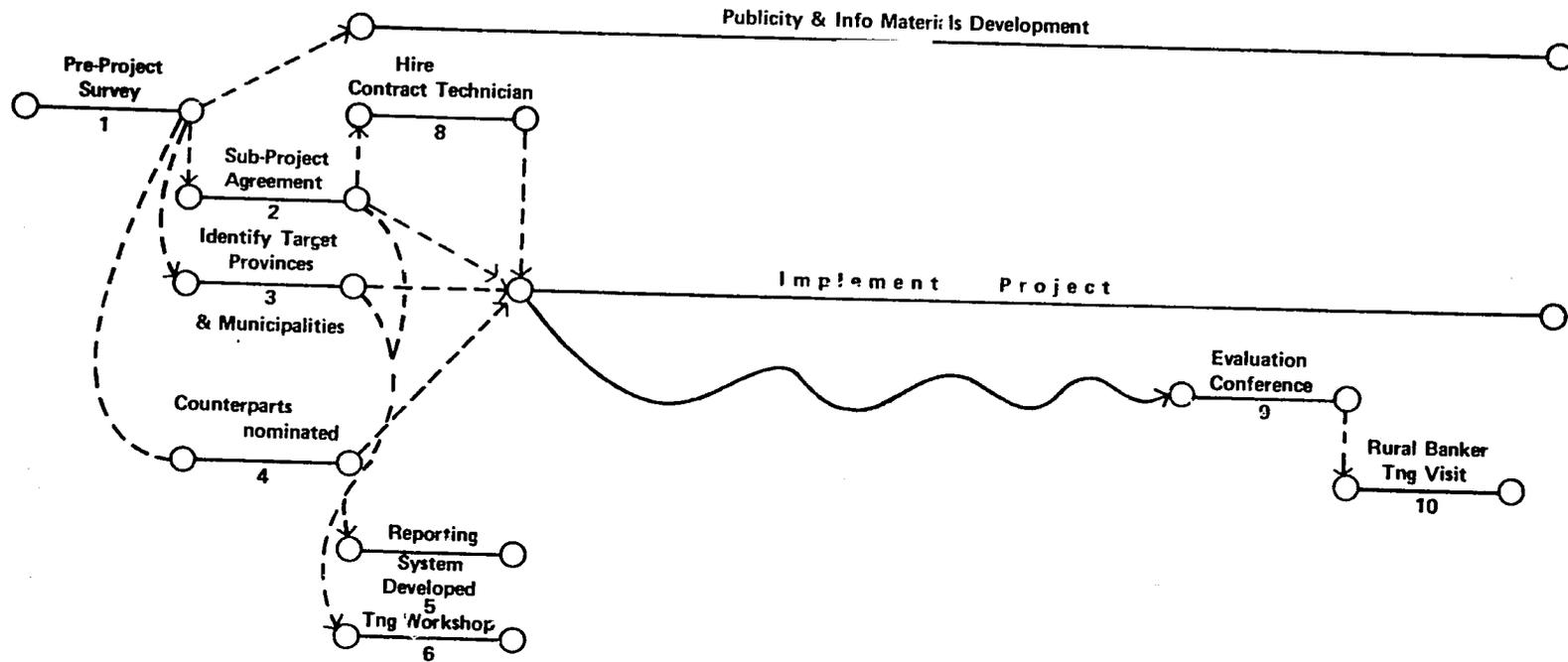
**IMPLEMENTATION PLAN
HIGHLIGHTS**

F. IMPLEMENTATION PLAN HIGHLIGHTS

	<u>Timing</u>
1. Pre-Project Survey conducted of Rural Banks and farmer acceptance in potential participating provinces.	Jan. '73
2. Sub-project agreement prepared with the Department of Agriculture, Bureau of Animal Industry, National Food and Agriculture Council, Central Bank Department of Rural Banks, and participating provinces, on the project objectives, and requirements during the life of the project.	July '73
3. Target provinces and municipalities identified.	July '73
4. Philippine counterpart selected -- project manager and provincial liaison personnel.	July '73
5. Project monitoring and operational evaluation feedback reporting system developed.	Aug. '73
6. In-country training workshop for provincial liaison personnel, Rural Bank supervised credit technicians.	Aug. '73
7. Publicity and education/information materials developed and continuing throughout life of project.	Aug. '73
8. AID contract technicians hired for field operational involvement, - interaction with rural bankers and provincial liaison personnel of the Bureau of Animal Industry.	Aug. '73
9. Interim Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative.	Jan. '74
10. Visit to Taiwan of Rural Banking System for selected rural bank managers and provincial liaison personnel.	Feb. '74
<u>Repeat Planning Process</u>	
1. Interim Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative.	July '74
2. In-country workshop for provincial liaison personnel.	Aug. '74
3. Interim Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative.	Jan. '75
4. 2nd observation visit to Taiwan of Rural Banking Systems for selected rural bank managers and provincial liaison personnel.	Feb. '75
5. Interim Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative.	July '75

16. In-country workshop for provincial liaison personnel. Aug. '75
17. Interim Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative. Jan. '76
18. 3rd observation visit to Taiwan of Rural Banking System for selected rural bank managers and provincial liaison personnel. Feb. '76
19. Final Evaluation of Progress Conference with provincial liaison personnel and Central Bank provincial representative. July '76

IMPLEMENTATION PLAN HIGHLIGHTS LIVESTOCK



NARRATIVE

G. NARRATIVE

