

PN-004-401  
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SATELLITE FARMING SUPPORT PROGRAM

A FEASIBILITY STUDY

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February 1986

# SATELLITE FARMING SUPPORT PROGRAM

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## EXECUTIVE SUMMARY

### PRIVATE SECTOR SATELLITE FARMING SUPPORT PROGRAM

#### A FEASIBILITY STUDY

#### INTRODUCTION AND BACKGROUND:

##### 1. The Problem to be Addressed:

In the context of agriculture development, efficiency in the transfer and application of improved technology is a precondition to productivity. Dr. Clifford Wharton, for many years Chairman of the U.S. Government's Joint Committee on Agricultural Development of the Board for International Food and Agricultural Development (BIFAD), made the following statement which provides a sense of the problem:

"....If there is one area where we have been most unsuccessful, it has been the development of cost-effective and program efficient models for the delivery of new scientific and technical knowledge to the millions upon millions of small farm producers of the Third World. We know how to harness the creative and inventive forces of science and technology in the war on hunger, but I submit that we still have not been fully successful in technology diffusion... I believe that attention in this area is one of the Agency for International Development's most critical items on their future agenda..." (BIFAD Inaugural, 1983)

Mr. Peter McPherson, Administrator of AID, points to the need for private sector involvement to address the issues:

"... formal extension systems can be very expensive in terms of recurrent salary costs and their demand on scarce administrative talent. Other approaches need to be pursued. These can include radio and private enterprise suppliers--- approaches that have been effectively employed in some areas of Asia and Latin America..." (Horizons, 1983)

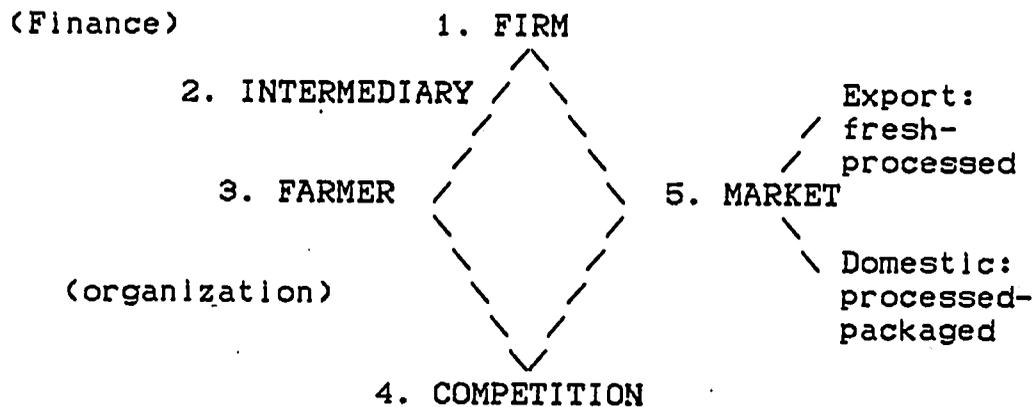
2. The search for mechanisms and strategies for strengthening information and technology transfer processes utilizing the private sector, is now a matter of priority for AID. It is recognized, however, that there are few tools, tested and documented approaches or models to structure technology transfer programs utilizing the private sector. In the last few years there has been interest in satellite farming as one approach to involve the private sector in the transfer of technology to small farmers for increased farm productivity and rural income. However, there is limited documented information on the strengths and limitations of the system or a framework to structure support programs. Thus, the reason for this study.

The following exhibit outlines the basic logic and structure of satellite farming:

LOGIC AND STRUCTURE OF  
SATELLITE FARMING

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(Government Policy)



1. FIRM/ENTREPRENEUR:
  - Established market linkage essential;
  - Management organization, extension service and extensive controls needed at farm level;
  - Equity and working capital requirements high;
  - Intensive management-controls required;
  - Some R&D/farm level technology adaptation necessary.
2. INTERMEDIARY: (Farmer Association/Coop/Contractor)
  - Essential service to interface with firm/farmer;
  - Capacity to organize/manage farmer associations/coops;
  - Financing required for some or all production inputs;
  - Trader operations possible alternative source of supply, however, presently fragmented and unreliable;
3. FARMER:
  - Essential inputs: family labor, 1/4-1/3 Ha irrigated and accessible farm land;
  - Interface through farmer association or cooperative;
  - Interest in guaranteed price but risk averse; 2-3 yrs. of demonstration before technology integrated.
4. COMPETITION:
  - High entry costs; success of new entrants dependent on linkage to markets; access to financing difficult;
5. MARKET:
  - Demand derived/influenced by economy and government policy, e.g. export incentives, credit;
  - Market segmented based on products and market network;
  - Export market competition intense in Asia;
  - Large potential Japanese, U.S. and Australian market;
  - Reliability and quality of supply critical for both export and domestic markets;

3. The study involved a review of operating experience of several firms involved in satellite farming. Two models were selected to describe the mechanics and advantages of the system. Generally, the system has proven to be effective in providing the limiting elements and necessary ingredients for improved farm productivity including:

- technology and production inputs not readily available to the small farmer;
- critical functions of marketing of products for both domestic and export markets.

The consequences for the major participants are:

a. For the farmer, income rewards for farming on a small scale as a result of application of improved technology including crop diversification and controlled management of inputs. The study indicates that with application of improved technology under satellite farming systems, production during one high value cropping season can increase annual income by at least 200 percent.

b. For the firm and cooperating intermediary, with an established market, proper planning, organization and management, the operations can realize very satisfactory returns on investment. Net returns to the firms are in the range of 20-40 percent on sales, and margins to the cooperating intermediary/contractor are about 15 percent.

4. The initial focus of the study was on defining the structure and mechanisms of satellite farming operations as a means for improved extension service/technology transfer. However, it quickly became evident that there are basic structural, institutional and farm level constraints to expansion of the system that need to be addressed including:

- lack of access to financial resources;
- weak and/or uncoordinated support from government sector including research and extension services and market information;
- weak farmer organizations to work with;

In addition, a serious limitation to the system in the Philippines is the economic instability which further complicates the perennial problem of access to credit and the related issue of foreign exchange risk for hard currency loans. The instability also affects domestic market demand for the relatively higher priced, commercially processed and packaged food products.

#### 6. SUMMARY ANALYSIS AND STRATEGY:

Access to finance, market linkage and supportive farmer organization are key factors of satellite farming. At this time, the opportunities for expansion of satellite farming systems are primarily in the area of exports given competitive advantages of the Philippines in proximity to the Japanese and Australian markets and price advantages

because of low wages in the agriculture sector. There are good models and experience for organizing export oriented satellite farming operations. The Northern Foods Corporation approach to farmer organization and technology transfer provides an excellent model for replication.

The issues at this time primarily center on financing and institutional support. These issues plus competition, high entry costs and need for experience and marketing networks limit new entrants. The importance of market linkage and access to finance supports a phased implementation strategy: one which first focuses on expansion of existing operations which have the experience and marketing linkages, and a parallel development activity which works with dynamic new entrepreneurs involving innovative and inherently more risky equity and venture capital financing and institutional support mechanisms.

Developing an incentive package to induce commercial financial institutions (e.g., Universal Banks) to actively participate in satellite farming promotion is key to the proposal. The assumption is that with adequate profit incentives they will be motivated to actively promote the expansion of satellite farming agro-projects including assisting in project identification and promotion, market analysis and working with project sponsors in project planning and financing.

## VII

The centerpiece of the proposed program is a focused comprehensive financing program providing: lines of credit for working capital; medium-to long-term credit; guarantee fund in support of institutional equity and venture capital financing; and rediscount facilities (under existing World Bank and USAID assisted Agriculture Loan Fund), all supported by focused technical assistance resources. As proposed, the program would be executed by selected finance institutions and an Advisory Board with membership composed of selected financial institutions, Philippine Chamber of Commerce, and Central Bank officials responsible for the complementary Agriculture Loan Fund (ALF).

The private sector-led expansion of satellite farming would result in increased private sector rural investment, geographic dispersion of agro-projects and increased rural productivity, accelerated technology transfer, and foreign exchange revenues from expanded exports.

It is proposed that the Satellite Farming Support Program be financed under the planned 1986 USAID assisted Accelerated Agriculture Production (AAP) Program. The proposed program will complement the existing ALF.

5. A summary framework for the proposed focused Satellite Farming Support Program is given below.

<u>PROGRAM GOAL:</u>	<u>STRATEGY:</u>	<u>KEY ASSUMPTIONS:</u>
Increase rural productivity and strengthen rural economy.	Private sector led mgt. and mkt'g plus pub. sector support of high value crop production under satellite farming operations.	Favorable export mkt. Small farmer quality production;  Pvt. sector and fin. inst's participation and investment in the rural areas;
<u>PROGRAM OBJECTIVE:</u>		
Strengthen rural institutional mechanisms to channel improved tech., technology assist. and fin. resources.	Improved policy dialogue between pub/pvt sector; access to credit; financing tech. assist and train.	Public/private sector cooperation in prog. development;  Improved political/economic stability.
<u>PROGRAM COMPONENTS:</u>	<u>INPUTS:</u>	<u>PURPOSE:</u>
<u>Institutional Level</u>		
a. Satellite Farming Finance Facility	Loan, Guar., Rediscount Facility and Tech. Assist.	Inst. credit program for satellite farming will encourage com'l finance institutions participation in agri lending for long term
b. Export Promotion	Policy Studies, Tech. Assist.	Market information and export support policy will expand the export base and supply demand for high value crops
c. Tech. Transfer, Research, Extension Information	Case Studies, Workshops, Information, Education and	Increased information flow and diversified approaches to extension of improved technology will help improve rural productivity and income
<u>Farm Level</u>		
d. Farmer organization improv.	Tech. Assist., Training, Mgt. Assistance	Improved organization/management capacities will facilitate the expansion of improved tech. tran. processes, prod. planning and quality control

## PART I

## THE "INDUSTRY"

## CHAPTER I: ANALYSIS OF THE INDUSTRY

A. OBJECTIVES AND SCOPE OF THE STUDY

The objective of PART I is to provide (1) an overview of satellite farming as an "industry" and (2) describe the mechanisms and application of satellite farming systems including a discussion on organization, operations and patterns of interaction between the firm, the farmer and contractor/intermediaries. The interest is in analyzing the system from the standpoint of: impact on the application and integration of technology; limiting elements to commercial cash crop production; impact on the rural economy; and ingredients necessary for expansion of the system in the Philippines.

The premise was that satellite farming systems offer an important advantage in that the system can efficiently provide the limiting elements and necessary ingredients for improved farm productivity. Most importantly:

- technology and production inputs not readily available to the small farmer;
- critical functions of processing and marketing of products for both domestic and export markets.

An important longer term potential to be explored would be whether the system could act as a catalyst for strengthening financial and other support systems for agribusiness generally. This would be of interest to development planners and donors since agribusiness can bear on the pressing problems in developing countries of rural employment, improved farm yields, quality of production, and the widening of the income base of small farmers through improved farming practices including crop diversification. \*

The analysis of the "industry" given below will provide a backdrop for the development in PART II of a proposal for a focused "Satellite Farming Support Program" (SFSP). Included in PART II is a discussion of feasibility issues and analysis of potential problems in structuring the proposed program.

\* In the context of agriculture development, efficiency in technology transfer is seen as a precondition to increased agriculture productivity, thereby contributing to national productivity. Annex 1 provides a general overview of the traditional technology generation, validation and transfer process, and illustrates the potential impact of private sector technology transfer on the integration of technology.

The analysis of the "industry" focused primarily on high value cash crop production (vegetables). This subsector was chosen since it best tests the 'system' given the demands on technology, financing and intensive management requirements. The assumption is that other types of satellite farming operations can learn from the analysis of the more difficult requirements of high value cash crops.

The study reviewed available literature primarily on extension services and agribusiness since there is little available literature on satellite farming per se. Lessons are drawn from: operating experience of 10 firms involved in various forms of satellite/contract farming; structured interviews of a sample of 75 farmers working with five satellite farming operations; interviews with traders involved primarily in buying and selling of vegetables for the Manila market; interviews with farmer officials of cooperatives and discussions with government officials.

The field surveys were limited to farming areas in five provinces in Luzon. However, interviews were conducted with firms operating nationally; therefore, the analysis and conclusions should be generally applicable.

#### B. THE GENERAL CHARACTERISTICS:

To introduce the system, satellite farming, as a farming system, needs to be viewed in the broader context of agribusiness and rural enterprise which includes the production and processing of food products, agricultural marketing services and agriculture input supply.

In the Philippines, the agriculture sector contributes about one-fourth of the gross domestic product, employs about half of the labor force and provides livelihood to about two-thirds of the population. In the context of agribusiness, satellite farming systems occupy an important intermediate position between farms and consumers, and the system has the potential to be an important source of agriculture growth and national income.

Satellite farming and/or contract farming (the terms are used interchangeably in the Philippines) is not a new concept and has also been applied in various forms worldwide. In the Philippines, the formal approach, which joins farmers in a corporate level arrangement (more recently termed satellite farming), has been utilized by several private sector firms since the early 1960's in commercial production of cash crops (e.g., fruits, vegetables), livestock (e.g., poultry, piggeries), aquaculture (e.g., prawns, milkfish) and plantation type crops (e.g. bananas, coffee, cacao), for domestic consumption and export.

Stated simply, satellite farming is a farming system which organizes contiguous farmers or groups of farmers into production units for economies of scale, and pools the resources of the firm, contractor/intermediaries and the farmer/farmer organization under a partnership or contract arrangement. (Annex 2 provides a summary description of three typical contract arrangements and sample contracts of Robina, Calif. Mfg. Corp. and Northern Food Corporation.)

Satellite farming, by its very commercial nature, places heavy emphasis on efficient production and marketing. General characteristics and patterns of satellite farming operations are:

- oriented towards medium and large scale farming operations and require an established market linkage;
- there are high entry barriers in terms of financing and establishment of marketing networks;
- agro-projects are labor and management intensive involving a relatively short production cycle;
- organization involves an intermediary/farmer association to liaise with the farmer and the firm; and
- a predetermined price for an agreed quality and quantity of output is the essence of the contract.

The above characteristics apply to all types of agro-projects, however, each satellite farming agro-project is also unique, particularly in the organizational and contract arrangements at the farm level between the firm, the intermediary and the farmer. Factors which influence the organization are the product itself, input requirements, resources and objectives of the firm.

A well known example of a large well-managed commercial satellite farming operation in the Philippines is the poultry production satellite farming operation organized by Magnolia Corporation (San Miguel Corp.) in southern Luzon. The Magnolia poultry satellite farming system, however, is not a typical system i.e., the operation is large by any standard, is integrated with a supporting satellite farming corn feed production system and modern extension system, and involves farmer producers with relatively greater than average resources. (A study of San Miguel's satellite farming corn seed operation was conducted by the Business International Corporation for AID's Bureau for Private Enterprise in 1983.)

Described below is a system organized by Northern Food Corporation (NFC), a relatively small-sized operation (assets of Pesos 130 million), which works directly with farmer organizations having about 3,000 farmer members. The firm has developed an excellent organization plan, farmer orientation and training program and efficient field management. The plan also provides a good benefit package

for the farmer and otherwise has a distinct social orientation but is still very much profit oriented. The planning framework of NFC is considered a good model for satellite farming and is used in PART II as a point of reference in planning a proposed discrete Satellite Farming Support Program.

Important features of the above models are:

- a. the farmer is given a stake in the success of the operation as a result of his inputs of land and labor;
- a. provision is made for profit sharing/incentives to encourage increased production and quality control;
- b. contract terms are carefully spelled out in regard to other benefits and penalties; and
- c. extensive extension services for technology transfer, management and quality controls.

#### 1. The Operating Environment

The "industry" operates in two distinct economic and cultural environments, i.e., the subsistence farm level production environment and a competitive commercial and marketing environment. A clear appreciation of attitudes, practices and objectives at both levels is important. For example, the farmer must understand the firm's objectives in meeting quality and scheduling requirements, and the constraints of the business environment under which it operates. On the farmers' side, the firm needs to understand the values and perceptions of the small-scale subsistence farmers who, because of limited resources, cannot afford to take risks and their reasons for distrust of new technology and new farming practices. Many farmers have been induced to invest scarce resources in various schemes only to find that at harvest there is no market for the product. Good relations, credibility and experience of the firm and its local contractor are important.

(a) At the farm level, the environment is basically family-oriented subsistence farming. Resources are limited and consist of small land holdings and family labor. The rewards of farming on a small scale are little. Subsistence farm operation plus other family labor provides cash incomes of about \$350-\$700 per year (equivalent). Farm productivity is usually low because of lack of technology and production inputs. Government extension services and commercial credit are usually not available. Traders and middlemen play an important function in supplying credit for basic subsistence needs and providing essential services such as the marketing of surplus farm products which are usually not within the capability of the average farmer.

(b) The commercial processing/marketing firm is concerned with credit, access to markets, quality control, costs, and a good return on investment. The firms come in all sizes and have different operating styles which in great

part is influenced by economic conditions, access to markets and credit, social orientation and the availability and capacities of farmer organizations.

The opportunities are very much demand derived. For example, as the current economic slowdown in the Philippines contracted the domestic demand for relatively higher priced processed foods declined and the surviving firms were those with export markets. The export market is highly competitive with a whole set of requirements and different demands of which market linkages, financing, improved technology and quality control are primary.

## 2. The Market

As indicated above, the demand or market for processed and packaged foods is economy derived or greatly influenced by the economic environment. Under the existing adverse conditions exports have become important to survival. The economics, however, are still with those operations which serves both the domestic and export markets. The domestic market provides the necessary base for long term stability.

The opportunities for exports are good given the Philippines' advantages of low labor costs and proximity to the rich markets e.g., Japan, Hong Kong, Singapore and Australia. However, lack of a consistent government policy and weak institutional support systems have not encouraged exports. Efficiencies which must be instituted to compete in the world markets are lacking in most farming systems. At the farm level, the problems of integration of improved technology and quality control need to be resolved. At the national level, lack of access to credit and high intermediation costs in dealing with an inefficient financial service system and export-related ministries discourage investments.

An indicator of the potential size of the food export "industry" is the number of registered commercial institutions involved in agriculture exports in which, despite the constraints of the system and economic conditions, still numbered several hundred in 1983-84. To secure an export market the firms need to be of a certain size and have proven record of performance which eliminates many of the existing firms. Reliable figures on total assets, sales and income of these firms is not available; however, the size of the firms involved range from large Philippine-based integrated companies such as the Ayala and San Miguel Corporations, to multinationals such as Del Monte and Heinz, to relatively small domestic marketing firms with assets of about Pesos 1,000,000 (\$50,000). (SOURCE: Philippine Exports 1983-84, Foreign Service Institute, Manila, Benjamin B. Domingo.)

C. STRUCTURAL ANALYSIS OF SATELLITE FARMING:

Table 1 below provides a listing of a sample of firms interviewed during the study and the types of crops or farm production which are now being managed under contract arrangements with farmers/farmer organizations or contractor intermediaries. Note: The firms included in the study are also involved in various non-satellite farming agro-projects in addition to the satellite farming agro-projects listed. It should also be clear that the list does not include all of the firms operating under various contract arrangements with farmers in the Philippines.

The sample of firms range in size from the large integrated Ayala and multinational San Miguel Corporations (Philippine-based) to the relatively small Ram Food Products with 150 employees involved in food processing for the domestic market. Also included in the study is Planters Products Corporation (government-managed) which had targeted 10,000 farmers for participation in its 1985 Maisagana (corn production) credit program. This Planters Products program includes satellite farming arrangements providing for technical assistance and production buy-back agreements.

<u>TABLE 1</u>	
<u>FIRMS INVOLVED IN STUDY:</u>	<u>SATELLITE FARMING</u>
(* firms surveyed in detail)	<u>AGRO-PROJECTS:</u>
Ayala Agricultural Development Corp.	Corn Seed/Feed
Benguet Management Corp.	Poultry/Citrus
*California Manufacturing Co., Inc. (CMC)	Cucumber/Mango
*Litton Agro-Marine Corp. (Litton)	Okra
*Northern Foods Corp. (NEC)	Tomato
Planters Products, Inc.	Corn/Rice
Purefoods Corp.	Corn
*Ram Food Products (RAM)	Cucumber/Tomato
San Miguel Corp./Magnolia	Corn/Poultry
*Universal Robina Corp. (Robina)	White Beans

For study purposes, five of the satellite farming operations were analyzed in more detail. The systems provide a good range of experience which characterizes cash crop satellite farming operations. Each differs in approach and all have some desirable features for replication.

Exhibit A below provides a matrix of five of the satellite farming operations surveyed. It indicates the variety of arrangements in the sharing of responsibilities for organization, financing, etc.

EXHIBIT A  
AGRO-PROJECT DISTRIBUTION OF RESPONSIBILITIES  
RESPONSIBILITIES: (A. Firm; B. Intermediaries)

	A.	NFC	RAM	ROBINA	LITTON	CMC	Traders
KEY FACTORS OF PRODUCTION:	B.	Coop.	Cont.	SLBIP	FSDC	Cont.	
1. MARKETING:		Firm	Firm	Firm	Firm	Firm	
-DOMESTIC		X	X	X		X	X
-EXPORT			X	X	X	X	
2. FINANCE/ CREDIT		Firm.	Cont.	SLBIP	Farmer	Cont.	X
3. FARMER ORGANIZATION		Coop.	Cont.	SLBIP	FSDC	Cont.	
4. PRODUCTION INPUTS		Firm.	Cont/ Farmer	SLBIP/ Firm/ Farmer	FSDC/ Firm/ Farmer	Cont./ Firm *	X
5. TECHNICAL ASSISTANCE		Firm	Firm	Firm	FSDC/ Firm	Firm	
6. MANAGEMENT/ QUALITY CONTROLS		Firm.	Cont.	SLBIP	FSDC	Cont.	

\* Farmer input responsibilities vary by contractor

The following discusses in general the organization, relationships and major functions of the main actors, i.e. the farmer, intermediary and the firm. As indicated above, the study focused primarily on high value cash crop vegetable operations since they are the most demanding and the experience, principles and concepts would apply to almost all satellite farming operations. Again, the actual organization and practice in sharing responsibilities will depend to a great extent on the nature of the crop, objectives of the firm and resources available.

#### 1. Marketing Linkages

The critical starting point for any commercial agro-project is the establishment a market linkage. In the international market, the firm's capacity to survive also depends on its knowledge of the intricacies of the market and a track record of performance in delivering quality products at the agreed time. The identification of export markets by prospective entrepreneurs has been constrained by

the lack of a data base and consistency of related government policy such as taxes, customs and exchange rates.

The information requirements for domestic production is less of a problem, but in a competitive export environment, information on importer requirements, prices, competition, etc. is critical. The larger firms with information networks have a definite advantage. The governments information/promotion service under the Ministry of Trade and Industry has not been very effective in providing timely data for prospective new entrants, i.e., the present system of a once or twice a year trade promotion leaves much to be desired in establishment of linkages and marketing connections for the starting entrepreneur. This, of course, limits the potential for expansion of the export base which is essentially limited now to the main traditional exports of sugar and coconut.

In all but one case, the firms involved in the study have established marketing arrangements or linkages both domestically and internationally. RAM and CMC have integrated processing and marketing facilities while NFC and Robina operate as subcontractors providing processed raw materials to other firms for further processing and marketing. In all cases, the requirements were of a continuing nature to supply an existing product line, e.g., in-house brand names such as RAM Foods and Pure Foods or international brands, e.g., Del Monte and Heinz. Litton Agro-Marine exports were to the fresh markets in Japan. (The fresh fruit and vegetable market in Japan is considered to be very attractive. The constraint has been quality supply to this sensitive consumer market.)

## 2. Organization

Assuming access to credit and a market linkage, decision factors in organizing under alternatives models are the product itself (cropping patterns), and supply source.

The crop dictates the organizational requirements and the need for contractor intermediaries. The Magnolia poultry operation would not require a contractor to coordinate the small number of farmers it would work with and that would have the resources to manage a minimum of 30,000 birds. A vegetable producing operation for a domestic production operation would require a contractor or cooperative organization in order to efficiently coordinate the 80 farm families required even for a small operation. A hybrid seed operation would require 40 farmers per one acre unit to maintain the needed quality, thus greater management and organizational requirements.

The supply alternatives for the firm are essentially (a) production by the firm itself (backward integration) or

(b) procurement from an intermediary supplier (contractor, trader or farmer association). The first alternative of corporate type farming has been tried on various labor intensive cash crops with little success. Trader operations offer a potential source of supply where scheduling and consistency in quality is not critical. Where reliability (quality, quantity and timeliness) is important, experience has shown that the most technically and economically feasible supply system is through forward contracting with farmers--farming their own land and coordinated either through a local contractor/intermediary or a farmer organization.

Of the sample of five firms surveyed, four of the firms (RAM, Robina, Litton AND CMC) had organized for supply of farm products through independent contractors/government intermediaries. NFC organized its supply operations through existing cooperatives. (The discussion below on alternative models and the feasibility analysis in PART II provides a discussion on the considerations of both approaches.)

### 3. Production Inputs

The level of inputs provided by the firms to the farmer varies in each case, but each firm at a minimum provides the farmer, either directly or through the intermediary, improved seeds and some level of technical assistance. The gap between what the firm provides and what is required is filled by the contractor intermediary or the farmer. The contractors usually finance the greater part of the inputs but they may require farmer financing of some part of the requirements. NFC operations differ from the other four in that it provides a comprehensive package of inputs including initial advances for subsistence needs. (The discussion below on alternative models gives additional comments on financing and control considerations.)

### 4. Finance and Credit

At the firm and intermediary level, financing is a sin qua non. Access to credit has been pointed out as the primary constraint to expansion of agribusiness generally. The requirements are for medium- to long-term capital for equipment and facilities. In addition, many of the firms need short term lines of credit for working capital. Each of the firms had applied for financing through the commercial financial system but their experience has been discouraging. Unless there was a personal relationship with the bank's management and real estate collateral outside of the project the application would not be considered. One firm's application for a line of credit took nine months to process even with real estate provided as security. As a result, the forward commitments to farmers had to be cancelled, causing serious problems with the community, and

inputs contracted for in anticipation of the loan had to be sold at a loss. The available government financing programs have been nonoperational unless there is a personal relationship involved. The conservative nature of the financial service system and lack of expertise in servicing the agriculture sector is a major issue of this proposal.

At the farm level, an important consideration is the provision for subsistence allowance for the farmer to take care of personal needs during the period before harvest when progress payments begin. This has not been adequately addressed by most of the satellite farming operations. It has resulted in many cases in "leakage" or sale of inputs and diversion or sale of the end product on the open market when funds are needed at home. NFC is the only firm that provides an advance as a standard practice as pre-project financing. The contractors working with Robina and CMC provide for some advances for personal needs and deduct these advances from progress payments. Two of the CMC contractors have an arrangement with farmers for loans and insurance whereby in case of death, crop failure or other such disaster, they will absorb all loans advanced.

The local entrepreneurs or contractors and small farmers suffer more from lack of access to credit. All have had to rely on credit from local money lenders to finance their working capital needs at monthly interest rates reaching 18 percent. The SLBIP management consultant, contracted under a World Bank project, has been able to secure loans from a local thrift bank (based mostly on the reputation of the contractor) for individual farmers.

Farmers working with FSDC are responsible for securing their own financing for required inputs. Most of these farmers utilize the local money lenders or input suppliers to finance needed inputs at higher costs.