In order to develop and mount an effective supervised credit program for livestock with active field implementation; coordination is necessary with the agricultural technical staffs of the central and provincial governments, the Central Bank and the private rural banking system. This effort would be similar in nature (but not in size) to that mounted for rice production. With strong government backing and support, a program of technical loan supervision should demonstrate that small scale non-collateral lending for livestock production is profitable to both the banker and the small farmer. Active participation by the USAID will also, provide reassurance to the rural bankers that this project is of sufficient import for the Philippine government to seriously commit adequate resources to it.

USAID is planning to enlist the assistance of certain of the Peace Corps volunteers to promote the utilization of the ALF credit program in their areas.

A local contractor will be hired to devise an easy-to-administer, operating system for non-collateral livestock loans.

We also want a contractor to evaluate performance (as in rice) and to train NFAC teams to assume the responsibility.

The total livestock ALF Program in the Philippines is now operating in 17 provinces. The largest inputs in terms of money and participating rural banks are concentrated in the provinces around Manila.

USAID efforts will be targeted in 11 provinces where participation is at a low level or where new provinces are being brought into the program. These provinces are indicated on the map showing the time table of activity.

USAID's total involvement will be 43% of the national livestock ALF projected program over the three year period. We will be assisting the Central Bank and NFAC personnel on the overall program, but concentrating our energies on the targeted areas.

Our efforts will bring at least 6 new provinces under livestock supervised credit programs for backyard farmers. This will increase the out reach of the program by 26% and have an impact on thousands of small farm families.

This represents our minimum goals. Hopefully, a larger number of provinces and rural banks will be encouraged to join in the program.

APPENDICES

APPENDIX

LIVESTOCK SUB-PROJECT

A. THE PROJECT PURPOSES

1. Statement of the Purpose

The purpose of this project is threefold. It is to

- a. increase small scale farmer income in selected provinces.
- b. increase production of poultry and livestock (swine and/or beef) in those provinces.
- c. Demonstrate the general feasibility of increasing small scale farmer income through backyard livestock production.

2. Conditions at the End of the Project (1 Jul 76)

- a. An average increase of 150 pesos per family per year for 20 thousand families in 23 provinces from backyard sales.
- b. Augment production by 13,000 MT of poultry meat, 55,000 MT pork and 5,000 MT of beef annually.
- c. The number of Agricultural Loan Fund (ALF) livestock provinces increased to 23, and the total amount of ALF loans in existing ALF livestock provinces increased to 30 M pesos.

3. Basic Assumptions

- a. Provinces selected are suitable for small scale poultry and livestock production.
- b. Small farmers are amenable to borrowing for poultry and livestock production.
- c. Small farmers will be able to sell their poultry and livestock at a profit.
- d. An adequate effective consumer demand exists for the increased poultry and livestock production.
- e. The system will be self-sustaining at the end of the project, because both banker and borrower will find it profitable.*
- f. Improved practices and breeds exist which can increase output and are profitable to the farmer.

* See Appendix ___

B. PROJECT OUTPUTS

<u>OUTPUTS</u>	<u>INDICATORS</u>	<u>NATIONAL TARGETS</u>
1. Motivated rural banks making non-collateral loans for livestock production.	a. The number of rural banks participating in the livestock program by the end of FY 76.	<u>150</u>
2. Motivated small farmers borrowing for and making repayment of livestock production loans.	a. Number of loans made annually by all banks by end of FY 76.	<u>20,000</u>
	b. Amount of loans made by all banks by end of FY 76.	<u>P 30 M</u>
	c. Average collection/default rate.	<u>92/03</u>
3. Upgraded agricultural technicians providing higher quality servicing of small farmers.	a. Number of supervisory agricultural technicians having received upgrading of technical skills.	<u>150</u>
	b. Number of farmer information meetings held specifically for the livestock program.	<u>150 per year</u>
	c. Number of farmers attending meetings.	<u>6,700 per year</u>
4. Competent and experienced supervised credit Philippine counterpart project managers in CE+BAI.	a. Direct counterparts assigned to work with USAID advisor.	<u>2</u>
5. Extension teaching materials for use of technicians and guidance of producers.		

OUTPUT ASSUMPTIONS

1. Rural banks can be convinced of the logic of making non-collateral loans for livestock on a timely basis.
2. Small farmers can be convinced that borrowing for livestock purposes is profitable.
3. Borrowing for small scale livestock production is potentially profitable.
4. Marketing systems can adequately handle the increased livestock production.
5. Adequate amounts of feedgrain will be available at the time, place and price which will not preclude farmers from engaging in swine and poultry production.

C. PROJECT INDEES

KINDS OF INDEES	MAGNITUDE	DATE ESTIMATED FOR DISBURSE
1. U.S.		
a. Direct Hire	0*	n/a
b. Contract Services: Livestock/credit specialists	4	At start of project Jul 73.
c. Commodities: Excess Property Vehicles	4	At start of project.
Education-Information Materials		
d. Training Third-country (Taiwan) short term orientation visit.	14 rural bank managers and 6 central bank tech.	FY 74 and FY 75
2. US/Philippines		
a. Agricultural Loan Fund consisting of GOP regular revenue resources and PL 480 local currency.		At start of project.
3. Philippines		
a. Personnel	<u>For Targeted Area Only</u>	
1. Rural Bank supervisory credit technicians**	22	
2. Central Bank technicians	11	
3. Bureau of Animal Industry technicians**	22	
b. Commodities		
Education-Information		P50,000
Materials		
Incentive Allowance		-
c. Training		
1. In-country training for supervised credit technicians of rural banks and rural bank managers.	2 per year	
2. Small farmer information meetings	2 per municipality	