##### 5. Technical Assistance

Education on application of new technology is a continual requirement for the first two or three years. Each of the firms has instituted some type of training and education program on the technology requirements but the integration process is slow. The firms' management estimates that it takes two to three years for the technology to be integrated but once the benefits are demonstrated, the spillover to other crops is significant.

Each of the firms provide some level of technical assistance. NFC has organized its operation to include several trained resident farm extension agents who are available to the farmer on a daily basis. RAM provides only a limited amount of technical assistance upon request. Robina extension agents are in the field and provide

periodic visits to the farmers' fields, but most technical assistance comes from the resident SLBIP contractor and Ministry of Agriculture extension agents who are given extra incentive pay to work with the project. Litton, at its own expense, provides pre-planting training at its own model farm operation and its extension agents visit the farmers periodically. CMC also has extension agents who visit the farms periodically and are available to assist the intermediary contractors.

All of the agro-projects have attempted to utilize more extensively government sector research and extension services. However, they have found the services to be unreliable. The research and extension services are uncoordinated, they lack basic transportation, and salary and per diem are inadequate; therefore, they have no incentive to travel. In order to secure needed assistance, private sector satellite farming operations have provided government extension advisors with salary supplements, per diem and transportation, with some success. The weakness in the government extension service limits the technology transfer process. It also causes inefficiencies in the private sector operations. Experience on technology from one agro-project to another is not made available causing duplication of efforts and waste of resources.

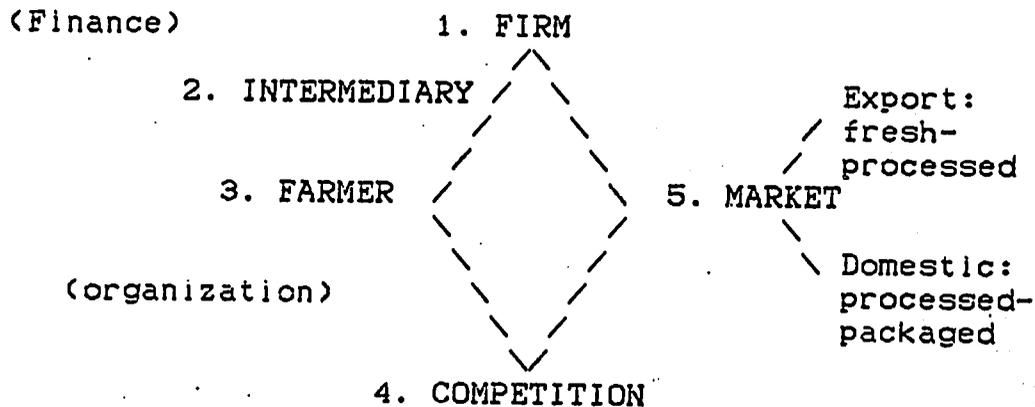
#### 6. Management/Quality Controls

All of the firms except NFC relied primarily on the intermediary to provide primary field management including the monitoring of the correct application of inputs, production practices and quality control. In all cases this was supplemented by extension agents provided by the firms. The contractors for CMC and RAM also hired experienced farmers full-time to assist in the inspection and monitoring of quality control. The government-assisted projects (SLBIP and FSDC) rely on their own field agents to inspect and monitor and have drawn from the available Ministry of Agriculture and Food extension advisors.

The costs for management controls over "leakage" remain high. Firms operating in areas where there are strong farmer organizations are able to use the association leadership to help maintain controls. The lack of farmer organizations to monitor their own members has been identified as a serious constraint for the long-term expansion of satellite farming systems.

LOGIC AND STRUCTURE OF  
SATELLITE FARMING

(Government Policy)



1. FIRM/ENTREPRENEUR:
  - Established market linkage essential;
  - Management organization, extension service and extensive controls needed at farm level;
  - Equity and working capital requirements high;
  - Intensive management-controls required;
  - Some R&D/farm level technology adaptation necessary.
2. INTERMEDIARY: (Farmer Association/Coop/Contractor)
  - Essential service to interface with firm/farmer;
  - Capacity to organize/manage farmer associations/coops;
  - Financing required for some or all production inputs;
  - Trader operations possible alternative source of supply, however, presently fragmented and unreliable;
3. FARMER:
  - Essential inputs: family labor, 1/4-1/3 Ha irrigated and accessible farm land;
  - Interface through farmer association or cooperative;
  - Interest in guaranteed price but risk averse; 2-3 yrs. of demonstration before technology integrated.
4. COMPETITION:
  - High entry costs; success of new entrants dependent on linkage to markets; access to financing difficult;
5. MARKET:
  - Demand derived/influenced by economy and government policy, e.g. export incentives, credit;
  - Market segmented based on products and market network;
  - Export market competition intense in Asia;
  - Large potential Japanese, U.S. and Australian market;
  - Reliability and quality of supply critical for both export and domestic markets;

## CHAPTER II: MODELS FOR STUDY AND REPLICATION

### A. THE PRIVATE SECTOR FIRMS, INTERMEDIARIES AND FARMERS

Discussed below are the structure and experience of two representative satellite farming systems employed in the Philippines. Both systems operate in the same environment and have the same input and ingredient requirements, i.e., land, labor, technology, management and linkage to markets. However the organizational structures differ significantly. The operations are large to medium scale in size, however, their planning and organizational approach are still good models for planning more modest satellite farming programs. The satellite farming crops, tomato and cucumber, also require systems that fully test satellite farming approaches in terms of demands on technology and management; therefore, the experience and lessons are of relevance to other type of satellite farming agro-projects.

- Northern Foods Corporation's (NFC): This medium sized firm has developed an approach which works directly with farmers through local farmer associations and their smaller sub-units (built around indigenous irrigation systems). It's marketing link is with a large multinational which sells the processed products in both the domestic and international markets. High quality standards are required for the raw materials, therefore, extensive management, controls and technical assistance are required at the farm level. The satellite farming system developed could be termed as "comprehensive" in that the full range of inputs are supplied by the firm and the farmer is given attractive incentives for meeting quality standards.

- California Manufacturing Corporation's (CMC): This larger sized firm has developed an approach which works through local intermediary contractors. The firm markets the processed products under its own brands both domestically and for export. The contract with the private entrepreneurs provides for an attractive margin for a set quality and quantity of production. This is the more typical approach whereby the firm is removed from working directly with the local farmer/farmer organization and management, technical assistance and input financing responsibilities and risks are shared with the contractor and farmer. The price of the raw materials to the firm is commensurately higher.

## 1. Northern Foods Corporation- Profile of Operations

Northern Foods Corporation's (NFC) satellite farming operation was selected to illustrate a "comprehensive" system with direct linkage to a farmer organization. The firm has a profit objective but it also includes in its corporate mission concern for the welfare of the farmer through a mutually beneficial partnership arrangement. Future plans are to develop a profit sharing program with farmers and expansion into subsistence crops.

### a. Background

The provincial government officials of Ilocos Norte contracted for field surveys on potential marketable high value crops. The 1983 study recommended tomato production for paste as having potential and a good domestic and export market. The demand for tomato paste is large and has been imported for processing for domestic and export sales. Based on the results of the feasibility study and interest from a multinational to purchase the tomato paste, Northern Foods Corporation secured financing through the government's KKK financing program to establish a processing plant in Sarrat, Ilocos Norte. The project's organization involved:

- engineering and plant construction supervision contract by a U.S. firm;
- purchase contract with Philippine Packing Corp. (Del Monte) to buy the raw material for paste and agreement to provide technical assistance on agriculture and processing technology;
- extensive negotiations with farmer associations and farmer orientation on requirements, operations and organization whereby the farmer agrees to provide land and labor and NFC agrees to provide a guaranteed minimum income if procedures are followed, and the full range of inputs, including training and technical assistance, through full-time NFC extension personnel.

The plant started operations late in the 1984-85 season but still managed to process over 875 tons of tomato paste with sales reaching Pesos 86 million. The initial project development costs for the plant and start-up costs are given as Pesos 129 million (\$6.5 million) which were financed by Pesos 105 million (\$5.2 million) equity (KKK contribution was in "Preferred Shares" with a sinking fund to redeem all outstanding shares within 14 years) and Pesos 24 million (\$1.2 million) in revolving suppliers' credit. The local government support and availability of long term financing was critical to establishment of the enterprise. The firm is restricted from declaring any dividends until preferred

shares are redeemed. The firm estimates that the shares will be redeemed in five to six years.

d. NFC Satellite Farming Experience:

The 1984-85 farming operations involved some 3,000 farmers cultivating 1,050 hectares. The allocation of land by the farmer to the commercial operation averaged about one-third hectare. (This is considered an ideal size for cropping by the farm family given the intensive labor required to produce at the firm's standards.)

An intensive education process was developed on the technology and requirements under the contract. The NFC detailed information package orients the farmer on the firm's policies and organizational goals, practices, procedures and requirements for participation. (Annex 3 provides a translated copy of NFC's illustrated farmer orientation materials.) The implementation plan accepts that the education is a continuing process and a two- to three-year period is required to integrate the technology.

In the first year of operation, NFC reports indicate that 70 percent of the contracted farmers performed as planned and many exceeded the 40 tons/hectare first year target. The highest yield was 112 tons giving an income of Pesos 28,000 on a per/ha basis for the approximately four-five month season. The success in start-up is in great part due to the existence of strong farmer organizations organized around the community irrigation systems. Strong farmer organizations are a definite resource to any agro-project since it allows for more efficient training and extension service and provides for group management controls.

Acceptance of the system has been extremely positive. NFC records show farmers' net incomes on a per hectare basis were two to nine times greater than income from traditional rice farming and 150 percent greater than that of tobacco, another traditional crop of that area. More farmers are wanting to join in the venture than can be accommodated by the plant's capacity. The farmer's interest is attributed to a great extent on the provision under the agreement that if the farmer follows the required practices, he is guaranteed a minimum net income of pesos 5,800/hectare for the use of his land even if expected yields of 40 tons/hectare are not reached, or if there is complete crop failure. This provision eliminates the risk which is of critical concern to the small subsistence farmer.

NFC officials state that net return during the first year's operations was less than expected because of unplanned start-up costs of production. They are confident that a planned internal rate of return (IRR) of 40 percent over 20 years and payback in 7.3 years will be achieved. In 1986-87 sales are projected to reach Pesos 150 million and net income is projected at Pesos 31 million or 20 percent net return on sales. A return of 35 percent is expected in future years which is reasonable considering the investment costs and risks assumed by the company under the system.

First-year operations confirm the critical need for well planned training and orientation of the farmers on technology and quality control requirements. NFC's control mechanism is through their full-time extension staff who are in the field every day, and a modern computerized accounting system which tracks the field operations, including inputs provided to each farmer and the expected outputs based on daily field reports. The field inspections and reports matched with the record system can surface problem areas and variances in production plans. Even with these controls there is some "leakage" of inputs to other farmer crops.

Plans are for extension of the satellite farming program into the rice growing period (wet season). Rice farming offer smaller margins but even at low margins, income will contribute to the continuing fixed costs of full time field personnel and plant facilities maintenance incurred during the off-season. It also allows the firm to integrate better farming practices on the rice crop which would contribute to the productivity of the follow-on high value crops. NFC is convinced of the viability of their satellite farming model and that it can be replicated in other areas with different crops.

## 2. California Manufacturing Corp.-Profile of Operations

California Manufacturing Corporation (CMC) was selected to illustrate a common satellite farming arrangement which involves contracting of farmers through a local contractor intermediary (hereafter called contractor). This organizational arrangement and strategy provides for a sharing of the risk in the financing of farm inputs and removes the firm from direct negotiation/contracting with the farmer. Annex 2 provides a sample of the purchase order agreement which specifies CMC's commitment and requirements that must be satisfied by the contractor in terms of product quality, quantity and schedule of deliveries.

a Background:

CMC Philippines is partly owned by California Packing Corporation, a U.S. multinational corporation. The company has operated in the Philippines since 1955 under different ownership arrangements. The firm is listed as one of the top 100 companies in the Philippines involved in processing of various food products under Lady's Choice and other brand names for domestic and export markets.

The firm processes some ten farm products of which cucumber is supplied under satellite farming arrangements. The company's cucumber farm operations are centered in Bulacan, Nueva Ecija and Cavite Provinces within a radius of 50-150 km. from the main processing plant outside of Manila. The cucumber satellite farming supply system involves nine contractor intermediaries working each season with an average of 940 farm families on about 3500 ha. (1/4 - 1/3 ha. plots/farm family).

b. CMC Satellite Farming Experience:

The satellite farming system employed by CMC is typical of many satellite farming operations in the Philippines where management and financial risk is spread amongst the firm, the local contractor and the farmer. The CMC system provides that the firm will supply technical assistance in critical areas and critical production inputs. For example, CMC supplies the hybrid seeds to the farmers through the contractor (as an advance), and also provides periodic field level training and extension service at their own expense.

CMC is very careful in their contractor selection. The numerous applicants are carefully screened and selected on the basis of their experience in farm management, farmer relationships and ability to finance production inputs and working capital. Once a contractor is approved, the contractor is responsible for the selection and organization of farmer cooperators. Depending on the local situation, the contractor could work through government sponsored cooperative organizations or may organize the farmers on an ad hoc arrangement for the cropping season.

CMC's involvement at the farm level in the early contracting period is limited to assisting the contractor evaluate the adequacy of the farmer's land and advising on the input requirements. Assuming the land area meets the requirements (water rights, land title/lease agreement), a purchase order (contract) is negotiated which sets the price standard and volume CMC will buy. Detailed schedules of delivery are prepared with the contractor. Before actual

planting, CMC inspects the land preparation. If approved, the purchase order is issued and the contractor is provided with the hybrid seeds (currently priced at the landed cost of Pesos 400/lb. which is deducted from the contractor's future progress payments).

The contractor must make his own arrangements with local suppliers for the financing of his share of production inputs. (CMC does not offer financial assistance but the purchase agreement with CMC could be used for collateral purposes by the contractor in short term borrowings.) The experience of contractors in accessing credit in the rural areas is poor. Most contractors arrange for credit through the local money lender at rates reaching 18 percent per month.

The firm requires strict quality control, and therefore extension and management controls are very critical during the growing period. For example, last season in Bulacan the CMC extension agents and the contractor staff made weekly visits to each of the 230 farms during the four-five month growing period. CMC assists with training and will provide specialized technical assistance. The contractors also hire their own inspectors to help maintain quality control. These "inspectors" are usually experienced farmers from the area who are familiar with the farmer cooperators. If farmers do not follow the advice of the technician and the contractor they are warned; if the problem persists, they will be disqualified from participating in the future. Any sunk costs of the contractor are lost. Accordingly, farmers are also carefully screened for prior performance.

During harvest time extra labor may be hired by the farmer to assist in the 18 hour/day backbreaking work of picking, grading and hauling to designated pickup points. The contractor also usually hires extra labor to inspect for quality and grading. The farmer harvests every two days throughout the season. The contractor is responsible for transport of the harvest to the plant site usually within 12 hours of harvest. Any delay will result in loss of moisture and lower prices when weighed at the plant. Payment is made to the contractor within three days after delivery. The farmer is paid at least weekly, however, the contractor will usually retain one or two weeks of the farmer's progress payment on account to cover personal loans or advances to the farmer for his share of the production inputs.

The CNC/contractor intermediary type approach has the advantage of spreading risks and responsibilities for farmer organization and control. The costs to the firm are in higher costs for raw materials since the intermediary works

on a margin of between 15-20 percent. Still, the return to the firm is estimated to be about 20-25 percent (as compared to the 35 percent return expected under Northern Foods' comprehensive program). The disadvantages under this system are mainly to the farmer who is required to finance some part of the production input requirements. His costs of financing, if available, are high; and those farmers otherwise qualified to participate but who have no access to financing are automatically excluded.

As noted above, CMC has more applicants for purchase order contracts than demand for raw materials (farm products). In the last three years the demand for processed products for the domestic market has leveled off because of the problems in the domestic economy. The company is exploring opportunities in Japan for fresh fruit and vegetable exports. The opportunities appear to be good, but the company's concern is that the market cannot be exploited until quality control can be improved at the farm level.

### 3. Government Intermediary Organizations:

Two experimental attempts by government support institutions to work with the private sector are interesting and could be important to expansion of private sector ventures. The agencies involved, Farm Systems Development Corporation (FSDC) and the National Irrigation Authority (NIA), have taken on the function of catalyst to initiate and stimulate expansion of satellite farming operations and also to act as intermediaries between the farmer and the private sector firms. Both of these agencies have responsibility for small farmer irrigation projects throughout the Philippines and, therefore, have interest in making their farmer organizations more productive in order for them to cover amortization costs of infrastructure and irrigation fees. The irrigation farmer organizations offer a potential base for satellite farming since the land is irrigated and the farmers are organized to work together.

The FSDC operation has been working with Litton Agro-Marine in Bulacan and Pampanga since 1984. The pilot program has been carefully planned. Operations are still relatively small and experience is limited, but FSDC management is very enthused about the farmers interest and cooperation. NIA is working with Universal Rubina in the Cavite/Laguna area under the Second Laguna de Bay Irrigation Project (SLBIP), a World Bank-financed project. Under this project an outside consultant was hired to work with the farmers.

The SLBIP is in its third year of operation and its experience has been very good according to the contracting firm and the farmers involved. Approximately 2500 farmers are now involved in the project. This demonstrates a potential public sector supported satellite farming programming mechanism. The key factor of the success of the satellite farming vegetable component is the leadership of the project hired consultant who helped develop the program and has the credibility to effectively interface with the farmer organization and with Universal Robina Corporation. Robina supplies Heinz, a multinational corporation, with processed white beans for further processing by Heinz into pork and beans for the domestic market.

The project has also been successful in utilizing the government extension service by providing the government personnel with additional remuneration for assistance on the project. Based on the success of the project, NIA management is encouraging the Ministry of Agriculture to establish other model satellite farming agro-projects in strategically located farming areas throughout the Philippines to demonstrate the viability of the system to potential private sector investors and demonstrate to farmers the benefits of application of improved technology.

As suggested by the consultant, these demonstration sites would follow the government's "Anchor" project concept which involves government partnership with the private sector firms in organizing technical assistance, production inputs, buy-back arrangements, storage and processing facilities, transport and marketing services.

#### 4. The Small Farmer- a Profile:

The survey attempted to compare farmer operations 'with' satellite farming contracts against farmers 'without' contracts. Some general conclusions can be drawn, such as: satellite farmers were found to be an older group averaging 40 years. The average household size for all farmers interviewed is six. Farmers on the average have two to six children. Those above the age of 10 are considered by the farmer to be of working age and are expected to contribute to the family's welfare. Sixty-nine percent of the farmers interviewed completed only elementary level education.

Many of the contract farmers in the survey had been involved off and on with small satellite farming operations for several years. Their experience under satellite farming had been good and most would be anxious for more opportunities to participate. The more successful satellite farmers are said to have a strong work ethic and sense of entrepreneurship. These characteristics are also said to be more noticeable in certain ethnic groups such as

Ilocanos and farmers from certain geographic areas such as Cavite, Laguna and Batangas Provinces.

a. Farm Characteristics

The majority of contract farmers in the sample (54 percent) lease their land under sharecropping arrangements, while 58 percent of the non-contract farmers were owner-operators. (Good irrigated land for lease is only available during the dry-season i.e., when the land is not in rice production.) On the average, the farm size is 2.3 hectares of which contract farmers allocated about 0.28 hectares to the contracted cash crop. The balance of the farm land is usually planted to other consumption crops including corn or rice if sufficient water is available. Most of the farmers interviewed had a few chickens, a few had a pig and a fewer number had a carabao. The owner operators with satellite farming experience were willing to allocate more land to cash crops during the dry season, however, over the last three years the contract volume amounts have diminished because of economic conditions and lower domestic demand.

b. Farmer Attitudes--Technology Transfer

Basically the goal of the small farmer is survival. This translates to aversion to any risk and hesitancy to experiment. In the Philippines (as in most developing countries), small farmers are reluctant to invest on their own in new technology until the benefits can be demonstrated. This contributes to the long lag time for integration of new technology. Even under satellite farming systems where a predetermined price is set before production begins, it will still take two to three cropping seasons before the farmer can be fully convinced of the benefits of diversification, and his first preference will also still be to allocate resources to the subsistence crops of rice or corn. These crops provide the small farmer more of a perceived sense of security than actual income. There are changes in attitudes occurring in those farming areas where there has been experience in satellite farming of high value cash crops and utilization of new technology. As increased production and income are realized over two growing seasons because of new technology and crop diversification, the integration of new technology to other crops and to the surrounding farms is very positive.

c. Farmer-trader relationships-

Historically, the small farmer's primary support system has been through individual arrangements with traders, landlords, and larger farmers in the area. There is a mixed feeling about the costs and benefits of working with traders. Many consider traders as exploitive of the farmer.

However, when considering the marketing and transportation service and cost of rural financing calculated against the price given the farmer, the trader's return may be in an acceptable range. In any event, there is usually no other alternative since there are few other support systems especially in providing credit for family consumption, emergencies, production inputs. Comments have been made that satellite farming operations serve to provide some 'competition' to the trader's operations, thus encouraging some better terms for the farmer.

The study indicates that technology transfer contributions by traders and other informal suppliers are minimal and, if at all, are unplanned. The technology transfer that does occur is by way of indirectly encouraging farmers to improve quality through offering higher prices for better production supply which results from application of better seeds, fertilizers, insecticides and other improved farming practices. This is not to say that the services of the traders are not essential. They perform a critical financing and marketing function that no other institution in the Philippines can provide. Considering the extensive outreach of traders, there is a need for additional studies on means to coopt the trader to participate more formally in the technology transfer process.

## B. SUMMARY OF EXPERIENCE

The following summarizes the analysis and discussions given in the previous sections.

In general, the advantage of satellite farming from the viewpoint of the firm is in the spread of costs of production and the sharing of risk. For the farmer, the advantage is in income rewards of small scale farming operations. Market links and access to credit are a necessary precondition to establishment of the systems.

### 1. The Firm:

New entries face several start up problems. The financial investment requirements are high and access to credit is difficult. In addition to the costs of plant facilities, new entrants must have the working capital to maintain operations for at least a two year start up period and, most importantly, they must have an established market linkage. At the field level, the firm must organize either internal extension services and field management controls or establish an arrangement with local intermediaries. The choice of implementing model is primarily based on

management's criteria on risk, profit objectives, management resources and presence of farm level farmer organization.

Firms with a good marketing network have been able to make good profit margins. There is a lack of hard financial data on the discrete satellite farming agro-projects. Most firms will only provide general financial data to the public which are subject to some question since sales, expenses and income are usually understated for tax reasons. The NFC financial data given in Annex 3 is the most comprehensive. It gives detailed 10-year planning figures and shows the costs of operating a "comprehensive" system. The NFC financial data indicate that profits will reach 35 percent annually and the IRR has been computed at 40 percent over a 20 year period. The other less comprehensive systems are citing net returns of 20-25 percent. Many outside observers speculate that the profit ranges may be even higher. A recent study by the Institute for Small Scale Industry indicated average returns of 40 percent for food processing firms. The profit margins at 40 percent are not considered excessive since most entrepreneurs understand that the high value crop ventures are high risk-high return investments.

Satellite farming arrangements are most appropriate for seasonal commercial cash crops with a short production and marketing cycle. A relatively quick product inventory and cash turnover is important to the firm and the small farmer. The farmer needs a steady flow of income for daily family consumption. The firm is concerned with cash flow, and short/seasonal production cycles limit the financial exposure and serves as a management control. In the Philippines, many processing firms have attempted corporate farming or integration of operations to the farm level, i.e., growing their own raw product requirements for purposes of control of supply. The experience has not been good in labor intensive cash cropping including vegetables and the subsistence crops of rice and corn. The investment costs for land and equipment are high and the technical and management problems in working with 'hired farmers', with no attachment to the land, have resulted in losses in practically every attempt.

Food processing firms have also attempted to buy directly from farmers and traders with no contract arrangements. Where quality and scheduling is important, the experience has been very poor. Accordingly, processors interested in quality and reliability of supply have found contractual satellite farming arrangements with small farmers working on their own land to be the most efficient. The firm is able to avoid the high investment costs for land and equipment, and the farmer has a stake in the venture which motivates improved production.

The two models described above offer two alternatives for organization and planning. NFC's model requires full control of operations and input supply in order to assure quality output. The management system which provides for company technical and field management to work directly with farmer organizations has proved viable and the firm is already planning to expand the system to cover the wet season production of rice and corn. The CMC model provides for the intermediary (contractor) to take on responsibility for financing of the inputs and to monitor for quality control. CMC raw material supply costs are greater but they also avoid the risks of financing the production inputs and possible diversion and crop failure.

### 2. The Contractor/Intermediary

The contractors (local private sector entrepreneurs) provide a very necessary service to the firm and the farmer. To survive, the contractors need to be good managers and have credibility with the farmers in the area. During the 4-5 month production period the job of organizing small farmers and coordinating farm production requires hard work and special management skills to obtain the quality products required by the firm and maintain costs for a reasonable return on investments. Judging from the number of applicants for Purchase Order Contracts with CMC, the contractor's return on investment is very competitive with other rural economic opportunities. A constraint to all rural entrepreneurs/contractors is access to institutional credit. Working capital financing for farm inputs and for field operations are a precondition in the contract arrangements between the firm and the contractor.

### 3. The Farmer

The predetermined price for the output is a very good incentive to the farmer to participate and allocate scarce resources. Ideally, the firm and the contractor would like for the farmer to share more in the financing of the production inputs as a control measure (avoids diversion of inputs). However, small subsistence farmers lack access to financial resources to finance the inputs. If the farmer is required to finance part of the inputs the financing costs to the farmer (if credit can be found) are very high and therefore his return on labor in the end is much less.

The analysis could draw no conclusions on income differences between contract and non-contract farmers also involved in farming high value crops. What is conclusive is that the contract is highly in demand and that incomes/ha. from cash crop farming is from two to nine times greater than the subsistence crops of rice and corn. (See Annex 5 for summary survey data.) The added satellite farming

family income is also relatively higher in comparison to most other unskilled off-farm employment. However, in most small farmer households some off-farm employment is still needed by some of the household members.

#### 4. The Supporting Financial Service System

The financial service system has been described as unreceptive to agriculture generally and having a "pawnshop mentality. For example, the present commercial and government sponsored programs and terms do not provide for financing, if at all, beyond four years and then the terms require 150-200 percent real estate collateral (outside of the project assets). These terms can only be met by the wealthy few who are not interested in agriculture investments or are not interested in the challenge of working with small farmers.

### C. SUMMARY CONCLUSIONS AND OUTSTANDING ISSUES:

#### 1. Summary Assessment:

- There is extensive experience in satellite farming. Under satellite farming arrangements the firm can provide what the farmer lacks in production inputs, including technology and marketing linkages to enter into production of higher value crops. The farmer can supply the essential land and labor, thereby reducing the firm's capital investment requirements. Therein lies the logic and the comparative advantage of satellite farming to both the firm and the farmer.

- The precondition to expansion of the system is an established market linkage and access to credit. If these conditions can be met, the impact of satellite farming can be substantial in terms of profits to the firm, acceleration of technology transfer, increased production and income rewards to the small farmer.

- The high entry and working capital costs, requirement of a market linkage and existing institutional and farm level weaknesses argue for a phased program finance plan:

- (1) initial financing operations targeted at expansion of the existing more experienced firms who can immediately compete in the highly competitive export market; and

- (2) parallel development of financing mechanisms and institutional support systems focused at new entrants.