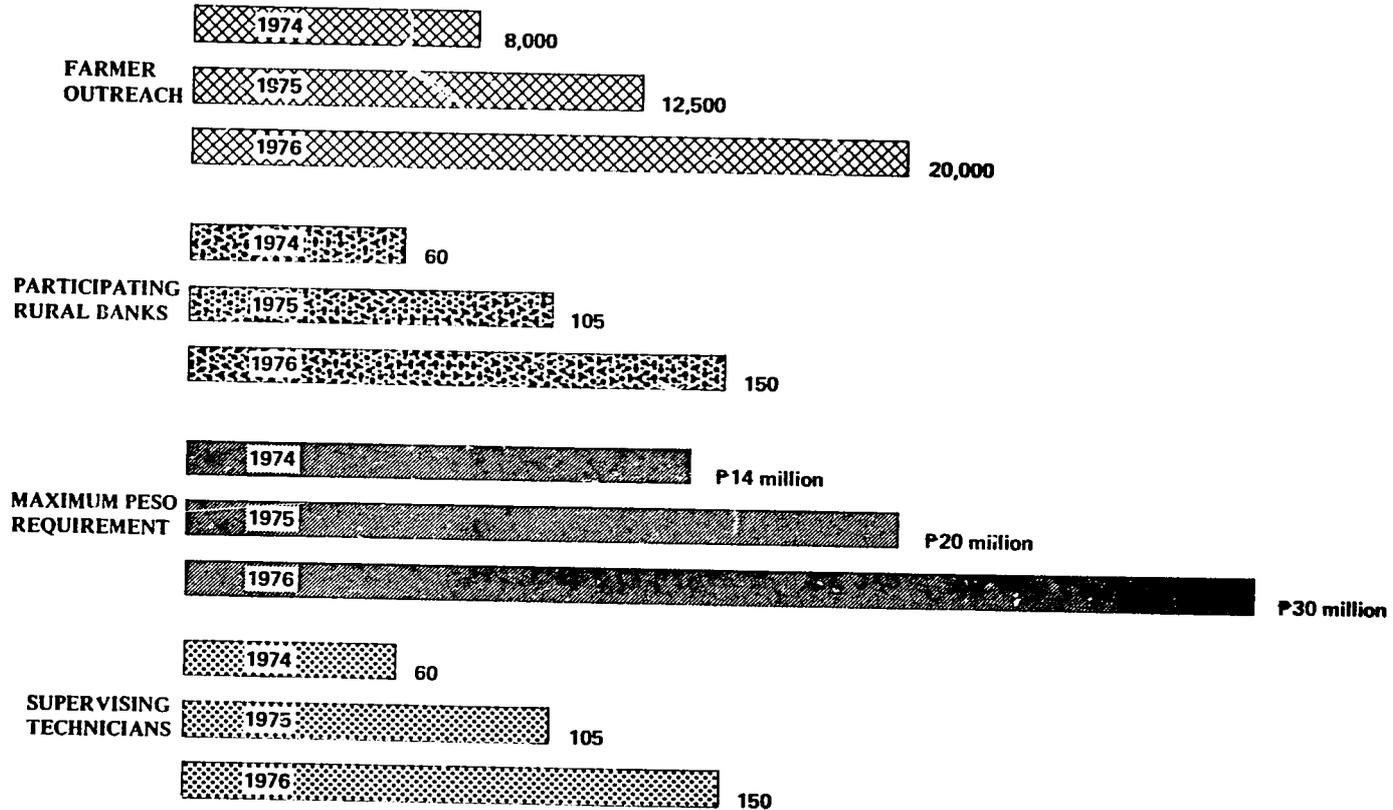
INPUT ASSUMPTIONS

1. Personnel and funding support will be available in a timely manner from AID/W and USAID.
 2. ALF will be adequately capitalized to meet the anticipated demands of the project.
 - 3.a. Central Bank will cooperate in intensive development of the rural banking system in the priority province selected.
 - b. Priority Province Agricultural Staffs will provide field staff for technical and administrative follow up.
- * One direct hire project manager funded under technical support. Part time to be spent on this project.
- ** One technician per 50 farmers in selected priority provinces.

U.S. BUDGET FUNDING
Livestock Sub-Project (\$000's)

	<u>FY 74</u>	<u>75</u>	<u>76</u>
Contract			
Long-term	30(4)	30(4)	30(4)
Short-term	-	-	-
Commodities	14	16	16
Participants	9	9	9
	<u> </u>	<u> </u>	<u> </u>
TOTAL	53	55	55

LIVESTOCK OUTPUT INDICATORS



COST/BENEFITS OF LIVESTOCK PRODUCTION

The economics of a backyard cattle, swine and poultry fattening project are illustrated below. Cost data were obtained from the Bureau of Animal Industry's Weekly Market News Service.

	<u>Per Animal</u>		<u>Per Unit</u> (3 Animals)	
	Pesos	Pesos	Pesos	Pesos
<u>CATTLE</u> (Seven month cycle)				
1. Loan from Rural Bank		700		2100
2. <u>Costs</u>				
a. 222 kilo animal procured @ 2.70 pesos per kilo. Raised for seven months in backyard, rough grazing.	690		1800	
b. Labor	0		0	
c. Feed	0		0	
d. Drugs, Vet., etc.	15		45	
e. Miscellaneous	43		129	
f. Loan Interest	42		126	
Total Cost:		700		2100
3. 422 kilo animal sold @ 2.70 pesos per kilo.		1139		3418
4. Net Profit		439		1318
5. Annual Profit		752		2256
6. Cost/Benefit 1:1.63				
<u>SWINE</u> (Five month cycle)				
1. Loan from Rural Bank		335		1675
2. <u>Costs:</u>				
a. 15 kilo weanling procured @ 120 pesos per head. Raised for five months in backyard.	120		600	
b. Labor	0		0	
c. Feed	180		900	
d. Drugs, Vet., etc.	10		50	
e. Miscellaneous	5		25	
f. Loan Interest	20		100	
Total Cost:		335		1675
3. 80 kilo animal sold @ 4.60 per kilo.	368		1840	
4. Net Profit		33		165
5. Annual Profit		79		395
6. Cost/Benefit 1:1.10				
<u>POULTRY</u> (Two month cycle)				
1. Loan from Rural Bank				405
2. <u>Costs</u>				
a. Chick procured @ 1.35 pesos each. Raised for two months in backyard.	1.35		135	
b. Labor	0		0	
c. Feed	2.30		230	
d. Drugs	.20		20	
e. Miscellaneous	.12		12	
f. Loan Interest	.08		8	
Total Cost:		4.05		405
3. Sold @ 5.62 pesos per bird *(anticipate 15% death, disease/cull loss)		5.62		*
4. Net Profit				478
5. Annual Profit				73
6. Cost/Benefit 1:1.18				432

MONTHS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Animal	(1)	:	:	:	:	:	:	:	:	:	:	:
Feed	:	:	:	:	:	:	:	:	:	:	:	:
Drugs and Vaccines	:	:	:	:	:	:	:	:	:	:	:	:
Costs	:	:	:	:	:	:	:	:	:	:	:	:
Animal	600.00	:	:	:	:	:	:	:	:	:	:	:
Drugs	15.00	:	:	:	:	:	:	:	:	:	:	:
Total Costs ₱	615.00	:	:	:	:	:	:	:	:	:	:	:
							Animal sold					

Example: 300 kg. Steer - Per 0.6 kg/day grain requires 8.01 Megacalories net energy/day - 17 kgs of 21% D.M. A/F - Brome Soilage alone will satisfy energy requirement

- NOTES: 1. It is a general practice for the loans to only include the purchase price of the cattle financed. Vaccines & drugs on request. Feed in form of concentrates, not financed in the loan.
2. Gains of 0.6 kg. to 0.7 kg. per day can be accomplished on roughage of medium to good quality alone.
3. Rate of gain will depend on quality of feeder animals, concentrate roughage ratio, palatability of feed, age of animals, management practices, rate of gain desired by the feeder.

Prices in Batangas area as of 9/72:
 Feeder animals approx 1 yr old at about 250 kg. l.w - price ₱600-700, sell about ₱400-450 kg. l.w. at ₱1,000+

ASSUMPTIONS

Fattening Period Average (7 mo.)
 210 days range - 180-240 days.