In support of both existing and new ventures, there will be need for support structures dealing with export market development, farmer information and cooperative development. With the institutional support systems in place, the program should actively solicit new entrants.

As indicated above, the primary need at both levels will be for innovative financing approaches for:

- (1) an efficient financial service system that can provide timely short-term working capital at reasonable terms for the firm, the contractor and the farmer; and
- (2) financing of medium- to long-term capital requirements for equipment and facilities.

Profit incentives will need to be provided to the banking sector to encourage them to work more aggressively with the agribusiness sector in financing term debt, equity and venture capital. The profit margins should be such that they would assume a promotional role in assisting in project development, export promotion and the strengthening of the rural banking system.

- Of interest to the government and development planners is evidence which indicates that the private sector-driven system can decrease the lag time for the application and integration of new technology by as much as 50 percent, directly impacting on farm productivity and rural income. Experience also confirms the worldwide findings that small farmers utilize very efficiently production inputs, i.e., the cost of producing a unit of agriculture output is reduced and the returns to the firm on any given input/investment is much greater than under corporate-owned farm operations.

- There is no one model for all situations. The model or planning framework of Northern Foods Corporation contains features of interest to donors in terms of an efficient profit making venture, with an efficient technology transfer approach, and a social orientation. As such, it is a good planning model from which to use as a point of reference for replication of systems, recognizing that each application will need modifications and appendages to fit the environment and objectives of the firm.

#### D. Summary of Programing Issues:

There are particular issues mentioned above which are considered as the primary limiting elements as seen by the private sector. These are:

##### 1. Access to Institutional Finance-Foreign Exchange Risk

To facilitate the whole satellite farming process there are requirements for efficient financial services and access to credit at all levels. The financial service system does not function and only the very wealthy and larger firms with internal resources are able to access credit. Lack of

access to credit has been cited in every discussion as a national resource problem and the greatest constraint to expansion of private sector involvement in the agriculture sector.

Related and an issue to both the borrower and lending institutions is the issue of foreign exchange risk involved in financing of imports. The depreciating peso does not encourage lenders to finance foreign exchange for equipment and other imported materials needed for plant improvements. If the lender agrees to finance the foreign exchange it will be at 30-40 percent interest rate which is intended to cover his exposure. The borrower may be able to borrow pesos and convert them to hard currencies but in either case the costs would be high. With the high cost of capital and high transaction costs (time, effort and "fees") added to the high risk - high return nature of commercial agriculture, entrepreneurs are not encouraged to invest.

## 2. Market Development- Lack of Institutional Support System

It goes without saying that there cannot be a commercial venture without a market. Market demand is now constrained by poor domestic economic conditions. There is increased interest in exports where there is large potential. Exports, however, are constrained by the lack of reliable and timely market information and consistency of government support policy.

## 3. Farmer Organization and Management Controls

As noted above, most high value cash crop production is usually very labor-intensive. Efficient management systems and logic do not allow for the firm to deal with farmers individually but in the absence of local farmer organizations much time and effort must be spent in farmer organization and orientation. Working through contractor intermediaries is one means by which a firm passes on the responsibility but the problem of quality control and efficiency still remains as a concern to the firm. Presently, farmer organizations are generally very weak and government sponsored organizations lack effective leadership.

The leadership does not command the needed authority to negotiate and assure that farmer members will honor the terms of the contract including the proper utilization of inputs provided by the firm or contractor. Farmers organized on an ad hoc basis with no traditional ties cannot serve as self-monitors. Therefore, there are added costs to the firm or contractor for additional controls to monitor individual farmers. In discussions with firms, the need for

viable farmer organization systems follows access to credit and market linkages on the level of importance.

#### 4. Information and Extension Services

Related to farmer organization and the weak support system is the lack of information on satellite farming systems and experience. For the most part, lessons learned are lost and each agro-project usually starts out as a fresh experiment. Many costly mistakes are duplicated in the first two years even though there is extensive experience. In part this is due to the weak coordination and support from the public sector research and extension services. The lack of information and documentation results in inefficiencies and duplication of effort. Efficiency in expansion of the system is dependent on capturing the lessons learned and efficient dissemination of the experience and tested technology or requirements.

PART II  
PRIVATE SECTOR  
SATELLITE FARMING SUPPORT PROGRAM

CHAPTER III: PROPOSED PROGRAM:

INTRODUCTION:

This study was initially focused on defining approaches to expand satellite farming as a vehicle for increased agriculture productivity, and secondly, to define aspects of satellite farming technology transfer processes which could be replicated or extended by the public sector extension service.

The study concluded that the system is indeed efficient in its capacity to: accelerate technology transfer; increase agriculture productivity; employ large numbers of small farmers and provide income rewards; serve as a good entry point for further agribusiness development. There are, however, serious institutional and farm level constraints to expansion of satellite farming. In addition to weakness of government agriculture policy (e.g., export promotion) and support institutions, priority areas which need to be addressed include the perennial problem of access to credit, market development and farmer organization.

The weakness of the public sector institutions and support systems and the importance of finance as the key lubricant to expansion of agribusiness argue for a new programming approach. Recommended is a strategy which shifts execution of the program from the public sector to private sector entities. It recommends that satellite farming promotion, finance, technical assistance and monitoring responsibilities be given to selected financial institutions and a proposed Satellite Farming Support Program Advisory Board. The perceived advantages are in terms of quicker disbursements and efficiencies in operations since the private sector has the knowhow and entrepreneurial skills to analyze the opportunities, organize profitable satellite farming operations, expand quality production, and develop marketing outlets.

The key assumption is that given reasonable profit incentives the private financial institutions will actively participate and will take on management functions of a highly focused private sector oriented program involving:

- development of innovative finance mechanisms for
- promotion of satellite farming;
- facilitating agro-project identification;
- assisting in agribusiness sector analysis;
- assisting entrepreneurs in project planning.

Loan financing of \$15.0 million and \$1.2 million in grant funding is proposed as the initial funding for the experimental program under the planned Accelerated Agriculture Production (AAP) project assisted by USAID.

## SUMMARY PROGRAM FRAMEWORK

<u>PROGRAM GOAL:</u> Increase rural productivity and strengthen rural economy.	<u>STRATEGY:</u> Private sector led mgt. and mkt'g plus pub. sector support of high value crop production under satellite farming operations.	<u>KEY ASSUMPTIONS:</u> Favorable export mkt. Small farmer quality production;  Pvt. sector and fin. inst's participation and investment in the rural areas;
<u>PROGRAM OBJECTIVE:</u>  Strengthen rural institutional mechanisms to channel improved tech., technology assist. and fin. resources.	Improved policy-dialogue between pub/pvt sector; access to credit; financing tech. assist and train.	Public/private sector cooperation in prog. development;  Improved political/economic stability.
<u>PROGRAM COMPONENTS:</u>	<u>INPUTS:</u>	<u>PURPOSE:</u>
	<u>Institutional Level</u>	
A. Satellite Farming Finance Facility	Loan, Guar., Rediscount Facility and Tech. Assist.	Inst. credit program for satellite farming will encourage com'l finance institutions participation in agri lending for long term
B. Export Promotion	Policy studies, Tech. Assist.	Market information and export support policy will expand the export base and supply demand for high value crops
C. Tech. Transfer, Research, Extension Information	Case Studies, Workshops, Information, Education and	Increased information flow and diversified approaches to extension of improved technology will help improve rural productivity and income
	<u>Farm Level</u>	
D. Farmer organization Improv.	Tech. Assist., Training, Mgt. Assistance	Improved organization/management capacities will facilitate the expansion of improved tech. tran. processes, prod. and planning.

## PROGRAM FRAMEWORK

### A. PROGRAM GOAL:

The proposed private sector-oriented program supports the government's overall program goal of: increased agriculture productivity and strengthening of the rural economy through:

- the promotion and integration of improved technology by small farmers for increased productivity;
- expansion of the export base; and
- generation of backward linkages to small farmers by agribusiness firms.

### B. PROGRAM OBJECTIVE:

The objective of the proposed Satellite Farming Support Program is to: establish private sector institutional mechanisms to channel financial resources and strengthen private sector support systems to expand satellite farming programs.

### C. PROGRAM STRATEGY AND COMPONENTS:

The program is designed to deal with both institutional and farm level constraints and strengthen both ends of the farm production chain, from the strengthening of financial services to agro-projects to supporting small farmer producer associations.

The two primary operating principles of the proposed Satellite Farming Support Program are:

1. The program needs to be highly disciplined with clear guidelines and criteria focused on satellite farming operations.
2. Selected private sector including commercial financial and credit institutions would function as the primary executing agencies.

An important consideration is that there is an existing financial infrastructure that could execute the financing program and coordinate support mechanisms including market analysis and information systems. This is not to say that there are not problems with the private commercial finance system. For example, there is a preoccupation with obtaining excessive collateral and there is a lack of experience in agriculture lending.

The assumption is that: (a) with adequate incentives, selected private commercial financial institutions will actively engage in agriculture lending and manage related subfunctions in support of expansion of satellite farming and marketing operations; (b) the profit incentive will

encourage other efficiencies to the system; and (c) with training and technical assistance the banking sectors' institutional and operational constraints can be resolved.

The experience in satellite farming in the Philippines is extensive and an expansion program could be developed quickly working first with existing satellite farming operations with marketing linkages and, in parallel, developing the institutional support systems for new entrants. As a point of reference in planning and structuring farm operations, the Northern Foods Corporation model described in Part 1 is recommended.

The following exhibit outlines the proposed components:

### OUTLINE OF PROGRAM COMPONENTS

Program Components:	<u>Primary Constraints/Issues:</u>					
	1.	2.	3.	4.	5.	6.
	Access to Credit	Fin. Supp. Syst.	Export Mkt. Info.	Export Policy	Tech Tran. Syst.	Farmer Assoc.
<b>Institutional Level Activities:</b>						
a. Satellite Farming Financing Facility:						
-credit	x					
-guarantee	x					
*-rediscount	x					
*-tech. assist.		x				
b. Export Promotion						
-tech. assist.			x			
-studies				x		
c. Technology Transfer Info. and Support						
-case studies					x	
-workshops					x	
-other research/info. sharing					x	
<b>Farm Level Activities:</b>						
d. Farmer Producer Association Improv.						
-training						x
-tech./mgt. assist.						x
* under existing ALF program described below						

## DISCUSSION: KEY COMPONENTS

### A. SATELLITE FARMING FINANCING FACILITIES

#### 1. The Purpose:

To develop institutional financing mechanisms for satellite farming operations which will encourage commercial financial institutions to participate further in agriculture lending programs on a permanent basis.

#### 2. The Issues: Lack of Access to Credit and Weak Financial Institutions

A continuing problem is the lack of access to short-, medium-, and long-term credit (both foreign and local currencies) at reasonable terms, on a timely basis and in the required dimensions. Every firm interviewed cited the lack of access to credit as a primary constraint and a national resource problem. Contributing to the problem is the lack of experience of the commercial financial institutions in agriculture financing and weakness in the rural banking system both of which restrict the expansion of rural based agribusiness generally.

#### 3. Background:

There are several existing government financing programs on record. However, most are non-operational for various bureaucratic and institutional reasons. (See Annex 5 for listing of programs.) In 1985 only 140 commercial financial institutions (of over 1900 institutions) were considered eligible to participate in the various government supported agriculture programs, mostly because of high arrearages on previous government sponsored loan programs.

The Agriculture Loan Fund (ALF), a government-supported program assisted by the World Bank and USAID, has been recently developed to strengthen both the government and commercial financial institutions. (World Bank funding for the program amounts to \$100 million (loan), supplemented by another \$20 million (loan/grant) from USAID.) The long term objectives are to institute policy and operational reforms and support agriculture activities. The donor credit financing resources are channeled through the Central Bank for onlending to selected commercial institutions. Technical assistance programs are to be administered in cooperation with the bankers' associations. The program is facing difficulties in implementation in part due to the conservative nature of the Central Bank staff and current economic and financial problems of the banking sector.

The current economic conditions of the country have contributed to the problem of the commercial and rural banks. The arrearages and loan losses are very high, and many of the private commercial banks are now under government-instituted reorganization. However, there still

exists a reasonably strong base to work with and with planned ALF technical assistance and restructuring a number of the stronger institutions could be coopted to participate and promote the program. The system now includes:

- a. private commercial banks (28) which now account for 75% of total financing to the agriculture sector (represents only 12% of their total loan portfolio and 60% of the loans are centered on sugar, coconut and rubber);
- b. private rural banks (1000) with 98% of the loans agriculture-related (most of which are delinquent);
- c. farmer-owned and provincially centered cooperative rural banks (29); a major expansion is now underway to cover each of the 72 provinces which offer good potential;
- d. thrift banks (136) of which 70% are in rural areas

Included in the above 28 commercial banks are several Universal Banks which function as both commercial and investment banks with equity and venture capital windows. The "Unibanks" have the potential to play an important part in rural credit working as "lead" banks with rural banking affiliates and in providing equity and venture capital under the proposed Satellite Farming Support Program. The involvement of the stronger commercial banks is seen as crucial in revitalizing the rural banking service system.

#### 4. Satellite Farming Financing Facilities- The Program Concept

##### a. FINANCE FACILITIES

A phased, highly focused and disciplined financing program is proposed. Key concepts of the proposal are:

##### (1) Finance Channels--

USAID loan resources would be coursed directly through selected commercial financial institutions for onlending to qualified firms and related contractor and farming operations.

##### (2) Phasing--

The phased financing program proposed provides for initial targeting on expansion of existing operations which already have established marketing networks and experience in operating in a very competitive environment. Parallel would be the development of innovative finance mechanisms (e.g., equity and venture capital financing) for new agro-projects proposed by entrepreneurs with sound business plans but limited capital.

##### (3) Sub-loan financing--

For existing satellite farming operations, sub-loan approval up to a free limit of \$250,000 would be delegated to the credit institution based on clear criteria and guidelines. Loans above the free limit would be subject to approval by a

Satellite Farming Support Program (SFSP) Advisory Board. For new satellite farming operations sub-loans would be on a co-financing arrangement with the credit institution and approval would be delegated to the SFSP Advisory Board. USAID financing would be limited to 50 percent of the approved credit and not more than \$3 million.

(4) Rural credit--

A "lead" bank arrangement is proposed in view of the weakness of the rural financial service system in loan appraisal and management generally. The "lead" bank would wholesale funds to their rural affiliates (either branch banks of the "lead" banks, private rural banks, e.g., thrift, rural and cooperative banks), who in turn would on-lend to the rural contractor intermediaries and farmer producer associations to form a larger financial system reaching down to the rural level.

(5) Criteria--

A basic criteria and feasibility requirement in the loan analysis and approval should be: (a) an established market link and (b) a satellite farming plan which employs a minimum number of farm families (e.g., 80-100 farm families).

(6) Terms--

A 25 percent equity contribution by the sponsor should be required. Interest rates would follow the ALF agreements of market rates and repayment. Maturity would be up to 5 years for equipment and modernization and 12 years for new plant facilities. Short term working capital credit would be available on a seasonal line of credit basis.

Demand for Credit Funds

The demand for funds cannot be quantified with any accuracy. As noted in the industry analysis, a few firms with the right personal connections and real estate collateral have been able to avail of commercial and government sponsored facilities. None could be said to be pleased with the arrangements considering the time and effort required and other transaction costs which discourage any would be investor.

The data below is based on interviews, loan applications of two commercial banks and information provided by the Securities and Exchange Commission and Ministry of Trade and Industry.

Credit requirements are of three types:

(1) Short Term Seasonal Credit-

For the processing firms, lines of credit for working capital are a standard requirement. The working capital requirements range from \$150,000 to \$600,000 (equivalent). Northern Foods' line of credit in 1985 was Pesos 12 million

(\$600,000). It is assumed that other less comprehensive operations would not exceed that amount.

At the farm level the requirement is primarily for seasonal (3-6 mo.) production input/working capital estimated to be between \$35,000-54,000 for the contractor intermediaries. The farmer producer associations once organized would also require similar amounts.

#### (2) Medium-term Capital Financing

Financing requirements for equipment, expansion and modernization of facilities vary but could reach as much as \$1,000,000. Ram Foods, for example, has equipment supplied under a 1965 (?) USAID financing program and was interested in securing spare parts and a second production line at an estimated cost of \$250,000. To date, they have not been able to secure the financing.

There will be cases where rural contractor intermediaries and farmer producer associations will require medium-term credit (1-3 yrs) for such items as small farm equipment, transport vehicles and construction of storage and grading facilities.

#### (3) Long-term Capital Financing

The total demand again cannot be estimated with any accuracy. The requirements are of two forms: debt, i.e., straight term debt and equity/venture capital financing. In theory, there are some 15 commercial institutions with long-term financing and equity/venture capital windows, but in practice little, if any, long-term financing is available. One large commercial financial institution revealed that they had on hand applications for agribusiness loans in the range of \$18 million, most of which were of a long term financing nature.

An official of the Ministry of Trade and Industry estimated that in the last four years the applications for assistance were in the range of \$250,000. This appears to be low. It may reflect the uncertainty of the environment and may correspond to limits set by a Central Bank facility which is directed at small-medium scale enterprise with assets of not more than Pesos 10 million (\$500,000).

### b. LOAN GUARANTEE FUND

Most agro-projects will require medium- to long-term financing and most new start-up projects would require some type of equity or venture capital financing. As indicated above, banks and credit institutions in the Philippines are risk adverse and even short term loans now require heavy collateral. The Philippine government has encouraged commercial banks to form equity and venture capital corporations for small and medium scale enterprise. However, little, if any, venture capital investments have

been made by the 17 banks listed as participating under the program.

A guarantee fund is proposed as part of the financing facility to assist in the financing of small-medium scale satellite farming agro-projects with long term viability, growth potential and with sound business plans. The guarantee facility would be used as a means to (a) induce private sector financing institutions to invest in productive agribusiness rather than invest their own generated savings and resources in financial instruments (Central Bank CDs and Treasury Bills) and (b) to encourage a change in the practice of requiring 150-200 percent real estate collateral in addition to the project assets. This eliminates most investors except the wealthy who are not interested in the more challenging agriculture projects

There is scope for USAID participation both as a guarantor and as a financier in efforts to develop venture capital facilities for small- and medium-scale satellite farming enterprise which can demonstrate viability and sound management. It is proposed that USAID initially restrict its participation to the guarantee of venture capital financing by participating financial institutions. It is expected that a well-disciplined program (clear criteria, appraisal and monitoring) with a guarantee will encourage investments by the private sector in satellite farming agro-projects.

The proposed loan guarantee program would be available to guarantee up to 50 percent of the amount financed up to a limit of \$1.0 million. The risk beyond the \$1.0 million would be taken by the sponsor and the participating financial institutions. The guarantee fund would need to be capitalized under the Satellite Farming Financing Facility, and managed by an experienced management institution (independent finance institution) which would invest the funds in interest bearing instruments constituting a reserve against which guarantees would be issued.

### c. REDISCOUNT FACILITY

Rediscount facilities are now available for participating CFIs involved in agriculture lending under the Agriculture Loan Fund (ALF). This facility should also be available for loans financed by the CFIs under the SFSF. Rediscount of eligible loans is now allowed up to 90 percent of the loan amount.

d. FINANCIAL SERVICES TECHNICAL ASSISTANCE AND TRAINING

The above financing facilities would be complemented by grant-financed technical assistance and training program under the existing ALF program. The program is now in its early stages of contracting for technical assistance to help strengthen the financial service system and review policy.

B. EXPORT PROMOTION PROGRAM

1. The Purpose

To develop a market information and export support program in order to expand the agriculture export base and supply demand for seasonal high value crops.

2. The Issues: Absence of accurate and useful marketing information and marketing service; non-promotive government policies.

3. Background

As noted above, the current economic conditions do not favor expansion of satellite farming systems and food processing plant capacity for domestic consumption. The potentials are now in exports where information and a data bank is important in order to compete effectively with other exporting countries. This requirement is especially true for new-starts which require accurate and timely market information on food product demand, prices and import requirements of the importing country. The government effort is basically limited to trade fairs and data made available by the Ministry of Trade and Industry (MTI) which is dated and of little use. (Trade fairs are promoted by the MTI Center for International Trade Expositions and Missions.)

Related is the lack of consistent government policy clear operational procedures and services for exporters. The firms interviewed complained about bureaucratic requirements, many of which had to pay "processing fees" to have their applications considered. Others complained that agribusiness and industry generally suffered because of high energy charges which they state subsidizes home consumers, export taxes, import tariffs on essential inputs and overvalued exchange rates. All of this translates to higher costs of doing business and discourages investments in agro-projects. The pending agriculture incentive legislation promises to address many of the policy constraints, but other studies on possible government interventions and policies to promote exports will still be required.

#### 4. Export Information Services and Policy- the Program Concept.

Agribusiness firms indicate a good awareness of the domestic market. A majority of the existing firms have international marketing and distribution networks already in place. The prospective new entrants, however, do not have access to market data outside of that provided by the Ministry of Trade and Industry (MTI) as a result of periodic trade fairs. This data is not kept current and is quickly outdated.

Financing would be provided for technical assistance in establishing an information system and data bank for agro-project exports. The proposal is that management of the data bank be coordinated closely with the financing services, both of which are preconditions to success of satellite farming projects.

The policy study requirements are seen as related to both the finance and information components. The premise is that information and policy studies need to be private sector-managed functions to be effective and responsive to the industry.

### C. TECHNOLOGY TRANSFER INFORMATION SUPPORT SERVICES

#### 1. The Purpose

To facilitate the information flow, diversify the approaches to extension and integration of improved technology and strengthen the public sector support service.

#### 2. The Issues

Absence of information on Satellite Farming experience and lack of technology transfer dissemination mechanisms.

#### 3. Background

Notwithstanding the long experience in satellite farming in the Philippines, there is almost a total lack of documentation or information on the processes involved and the experience of other satellite farming programs. Every start-up agro-project begins with a new series of experiments in farming systems and technology transfer processes. This may take as long as two years. Related and contributing to the problem is the poor information flow between government research and extension agencies, and weak links of both of the services to the private sector. The government research and extension services should be available to guide interested firms on satellite farming cropping patterns, soil testing, input requirements for high value crops and methods of farmer organization. This support and information flow would result in increased efficiency.

#### 4. Satellite Farming Technology and Information- the Program Concept

To initiate a more efficient technology transfer process, the Satellite Farming Support Program would provide grant funds to finance:

- (a) case studies
- (b) workshops
- (c) research on information sharing approaches

Grant funds would be provided to prepare case studies, organize seminars and workshops and other informational type programs which will provide exposure and experience on technology transfer and the performance and problems of satellite farming operations in general.

The studies and information sharing are expected to result in establishment of a continuing dialogue which will in turn result in better coordination of the private sector with research and extension services in such areas as farm extension, soil testing and research on variety improvement.

Illustrative topics for seminars and research could include, among others:

- state-of-the-art on community organization
- transition from subsistence to commercial farming
- synthesis of key factors in technology transfer

#### D. FARMER PRODUCER ASSOCIATION DEVELOPMENT

##### 1. The Purpose:

To develop organizational procedures and management systems to facilitate the expansion of satellite farming operations.

##### 2. The Issue- Weak Farmer Organizations

Satellite farming, by definition, is based on farmers working together to provide as a group the required raw materials. Therefore, a viable farmer producer organization is a precondition to the system. Viable farmer organization mechanisms are as crucial as credit and market linkages to the system.

##### 3. Background

Most existing farmer organization have been developed under various government programs. Farmers have been required to join these organizations to avail of government sponsored programs. The organizations to a great extent have been politicized with appointed leadership. A farmer may belong to as many as five local organizations whose

functions overlap, many times are duplicative and none of which have the discipline and self monitoring or control mechanisms needed in satellite farming operations. Farmer organizations with good leadership are needed as a focal point to negotiate contracts, facilitate orientation and training and for management and quality control.

There are some existing farmer associations that offer natural advantages and could be used as a base for new satellite farming operations. These include associations organized by the Farm Systems Development Corporation (FSDC), and National Irrigation Association (NIA). Both of these government agencies are responsible for assisting farmer irrigator associations and water systems. This is an essential resource for satellite farming. (As noted above in Part 1, these two organizations are already involved in experimental satellite farming operations.)

There are also a few farmer associations that have hired professional staff (manager and accountant) to handle their business affairs with very positive results. For example, there are several farmer cooperatives organized by private voluntary organizations that have grown to include business enterprise. The area marketing cooperatives, assisted by the Bureau of Cooperative Development (BCOD), have hired professional managers with good success. Also, the experience and success of the Second Laguna de Bay Irrigation Project (SLBIP) in organizing some 2500 farmers for satellite farming operations attests to the feasibility, importance and benefits of professional management. With professional management hired locally, producer associations should be able to expand their benefit programs to include other services such as credit union activities, marketing and input supply.

#### 4. Farmer Producer Associations- Program Concept

A pilot program is proposed to assist ongoing and new-start satellite farming operations strengthen farmer producer associations. The program would provide financing for:

- (a) technical assistance
- (b) training
- (c) management financing

It is proposed that up to 20 farmer producer associations with membership of at least 200 farmers involved in satellite farming operations be selected and provided with technical assistance, training and seed funds to help defray professional management costs for three years on a declining basis.

The proposed grant would be coordinated by a private voluntary organization such as the Philippine Business for Social Progress (PBSP) in consultation with the SFSP Advisory Board and in cooperation with such government institutions as BCOD, FSDC and NIA. The contract would provide for development of systems for information and education of farmers on satellite farming operations and requirements, and for the training of producer association leaders in farming systems technology including production planning and quality control.

#### D. IMPLEMENTATION ARRANGEMENTS:

Following is an expansion of the general implementation framework given above. As a reference point, the analysis of the "industry" indicates that the constraints to expansion of existing satellite farming operations are primarily functions of finance. And as noted above, new entrants are faced with the crucial requirement of establishment of marketing linkages and competition. Until the firms control mechanisms are firmly in place the initial 2-3 years of operations will only be marginally profitable. The basic requirements to be addressed in the implementation plan are:

- (1) Access to Credit: capital cost financing and working capital;
- (2) Marketing linkages and export information networks; and
- (3) Field management and control systems and related farmer organization planning.

As noted above, a guiding principal of the proposed program is that resources should be channeled directly through private sector entities where possible for needed efficiencies. The objective of this program approach is not to compete with the public sector but to reinforce and complement public sector programs focused at agriculture development generally. Again, as noted above, the premise is that the private sector will take every opportunity to develop, translate and apply new production, organization and marketing technology in the most efficient way possible to achieve optimum productivity and profits.

##### 1. Finance Facilities:

There is precedence for AID working directly with private commercial institutions. In 1985 a centrally funded standby facility of \$2.0 million for export oriented small- and medium-scale enterprise was approved by the AID Office of Investment, Bureau for Private Enterprise. The

participating institution is the Far East Bank and Trust Company, a Philippine Unibank. This is one of several "universal" banking institutions along with other private universal banks such as the United Coconut Planters Bank, PCI Bank and Bank of the Philippine Islands (BPI) which would be considered good candidates for participation in the program. BPI has indicated interest in such a program and is already financing satellite farming activities of the Ayala Agriculture Development Corporation (a subsidiary of the Ayala conglomerate which owns a major share of BPI).