1 to 3 animals per borrower.

Purchase: Price per animal will vary depending on demand and supply.

SWINE FATTENING PROJECT

Months:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Animal Purchase		(1)										
Feed Needs Kilos		39	39	81	90	25						
Feed Needs in Bags (Prac)		1	1	2	3	-						
Vet & Drugs												
Misc												
<u>Costs:</u>												
Animal (1)		120.00										
Feed		29.75	25.40	25.40 23.50	70.50							
Vet & Drugs		10.00										
Misc			5.00									
Releases by Months		159.75	30.40	48.90	70.50							
Total Cost - P299.55												

Assumptions made for calculations
(4-1/4 months to finish wt)

Feed Prices	Weanlings Price
Starter - P29.75	P120.00/Hd
Grower - 25.40	
Finisher - 23.50	Buy - 15 Kg/L.W. Sell- 30 Kg/L.W.

Weight Range	Air Dry Feed Consumption	Est Gain/Day
15-35 Kg	1.3 Kg/day	0.33 Kg/day
35-60 Kg	2.7 Kg/day	0.62 Kg/day
60-100 Kg	3.3 Kg/day	0.74 Kg/day

Approx Weight beginning of month	
Mo. 2 - 15 Kg	5 - 55 Kg
3 - 25 Kg	6 - 75 Kg
4 - 35 Kg	6 1/2 - 80 Kg

This does not take into account cutting mixed feeds with kono. If this is done fattening time will be extended and rates of gain per day lowered.

No costs included for management or labor. Assumed to be a family project.

BROILER PROJECT

WEEKS	(100 BIRDS)												
	Month (1)						Month (2)						
	0	1	2	3	4	5	6	7	8	9	10	11	12
Inputs													
Chicks (100)	100												
Feed (kilos)	40		45		50		65	70					
Feed in bags	(1)	(1)		(1)	(1)		(2)	(1)					
Drugs as needed													
Costs													
Chicks	135.00												
Feed	34.00	34.00		34.00	34.00		68.00	34.00					
Drugs/vaccines	20.00												
Misc.			15.00										
Total Cost	189.00	34.00	15.00	34.00	34.00		68.00	34.00					

Money releases
 1st mo.-272.00
 2nd mo.-136.00
Total: 408.00

ASSUMPTIONS

NOTE: Loan should be a 10 week period to allow for possibly a slightly slower growth rate for backyard operators.

	Feed Required Per l.w.	
	l.w/kgs.	(feed kg.)
2 wks.	0.25	0.40
4 "	0.50	0.85
6 "	3.75	1.35
7 "	1.00	2.00
8 "	1.25	2.70

Chicks = ₱1.35 each
 Broiler mash - ₱34.00/40 kg. bag.
 Drugs & vaccines - ₱0.20/bird
 Feed conversion - 2.2 to 1

No labor or management charges made.

**FISH & RURAL PRODUCTION
DIVERSIFICATION**

FISH

Man is still basically a hunter of fish rather than a cultivator.

Fish is the principal source of protein in the Philippine diet, and effective consumer demand is increasing at a rate of 4.7% per year. Pond fish culture offers attractive technical means for meeting the increasing demand at a relatively steady price to consumers because harvest dates can be set independent of conditions which affect the ocean catch; the controlled production system offers the opportunity to introduce improved production husbandry practices and through research continued improvements can be expected in production technology. Present production costs in pond culture are at such levels that export appears economically feasible when technical aspects of processing, transport, and storage are improved so that a quality product is delivered to the consumer.

An estimated 370,000 hectares of undeveloped land suitable for fishpond development exists in the Philippines offering untapped potential for expansion of pond fish production.

The Government of the Philippines, therefore, places high priority upon rapid expansion of pond fish culture and plans to use an estate development strategy so large numbers of small fish farmers may benefit. Preliminary studies indicate that 3 to 5 hectare pond operations under intensive culture with efficiently engineered layout may provide higher income than comparable grain crop farms.

USAID is currently supporting the development of pond fish production technology through the Inland Fisheries Project under which brackish and fresh water fish research stations are being established. Per hectare yield increases, per kilogram reduction of production costs, and reduction of production risks are the research objectives. With the assistance of two Auburn University technicians provided under an AID contract, some economically attractive improvements are already being recommended to fishpond operators and there is great optimism that even more significant developments may be forthcoming in the next two years that could, for example, reduce the cost of bangus production by 50%. The Philippine Government is supporting the successful establishment of these research centers and is now taking steps to effectively link these centers with the responsible extension agency, the Bureau of Fisheries.

The U.S. Peace Corps now has 20 volunteers working in pond fish culture with the objectives of assisting the Bureau of Fisheries strengthen its extension work with fish pond operators.

The Philippine Government has just completed successful IBRD negotiations for a fish sector loan. Some \$4 million of the \$12 million loan is earmarked for expansion of fish pond estates. Intensive planning is underway now to complete project organization, operational procedures and selection of production technology to be used. Existing feasibility studies are being reviewed and updated to reverify the marketing arrangements and overall cost benefit ratios. By December 1973 this IBRD financed program should be ready for "start-up" operations expecting that from 5,000 to 7,000 hectares of ponds serving 1,400 to 2,300 families could be developed under the present IBRD loan when supplemented with other local funds to provide the required infrastructure, extension and marketing assistance.

GOP and USAID are exploring possibilities for including small scale operator pond fish culture as an integral element of this production and income project. Several months may be required to complete the design but basic elements have been identified. Trained extension workers supported with tested, high yielding production technology from the research stations; pond engineering and construction to gain economies and efficiency in operation; timely credit responsive to small pond operator needs under supervision to remove requirements for land collateral; fry and other inputs such as chemical fertilizer available in the needed quality, quantity and time; marketing linkages to reduce price risk, facilitate loan collection and offer the grower a suitable production incentive; and transport capable of delivering a quality product to either a processor or retail outlets.

USAID will provide one contract fish pond development technician to work with this element of the production and income program and this technician will be required for four years, commencing about July 1, 1974. In cooperation with TAB/Washington, a special 3-day workshop is planned during July-August 1973 to bring international consultants together with Philippine specialists to review all elements of the proposed fish estate production system. This offers an opportunity to improve quality of the project design and planning. Short term orientation training will be provided 6 key officials responsible for program operations. When the plans reach an advanced stage, further need for USAID assistance may be identified. Expenditures for fish production will commence in FY '75 and continue through the next three years.

RURAL PRODUCTION DIVERSIFICATION

As the rice and corn production campaigns begin to achieve their increased income and production goals, the need for the small farmer and the Government to consider the development of diversified production opportunities to include small-scale rural industries assumes greater importance. The creation of small-scale, viable agricultural and agribusiness enterprises on a significant scale has obvious potential for increasing employment opportunities in rural areas and helping to alleviate very high rates of rural unemployment and underemployment. The Government has indicated strong interest in this area, and in the course of Fiscal Year 1974 the Mission and the GOP will be building on the rural industry study recently completed by an AID consultant to develop and formulate specific project proposals. Modest grant resources will be utilized for short-term participant travel (\$10,000 - \$15,000) to third countries which have had relevant experience and developed expertise in the area of small-scale rural industry and for short-term consultant services (\$30,000) to assist in government project development efforts.

U.S. BUDGET ESTIMATE

Fish Sub-Project (\$000's)

	<u>FY 74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>
Contract	40	75	75	100	100
Commodities	-	30	20	20	20
Participants	-	8	30	30	30
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	40	113	125	150	150

Rural Production Diversification

	<u>FY 74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>
Contract					
Long-term					
Short-term	30				
Commodities	-				
Participants	15				
	<hr/>				
TOTAL	45				

To be developed as separate project