The various activities would need to be coordinated with the public sector including:

- the Central Bank (rediscount and ALF technical assistance);
- Ministry of Agriculture (technology transfer, farmer organization);
- Ministry of Trade and Industry (export promotion); and
- specialized government corporations such as Farm Systems Development Corporation and National Irrigation Authority (farmer organization).

a. General Administration/Organization:

The central component of the Satellite Farming Support Program is the financing facility. As recommended above, establishment of a SFSP Advisory Board is proposed. The Board would include representatives of the participating finance institutions; PCCI Agriculture Committee; a member of the Central Bank's ALF Committee; and a representative of USAID. The Board would provide policy oversight, review loans above the free limit, guide grant activities and coordinate with other private and public sector agencies involved in agriculture credit. The Board would be supported by a project-financed SFSP Secretariat responsible for day to day activities. Note: Active participation by the Philippine Chamber of Commerce (PCCI) is considered important to the success of the program. The PCCI is the leading private sector interest group in the country supporting industrial development and has taken a strong stand in promoting a policy of dispersion of industry to the rural areas including agro-industry. It has also demonstrated leadership and ability to influence national policy which is key to the proposed program.

To the greatest extent possible, the participating finance institutions and the SFSP Advisory Board would have authority for approval of loans and negotiation of contracts within clear guidelines and criteria. USAID would have post-audit authority as it does under all agreements. In the initial phase, the loan review process should involve representatives of all institutions involved in the project.

The intent is to use the loan review process as a learning experience, provide an opportunity to clarify issues and improve procedures, critically review agro-project appraisals and permit the institutions involved to form trust and good working relationships with each other. This is critical to the long-term success of the program.

At the farm level, for small equipment and seasonal working capital lines of credit, a local SFSP Committee should also be established involving representatives of the "lead" bank, rural banking affiliate, local leaders and the agriculture development officer. The Committee would need to insure that the affiliate rural banking institution has the capacity to monitor the agro-project i.e., field appraisal and inspection staff to insure that funds are applied for the approved purpose.

#### d. Processing and Feasibility Assessment

The experience of loan losses and high arrearages of previous government-supported agriculture loan programs point to the need for better criteria and analysis of loan proposals. Each proposal would need to be analyzed and reviewed for technical, managerial and financial feasibility. A primary requirement would be an established market for the product, or in the case of a new satellite farming operation, a business plan which can justify the investment.

In most cases the existing borrowing firms are of sufficient size and have experience in preparation of feasibility studies and financial data needed for project appraisal. If the agro-project is complex then it is expected that the services of a local consulting firm would be secured to prepare the required financial and technical data. The cost could be considered as part of the loan, if approved.

In the case of loans to farmers' producer associations and local contractor/entrepreneurs for seasonal lines of credit, the "lead" bank and rural affiliate staff would need to work with the borrower in preparing the loan application and cash flow and technical analysis. A primary requirement would be a contract (established market) with a processing firm. The analysis would need to carefully consider contractor experience and reputation as an important basis for approval. Similarly, in the case of farmer organizations the strength of leadership and management reputation will be critical evaluation factors. Until there is sufficient experience with the borrower, each seasonal line of credit should be considered a separate agro-project, i.e., the following seasonal line of credit should be evaluated on its own merits.

To strengthen the rural credit and provide the lending institution with some security, a standard requirement would be for the rural borrower to assign progress payments from the firm to the lender to amortize the loan within the production period. Experience in farm lending indicates that it is very important that a schedule of repayment be established which coincides with the receipt of payment for the output. This also provides a form of management control for the lender.

A more efficient assessment and review system must be developed to act quickly on loan applications. The 6-12 month delay in processing of loan applications has been a serious weakness in the present system. A uniform loan application which provides basic information on the essentials of the agro-project to be financed would be one measure to facilitate the process. This would keep the burden of paperwork to a manageable level and allow the financing institution to process the request as quickly as possible.

c. Loan Guarantee Facilities:

The loan guarantee fees assessed for the guarantee (usually 1 percent of the loan amount) would be used to cover the administration of the fund and any excess would be added to the reserve. The guarantee fund concept can only achieve its objective if, first, the participating financial institution can be convinced of the Fund's integrity and, secondly, if the Fund is shown to be operable, i.e., the management staff can evaluate the loans and expeditiously process the applications eligible for guarantee. Accordingly, the management staff must be trained in risk management techniques including a careful review of loan applications submitted for guarantee, and continual monitoring of the agro-project to assure that actions are being taken promptly on problems and arrearages before any of the loans deteriorate.

2. Technical Assistance and Training

As discussed above, the focused satellite farming assistance and training grants would be in direct support of the central loan fund facilities. Accordingly, the SFSP Advisory Board would play a key role in the development of the terms of reference and in monitoring the activities.

a. Finance Related Technical Assistance

The grant assistance provided by USAID under the ALF to strengthen financial institution capacities and policy would complement the proposed Satellite Farming Support Program.

#### b. Export Promotion

The grant technical assistance focused at export promotion is in direct support of the finance facility. Following the general principles outlined above, the grant funds would be coursed through private sector institutions and foundations selected in consultation with the SFSP Advisory Committee. The Secretariat to the SFSP Advisory Board would manage the contract technical assistance. The terms of reference for the contracts would be developed in cooperation with the PCCI, MTI and exporters association, and approved by the SFSP Advisory Board.

In general, the terms of reference would generally focus on: (1) establishment of a reliable information management system and a data bank to facilitate the marketing of Philippine agriculture products and (b) export related policy and government services which are needed to create the economic environment to encourage investments and exports.

#### c. Technology Transfer Information and Support Services

The conclusions of this study indicate that information sharing on improved technologies and support services between the public sector and the private sector are extremely weak and need to be improved. It is proposed that grant technical assistance resources be channeled through one of the agriculture foundations of the University of the Philippines which has a good working relationship/network with the MAF, PCARRD (the government's research organization) and the various agriculture universities and colleges. The program would complement the proposed export promotion program described above and the proposed technical assistance to strengthen farmer producer associations. The program would build on and also complement other government supported programs of the Ministry of Agriculture such as the Rainfed Resources Development Program which also works on small-farmer development systems.

The terms of reference would be developed with the Advisory Committee and in consultation with the PCCI and the Ministry of Agriculture. The foundation would be contracted to develop case studies, organize workshops and to otherwise assist in the coordination of information services between the public and the private sector. The opening of two-way communications is expected to result in improved attitudes for cooperation and increased willingness of the public sector to provide support to the private sector.

#### d. Farmer Producer Association Improvement

Over the life of the project, it is proposed that up to 20 farmer producer associations with membership of at least

200 farmers involved in satellite farming operations be selected and provided with technical assistance and seed funds to help defray professional management costs for three years on a declining basis. As a condition to participate in the experimental effort, the farmer members would be required to contribute to a management fund from the proceeds of the satellite farming operation and other new producer association activities to support the costs of a continuing professional staff for the producer association.

There are several private voluntary organizations (PVOs) that are concerned with farmer organizations and the rural sector generally such as the Philippine Business for Social Progress (PBSP) who also has direct links to the business community and the rural sector. One or two of these PVOs would be selected to work with the satellite farming entrepreneurs, BCOD, FSDC, and NIA in developing organization mechanisms and information and education programs focused on satellite farming requirements.

The program would test whether it is technically and financially feasible for farmer organizations to hire professional managers and accountants to handle satellite farming operations as demonstrated in the Second Laguna de Bay Irrigation Project (SLBIP) described in Part I above. Test areas should be in geographic areas where there is already satellite farming operations. These are now centered in the Provinces of Bulacan, Pampanga, Pangasinan, Laguna, Cavite and Ilocos Norte.

Detailed scopes of work for the hiring of management services (manager and accountant) would be developed by the SFSP Advisory Board and representatives of farmer organizations and in consultation with BCOD, FSDC, and NIA.

E. FINANCING REQUIREMENTS (\$ 000)

	Loan	Grant
1. Institutional Level-		
A. Satellite Farming Development Facility		
- Financing Facility **	13,000	
- Guarantee fund	2,000	
- Rediscount	*	
- CFI Technical Assist.	*	
- CFI Training	*	
B. Export Promotion		
- Technical Assistance		250
- Studies		100
C. Technology Transfer Information and Support Services		
- Case studies		100
- Workshops		50
- Other research/information sharing		50
2. <u>Farm Level-</u>		
D. Farmer Organization Improvement		
- Management support fund		400
- Training		100
- Technical Assistance		150

## Estimated Funding Requirements:

(1) Accelerated Agriculture Production	15,000	1,200
(2) Private Sector Contribution (minimum) **	4,000	

\* Existing program under the ALF

\*\* A 25 percent contribution by the loan recipient is a standard requirement in the financing of projects by USAID.

## CHAPTER IV: FEASIBILITY ASSESSMENT

The aim of the proposed program is to provide the limiting elements (e.g. credit) and supporting ingredients (e.g. market information, farmer organization) that will facilitate the expansion of satellite farming systems.

The analysis below will discuss (a) technical, (b) financial, (c) economic, and (d) policy concerns and issues of the program and potential problems still to be addressed.

### A. TECHNICAL ASSESSMENT

The "industry" analysis indicates the technical viability of satellite farming systems to effectively address the need for: (1) a continuing supply of technology, extended to the farming community; (2) increased rural productivity and small farmer income; and (3) an integrating commercial arrangement which coordinates seasonal crop production and marketing.

#### 1. Integrating Relationships of Satellite Farming

The integrating relationship of small farmer production and a processing firm brought about through satellite farming is effective in addressing the limitations and is technically, financially and economically practical. The system satisfies the following: (a) seasonal high value crop production is usually only technically and economically feasible through labor-intensive farming systems and employment of family labor; (b) to obtain the desired commercial product, improved cultural practices and improved technological inputs are required; (c) production planning and forward contracting must be done well in advance of the harvesting and processing period for seasonal crops; and (d) small farmers do not have the technical know-how and market linkages required to commercially produce and market high value perishable crops.

#### 2. Acceleration of Technology Transfer:

The empirical evidence of this study does indicate that indeed the technology transfer process is effectively improved and accelerated through private sector involvement in satellite farming systems. An interesting comment on the process was provided by former Deputy Minister Manny Lim of the Ministry of Agriculture and Food. He attributes the decrease in lag time to the simple fact that the private sector seeing an opportunity or market will seek to invest, without benefit of extensive research, in order to establish itself and capture a market, leaving the field testing for

adaptability to local conditions to the first and second year field work. In essence, the adaptation is forced and the usual five- to ten-year process of research and testing to identify the most ideal technology is avoided. Nevertheless, over a two-year period an optimum technology can be achieved and profitable farm operations can be reached. (Annex 1 provides an outline of the technology transfer process and the impact of private sector involvement on the lag time for the transfer and integration of technology.)

### 3. Alternatives to Satellite Farming

The study reviewed possible alternatives to satellite farming arrangements. Essentially the alternatives are to secure supplies under non-contract arrangements directly from farmers, middlemen or traders at harvest, or for the firm to establish its own farm operations.

a. The difficulties inherent in the direct purchase approach are that (1) the farmer cannot anticipate the market and will not invest scarce resources (land and labor) without an assured market, and (2) leaving planting and harvesting dates to the independent judgment of farmers and traders, without advanced scheduling, would not assure timely delivery and quality of production.

b. The experience of corporate farming (corporate owned land, equipment and hired labor) of seasonal crops by firms in the Philippines has been a dismal failure. For example, attempts by the private sector in corporate farming to satisfy the government's General Order 47, which requires employers (with 500 or more employees) to provide food supplements (e.g., rice) to employees, was disastrous in all but one case. The lessons learned are that labor-intensive crops do not lend themselves to commercial farming. Small-scale farmers on a daily wage, with no attachment to the land they farm, will not commit the labor resources (12-15 hour day) required of seasonal crops, and less so for seasonal high value cash crops where the labor of the entire family is required. In addition, the high capital costs of land and equipment do not make seasonal cash crop farming financially/economically feasible.

### 4. The Technical Issues to be Addressed:

#### a. Farmer Attitudes- Risk Aversion

It cannot be assumed that the small-scale farm family will diversify into high value cash crops or allocate his scarce resources on the promise of substantial increase of family income. The study indicates that small farmers will resist new technology or diversification into high value

crops because of (1) his experience with the volatility of high-value cash crop market prices (without forward contracts) and (2) the perceived security of concentrating on the traditional rice and corn crops as a form of food security and with which he is familiar.

COMMENT: Only with secure marketing arrangements (e.g. satellite farming contracts) and 2-3 years of education/demonstration of the benefits of application of new technology will the small farmer be convinced to change his existing farming practices and "risk" his scarce resources of land and labor in new technology. The implication of this to satellite farming is that the firm must be prepared to devote resources in the first year to an extensive education and orientation process to integrate the new technology. A good model for farmer orientation and education has been developed by Northern Foods Corporation. (See Annex 3 for description.) This information and education process is especially important for export oriented agro-projects where quality is a primary criteria.

#### b. Management Controls on the Farm

In bringing together largely uneducated subsistence farmers and entrepreneurs in a commercial venture there are special social/cultural and management problems that must be considered and planned for, especially the costly controls that seem to be inherent in the system and which deter investments by the private sector. Two common problems are (a) "leakage" of production inputs through the sale or application of the input on other crops, and (b) the diversion or sale of the final product in the commercial market when funds are needed or the market price is higher than the previously set contract price.

COMMENT: No cost-effective method of management control has been found to deal with this problem except through continual farmer education on contract responsibilities (and consequences of default) and extensive management controls, including good accounting procedures and withholding some portion of the proceeds until the contract is completed. Experience has been, however, that over time (two to three years) the ongoing agro-projects have been able to organize a stable group of farmers who will respect the contract terms. The "learning" costs are high and discouraging during the initial years.

For the long term, the most effective mechanism for control would appear to be the development of stronger farmer organizations which can help monitor their own members. The proposed "farmer producer association" program attempts to address the problem through the provision of grant technical assistance from a private

voluntary organization and experimenting with hiring of professional management as part of the loan package where needed.

c. Public Sector Support- Information Dissemination

The weakness in coordination and information sharing within government research and extension agencies and between the extension service and related private sector activities creates inefficiencies and duplication of effort in technology testing and extension.

Unfortunately, there exists a degree of mutual distrust between the private sector and the public sector. The private sector's perception is that the public sector agencies lack the capacities and interest to support agribusiness. The public sector feels that the private sector is exploitive of the small farmer. In large part the distrust is a result of poor communications. Also, the public sector research and extension services lack incentives to do the needed field work because of lack of mobility, low salaries and per diem, limited technical and extension training, lack of equipment and poor organizational structure.

COMMENT: The proposed program cannot address the attitudinal issues. Both the public sector and the private sector would benefit, however, from an open information and communication process regarding satellite farming programs, performance and problems as a means to facilitate the technology transfer process. Accordingly, a modest technical assistance effort is proposed under this program to develop a technology transfer information sharing and support service focused primarily at satellite farming systems. It is expected that through the development of an information system for satellite farming systems, more permanent two-way communications can be established, resulting in more efficiencies in the transfer of technology generally and improved support services to the private sector.

B. FINANCIAL ASSESSMENT

The centerpiece of this proposal is a comprehensive funding facility. Coursing of the funds directly to the financing institutions is intended to provide flexibility and efficiency in service. The demand for financing is now primarily related to exports as shown by MTI data on the number of inquiries by prospective entrepreneurs, firms registered as food product exporters, loan applications pending with commercial financial institutions and comments of firms interviewed.

## 1. Finance Requirements

### a. The Firm

The barriers to entry of new firms are in high cost of establishing processing facilities and establishing a market in a competitive environment. Existing firms with marketing networks have the advantage but they still require financing for expansion of facilities or replacement of outdated equipment and for working capital. New entrants cannot survive in the competitive environment without some institutional support in financing and market information. To compete effectively and secure contracts, the firm must be of a certain size to warrant any confidence in its ability to perform. The financing costs of establishing such plant facilities are relatively high. For example, Northern Food Corporation with plant and equipment investments of about \$5.0 million would be considered as small by most U.S. standards and medium sized by international standards. Most new entrants will require equity or venture capital.

### b. The Contractor and Farmer

In contracts where the financing is shared with contractor/intermediaries and farmers, the typical financing requirement at the farm level is for seasonal lines of credit for working capital (procurement of production inputs farmer subsistence requirements, accounts receivable financing). Depending on the nature of the contract arrangements, either the farmer/association and/or the contractor would be seeking at least two months of financing until production begins. At about the two-month period the first weekly progress payments would be received and the financing requirements correspondingly decrease. The financial outlay by the local contractor/farmer association or exposure by the lender at any one time in seasonal production agro-projects is at most 60 days of working capital. This would amount to about \$12,000-18,000, decreasing to about 15 days once the progress payments begin. Both the contractor and farmer have little access to the required credit.

## 2. Finance Resources:

The continual complaint is that there is a lack of access to credit. The anomaly is that there are existing financing programs (e.g., Agriculture Loan Fund (ALF) and the Industrial Guarantee Loan Fund) and there are also reports that many of the commercial financial institutions have excess lending resources but few borrowers. It is generally felt that these institutions do not have the disposition (in addition to their lack of institutional experience) to enter into agro-projects without attractive

incentives to cover what they consider high risks and costs of administration.

In the case where finance institutions are disposed to consider agriculture loans under either government-sponsored programs or using their own funds, the borrowers cannot access credit because of the high collateral and transaction costs including long delays in the review and approval process. The end result is that most finance institutions have chosen to invest in Central Bank CD's or Treasury Bills as an alternative to getting involved in agriculture lending (which also satisfies the government requirement that 25 percent of loan resources must be invested in the agriculture sector).

COMMENT: The concern is that the proposed Satellite Farming Support Program would add to the fragmentation and overlapping structure of the existing loan programs, none of which satisfy the need for adequate service, timeliness and reasonableness of interest rate. The proposed SFSF is not intended to compete with existing programs but is an attempt to add impetus and efficiency to lending to the agriculture sector by eliminating approval layers and bureaucratic hurdles. The highly focused experimental approach with appropriate incentives to the participating institutions and supportive technical assistance should:

(1) provide lending efficiency for a manageable subsector or target clientele and system which has demonstrated viability;

(2) coopting the financial institutions to promote satellite farming and add other efficiencies to agriculture lending;

(3) provide experience to encourage the use of their own resources in agriculture lending.

### 3. Foreign Exchange Risk

A concern of the borrower and the financial sector is the foreign exchange risk involved in dollar-financed loans with the continuing depreciation and political uncertainty. The financing institution will normally require dollar repayment at the exchange rate then prevailing which passes on the risk to the sub-borrower. In today's environment hard currency loans with local currency repayment or passing on the foreign exchange risks to sub-borrowers would make for an effective interest rate of about 40 percent. This would require the firm to pass on the costs to the consumer, no longer making them competitive.

A suggestion made was that until some stability in the economy can be realized, and in the interest of stimulating the economy and agriculture sector, subloan agreements

with the lending institutions provide an allowance for foreign exchange losses, e.g. 10 percent for short-term credit and 25 percent for medium- to long-term loans. This is based on estimates of the expected depreciation in the peso in 1986 and for the foreseeable future. Another position is that the risk is a cost of doing business and the sub-borrower must treat the risk such as any other increase in prices of intermediate or raw materials.

Assuming an accommodation can be reached in order to stimulate agriculture lending, criteria will need to be developed to assure that the any allowance or consideration does not provide any of the parties an unearned windfall. The allowance would need to be reviewed periodically to adjust the agreement terms to the existing conditions.

COMMENT: The Philippines is a recipient of substantial grant funds under the Economic Support Fund. Assuming that these grant funds are made available for this activity the repayment of hard currency loans in local currency would be less an issue with a policy decision or acceptance that the revolving fund would be depreciating or self liquidating over time.

#### 4. Financial Institution Capacities

There are institutional improvements in which the financial institutions must be encouraged to invest in order to build their capacity to work with agriculture clients. Only a few institutions have trained staff and experience in agriculture lending. The risk of agriculture lending is increased by a lack of capacity to analyze and monitor farm credit. (This becomes both a technical and financial issue.)

The finance institutions admit that staff involved in commercial lending are hardly aware of the problems of small farmers and technical considerations of farm credit. Criteria and analysis now applied by most of the commercial banks to determine whether a proposed agro-project is bankable is the same as for short-term commercial loans. As noted above, the practice has been to rely heavily on collateral (150-200 percent real estate collateral outside of the project assets) rather than allocating the time and money necessary to carry out an adequate appraisal to determine the soundness of the proposals on their own merit and internal collateral. Finance officials understand that commercial credit analysis and collateral requirements do not lend themselves to production-type loans (where cash flow, experienced technical management and market linkage are the important tests for viability) but are reluctant to invest in capacity building.

COMMENT: The ALF appraisal staff (IBRD and USAID) have also identified the weakness in the capacities of financial institutions to process loan applications including the appraisal and follow-on monitoring. Accordingly, a grant technical assistance component was established to develop this capacity through technical assistance and training. As noted above, there are at least four strong universal banks with branch and correspondent rural banks which have ventured into agriculture lending which could already form the core for the lead bank lending arrangement to the rural areas. Over time as capacities are built, other institutions could become participants in the program.

In the rural areas an added constraint is the lack of financing institutions qualified to participate in finance programs. Most of the 1000 rural banks are faced with high arrears and other management related operational problems. Even in the best of times the contractors and farmers have had to resort to financing through money lenders at monthly interest rates as high as 12-18 percent rather than attempt to work through the hurdles of the local finance system. The ALF is attempting to address this issue.

##### 5. Terms--Interest Rates, Equity Contribution and Tied U.S Procurement

The ALF requirements are for interest rates to be set at the existing market rates. An added requirement of USAID programs is a 25 percent equity contribution by the firm in the financing of the agro-project. Under U.S. regulations, procurement of equipment and materials must be from U.S. sources which raises the issue of price competitiveness with other suppliers.

The requirement of a 25 percent equity contribution appears to be less of a concern than the market interest rate for medium- to long-term loans. According to firms interviewed, the market interest rates reaching 40 percent would not induce private sector investors to borrow considering the risks involved and the costs of securing the loan, i.e., bureaucratic problems of loan processing, long delays and reported "processing charges". (The interest rate issue is also discussed below under Policy Issues.)

The tied U.S. procurement has caused considerable problems in other USAID financed programs. For example, in many cases Japanese and Taiwanese equipment is cheaper by considerable margins. This requirement in addition to 40 percent interest rates would again not encourage investment. There is little relief possible under the legislation, and some other means must be developed to offset the tied procurement.

COMMENT: The grant technical assistance aimed at making commercial financial institutions more responsive and efficient is one attempt to offset the high cost of capital. The assumption is that with efficient procedures and efficient processing of loan applications, the administrative costs will be lower and the market interest rates will not be so ominous. From the viewpoint of the finance institution, the equity investment and market interest rate requirements are reasonable, and financially viable agro-projects should be able to handle the terms. The proposal also suggests that the problem of financing in the rural areas can be mitigated with a "lead" bank arrangement whereby the financing requirements of the firm and the farmer/contractor can be coordinated by the stronger institution. The larger institution can presumably provide resources and qualified staff to work with the weaker rural banking structure for the benefit of both.

A possible incentive for borrowers of hard currency for import of equipment tied to U.S. source is that loans would be at a preferential rate to compensate for the higher cost. For example, a hard currency loan repayable in local currency would carry a 35 percent interest rate.

## C. ECONOMIC ASSESSMENT

### 1. Economic Benefits

#### a. The Firm

The firms interviewed commented that a minimum of 20 percent return was expected from their satellite farming ventures. Evidence indicates that indeed returns to the firms were at least 20 percent and in most cases were reaching 35 percent. Independent estimates are that the returns are closer to 40 percent, a return acceptable worldwide for these types of operations which are subject to major risks.

The variance in the rate of return received is primarily a function of the type of contract arrangement. The fewer the layers between the firm and the farmer, the larger the return to the firm. Accordingly, satellite farming operations that follow the MFC model, which works directly with the farmer associations, should receive higher financial returns to compensate for higher risks in providing for the full range of inputs and the increased management costs.

Satellite farming arrangements that follow the more common CMC model must accept higher costs of raw materials and therefore smaller margins, but still attractive in the range of 20-25 percent. (The exact returns could not be pursued due to difficulties in obtaining financial data. As

noted above independent estimates are that profits range between 35 and 40 percent.)

#### b. The Contractor/Intermediary

Considering the number of local entrepreneurs (contractor/intermediaries) interested in joining with agribusiness firms in satellite farming relationships, returns for contractor operations in the range of 15-20 percent appear to be competitive with other rural enterprise activities, even with local financing costs of 12-18 percent monthly.

To be considered for purchase order contracts by CMC, the local entrepreneurs must be able to demonstrate that they have the management experience and finances to provide the required inputs to the farmer or such arrangements that will assure adequate technology inputs. As such, the returns indicated above cannot be realized unless the contractor has access to credit on a timely basis. As noted above, the financing requirements have been a major constraint to local entrepreneurs who could otherwise meet the firm's criteria. Contractor/intermediaries in most cases have been able to secure financing from local money lenders and in a few cases from commercial institutions through assignment of proceeds.

#### c. The Small Farmer

There is a great demand by small farmers to participate in satellite farming arrangements in areas where the system has been demonstrated. The attraction is in the increased income and guaranteed price for the output. (These income benefits should also be looked at against the burden of labor imposed on the farm family. See issues below.)

The study compared income derived from labor-intensive cash crop farming against income received from the traditional subsistence farming of rice and corn crops. As would be expected, incomes per season are greater for the high value seasonal cash crops (with improved technology and the related higher labor inputs) as compared to the subsistence crops. Also, most satellite farming cash crop operations take place during the dry season when rice or corn cannot be produced, therefore there is no opportunity costs except in the irrigated farming areas where there is sufficient water for year around rice farming. Farmers who rent their otherwise idle land during the dry season to satellite farmers under sharecropping arrangements derive added income at little, if any, cost to them.

Interestingly, the analysis of farmer incomes does not show a great difference in the incomes between individual satellite farmer participants as compared to individual non-contract farmers also involved in some form of cash crop farming. However, the non-contract farmer does not have any security in price on the open market, a risk which the

satellite farming participant avoids. One can also safely assume that considering the numbers involved in the satellite farming operations (minimum of 80 farm families), there is an aggregate increase in income of the farmer association participating in the satellite farming operation in a given area against the aggregate incomes of non-contract farmers in the same area, i.e., the satellite farming activities spread benefits over a large group of farm households in turn benefiting the larger community.

#### D. SOCIO-ECONOMIC ISSUES

The economic benefits of satellite farming appear positive from every perspective. However, there are related social and benefit-cost issues of concern which are inherent in the system.

##### The Farm Family and the Community

The labor intensity of satellite farming has its effect on the farm family. The addition of another crop results in the need for one or more of the children to leave school to work on the farm. In addition, the health of the entire farm family is affected, especially during the harvest season, by its intensity.

The system requires quality output and the need to meet production schedules. This requires long working days by the whole family, especially during harvest when picking, hauling and grading may involve a 20-hour work day for the whole family. Traditionally under subsistence cropping, farmers had arrangements with their neighbors or farmer associations to share or exchange labor during the harvest period. The satellite farming system requires careful selection of farmer participants who will perform. Because of the weakness in farmer organizations, satellite farming operations establish ad hoc organizational arrangements whereby farmers are individually picked to participate in the operations based on their reputation or reliability. Under these ad hoc arrangements, there is no cohesiveness in the participating group or with the larger community, creating conflicts within the community.

There is a long standing mistrust by the small farmer of entrepreneurs and commercial enterprise (and government programs) generally. The perception at the farm level is that the farmer has been exploited and 'outsiders' are there to get the most out of the farmer at the least cost.

As noted above, farmer organizations are generally weak and therefore cannot be effective in bargaining with the entrepreneur to enhance the farmer's benefits and return on labor. During the survey it was noted that there were significant variances in contract arrangements and the

contract price given the farmer. Price difference was attributed to the amount of outside production inputs financed/provided by the firm or the contractor. Data is not available to make a good comparison but there is speculation that some farmers are compensated less for their labor under similar contracts.

**COMMENT:**

There is no easy answer to the socially-related problems. Government intervention and regulations would not be the answer. The strengthening of farmer organizations including the training and development of farmer leaders and hiring of professional managers by the farmer association would certainly work in the interest of the farmers. This could result in more uniformity in contracts used by firms in satellite farming, thereby protecting the interests of farmers and reducing whatever discrimination there is among the various satellite farming operations. It is also anticipated that with stronger farmer organizations other services such as health services could be negotiated under the contract similar to those provided to other trade associations.

Notwithstanding the possible problem of variance in contract prices to the farmer, the study indicates that farmers under satellite farming arrangements receive better prices than through selling their surplus through traders. The exact comparison cannot be made since the farmer-trader arrangements are complex. The traders provide for immediate personal unsecured loans at the farm and other services not offered under the less personal commercial arrangements.

This proposal suggests that it is in the long-term interest of agriculture generally to strengthen farmer producer associations through training, technical assistance and hiring of professional managers for added efficiencies. The SLBIP and NFC operations are good examples of the advantages to the farmer and to the firm of having strong farmer organizations and professional managers. Stronger associations also increase farmers' capacities to finance collectively such items as hand tractors for land preparation and vehicles for transport which can be shared to make the individual farmer's work easier.

**E. POLICY ANALYSIS**

The proposed program offers opportunities to address three of the major AID policy areas, namely: private sector development, institution building and policy dialogue. In regard to the later, the firms' investment decisions are influenced by the consistency of government policy on every aspect of private sector operations, especially in

facilitating exports and assuring access to credit, among others.

### The Issues

#### 1. Market Development/Export Policy

As noted, under present economic conditions, the main potential for satellite farming is in combination with export promotion of high value cash crops. One obstacle to expansion of exports is the lack of a coherent and consistent policy by the government on exports and an effective marketing information program.

COMMENT: Included in this proposal is grant assistance to the private sector to develop markets by establishing an information base and data bank on the foreign markets and requirements to enter the market. This would facilitate a dialogue with government leaders who now have issued pronouncements in the latest Five Year Plan acknowledging the importance of the agriculture sector in moving the economy. There is legislation now being developed under an Agriculture Incentive Bill that appears very supportive of exports. There are three important draft provisions in regard to export promotion, i.e.:

- elimination of all export taxes;
- tax credits equivalent to (?) percent of the FOB value of "new" export products (may be used in payment of income tax); and
- elimination of duties on agriculture production raw material inputs such as seeds, intermediate goods, equipment and spare parts for exporting industries.

Note: To be effective, the legislation will need to have a parallel commitment to facilitate the firm's access to financing and hard currencies to import essentials. In addition, the banking system must also be able to efficiently process documentation for import and export transactions.

#### 2. Interest Rates

The interest rate structure for loan funds raises several policy issues for the lending institution and the borrower. Private sector firms interviewed commented that they would be prepared to contribute 25 percent of the value of the total costs of the agro-project if they could receive loans at "reasonable" interest rates. However, on the lending side, the guiding principle of AID is that the on-lending interest rate should be at market rates to allow full coverage of the lending costs and a reasonable return to the lending institution. This appears to be the only reasonable way to encourage commercial lending under

any situation. The market rate under these guidelines would currently be about 20 percent (prime rate at 16 percent) for short term seasonal local currency financing and about 40 percent for dollar loans repayable in local currency.

As noted above, the issue is further complicated by the requirement that imported items must be of U.S. origin. Thus, the cost of financing is a major cost item for agribusiness projects and investors require some incentives such as preferential interest rates in order to encourage investments in agriculture projects also considering the higher management costs and risks involved.

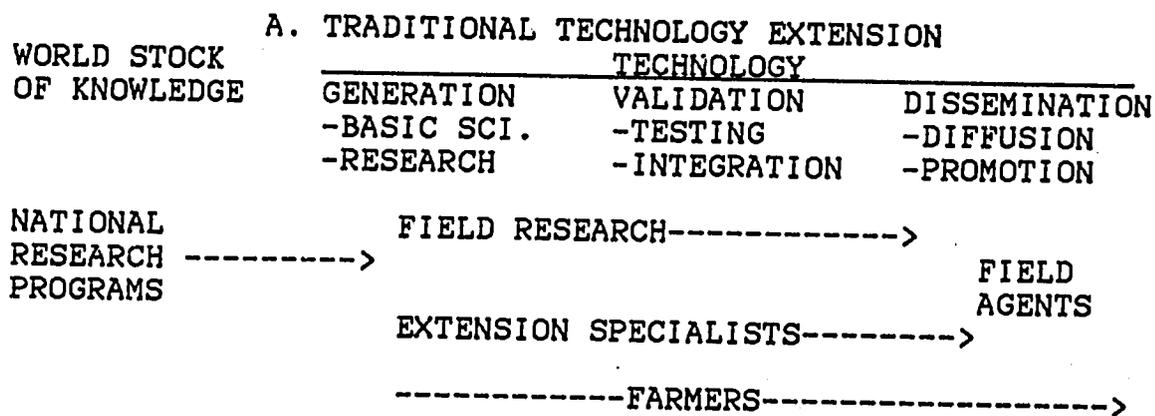
COMMENT: Part of the solution appears to be in assisting both the finance institutions and the firms involved in satellite farming to establish institutional and operational efficiencies at all levels to cut down on direct and indirect costs of doing business. The finance institutions need to be more efficient in their lending operations, including minimizing risks by better staff appraisal and field monitoring. These and other efficiencies over time would lead to lower administrative costs and cost of financing to the borrower. The firm or agro-enterprise may be able to cut high management costs and risks with stronger management controls which would be supported by better farmer organizations with which to work. With better finance service and improved farm level organization and management the entrepreneur may be more inclined to invest even at market rates.

This analysis indicates that with USAID concessional loan financing, local currency financing could be near prime rates and still allow for a spread of at least 12 percent to cover administrative costs and allow for a reasonable return for servicing the loan and risks. The selected "lead" banks could also wholesale funds to their rural affiliate banks for on-lending to contractor and farmer sub-borrowers charging 20-25 percent rates with each sharing in the spread. This annual rate is much less than the current 12-18 monthly interest rate being paid to the local money lenders. With efficiencies in the financial service system, i.e., timely and reliable financing and lower indirect transaction costs, it is assumed that the firm and the lending institution can both do business profitably.

REFERENCES:

- AID, Bureau for Private Enterprise, Agribusiness and the Small Scale Farmer, A Study by Business International Corp.
- AID, Bureau for Policy and Planning, Farming Systems Research, Issues for Project Evaluation
- AID, Agribusiness and Rural Enterprise, Bureau for Development Support,
- AID, Rural Financial Services Project Paper, Manila, Sept. 1985
- AID, Agribusiness Development Project Paper, Guatemala, August, 1984
- Claar, J.B. and Watts, L.H., "Knowledge Transfer in Developing Countries", Issues, Status, Constraints and Outlook, Colorado State Univ., 7/83
- Coie, R. D., "Who Moves the Farmer: Some Issues in Communications and Extension", (mimeographed)
- Cruz, T.S. and Quiamco, B.M., "Needs of Agriculture Technology as Inputs to a Learning/Delivery System", PCARRD (mimeographed)
- Goldmark, Parks, Stout, Rochin, Peruvian Agroindustry Performance and Prospects for Action, DAI, Sept. 1983
- Gilbert, E.H., Norman, D.W. and Winch, F.E., Farming Systems Research, A Critical Appraisal, Dept. of Agriculture Economics, Michigan State Univ., Paper No.6, 1980
- INTERPAKS, "Problems Facing National Agriculture Extension in Developing Countries, Univ. of Illinois, Series No.3, 1984
- Lim, R.H., "High Costs of Technology Transfer", (mimeographed)
- McPherson, P., "Mobilizing Small Farmers", Horizons, 5/83, (USAID)
- PCARRD, "Research Utilization Strategy: Completing the Cycle", Ch.13, (mimeographed)
- PCARRD, "Towards a More Self Reliant Agriculture and Resource Sector, Book Series 33/85
- Villegas, B.M., "Why Study Agriculture", Center for Research and Communication, South Asia Science Foundation, (mimeographed)
- Wharton, C., BIFAD Inagural, March 30, 1983, (USAID)
- World Food Issues, Center for the Analysis of World Food Issues, Program in International Agriculture, Cornell Univ., 1/84

ANNEX 1  
TECHNOLOGY TRANSFER PROCESS



B. PRIVATE SECTOR INTERVENTION

AGRICULTURE SECTOR	TECHNOLOGY			
	GENERATION	VALIDATION	PROMOTION	PRODUCTION
INTER. CENTERS	RESEARCH: EXPER- IMENT STATION	FARMER TESTING	SECTOR AGEN.	FARMERS & AGRO- PROJ.
UNIV- ERSITIES		FARMER ADAPT.	FARMER/ ASSOC.	
GOVT. AGENCIES	FARMERS EXPER- IENCE	TECH./ ECON. EVAL.	KEY AREAS ---PRIVATE SECTOR--- INTERVENTION	
PVT. INDUSTRY	X	X	X	X
FARMERS	X	X	X	X

C. PRIVATE SECTOR IMPACT  
ON TECHNOLOGY TRANSFER

INTEGRATION:	ESTIMATED TIME LAG
-UNDER EXISTING ORGANIZATION/SYSTEMS	5-8 yrs
-WITH INTEGRATED/COORDINATED RESEARCH & EXTENSION	3-6
-WITH PRIVATE SECTOR LED PROMOTION AND PRODUCTION	1-3

(Note: The decrease in lag time is based on Philippine experience and reported observations worldwide.)

ANNEX 2  
CONTRACT ARRANGEMENTS:

The arrangements for the sharing of responsibilities for financing of production inputs vary in each case depending primarily on the firm's resources, risk criteria, the market being served and the product itself. In addition to the buy-back built into the arrangement, any or all of the following may be financed by the firm. (The gap to be filled, if any, is the responsibility of the intermediary or the farmer in some combination.)

- cash or in-kind financing of inputs
- technical assistance
- management services
- processing/packaging services
- cash advances for family consumption needs

For the purpose of this study, contracts have been classified into three basic types which vary according to the level of inputs and risk to the firm.

1 Full Resource Provision Contract-

This type of agreement is comprehensive in that the firm finances all required inputs (in-kind financing), technical assistance and management services. In the event of a crop failure, the loss is on the account of the firm. In most cases, a bond or some personal security is required from the farmer or farmer organization to guarantee that the inputs provided are not diverted or that the crop is not sold to another party at harvest.

Comment: This arrangement is the most attractive to the farmer. Incentives provided to the farmer under this comprehensive arrangement also guarantee farmer interest and cooperation. This management planning and controls that usually goes with this arrangement is attractive to an external donor since the profit-oriented firm would have well prepared agro-project feasibility studies, financial plans and accounting systems, and firm marketing linkages. On the part of the firm the returns are higher which goes with the higher financial exposure or risks.

2. Modified Resource Contract

This agreement is the most typical provision contract whereby the firm utilizes a local contractor/intermediary to work with the farmer organization and the pre-determined

contract is set with the contractor. Inputs provided by the firm are usually limited to seeds and technical assistance. Many times the firm will guarantee payment for the procurement of inputs with proceeds assigned to the lender. (The contractor may sometimes use the purchase order or contract as collateral.) In this arrangement the farmer is usually required to provide some part of the inputs, or part of the cost of the inputs may be deducted from the proceeds.

Comment: This arrangement is intended to spread the risk. Bringing in the local contractor gives the firm an additional measure of control since the local contractor usually knows the farmers and has his own source of information on the farm activities for monitoring purposes.

### 3. Market Price Contract-

The agreement provides that farm inputs provided to the farmer/farmer organization will be exchanged at harvest for a specified output at prevailing prices in the market less the cost of inputs provided, transport and marketing expenses incurred by the firm/entrepreneur. In the event of crop failure, the inputs provided are on the account of the farmer and the next crop will be mortgaged to that extent.

Comment: This type of contract is commonly used by traders with individual farmers (vs farmer organizations) for fruit and vegetable crops. The risks are primarily with the farmer since there is no pre-determined price for the output and the farmer/farmer organization (intermediary) is usually liable for the cost of the inputs in the event of crop failure. For the firm, there is no assurance of timely supply and there is no control on quality.

ANNEX 3

NORTHERN FOOD CORPORATION  
INFORMATION MATERIALS

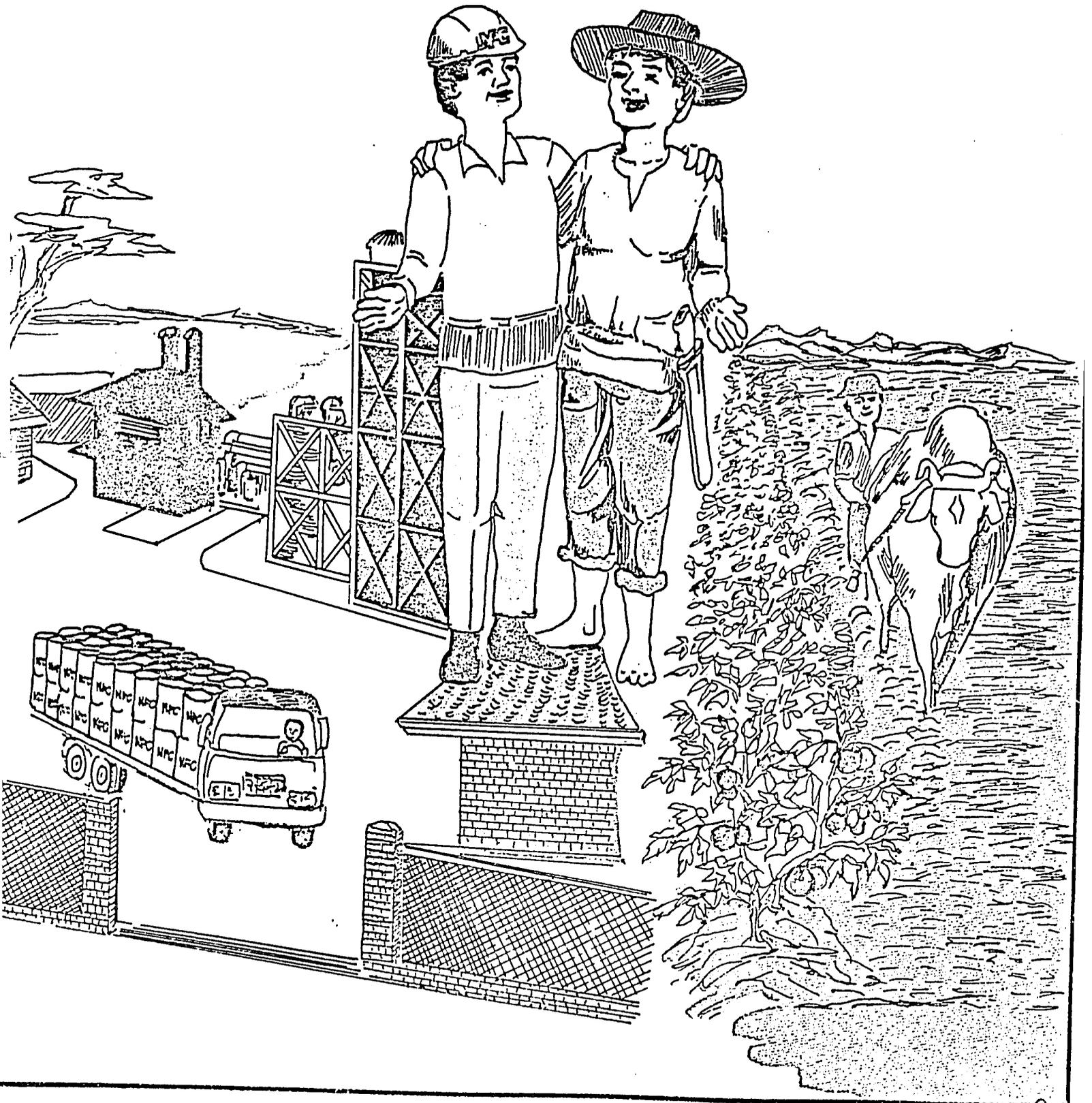
# NFC

## NORTHERN FOODS CORPORATION

SARRAT, ILOCOS NORTE

### PAKAAMMO MANIPUD ITI NFC

*Agri-Programme*



N O R T H E R N F O O D S C O R P O R A T I O N

T O M A T O P A S T E P R O C E S S I N G P L A N T

10 - Year

F I N A N C I A L P R O J E C T I O N S

## PROJECT DESCRIPTION

In early 1984, the establishment of an integrated fruit and vegetable processing center was proposed. The anchor project was to be a puree/evaporating plant capable of processing 20 MT per hour fresh tomatoes from 4% solids fresh fruits up to 31% solids paste. Supplying the fresh tomatoes was to be beneficiary farmer cooperators within qualified areas around the processing plant who will be provided with all the material inputs (fertilizers, seedlings, pesticides, etc.) while they will provide their labor, land and dedication, in return for which they are guaranteed a minimum net income of P5,800 per hectare per crop (in four months).

In October 1984, the NFC tomato processing plant was put up in Sarrat, Ilocos Norte with equipment supplied by Franrica Manufacturing Inc., of Stockton, California (USA). In February 1985 the plant started processing smoothly at its rated capacity of 20 MT of fresh tomatoes per hour, without any mechanical breakdowns. A total of 875 MT of tomato paste was produced in this first trial season. Of the paste produced from Ilocos Norte tomatoes, 85% graded premium while 15% graded standard. Standard is equivalent to Taiwan quality, while premium is approximately equal to California paste which means it is better than the Taiwan paste in color, mold count and flavor. On the tomato production side, the past season had 324 hectares planted, directly benefitting around 1,000 farmers who earned on the average P8,080 per hectare or 40% over their guaranteed minimum income--with the top farmer earning a net income of P28,223.99 per hectare.

For the next processing season of 1985-86, NFC projects to plant 920 hectares beginning September 1985 (as of May 1985 NFC already has over 1,193 hectares committed by farmers in qualified areas within a 30-kilometer radius of the plant), and starting the season 1986-87 and onwards, NFC projects to utilize its plant at full capacity by planting 1,250 hectares. This respectively translates to 2,700 and 3,800 farmers directly benefited, approximately P100.0 Million and P150.0 Million in annual sales, and average total annual income/sales/other taxes of P20.0 Million.

Total project cost to date is P129.0 Million, which is financed by P105.0 Million in stockholders' equity and P24.0 Million in revolving and suppliers' credits.

PROJECT HIGHLIGHTS

A) FINANCIAL

1) Total Project Cost

Property, Plant and Equipment

Plant equipments	₱ 67.0 Million
Buildings and improvements	33.2
Other equipments	<u>5.1</u>

Sub-total ₱ 105.3 Million

Inventories of Tomato paste, packaging and Other materials 9.6

Receivables 1.6

Deferred Development Expenses

Pre-operating expenses, start-up expenses and test run cost 12.5

Total ₱ 129.0  
=====

2) Sources of Financing

Equity in Common and Preferred shares ₱ 104.5

Revolving credits, trade payables and accrued expenses 24.5

Total ₱ 129.0 Million  
=====

3) Other Financial Highlights:

	<u>1985-86</u>	<u>1986-87 onwards</u>
Total hectares	920	1,250
Annual		
Sales	₱86.0 Million	₱150.2 Million
Net income	-	₱ 31.0 M/year ave.
Sales/income/Other Taxes	1.0 Million	₱ 12.0 M/year ave.
Cash Inflow	-	₱ 40.0 M/year ave.
IRR		40% (over 10 yrs.)
ROI		45% (over 10 yrs.)

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B) MARKET

NFC has existing purchase commitment contracts with Philippine Packing Corporation-Del Monte (PPC-Del Monte) and the local fishcanners. Also the Company will begin exporting paste by 1986. All these assure a ready market for NFC's total paste production.

C) PLANT PROCESSING

NFC has concluded an agreement with PPC-Del Monte whereby the latter will provide NFC with necessary technology in field production and plant operation. PPC-Del Monte will provide manpower and technical services for the first two years to assure both the success of the integrated operation and a smooth, effective technology transfer.

D) FIELD PRODUCTION

NFC provides all the necessary inputs of seedlings, fertilizer, chemicals and technical services. The farmer provides his land and labor only--in return for which he is guaranteed a minimum net income of ₱5,800.00 per hectare. If this yield exceeds 40 tons per hectare, he is paid additional bonuses. The farmer does not incur any loan liability, does not pay any interest and has the absolute security of earning at least ₱5,800.00 per hectare--even if his crop fails or yields less than 40 tons per hectare.

During the just ended 1984-85 season, NFC's farmers averaged a net income of ₱8,080.94 per hectare. This is more than twice the net income earned on palay and about 1.5 times that of tobacco. The top farmer earned ₱28,223.99 per hectare net income.

NFC's contract farmers plant palay before tomatoes; with mung beans, peanuts or corn, and following tomatoes as a third crop. The residual fertilizer from the tomato crop has also been found to increase the yields of the subsequent crops--an additional benefit to the farmers.

## THE MARKET

### Tomato Paste Imports

In terms of tonnage, tomato paste is the largest processed fruit or vegetable traded on the world market. It is the raw material for tomato catsup, juice, and sauce. The Philippines imports all of its tomato paste requirements and domestic demand has increased rapidly as local food processors have established their own brands of canned beef, pork, and fish products.

### Philippine Demand for Tomato Paste

<u>Year</u>	<u>Quantity</u>	<u>%age Growth</u>
1978	2459 M.T.	
1979	3499	
1980	2264	
1981	3938	
1982	5318	21.50% per annum average growth 1978-1982

### Projected:

1983	5584	+ 5% minimum growth
1984	5863	+ 5%
1985	6156	+ 5%
1986	6464	+ 5%
1987	6787	+ 5%
1988	7126	+ 5%

Note: The projected annual growth of 5% is very conservative

NFC started its initial processing in February 1985 and will run at full commercial operation in December 1985. Significant dollar savings of \$4.0-5.0 M per annum will be realized.

The total projected domestic tomato paste production by NFC will just be able to meet local demand through 1988 - then supply will start falling short of demand beginning 1989 - assuming that 100% of NFC's paste production is sold locally. However, NFC's costs are competitive on the world market - and by 1986, NFC will begin exporting paste with 432 tons to Malaysia and 600 tons to Hongkong already committed in June 1985. A shortfall in supply for the local market will occur by 1988.

#### Cost Competitiveness On the World Market - Tomato Paste

We believe that domestic processors of import substitution products should not require protection to survive. In the longer term, the financial viability of such processing plants must be assured by their viability to sell in the free market and compete against other world suppliers in export markets.

The major producers of tomato paste for export are Taiwan, and Portugal. Taiwan produces the lowest cost paste due to their high average yields of 60 MT per hectare and lower labor costs than the "developed" producer countries. In 1981, Taiwan exported 21,584 MT of paste, including 11,208 MT to Japan and 4,779 MT to the USA.

High tomato yields of 60 MT per hectare can only be achieved when all of the following conditions are met: bright sunshine, low humidity, irrigation, and cool nighttime temperatures. While the Bukidnon high plateau has the cool nighttime temperatures required for a good flower set without abortions, the rainfall and humidity cause bacterial, viral and fungal diseases that keep the average maximum yields down at 35 MT per hectare. Previous field trials in areas between Laguna and Pangasinan have shown that these areas are too warm to get a good extended flower set thereby limiting yields to projected maximums of 35-40MT per hectare, with average yields more likely running between 20-25 MT. Sun-scalding which cracks the fruits and allows mold to enter is also a problem in these areas for harvests by late February. In Ilocos Norte, which is only a few degrees south of the tomato areas of Taiwan, conditions have proven to be ideal and yields of 60 MT per hectare can be expected as proven in this first season. With matching yields and field labor at about one-third the cost of Taiwan's labor, our raw material (fresh tomatoes) can be supplied to the plant at the lowest cost of P0.60 per kilo versus Taiwan's cost of P0.90 per kilo.

PPC-Del Monte Market Tie-Up

Tomato Paste:

Agrimán has concluded an agreement with PPC-Del Monte for both the supply of technology to produce a high quality paste and to guarantee the market. Our agreement is for two years at approximately \$860.83 per MT delivered Manila. PPC-Del Monte will export paste by the second year (1986) to its established markets in Asia with projected volumes of:

<u>Country</u>	<u>Quantity of Paste</u>
Japan	3500 M.T.
Malaysia & Indonesia	2500
Hongkong	2000
Korea	<u>1500</u>
	9500 M.T.
	====

NFC's plant would have to expand by 3 times to 60 tons per hour fresh tomatoes processed or 1800 hectares (7200 farmers-36,000 beneficiaries) production just to supply PPC-Del Monte's present requirements and 70% of the domestic market. The tomato varieties selected for Ilocos Norte which will be hot break processed and aseptically packed will also provide a higher color quality than Taiwanese paste. Most significantly, NFC can completely supply these export markets with a higher quality product at prices equal to or lower than Taiwan.

TECHNOLOGY TRANSFER AND MANAGEMENT ---

The success of this project is dependent on sufficient quantity of low cost fresh tomatoes and the management of processing technologies to produce a high quality paste. To assure the supply of these initial inputs, Agriman has contracted the services of PPC-Del Monte for both field production and plant operations.

VARIETAL TESTING

In the recently concluded Tomato trials conducted in Bacarra,

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Ilocos Norte -- PPC selected from 132 lines on Trial, three (3) varieties that can average 60 MT yield per hectare, were bacterial wilt resistant and produce fruits with excellent processing qualities in terms of firmness ( to minimize transport & handling losses), solids, pH, and color. Hybrid crosses which yielded 20% higher than pure varieties were also selected. PPC-Del Monte's on-going research experience in China, Japan, Taiwan, California, and Bukidnon is of tremendous value in the continual selection of lines that will eventually yield a target of 80 MT average per hectare of high recovery fruits specifically suited to Ilocos Norte. Extensive trials are again planned for the next season.

### PLANT OPERATIONS

Critical points of plant operations include: Maximizing solids extraction; control of holding times and temperatures for maximum paste and color retention; minimizing energy costs by fine tuning steam utilization and the boiler; handling of the aseptic packaging to prevent contamination; preventive maintenance of equipment to keep it running 20 hours a day for 120 days without breakdowns. Inability to process incoming tomatoes due to shutdowns or high operating costs can cause massive losses -- hence, it is too risky to start the operation with new inexperienced personnel.

PPC will supply the following skilled personnel for the first two (2) years of plant operations: plant engineer, shift supervisors, boiler tenders, instrumentation technicians, mechanics, electricians, production supervisors, capatazes, evaporator operators, aseptic tenders, aseptic filler operators, quality control supervisor, plant sanitarian, lab technician. These plant personnel are all experienced in their specific responsibilities from their work at PPC cannery. They will also be backed up by visits from the senior cannery and engineering management staff of PPC. NFC will also hire its own counterparts who will first get training at the PPC cannery before the start of NFC's processing operations.

It is expected that after the Technology transfer of (2) full processing seasons, NFC's operations personnel will be sufficiently trained to take over specific operational responsibilities directly.

Other Products:

Del Monte is also ready to provide NFC with confirmed markets for: Fruit purees including passion fruit, guava and papaya, and diced red bell peppers in brine. PPC is presently having several varieties of passion fruits and guava lab tested for flavor acceptability - and bacteria wilt resistant red bell pepper lines are being identified from their selections. Estimated annual requirements for Del Monte consumption of final processed product are:

Guava Concentrate	- 200 M.T.+
Passion Fruit Concentrate	- 430 M.T.+
Red Bell Pepper, Diced	- 2200 M.T.+

For conservation, sales of these products were not included in projections.

Summary of Alternative Cases

<u>SALES (%)</u>	<u>Cost of Sales</u>	<u>Cost of RM*</u>	<u>IRR**</u>	<u>Payback (YEARS)</u>	<u>ROI</u>
Base	+25	P	8.35	10.11	10.45
Base	+20	1.01	15.00	8.25	19.00
Base	+15	0.83	20.11	7.08	27.25
Base	+10	0.76	25.30	5.50	35.38
Base	+5	0.68	29.89	4.29	43.51
Base	Base	0.60	34.32	3.39	51.64
-5	Base	0.60	27.96	4.67	39.77
-10	Base	0.60	20.26	6.95	27.90
-15	Base	0.60	12.80	8.83	15.68
-20	Base	0.60	0.49	14.66	2.91
-25	Base		<0	>15	<0

\* Percentage of increase in cost of sales, translated to equivalent effect on per-kilo of fresh tomatoes delivered plant.

\*\* IRR on 104.0M equity, over 10 years.

NORTHERN FOODS CORPORATION  
 PROJECTED CASHFLOW STATEMENT  
 10 YEARS (000)

	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
<b>CASH PROVIDED BY:</b>										
Income from Operations	-2291	39676	42019	41992	41945	36658	37722	40066	40029	39952
add back non-cash charges										
Depreciation	7724	7761	7798	7836	7873	9678	9715	9752	9789	9826
Amortization of Pre-op Expense	1252	1252	1252	1252	1252	1252	1252	1252	1252	1252
Decrease in Inventory	1466									
Total Cash from Operations	8151	48689	51070	51070	51070	47588	48689	51070	51070	51070
Collection of Receivables	909									
Decrease in Paste Inventory	5852									
Proceeds of Loans										
Bunker Financing	2500	3500	0	0	0	0	0	0	0	0
Mortgage Financing	48000	0	0	0	0	0	0	0	0	0
Inventory Financing, City Trust	9733	15563	13181	13181	13181	13181	13181	13181	13181	13181
Total Loans	60233	19063	13181	13181	13181	13181	13181	13181	13181	13181
TOTAL CASH PROVIDED	75145	67752	64251	64251	64251	60769	61870	64251	64251	64251
<b>CASH APPLIED TO:</b>										
Payment for Income Tax	0	0	6383	8811	9372	19618	10028	11660	13321	13308
Payment of Interest	2604	9409	4816	11577	9178	6778	4378	1978	1978	1978
Payment of Accrued Int. Mort Financing	0	12000	12000	12000	3600	2400	1200	0	0	0
Acquisition of Fixed Assets	3752	558	558	558	558	9395	558	558	558	558
Increase in Inventories	1663									
Payment of Liabilities										
Payment of Payables-Trade	17547									
Payment of Bunker Financing	2500	3500	0	0	0	0	0	0	0	0
Payment of Mortgage Financing	0	0	0	12000	12000	12000	12000	0	0	0
Payment of City Trust Financing		25296	13181	13181	13181	13181	13181	13181	13181	13181
Payment of KKK Credit Line		6916	0	0	0	0	0	0	0	0
Payment of Dividend to Preferred Shares			37440	12480	12480	12480	12480	12480	12480	12480
Retirement of Preferred Shares										
TOTAL CASH APPLIED	28066	57679	74378	70607	60369	66853	53825	39857	41518	41505
<b>EXCESS CASH</b>										
add INTEREST INCOME	47079	10073	-10127	-6356	3882	-6084	8045	24393	22733	22746
add CASH BALANCE BEG.	43	47122	62790	60137	60937	72072	74576	91510	126825	164717
<b>CASH BALANCE END</b>										
	47122	62790	60137	60937	72072	74576	91510	126825	164717	207169

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NORTHERN FOODS CORPORATION  
 PROJECTED BALANCE SHEET  
 10 YEARS (000)

1984-85 1985-86 1986-87 1987-88 1988-89 1989-90 1990-91 1991-92 1992-93 1993-94 1994-95

ASSETS

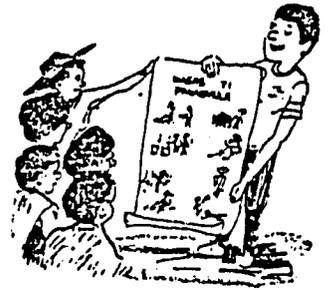
	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
<b>Current Assets</b>											
Cash	43	47122	62790	60137	60937	72072	74576	91510	126925	164117	207169
Receivables - Trade	909	0	0	0	0	0	0	0	0	0	0
Inventory - Paste	5852	0	0	0	0	0	0	0	0	0	0
- W/house & Packaging Mat'l	3805	4002	4002	4002	4002	4002	4002	4002	4002	4002	4002
Receivable - Others	544	544	544	544	544	544	544	544	544	544	544
<b>Total Current Assets</b>	<b>11153</b>	<b>51668</b>	<b>67336</b>	<b>64683</b>	<b>65483</b>	<b>76618</b>	<b>79122</b>	<b>96056</b>	<b>131371</b>	<b>167263</b>	<b>211715</b>
<b>Property, Plant and Equipment</b>	<b>105335</b>	<b>109086</b>	<b>109644</b>	<b>110202</b>	<b>110760</b>	<b>111318</b>	<b>120713</b>	<b>121271</b>	<b>121829</b>	<b>122587</b>	<b>122945</b>
Less Accumulated Depreciation	0	7724	15485	23284	31120	38992	46470	58385	69137	77926	87752
<b>Net Property, Plant and Eqpt</b>	<b>105335</b>	<b>101362</b>	<b>94159</b>	<b>86918</b>	<b>79641</b>	<b>72326</b>	<b>72043</b>	<b>62897</b>	<b>53693</b>	<b>44462</b>	<b>35193</b>
<b>Deferred Development Expenses</b>											
Pre-operating Expense	7950	7950	7950	7950	7950	7950	7950	7950	7950	7950	7950
Start-up Expense	3923	3923	3923	3923	3923	3923	3923	3923	3923	3923	3923
Test Run Cost	647	647	647	647	647	647	647	647	647	647	647
<b>Total Deferred Development Exp</b>	<b>12520</b>										
less Amortization	0	1252	2504	3756	5008	6260	7512	8764	10016	11268	12520
<b>Net Deferred Development Expense</b>	<b>12520</b>	<b>11268</b>	<b>10016</b>	<b>8764</b>	<b>7512</b>	<b>6260</b>	<b>5008</b>	<b>3756</b>	<b>2504</b>	<b>1252</b>	<b>0</b>
<b>TOTAL ASSETS</b>	<b>129008</b>	<b>164298</b>	<b>171510</b>	<b>160365</b>	<b>152636</b>	<b>155203</b>	<b>156174</b>	<b>162699</b>	<b>187568</b>	<b>214977</b>	<b>246909</b>

LIABILITIES AND STOCKHOLDERS' EQUITY

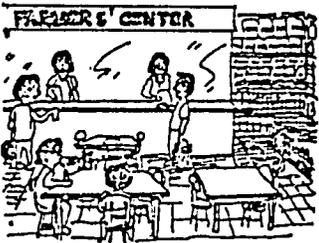
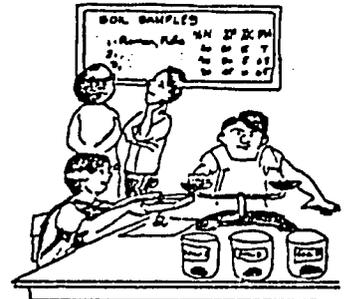
<b>Liabilities</b>											
Accrued Expense	264	0	0	0	0	0	0	0	0	0	0
KKK Revolving Credit	6916	6916	0	0	0	0	0	0	0	0	0
Accounts Payable - Trade	17283	0	0	0	0	0	0	0	0	0	0
Mortgage Payable	0	48000	48000	48000	36000	24000	12000	0	0	0	0
Accrued Interest Payable	0	12000	12000	12000	3600	2400	1200	0	0	0	0
Income Tax Payable	0	0	6383	8811	9372	10618	10028	11660	13321	13308	13295
City Trust Financing	0	9733	0	0	0	0	0	0	0	0	0
<b>Total Liabilities</b>	<b>24463</b>	<b>76649</b>	<b>65383</b>	<b>69911</b>	<b>48972</b>	<b>37018</b>	<b>23228</b>	<b>11660</b>	<b>13321</b>	<b>13308</b>	<b>13295</b>
<b>Stockholders' Equity</b>											
Preferred Shares - \$1000 par value											
Authorized 103,545 Shares											
Fully Issued and Outstanding	103545	103545	103545	103545	103545	103545	103545	103545	103545	103545	103545
Common Shares - No Par Value											
Authorized 100 shares											
Fully Paid and Outstanding	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
<b>Retained Earnings, Beginning</b>	<b>104545</b>										
add Net Income from Operations		-16895	11883	16392	17433	19749	19452	21684	24767	24743	24719
add Interest Income			5395	7475	7156	7252	8589	9889	10921	15159	19706
less Dividend Payments				37440	12480	12480	12480	12480	12480	12480	12480
<b>Retained Earnings, Ending</b>	<b>0</b>	<b>-16895</b>	<b>582</b>	<b>-12991</b>	<b>-881</b>	<b>13640</b>	<b>28401</b>	<b>46494</b>	<b>67702</b>	<b>97124</b>	<b>129069</b>
<b>Total Stockholders' Equity</b>	<b>104545</b>	<b>87650</b>	<b>105127</b>	<b>91554</b>	<b>103664</b>	<b>119195</b>	<b>132946</b>	<b>151039</b>	<b>174247</b>	<b>201669</b>	<b>235614</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>	<b>129008</b>	<b>164298</b>	<b>171511</b>	<b>160366</b>	<b>152636</b>	<b>155204</b>	<b>156174</b>	<b>162699</b>	<b>187568</b>	<b>214977</b>	<b>246909</b>

NORTHERN FOODS CORPORATION  
 CONSOLIDATED INCOME STATEMENT  
 10 YEARS (000)

	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-96	Totals
<b>GROSS SALES</b>	86042	150213	150213	150213	150213	150213	150213	150213	150213	150213	1437959
less SALES TAX	860	1502	1502	1502	1502	1502	1502	1502	1502	1502	14380
<b>NET SALES</b>	85182	148711	148711	148711	148711	148711	148711	148711	148711	148711	1423579
<b>COST OF SALES</b>											
<b>Cost of Raw Tomatoes</b>											
FERT/INSECT/FUNGICIDE	12962	26392	26392	26392	26392	26392	26392	26392	26392	26392	196490
TRELLISSING EXPENSE	400	300	300	300	300	300	300	300	300	300	3100
FARMERS' INCOME	6623	10419	10419	10419	10419	10419	10419	10419	10419	10419	100394
HARVESTING EXPENSE											
VEHICLE WIRE	2945	4629	4629	4629	4629	4629	4629	4629	4629	4629	44506
FUEL EXPENSE	605	949	949	949	949	949	949	949	949	949	9146
SALARIES AND WAGES	5735	7516	7516	7516	7516	7516	7516	7516	7516	7516	73379
FARM OVERHEAD	1573	1822	1822	1822	1822	1822	1822	1822	1822	1822	17971
<b>Total Cost of Raw Tomatoes</b>	30843	46027	46027	46027	46027	46027	46027	46027	46027	46027	445086
<b>Cost to Process</b>											
DUNKER	8745	12612	12612	12612	12612	12612	12612	12612	12612	12612	122253
POWER & UTILITY	5451	6154	6154	6154	6154	6154	6154	6154	6154	6154	60937
CHEMICALS & BASES	1115	1630	1630	1630	1630	1630	1630	1630	1630	1630	15785
PACKAGING COST	4802	7886	7886	7886	7886	7886	7886	7886	7886	7886	75776
MISCELLANEOUS	88	108	108	108	108	108	108	108	108	108	1060
SALARIES AND WAGES	2701	3127	3127	3127	3127	3127	3127	3127	3127	3127	30844
FREIGHT-PASTE	1365	2662	2662	2662	2662	2662	2662	2662	2662	2662	25323
MAINTENANCE	55	340	340	340	340	340	340	340	340	340	3115
OVERHEAD	242	284	284	284	284	284	284	284	284	284	2799
DEPRECIATION	7724	7761	7769	7836	7873	9678	9715	9752	9789	9826	87752
<b>Total Cost to Process</b>	32288	42544	42601	42639	42676	44481	44518	44555	44592	44629	425543
add Cost of Grun	6352	9712	7331	7331	7331	10813	9712	7331	7331	7331	89575
<b>Total Manufacturing Cost</b>	49483	92303	95959	95997	96634	101321	100257	97913	97950	97987	951204
add Beginning Inventory	5852	0	0	0	0	0	0	0	0	0	5852
less Ending Inventory	0	0	0	0	0	0	0	0	0	0	0
<b>COST OF SALES</b>	75335	96303	95959	95997	96634	101321	100257	97913	97950	97987	957056
<b>GROSS PROFIT (LOSS)</b>	9847	50408	52751	52714	52677	47390	48454	50798	50761	50724	466523
<b>GENERAL ADMINISTRATIVE EXPENSE</b>											
SALARIES AND WAGES	1367	1583	1583	1583	1583	1583	1583	1583	1583	1583	15614
MANAGEMENT FEES	4380	4560	4560	4560	4560	4560	4560	4560	4560	4560	45420
PROFESSIONAL FEES	78	90	90	90	90	90	90	90	90	90	888
TRAINING & DEVELOPMENT	12	14	14	14	14	14	14	14	14	14	138
TRAVEL & TRANSPORTATION	468	542	542	542	542	542	542	542	542	542	5346
RENTALS OF STAFFHOUSES	36	42	42	42	42	42	42	42	42	42	414
OFFICE SUPPLIES	46	54	54	54	54	54	54	54	54	54	532
LIGHT & WATER	57	65	65	65	65	65	65	65	65	65	642
COMMUNICATIONS	98	113	113	113	113	113	113	113	113	113	1115
REPAIRS & MAINTENANCE	12	14	14	14	14	14	14	14	14	14	138
INSURANCE	360	417	417	417	417	417	417	417	417	417	4113
TAXES & LICENSES	1503	1511	1511	1511	1511	1511	1511	1511	1511	1511	15102
DONATIONS/CONTRIBUTIONS	50	58	58	58	58	58	58	58	58	58	572
OTHER EXPENSES-PPC	2059										2059
MISCELLANEOUS	360	417	417	417	417	417	417	417	417	417	4113
AMORTIZATION	1252	1252	1252	1252	1252	1252	1252	1252	1252	1252	12520
<b>Total Gen Admin Expense</b>	12138	10732	10732	10732	10732	10732	10732	10732	10732	10732	108726
<b>INCOME (LOSS) FROM OPERATIONS</b>	-2291	35676	42019	41982	41945	36658	37722	40066	40029	39992	357797
less INTEREST EXPENSE	11604	21409	16816	15177	11578	7978	4378	1978	1976	1976	97674
<b>NET INCOME BEFORE TAX</b>	-16895	18267	25203	26805	30367	28680	33344	38088	38051	38014	259923
less PROVISION FOR INCOME TAX	0	6383	8811	9372	10618	10028	11660	13321	13308	13295	96797
<b>NET INCOME BEFORE TAX and INTEREST INCOME</b>	-16895	11883	16392	17433	19749	18652	21684	24767	24743	24719	163127
less INTEREST INCOME		5395	7475	7156	7252	6529	8885	10921	15159	19706	90742
<b>NET INCOME AFTER TAX and INTEREST INCOME</b>	-16895	17478	23867	24590	27001	27241	30573	35688	39902	44425	253369
	yyyyy										



# NORTHERN FOODS CORPORATION AGRI-PROGRAMME



## FOREWORD

When this primer came out, we had in mind all those farmers who are willing to participate in this new project. We believe that they deserve to be well informed of what the Northern Foods Corporation is all about and what it intends to do, especially in connection with the development we would like to extend to the farmers. It will enable the farmers to know the incentives and benefits that the Company will be giving them.

We owe this to you, the farmers, who have helped us make a good start, and we hope that this will continue through your support as well as from those people who are willing to join us in this project. Through this primer, we hope that all those doubts and wrong informations that have reached you will be removed from your minds. We also hope that the primer will enable you to see the whole perspective of this project more clearly and objectively.

Likewise, I would like to take this opportunity to thank all of you who helped us overcome the problems which we have encountered in our aim to make this project a fulfillment. Without you, we could never have started on this.

So, to all able and diligent farmers, this primer is dedicated to you.

ALEJANDRO V. DAZA  
President

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LADAWAN 1. NI APO TI TALON, TI NFC, KEN NI AGTALTALON

- INTRODUCTION -

We would like to present to the public the Company's good intentions and objectives and the opportunity it could offer to the people of Ilocos Norte, under an entirely different scheme run by a new breed of honest and sincere people.

NFC is a private corporation devoted to the production of tomato paste largely for local market and export purposes. Tomato Paste is the raw material used by canneries in the manufacture of tomato sardines, catsup, tomato sauce and several other locally processed foods.

Here in our country, the local Canners and Food Processors have been dependent on imported tomato paste for their products ever since and because of this, NFC envisions to supply them with locally produced paste thereby saving dollars and at the same time provide a means of increasing the income of the farmers in our locality. This is by way of opening a guaranteed market for the tomato crop that the Company will support fully in terms of production, under the NFC Crop Growing scheme.

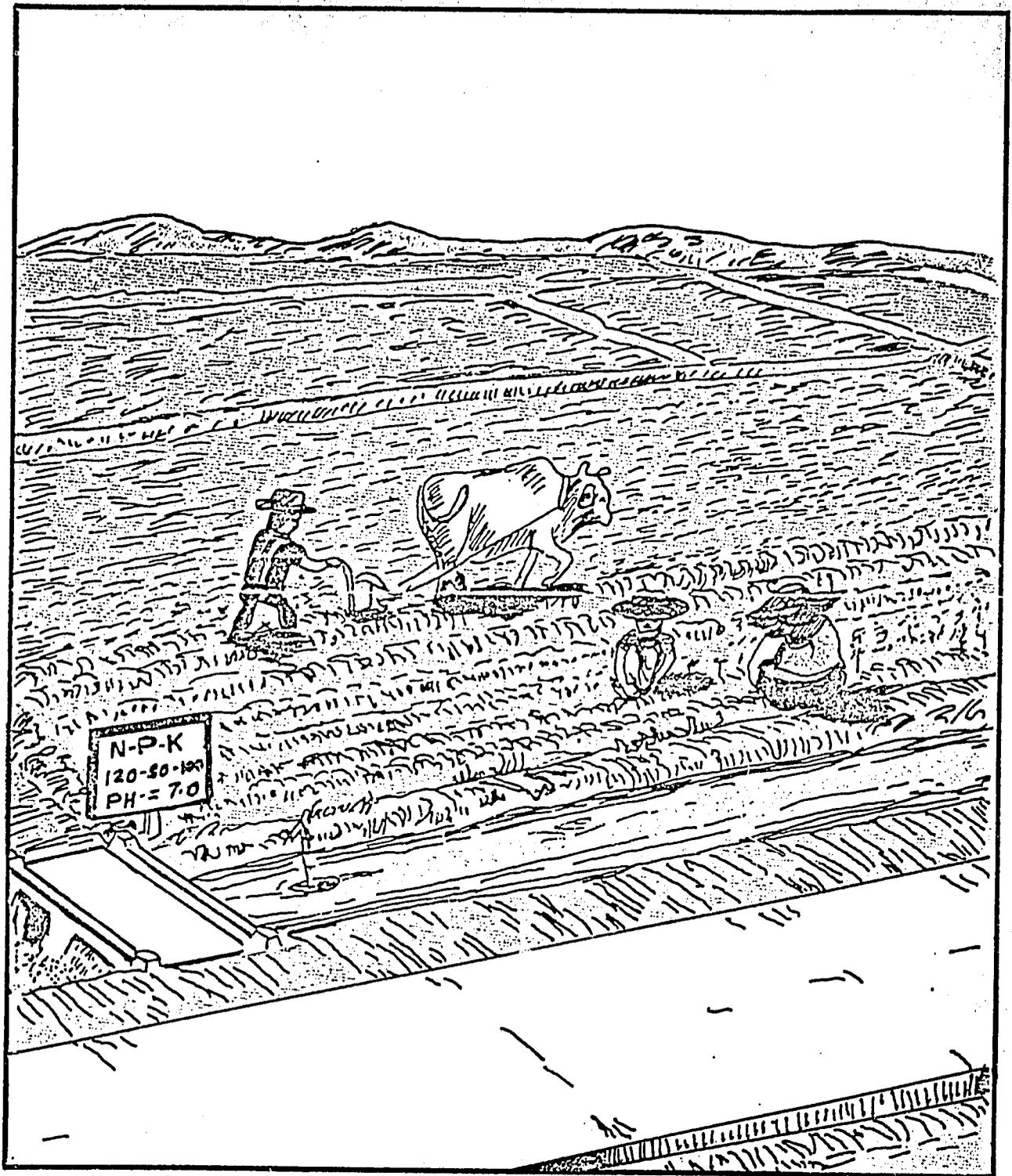
In a nutshell, NFC is a firm run by young and energetic men and women in their roles as Farm Supervisors, Plant Personnel, and other employees interacting with the farmers, who comprise the vital force of an "Integrated Private Company". As a primary goal, this private company intends to make into reality a livelihood program which has never been proven to materialize under previous conventional schemes.

Among the tomato paste producing countries in the world, processing occurs once a year from 45 days in Canada, 90 to 105 days in Taiwan and from 105 days in California. In Ilocos Norte, processing starts from December 15 until April 15 or totalling to 120 days. During the season, the plant operates 24 hours a day, 7 days a week within a period of 120 days with a capacity of 400 tons of tomatoes per day, which is equivalent to one year regular operation.

Tomatoes are planted starting from the month of September to January. Processing in the Plant is simultaneous to harvest time which begins from December until the end of April.

In the province of Ilocos Norte, rice is the main crop planted by farmers which starts from May to September. Next to rice, the farmers plant their fields with different Cash Crops including tomatoes.

Some of the Cash Crops which are planted after rice can only provide very marginal income to the farmers. NFC aspires to help augment the income of the farmers through the package of technology that it intends to offer and this is also one of the main reasons why Northern Foods Corporation decided to process tomato paste and therefore built the Plant in Ilocos Norte.



LADAWAN 2. TI KASAYAATAN A PAGMULAAN KEN DAGITI KASAPULAN

## THE FARMER

To succeed with the program, the farmer is only expected to provide his land (owned or held under the agricultural leasehold, civil lease, sub-lease, administration or other contractual scheme), family, labor and dedication.

To achieve this, the farmer will enter into a "Crop Growing Agreement" with NFC. This will embody all the salient points taken up and explained in this primer.

To safeguard the interest of the farmer or the Landowner and NFC, the Company will only sign Crop Growing Agreements that shall meet the conditions stated below :

1. Relationship between landowner/possessor/lessor/sub-lessor/administrator and Farmer must be good and harmonious.
2. The Landowner/possessor/lessor/sub-lessor/administrator and Farmer must have a pre-arranged agreement regarding their intention of entering into a cooperative growing agreement with NFC.

In order to fully implement these two conditions, NFC has two (2) forms, the "Declaration of Conformity", to be duly signed by both the landowner/possessor/lessor/sub-lessor/administrator and the farmer or the "Instruction and Undertaking" to be signed by the farmer.

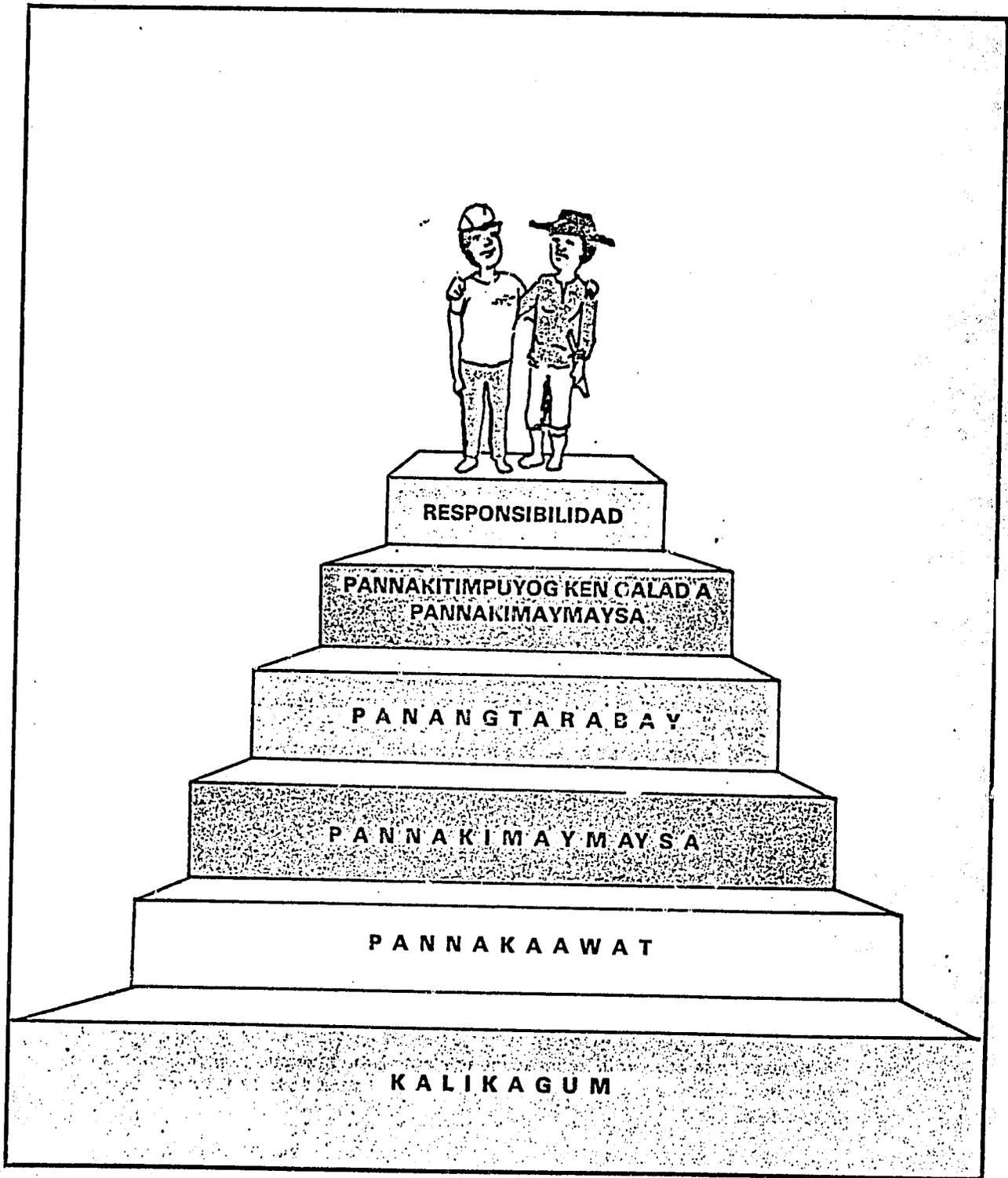
The Company defines the farmer as the person involved in the actual cultivation of a parcel or parcels of land devoted to the production of cereals and vegetable crops for own consumption and commercial purposes.

NFC considers two important prerequisites that it expects from the farmer. These are the material and moral prerequisites which are discussed as the following :

### A. Material Prerequisites

#### 1. Land

- a. Rights - must own, or in case of lease, must have a good relation as well as pre-arranged agreement with his landowner regarding the utilization of land for tomato production as provided for in Annex 2.3 of Crop Growing Agreement.
- b. Area - minimum of 1,000 sq m (0.1 Ha); if farmer owns less than 1,000 sq m, he has to find a partner or partners to come up with the required minimum area and shall be registered under one (1) name as agreed by themselves.



LADAWAN 3. GALAD A KASAPULAN

- maximum of 7,500 sq m (.75 Ha) ; areas more than 0.75 Ha can still be considered if farmer can provide the necessary labor requirements at all times; the Technicians of Farm Supervisors will list down all probable labor available and the farmer will be informed and made to realize the amount of labor expense required for a given area (at least 1 person per 1,000 sq.m).

JTE: "Zanjas" will be prioritized in the selection of contract growers. Large "zanjas" will be subdivided into "gunglos" for more effective management and supervision. Each gunglo must have a maximum area of 5 hectares. Operations shall be dealt with by gunglos, however, payments shall be made individually, on farmer to farmer basis.

Irrigation and Drainage - must be able to provide the water requirement at all times through gravity irrigation during the entire tomato cropping season and at the same time have the necessary drainage system. Irrigation canals should be provided for the entire area to properly distribute water based on required irrigation schedule primarily to prevent overflowing of neighboring areas (in case where irrigation is needed from one area to another).

Fertility - must have the required pH and fertility level to conform with NFC standards based on actual soil analysis specific for location solicited and surveyed by NFC personnel.

Location - must be beside or within 100 meters of existing roads, and farm lots should be near each other and should be easily accessible for more convenient supervision. Prospective farmer should be living near or within the vicinity of proposed tomato field for better control and to act as look-out for the future farm produce.

NOTE: If location is more than 100 meters away from passable roads and/or light vehicles (i.e. ISUZU ELF) could not enter, the farmer must guarantee in writing (as specified in the contract) that they would be responsible to bring all inputs and harvest to or from designated Pick-Up-Points ( PUP's ) assigned to them.

## 2. Labor

Must have available household labor enough for specific area to be devoted to tomato crop or 1 man/day for every 1,000 square meters of tomato crop.

NOTE: If household labor is not enough the farmer must have financial capacity and willingness to guarantee in writing (as specified in contract) to hire labor necessary or required to augment every given specific operation.

## 3. Farming Tools

Must have basic requirements necessary to cultivate tomato crops more particularly available draft animal at all times whether hired, borrowed, or owned

MASAPUL A TI PANAGPA-SUYOT MASAKUPAN TI INTERO A PAKABUKLAN TI KAMATIS.



LADAWAN 4. NI FARM SUPERVISOR KEN NI AGTALON

## B. Moral Prerequisites

- a. Interest and Drive - must have wholehearted support and enthusiasm in growing tomatoes as priority cash crop above other crops available for planting within specific tomato cropping season in his committed area.
- b. Receptivity - must have willingness to accept, absorb, apply and contribute new ideas in terms of technical and practical requirements of modern tomato production adaptable to certain situation in his locality.
- c. Cooperation - the farmer must have mutual involvement with his NFC Farm Supervisor in the performance of field operations; must be capable of relating and expressing new ideas and/or problems to NFC personnels and more specifically, NFC Supervisors and Agri-Techs.
- d. Support - must have voluntary support to the government and NFC program on the ongoing tomato project; must have basic understanding and recognition of his relationship with the NFC processing plant in terms of reciprocal benefits that the company, himself, and the whole community can derive out of the relationship.
- e. Social Concern and Cooperative Intention - must be willing to work actively in the bayanihan system and must realize the practicality and need to work as a group or in association with other farmers in growing tomato.
- f. Responsibility - must have total acceptance of the above moral prerequisites and willingness to be held responsible for all Company properties temporarily assigned to them for use in tomato production.



**NAGDADAKKEL  
DAGITI GINUMI  
TI MAISKO,  
BAROK.**

**DAYTA TI EPEKTO  
TI ADU NGA ABUNO  
A NAYAPLIKAR ITI KA-  
MATISYO ITI NAPALA-  
BAS A PANAGMUMULA.**

**LADAWAN 5. TI NASAYAAT NGA EPEKTO TI NABATI NGA ABUNO  
KALPASAN TI PANAGMULA TI KAMATIS**

### THE FARM SUPERVISOR

Because the Company desires to have a firm link with the Farmers, NFC employs Farm Supervisors to facilitate and take effect the following objectives:

1. Extend technical assistance to the farmer in terms of general crop production.
2. Act as mediator or bridge between the management and farmer regarding common interests and goals, so as to provide the Company a direct hand information concerning all related field informations.



MALAKSID ITI GARANTI-SADO A BAYAD KADAGITI APIT, SIR, ANIA PAY TI IPAAY TI NFC KADAKAMI NO AGMULA KAMI TI KAMATIS?

TI KOMPANYA IPAAYNA AMIN DAGITI KASAPULAN TAYO NGA AGMULA TI KAMATIS KAS ITI BIN-I, ABUNO, INSEKTISIDIO, FUNGISIDIO KEN LIBRE A PANANGASISTIR.

LADAWAN 6. TOMATO GROWERS' ASSOCIATION

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### THE FARM SUPERVISOR

3. Provides logistics and support both the farmer and management in terms of input and output related operations.
4. To transfer ideas and/or technology to the farmer's level of understanding.

In full detail, the technology involved in the entire operation of tomato crop production is envisioned to be accepted and understood by the farmer through the role of the NFC Farm Supervisor.

DAGITI SEMILIA KET  
MABALINEN NGA IMULA  
KALPASAN TI 21 NGA  
ALDAW MANIPUD  
PANAGBUNOBUN.

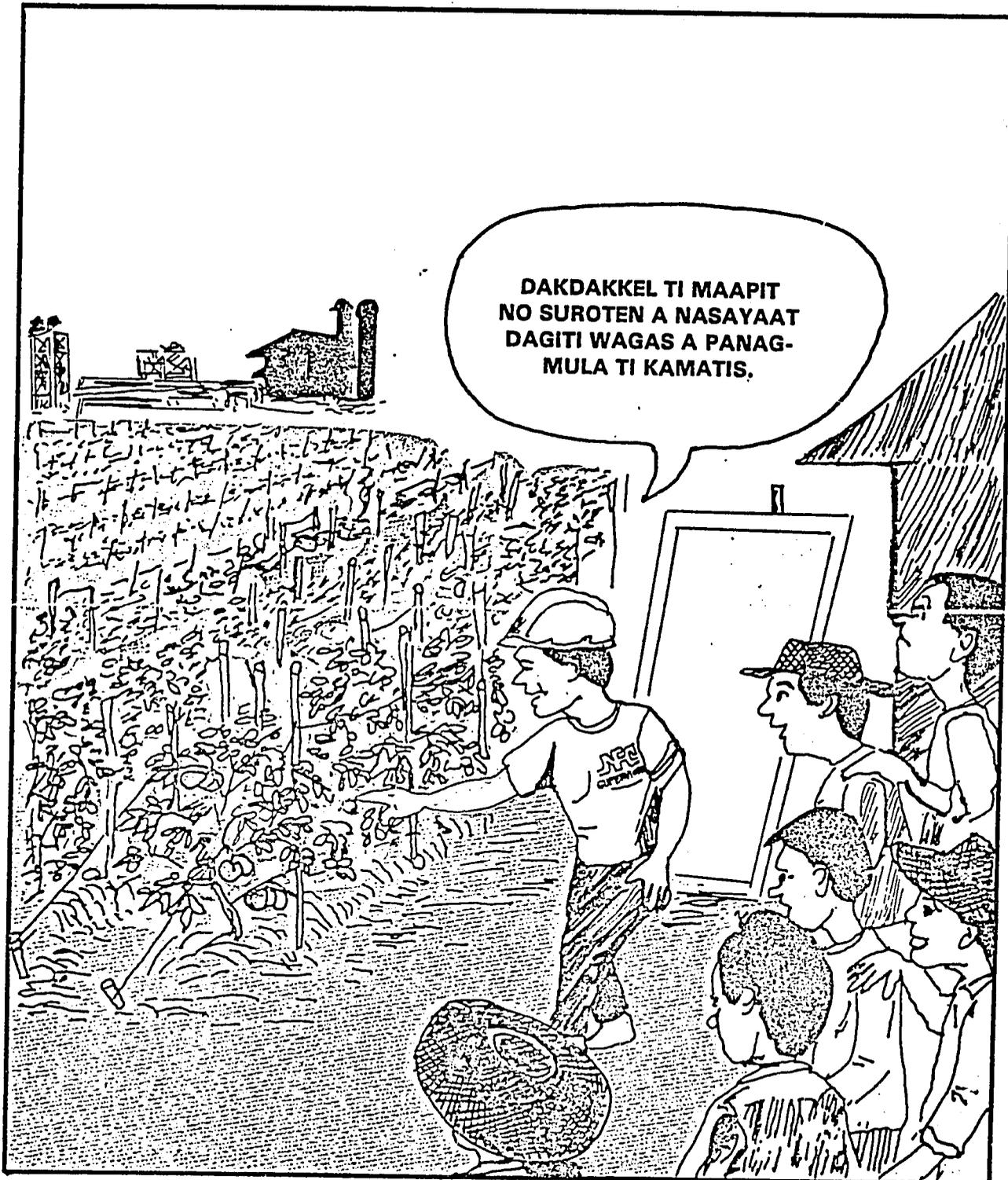


LADAWAN 7. NAILADAWAN A WAGAS TI PANAGMULA

## HIGHLIGHTS OF THE AGRI-PROGRAMME EXTENSION PROJECT

### A. TOMATO GROWERS ASSOCIATION

1. The right approach in the transfer of technology will be identified on a case to case basis, farmer to farmer, farm association to farm association basis. The basic need in organizing the farmers will be emphasized according to the basic guidelines as farmers training courses will be done in groups or by farmer associations.
  
2. The existing "Zanjas" and "Gunglos" will be tapped and the same effective and proven system will be adapted. NFC believes that this organizational system has proven itself for centuries in this region among farmers. Hence, the adaptation of the tomato growers association.
  
3. These tomato growers association will not only facilitate convenient group instructions and trainings but also make programming schedules of input deliveries as well as hauling of future tomato production more systematic.



**LADAWAN 8. TI PANAGSURSURO KEN PANAGPASAR KADAGITI PROYEKTO**

## B. DETAILED PLANTING GUIDE

1. Farmers will be trained on cultural practices and basic planting operations for tomato production. The farmer will be made to understand every detail of the above mentioned aspects in their level of intelligence, education and dialect.
2. Farmers will be provided with diagramatic flow charts to show step by step all the basic planting, maintenance, harvesting, and other operations essential to tomato production.
3. Farm Supervisors will be responsible for the supervision and transfer of the technical aspects of production with great emphasis on seedbed preparation, planting, disease and insect control, irrigation, fertilization, weeding, trellising, training, harvesting and other related operations.

SOIL SAMPLES				
Name of Farmer	%N	%P	%K	PH
1. Plata, Ramon	20	60	15	7
2. Tomas, Rene	40	50	5	6.5
3. Nacasilab, Legor	30	45	10	6.7
4. Alonzo, Edel	40	75	50	7.9



LADAWAN 9. PANNAKAANALISAR TI DAGA A PAGMULAAN

101

### C. FIELD TRIPS AND WORKSHOPS

1. Instructions will be done such that the farmers will be able to participate and see actual situations in seminars and field trips.
2. During these workshops, the farmers will not only see how tomatoes are supposed to be grown in the NFC way but also how their future produce will be processed into paste. In this way, they would be able to realize their vital role in the project and their closely linked relationship with the processing plant.



LADAWAN 10. LIBRE A KASAPULAN KEN PANNAKAITULOD ITI PAGMULAAN

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#### D. SOIL ANALYSIS

NFC will conduct soil sampling and analysis of committed areas at no charge to the farmers, to provide the proper rate and kind of fertilizer needed in growing tomato. This assures maximum utilization of fertilizers thereby making the crops capable of producing tomatoes at optimum yields.

Under favorable climatic conditions, the right technical support and cultural practices, the farmer can expect higher yields which can increase the minimum guaranteed income that the Northern Foods Corporation guarantees under the Crop Growing Agreement (see p.25 for details of increased income due to increase in yield).

AWATENYO TOY SANGA-  
RIBU A PISOS NGA INSENTIBO  
ITI PANAGBUNOBUN KEN  
PANANGTARAKENYO KADA-  
GITI SEMILIA.



LADAWAN 11. INSENTIBO ITI PANAGMULA

E. FREE INPUTS AND DELIVERY TO FARMSITE

NFC provides for free all the necessary inputs needed for farming like the seeds, fertilizers, insecticides, and also lends the necessary farm equipments like the sorayer without any rental fee.

All of these will be delivered to designated pick-up points or farm sites at no charge to the farmers as required by specific schedule to be defined by the Company.



LADAWAN 12. KABABAAAN A GARANTISADO A BAYAD

## F. NFC COMPENSATION PAYMENT

NFC provides to the farmer a "Compensation Payment (CP) which is the sum total of the Transplanting Incentive (TI), Minimum Guaranteed Payment (MGP), Bonus, Harvest Subsidy (HS), Harvest Fee (HF), and Loading Incentive (LI). These payments will be given to the farmer according to the schedule stated in the crop growing agreement as discussed below and in the following pages.

### "TRANSPLANTING INCENTIVE"

NFC will pay to the farmer a "Transplanting Incentive" (TI) of P 1,000.00 for the preparation of a nursery seed-bed and care of seedlings required per hectare of field to be transplanted to tomatoes.

The farmer will receive the amount or the equivalent amount for his committed area after transplanting. This is approximately 21 days after he indulges himself in the first schedule of operations as specified on the farm plan to be prepared for him by the Company and as embodied in the crop growing agreement or contract.

This provides therefore an opportunity for the farmer to receive in advance a portion of his Compensation Payment even before he starts to harvest his crops.



LADAWAN 13. TULONG ITI TIEMPO TI PANAGAPIT KEN PANAGIKARGA

## "MINIMUM GUARANTEED PAYMENT AND BONUS"

"Minimum Guaranteed Payment" (MGP) of P 5,000.00 will be paid per hectare even for yields less than 40 tons per hectare or even in the event of crop failure (providing therefore a built-in crop insurance scheme). In addition to this, a "Bonus" will be paid to the farmer for every ton delivered in excess of 40 tons of actual yield per hectare (see page 29 for details).

The P 5,000.00 MGP, therefore, is the minimum amount that the farmer is bound to receive for his tomato harvest whether he produces 40 tons or lower per hectare. He can still increase his income if he harvests more than 40 tons per hectare or the equivalent amount as exemplified below :

1. Equivalent Minimum Yield (EMY) = 40 tons per hectare

Therefore, if committed area is 1/4 hectare or 2,500 square meters, 1/4 ha  
EMY = 10 tons or 10,000 kg or approximately 400 crates

2. Equivalent Minimum Payment (EMP) = P 5,000.00 per Ha (MGP)

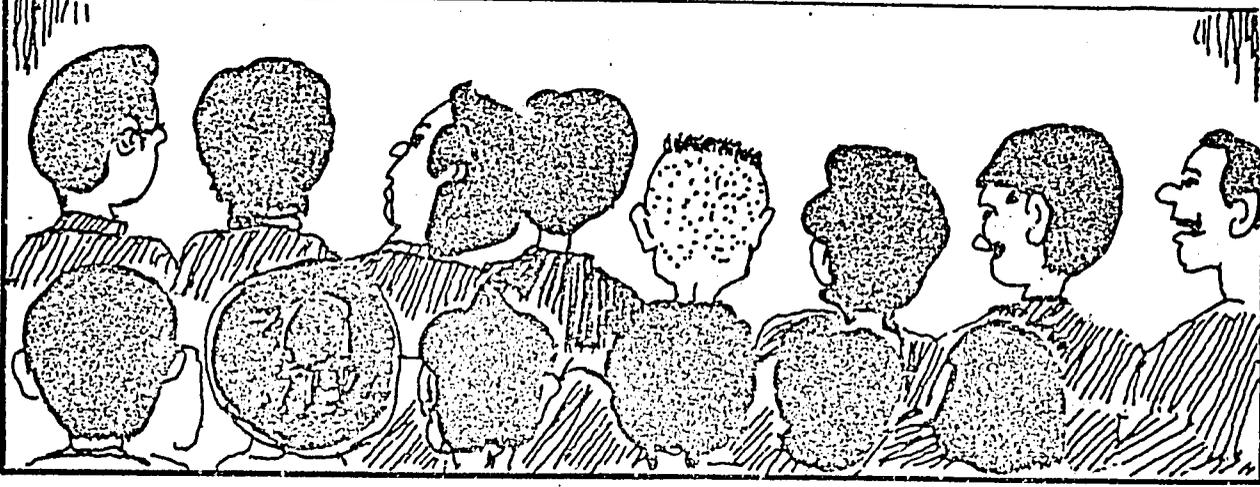
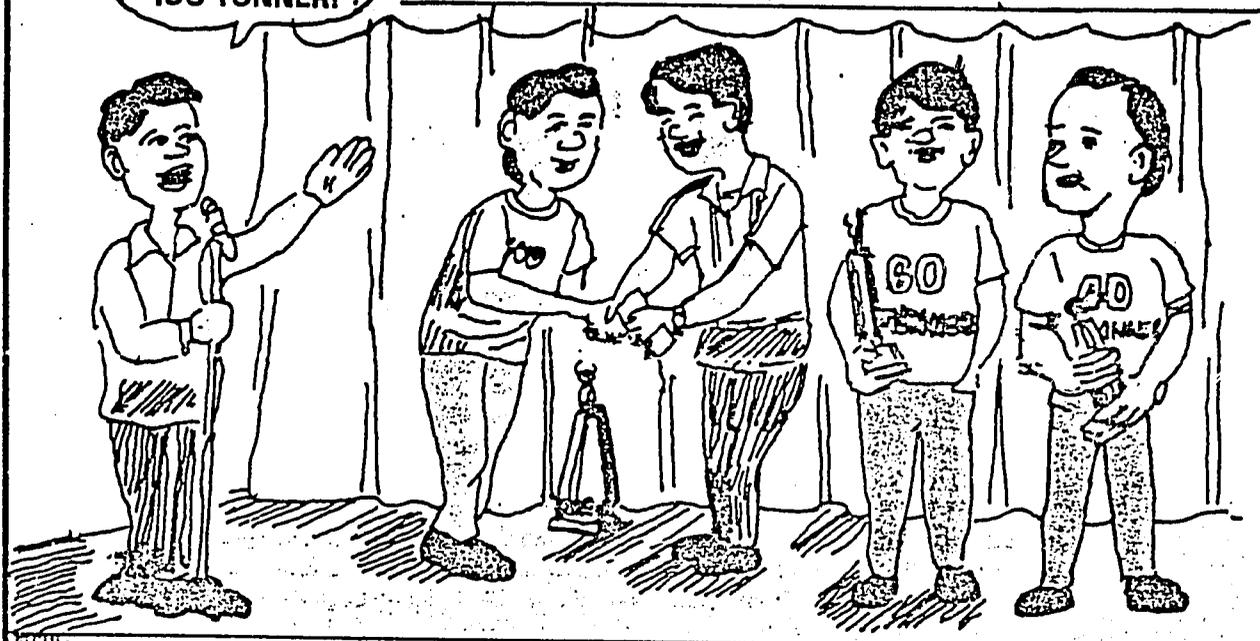
Therefore, if committed area is 1/4 hectare or 2,500 square meters, the  
EMP = P 1,250.00 which actually represents the Minimum Guaranteed Payment (MGP).

3. If the farmer harvests 500 crates from his 2,500 square-meter lot, or 100 crates more than his EMY, this excess which is approximately 2.5 tons or 2,500 kg (at 25 kg per crate) will be considered as "Bonus". The resulting "Bonus" therefore will be P 750.00 or P 300.00 x 2.5 tons. This will be added to his MGP and the resulting income becomes P 2,000.00 or :

$$P 1,250.00 \text{ (MGP)} + P 750.00 \text{ (Bonus)} = P 2,000.00$$

**AWARDING PROGRAM**  
**MOST OUTSTANDING TOMATO GROWERS**  
**OF THE YEAR**

MR. JUAN DELA  
CRUZ  
100 TONNER!



LADAWAN 14. DADDUMA NGA INSENTIBO KEN GUNGONA

## "HARVEST SUBSIDY AND LOADING INCENTIVE"

Under NFC Crop Growing Agreement, the farmer is entitled to a "Harvest Subsidy" (HS) of P 800.00 per hectare and additional "Harvest Fee" of P 20.00 per ton in excess of 40 tons of yield per hectare.

NFC will also pick up and deliver the tomatoes to the plant site at no charge to the farmers.

Weighing and acceptance of harvested tomatoes will be done right at the farmsite or at designated pick-up-points, eliminating therefore the traditional middlemen and difficulties in negotiating for a fair, honest, and favorable price for farm produce.

NFC will give a "Loading Incentive" (LI) of P 10.00 per ton for loading their harvest from designated pick-up-points to NFC trucks.

If we use again the example given on page 26, the farmer will receive P 200.00 (HS) for his 2,500.00 square meter lot and P 50.00 (HF), equivalent to the sum of P 250.00 in all (HS + HF) as explained by the following :

1. Equivalent Minimum Payment (EMP/HS) = P 800.00 per Ha.

Therefore, if committed area is 1/4 Ha. or 2,500.00 square meter, the EMP/HS = P 200.00 representing the Harvest Subsidy (HS) whether his actual yield is higher or lower than the Equivalent Minimum Yield (EMY) which is 10,000 kg.

2. However, since the actual yield in the previous example is more than the EMY, the farmer becomes automatically entitled to Harvest Fee (HF) of P 20.00 per ton in excess of the EMY. The farmer therefore will receive P 50.00 (HF) for the 2.5 tons in excess of actual yield from his EMY or  $P 20.00 \times 2.5 \text{ tons} = P 50.00$

3. Since his total harvest is 500 crates or approximately 12,500 kg or 12.5 tons, his LI will be P 125.00 or  $P 10.00 \times 12.5 \text{ tons}$ . For his LI, he will be issued a "Loading Ticket" which he can encash or exchange for goods at the "NFC Farmers' Center" (please refer to page 35). The loading ticket will be issued to him by NFC checkers as soon as his tomatoes are loaded to NFC trucks.

If we include his income from Transplanting Incentive (TI), the total Compensation Payment ("CP") that the farmer will receive for his 2,500 sq m lot will be as follows :

"Minimum Guaranteed Payment" (MGP)	=	P 1,250.00
"Bonus"	=	750.00
"Harvest Subsidy" (HS)	=	200.00
"Harvest Fee" (HF)	=	50.00
"Loading Incentive" (LI)	=	125.00
"Transplanting Incentive" (TI)	=	250.00
		-----
Total "Compensation Payment (CP)		P 2,625.00

Compensation Payment Summary  
( cont'd ... )

---

- c. P 700.00 per ton for the next 10 tons in excess of 60 tons up to 70 tons EMY
- d. P 800.00 per ton for the next 10 tons in excess of 70 tons up to 80 tons EMY
- e. P 900.00 per ton for the next 10 tons in excess of 80 tons up to 90 tons EMY
- f. P 1,000.00 per ton for the next 10 tons in excess of 90 tons up to 100 tons EMY

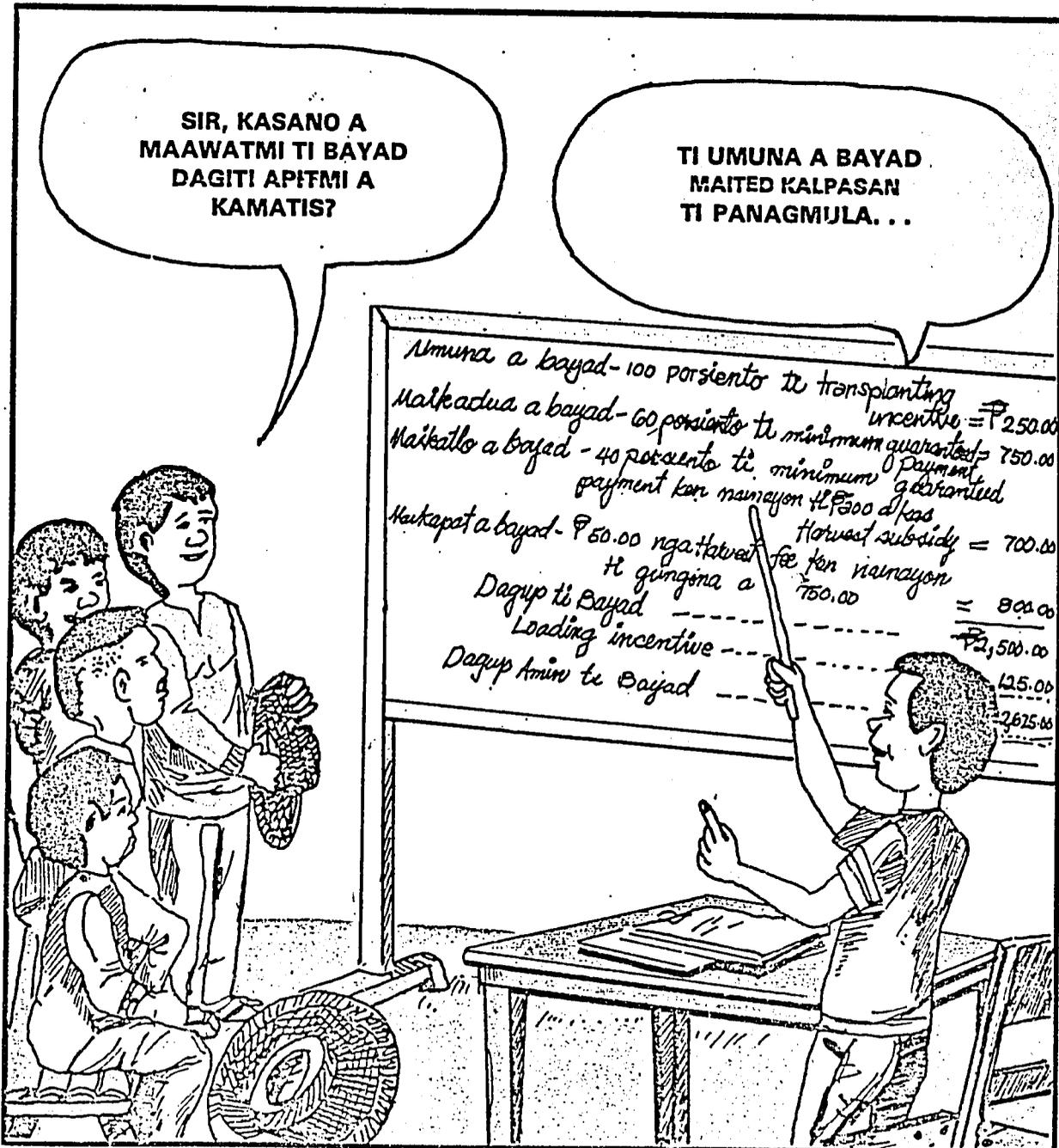
- HS = Harvest Subsidy (P 800.00 per Ha)
- HF = Harvest Fee (P 20.00 per ton in excess of 40 tons per Ha)
- LI = Loading Incentive (P 10.00 per ton)
- CP = Compensation Payment (Sum total of the above)

We had proven through extensive research and from experience in our commercial planting from November 1984 to December 1985 that we could achieve yields of 40 tons up to more than 100 tons of tomatoes per hectare in Bacarra, Laoag, Piddig, Dingras, and Solsona. In these parts, although rainy season is over, there is enough irrigation to provide water for the duration of the tomato crop.

- c. P700.00 iti kada tonelada para iti sumuno a 10 tonelada a sobra ti 60 tonelada agingga iti 70 tonelada a Kaibatogan ti Kababaan nga Apit.
- d. P800.00 iti kada tonelada para iti sumuno a 10 tonelada a sobra ti 70 tonelada agingga iti 80 tonelada a Kaibatogan ti Kababaan nga Apit.
- e. P900.00 iti kada tonelada para iti sumuno a 10 tonelada a sobra ti 80 tonelada agingga iti 90 tonelada a Kaibatogan ti Kababaan nga Apit.
- f. P1,000.00 iti kada tonelada para iti sumuno a 10 tonelada a sobra ti 90 tonelada agingga ti 100 tonelada a Kaibatogan ti Kababaan nga Apit.

- HS = Harvest Subsidy wenno tulong ti tiempo ti panagapit (P800.00 per ha.).
- HF = Harvest Fee wenno tulong iti panagapit no nasubraan ti 40 tonelada kada ektarya (P20.00 kada tonelada a sobra ti 40 tonelada).
- LI = Loading Incentive wenno tulong no ni Agtaion ket isu ti mangikarga kadagiti apit-na iti lugan ti NFC (P10.00 kada tonelada).
- CP = Compensation Payment wenno Bayad ti Nagbannogan (dagup dagiti adda iti ngato).

Napaneknekanmi babaen kadagiti naaramid a panagsukisok (Research) ken bukod a padas iti inkam panagmula manipud Nobiembre 1984 agingga iti Disiembre 1984 a mabalín a mante-neren ti nangato nga apit manipud 40 agingga 100 a tonelada kada ektarya iti ili ti Bacarra, Laoag, Piddig, Dingras ken Solsona. Dagitoy a paset ket awananen iti nawadwad a tudo iti tiempo ti panagmula ti kamatis ngem addaan iti umanay a padanum a mangbiag ti kamatis agingga a maapitan dagitoy.



LADAWAN 15. WAGAS TI PANAGBAYAD

## COMPENSATION PAYMENT SUMMARY

The farmer's total Compensation Payment per hectare will actually vary depending upon the yields that the farmer will realize after harvest. As the yields increase over and above the Equivalent Minimum Yield (EMY), the Compensation Payment (CP) also increases in the following manner:

at 20 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 0 (Bonus) + 800.00 (HS) + 0 (HF) + 200.00 (LI)	= P 7,000.00
40 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 0 (Bonus) + 800.00 (HS) + 0 (HF) + 400.00 (LI)	= P 7,200.00
50 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 3,000.00 (Bonus) + 800.00 (HS) + 200.00 (HF) + 500.00 (LI)	= P 10,500.00
60 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 9,000.00 (Bonus) + 800.00 (HS) + 400.00 (HF) + 600.00 (LI)	= P 16,800.00
70 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 16,000.00 (Bonus) + 800.00 (HS) + 600.00 (HF) + 700.00 (LI)	= P 24,000.00
80 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 24,000.00 (Bonus) + 800.00 (HS) + 800.00 (HF) + 800.00 (LI)	= P 32,400.00
90 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 33,000.00 (Bonus) + 800.00 (HS) + 1,000.00 (HF) + 900.00 (LI)	= P 41,700.00
100 tons	= P 1,000.00 (TI) + 5,000.00 (MGP) + 43,000.00 (Bonus) + 800.00 (HS) + 1,200.00 (HF) + 1,000.00 (LI)	= P 52,000.00

WHERE :

- TI = Transplanting Incentive (P 1,000.00 per Ha)
- MGP = Minimum Guaranteed Payment (P 5,000.00 per Ha)
- Bonus =
  - a. P 300.00 per ton for the first 10 tons in excess of 40 tons EMY up to 50 tons EMY
  - b. P 500.00 per ton for the next 10 tons in excess of 50 tons up to 60 tons EMY

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LADAWAN 15. TI NFC ITI PROGRAMA A PANAGMULA TI PAGAY

## PAYMENT SCHEME

The total Compensation Payment of the farmer in his committed area shall be paid in the following schedule as embodied in the Crop Growing Agreement :

Payments	Schedule of Payment
1st Payment - 100% of Transplanting Incentive TTI	full payment after acceptance of seedlings by the company representative during or right after the transplanting operation
2nd Payment - 60% of Equivalent Minimum Payment ( EMP ) of the Minimum Guaranteed Payment	One week after first harvest round
3rd Payment - 40% of Equivalent Minimum Payment ( EMP ) of the Minimum Guaranteed Payment ( MGP ) plus Harvest Subsidy (HS)	Paid one week after termination of the last harvest round
4th Payment - Differential Payment (balances on previous payments, if any) plus Bonus and Harvest Fee.	After data conciliation or 2 weeks after third payment

NOTE : Loading incentive will be paid upon loading of the harvested tomatoes in the form of loading tickets which the Farmer can encash and/or exchange for goods at the NFC Farmers' Center.

If we use the example on page 27, the distribution of payment will be as follows :

1st Payment	=	100% of P 250.00 TI	=	P 250.00
2nd Payment	=	60% of P 1,250.00 MGP	=	750.00
3rd Payment	=	40% of P 1,250.00 MGP + 200.00 HS	=	700.00
4th Payment	=	P 750.00 Bonus + P 50.00 HF	=	800.00
TOTAL PAYMENTS				P 2,500.00
Loading Incentives				125.00
GRAND TOTAL				P 2,625.00

As mentioned on page 35, the farmer has the option to collect his payments (total or fraction of his Compensation Payment) in cash or in terms of goods that shall be available at the NFC Farmers' Center.

### G. NFC RICE ASSISTANCE PROGRAM

NFC will provide technical and material assistance to interested rice farmers during rice season. This will be before and after tomato season, thus extending NFC outreach program from tomato production to other related crops like rice.

NFC will also provide assistance to the farmer by means of coordinating with the Ministry of Agriculture and Food and National Food Authority so that they can avail of loans under the government's rice assistance program.

NFC believes that its role in its sincere desire to uplift the economic status of the farmer is not only confined to production of tomatoes but also other concerns which are linked with the livelihood of the farmer.

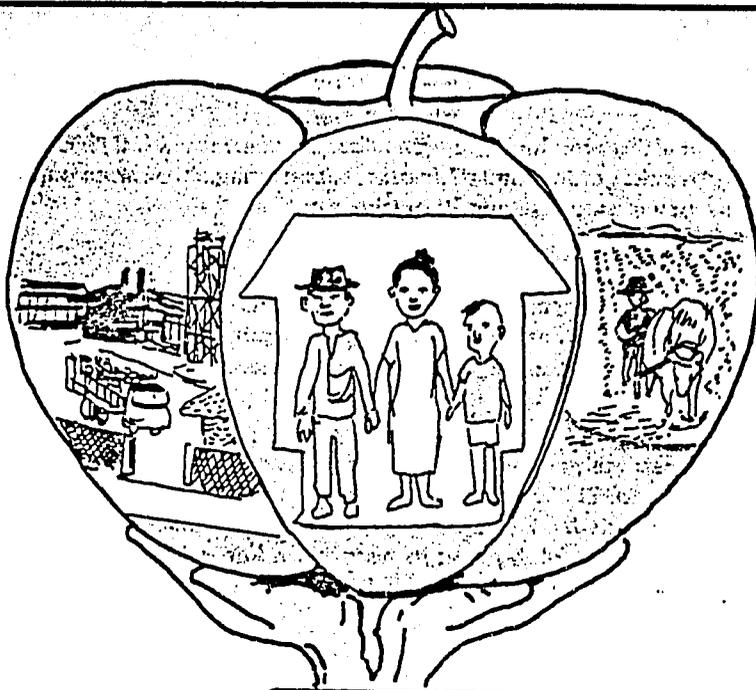
Aside from technical and material assistance on existing crops, NFC will introduce other crops such as guayabano, passion fruit, guava, and other permanent crops which can be processed by its facilities in the future.

INTUGOTYO TAY  
I.D. YO A KAS CONTRACT  
GROWER, TATA?

# FARMERS' CENTER



LADAWAN 16. TI FARMERS' CENTER



**NCC**

**NATABA A DAGA**

**NASAYAAT A PAGPADANUM**

**APAGISU A KLIMA**

**NASARIRIT KEN NAGAGET NGA ILOKANO**

**KONKRETO KEN ASPALTO A KALSADA**

**KABARUANAN A PROYEKTO TI AGRIKULTURA KEN  
INDUSTRIA**

**SARANAY MANIPUD ITI GOBIERNO KEN KADAGITI  
PANGPANGULUEN**

H. DAILY BASIC NEED ASSISTANCE

To give assistance to the farmers in terms of their daily basic needs, NFC will put up the "NFC Farmers' Center". This will be in addition to the incentives previously mentioned. In this special Company outlet, the farmer can acquire canned goods, soap, oil, sugar, and other basic needs at factory prices.

However, only registered and confirmed NFC tomato growers can avail of this offer. The detailed mechanics of this scheme will be discussed during association meetings.

All other Company-farmer related assistance schemes can be transacted here. The "loading tickets" which NFC will issue to the farmers can be exchanged for goods available at the center. Likewise, all payments due to the farmers (GNI, HF, HS, etc.) can be collected in cash or can be withdrawn in kind by the farmer from this center.

In the future, NFC envisions to provide at the center a place where the farmers can temporarily store other farm produce before delivery of these to their final buyers. This will provide the farmers a common place where they can sell their farm produce thereby facilitate and present a collective bargaining power in order that they can negotiate and sell at more advantageous prices.

#### IV. RESUME

The management, the workers of the plant, and the workers of the field, envision to prove to the Filipino people and the rest of the people of the world that sincere and honest dedication to each of our roles in this project will bring inevitable success in achieving our goal.

Ilocos Norte is indeed fortunate to have fertile lands, efficient irrigation system, the right climatic requirements for the exacting tomato crop, concrete and asphalt roads from farm to market, diligent and industrious Ilocanos, the most modern and appropriate agro-industrial project for the province, unrelentless support from the government and its leaders, and all other favorable conditions which can turn the enumeration a litany of the "Right Ingredients". With all these, failure is virtually impossible.

We believe that with all the "Right Ingredients", only corruption, dirty politics, and selfish interest can creep-in to slowly destroy our mutual effort in working together in this project for the province of Ilocos Norte and for the country.

There has never been a project in our history or in any part of the country before with the same kind of scheme and everyone will be lucky to have the opportunity to participate in achieving this goal for the first time.

Tomato is the heart of the whole project and without the farmers, the Tomato Paste Project will never live.

The great ILOCANO PEOPLE will prove that it can be done.

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ANNEX 4

SUMMARY SURVEY DATA  
COST AND RETURN ANALYSIS

TABLE 1 COST AND RETURN COMPARISON  
 BY TYPE OF CROP PER HECTARE

TOTAL PROD:	CUCURBITS			PALAY	CORN	CABBAGE
	RAM	SLBIP	CMC	IRRIG	WHITE	
VOLUME	20513	13514	23448	4290	1430	15814
VALUE	58975	30812	66206	15002	4289	59144
COSTS:						
INPUTS	9112	6781	11307	1617	499	9757
LABOR	15090	8820	21143	2062	1042	15370
OTHER	2369	927	1922	4412	1454	136
TOT. COSTS	26571	16528	34372	8091	2993	25262
NET INCOME	32404	14284	31834	6911	1296	33882
ROI (%)	121.95	86.42	92.62	85.45	43.32	134.12

TABLE 2 RAM FOOD PRODUCTS

COST AND RETURN ANALYSIS FOR  
CUCURBITS PRODUCTION PER HA.

	VOLUME /NUMBER	VALUE
TOTAL PRODUCTION	KG. 20513	PESO 58975
MAJOR EXPENSES:		
1. LABOR (MAN DAY):		
LAND PREP.	25	625
FLOWING	1	800
SEEDING	28	700
FERT. APPLIC.	38	950
WEEDING	103	2575
SPRAYING	67	1675
HARVESTING	254	6350
SORT/GRADE	28	700
HAULING (KG.)	.03	615
OTHER		100
2. INPUTS:		
SEEDS (CAN)	4	2050
FERT. (BAGS)	18	4644
PEST. (LI)	13	2418
3. IRRIGATION		
		769
4. LAND RENT		
		1600
TOTAL COSTS		26571
NET INCOME		32404
RETURN ON INVESTMENT (%)		121.95

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TABLE 3 SECOND LAGUNA DE BAY IRRIGATION PROJECT

<u>COST AND RETURN ANALYSIS FOR CUCURBITS PRODUCTION PER HA.</u>		
	VOLUME/NUMBER	VALUE
TOTAL PRODUCTION	KG 13514	PESO 30812
MAJOR EXPENSES:		
1. LABOR (MAN DAYS):		
LAND PREP.	20	500
FLOWING	1	600
SEEDING	15	375
FERT. APPLIC	35	875
WEEDING	27	675
SPRAYING	70	1750
HARVESTING	122	3050
SORT/GRADE	8	200
HAULING (KG)	.02	270
OTHER		525
2. INPUTS:		
SEEDS (CANS)	2.7	1296
FERT. (BAGS)	16	4000
PEST. (LI)	11	1485
3. IRRIGATION		
		230
4. LAND RENT		
		697
	TOTAL COSTS	16528
	NET INCOME	14284
	RETURN ON INVESMENT (%)	86.02

CALIFORNIA MANUFACTURING CORP.

TABLE 4

<u>COST AND RETURN ANALYSIS FOR CUCURBITS PRODUCTION PER HA.</u>		
	VOLUME/NUMBER	VALUE
TOTAL PRODUCTION	KG 23448	PESO 66206
MAJOR EXPENSES:		
1. LABOR (MAN DAYS):		
LAND PREPARATION	19	475
FLOWING	1	679
SEEDING	35	875
FERT. APPLIC.	80	1600
WEEDING	293	1325
SPRAYING	71	1420
HARVESTING	488	7320
SORT/GRADE	57	855
HAULING (KG)	.02	469
OTHER		125
2. INPUTS:		
SEEDS (CANS)	3.71	1595
FERT. (BAGS)	19	4560
PEST. (LI)	28	5152
3. IRRIGATION		
		472
4. LAND RENT		
		1452
	TOTAL COSTS:	34372
	NET INCOME:	31834
	RETURN ON INVESTMMENT (%)	92.62

TABLE 5

FARMER OPERATOR

COST AND RETURN COMPARISON FOR CABBAGE (PER HECTARE)		
	VOLUME/NUMBER	VALUE
TOTAL PRODUCTION	KG. 15814	PESO 59144
MAJOR EXPENSES:		
1. LABOR (MAN DAYS):		
LAND PREPARATION	5	125
FLOWING	INC. ABOVE	
SEEDING	6	150
FERT. APPLIC.	34	850
WEEDING	66	1650
SPRAYING	17	425
HARVESTING	20	500
SORT/GRADE	NIL	
HAULING (KG)	.7	11070
OTHER/TRANS.	14	600
2. INPUTS:		
SEEDS (CANS)	301	1806
FERT. (BAGS)	20	4800
PEST. (LI)	15	3150
3. IRRIGATION		
4. LAND RENT		
		136
TOTAL COSTS:		25262
NET INCOME		33882
RETURN ON INVESTMENT (%)		134.12

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ANNEX 5

AGRICULTURE AND EXPORT  
FINANCING PROGRAMS

TABLE I  
STRAIGHT OR COMMERCIAL LOAN.

<u>Qualification of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents to be Submitted</u>	<u>Required Collaterals</u>	<u>Loan Value</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Implementing Office</u>
Exporters, preferably with track record of export earnings.	1. Export Advance Line (EAL)	1. <u>EAL</u> a) Registered copy of Real Estate Mortgage/ Chattel Mortgage/TCT	1. <u>EAL</u> a) Real Estate Mortgage/ Original TCTs	70% of Appraised Value	Prevailing Market Rate	90-120 days	Loans Dept. of ESs
	2. Packing Credit Line (PCL)	b) Appraised/market value of properties mortgaged	b) Chattel Mort	50% of Appraised Value	-do-	-do-	
New Exporter, SEC registered	3. Post-shipment or Export Bill Financing (EBF)	c) Insurance policy covering improvements on mortgaged properties/goods or equipment under chattel. d) Financial Statements for the past years (3)/Projected Income Statements.					
		2. <u>FCL</u> a) Original/notarized Deed of Assignment of export proceeds covered by LC/FO/Sales Contract b) Copy of export LC/confirmed FO/Sales Contract c) Original/negotiable promissory note with a rider that a penalty shall be imposed in the event that the exporter fails to negotiate the LC/FO/SC	2. <u>FCL</u> LC/Confirmed FO/Sales Contract	80-100% of the LC/FO/SC value	-do-	30-90 days	-do-
		3. <u>EBF</u> Copy of negotiated export bill/commercial invoice/BL or AWB/export declaration	3. <u>EBF</u> a) Commercial Invoice/BL or AWB b) Negotiated export bill/export declaration	80-100% of EB value	-do-	Depending on the country of destination but not to exceed 90 days.	-do-

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Table II

CB REDISCOUNTING

<u>Qualification of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity (CB Terms)</u>	<u>Implementing Office</u>
Exporter, preferably with track record of export earnings	<ol style="list-style-type: none"> <li>1. Packing credit</li> <li>2. Post shipment financing or export bill credit</li> </ol>	<p><u>Packing Credit:</u></p> <ol style="list-style-type: none"> <li>1. Original deed of assignment of export proceeds covered by L/C, confirmed PO/sales contract</li> <li>2. A copy of export L/C, confirmed PO/sales contract</li> <li>3. Promissory note containing a rider that interest thereon shall be automatically deducted, if exporter fails to negotiate the L/C</li> <li>4. Certification by the rediscounting bank of the exporter's FX inward remittances during the last quarter preceding the date of application</li> </ol>	<p><u>Packing Credit:</u></p> <ol style="list-style-type: none"> <li>1. L/C, purchase order or sales contract</li> </ol>	50% of face amount of promissory note/draft	12.75% p.a. to authorized agent banks. Lending rates of authorized agent banks to exporters shall be consistent with the prevailing market rates	<p><u>Packing Credit:</u></p> <p>90 days which may be rolled over for another 90 days at prevailing rediscounting rate (short term)</p>	CB-Department of Loans and Credit
		<p><u>Export Bill Credit</u></p> <ol style="list-style-type: none"> <li>1. Certification that exporter's producer's packing credit rediscounted with the CB had been fully settled</li> <li>2. Copy each of the commercial invoice and the E/L/AWB/negotiated export bill/export Declaration</li> </ol>	<p><u>Export Bill Credit:</u></p> <p>Copy each of the commercial invoice and the E/L/AWB/negotiated export bill/export declaration</p>			<p><u>Export Bill Credit:</u></p> <p>Depending upon location of drawee bank varying from 10-15 (short term) days</p>	

**TABLE III**  
**APEX FINANCING PROGRAM**

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Maximum Loan Per Project</u>	<u>Interest Rates</u>	<u>Maturity (CB Terms)</u>	<u>Implementing Office</u>
<p>Medium and large scale projects which conform to government plans and priorities, belonging to the following sectors are eligible for financing:</p> <ol style="list-style-type: none"> <li>1. Manufacturing</li> <li>2. Shipping</li> <li>3. Mining</li> <li>4. Construction</li> <li>5. Agro-Industry</li> </ol>	<p>To cover the estimated foreign exchange costs of goods, machinery, equipment, services and civil works necessary to carry out the investment projects.</p>	<ol style="list-style-type: none"> <li>1. Feasibility study/ brief profile of the project</li> <li>2. List of goods to be financed and competitive quotations on machinery and equipment proposed to be funded under the APEX loan program</li> <li>3. Amortization Schedule</li> <li>4. Registration Certificates (EFZA, HDI, etc)</li> </ol>	<p>No uniform collateral requirement. Depends on the policy of the Participating Financial Institutions (PFI) concerned which are:</p> <p>POCP PISO Bank Anscor Capital IBAA (FCID) Citytrust BPI Metrobank</p>	<p>Available up to \$6M but larger amounts may be financed subject to World Bank's prior approval.</p>	<p><u>Foreign:</u> 60:40 (WB-fixed rate) (CL-Libor based 6 mos.)</p> <p><u>Peso:</u> MRR based (6 mos.)</p>	<p>Grace-up to 8/15/88 WB-15 yrs. (maximum) up to Year 2001 CL-up to February '94</p>	<p>Apex Development Finance Unit of Central Bank (CFE-DFU)</p>

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TABLE IV

SHORT-TERM TRADE CREDITS UNDER THE TRADE FACILITY

<u>Qualification of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Implementing Office</u>
Exporters	To cover the FX costs of goods, machinery and equipment	<p>Application together with the following information:</p> <ul style="list-style-type: none"> <li>a. Loan Amount</li> <li>b. Proposed Lender</li> <li>c. Purpose of Loan</li> <li>d. Terms (maturity, interest, fees, etc.)</li> <li>e. Schedule of availment</li> <li>f. Borrower's cash flow</li> <li>g. Mechanics of proposed borrowing transaction</li> <li>h. Others that may be required</li> </ul>	Subject to the negotiation agreement between the foreign creditor bank and Philippine obligor/borrower.				Management of External Debt and Investment Accounts Department

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**TABLE V.**  
**COTTAGE INDUSTRY GUARANTEE LOAN FUND (CIGLF)**

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>REQUIRED Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity CB Terms)</u>	<u>Implementing Office</u>
<ol style="list-style-type: none"> <li>1. Filipino citizens or if partnership/corporation - 75% Filipino ownership with an all Filipino Board of Directors</li> <li>2. Total assets of not more than P100,000 at the time of registration with NACIDA</li> <li>3. Duly registered with NACIDA</li> <li>4. No past-due obligation with any government/private financing institution</li> </ol>	<ol style="list-style-type: none"> <li>1. Purchase of fixed assets</li> <li>2. Working capital</li> </ol>	<p><u>Sole Proprietorship:</u></p> <ol style="list-style-type: none"> <li>1. Passport size picture</li> <li>2. Inside &amp; outside photo of business establishment</li> <li>3. Photocopy of certificate of registration/re-validation with NACIDA</li> <li>4. SSS Registration</li> <li>5. Quotation/pro-forma invoice</li> <li>6. Certified photocopy of trade name with the Bureau of Domestic Trade</li> <li>7. Mayor's Permit</li> <li>8. License to engage in business issued by the city or municipality</li> <li>9. Income tax return for preceding year and affixed receipt of payment</li> <li>10. Certification from NACIDA</li> </ol> <p><u>Partnership/Corporation:</u></p> <ol style="list-style-type: none"> <li>1. Registration with Bureau of Domestic Trade</li> <li>2. Copy of Articles of Partnership/Incorporation &amp; By-Laws registered with SEC</li> <li>3. Resolution of Partnership</li> <li>4. Curriculum vitae/personal data sheet/list of stockholders as of date of application</li> </ol>	<ol style="list-style-type: none"> <li>1. Real estate</li> <li>2. Chattel Mortgage</li> <li>3. Assignment of cash deposit with banks</li> <li>4. Sales contract/irrevocable letters of credit/confirmed purchase order</li> <li>5. In the absence of the above, unsecured loans can be covered by a guarantee</li> </ol>	Maximum of P100,000.00	MRR (90)	<p><u>Working capital loan:</u> max. of 3 yrs.</p> <p><u>Fixed asset loan:</u> max. of 10 yrs.</p>	CB-Department of Loans and Credit

TABLE VI  
INDUSTRIAL GUARANTEE AND LOAN FUND

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity</u>	<u>Implementing Office</u>
1. Cottage Industry - firms with total assets not exceeding P250 T	1. Purchase of factory site for new and expansion projects; maximum of 25% of amount applied for	Loan application together with supporting documents required by accredited financial institution	1. Real estate, building and land improvements	<u>Cottage Industry:</u> Accred. - P2 M maximum Non-accred. - P.15 M maximum	Total of 23% p.a. inclusive of charges	7 - 12 yrs. with 2 - 3 years grace period depending on type of loan	Department of Loans and Credit
2. Small Industry - firms with total assets of over P250 T but not exceeding P2.5M	2. Construction of factory buildings		2. Machinery and equipment				
3. Medium Industry - firms with total assets of over P2.5 M but not exceeding P10 M	3. Purchase of machinery/equipment/fixtures and installation costs		3. Acceptable stocks and bonds				
	4. Permanent Working Capital			<u>Medium Industry:</u> Accred. - P5 M maximum			

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**TABLE VII**  
**AGRICULTURAL LOAN FUND**

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity</u>	<u>Implementing Office</u>
Individual or enterprises whether sole proprietorship, partnership, corporation or cooperatives engaged in agricultural production or intending to engage in agriculture and agro-processing investment	<ol style="list-style-type: none"> <li>1. Short-term production credit</li> <li>2. Medium and long term loans for capital outlay and operating capital excluding land acquisition</li> </ol>	<ol style="list-style-type: none"> <li>1. Accomplished application form</li> <li>2. Bio-data of borrower</li> <li>3. Copy of latest income tax return of borrower</li> <li>4. Certificate of registration of the firm with the Bureau of Domestic Trade and other authorities</li> <li>5. Project plan, including the proposed investment outlay, project data,</li> <li>6. Pro-forma invoices/bills of materials and specifications, project plans and contracts, if applicable</li> <li>7. Titles, tax declarations, location plans, and current tax receipts covering the collaterals offered</li> <li>8. The borrower's latest financial statements and a cash flow statement including supplementary statements and schedules. Audited statements should be submitted in the case of rehabilitation or expansion of projects.</li> </ol>	<ol style="list-style-type: none"> <li>1. Real Estate</li> <li>2. Chattel Mortgage</li> <li>3. Bonds or other securities issued by the National Government</li> </ol>	The amount of loan that may be obtained by a borrower under the ALF Program will depend, among others, upon the requirements of the project based on the over-all evaluation of the conduct banks, including the viability and profitability of the project; the collateral offerings; and the credit worthiness of the borrower. The loan amount, however, shall not exceed the single borrower limitation under Section 23 of R.A. 337, as amended, which sets fifteen percent (15%) of the unimpaired capital and surplus of a bank as the maximum amount that may be granted.	Flexible and determined by individual participating banks on the basis of CB's interest rate for ALF funds.	<p><u>Production Credit:</u> One year; for sugar and banana projects, 18 months</p> <p><u>Working Capital:</u> 7 yrs. with 2 yrs. grace period</p> <p><u>Long Term:</u> 15 yrs. inclusive of 7 yrs. grace period</p> <p><u>Medium Term:</u> 7 yrs. with 2 yrs. grace period</p>	Department of Loans and Credit

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**TABLE VIII**  
**AGRO-INDUSTRIAL TECHNOLOGY TRANSFER PROGRAM (AITTP)**

<u>Qualification of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Implementing Office</u>
Firms with financially viable agri-based projects.	<ol style="list-style-type: none"> <li>1. Technology transfer</li> <li>2. Domestic and Export market development</li> <li>3. Livelihood generation</li> </ol>	<p>Submission of AITTP Project Feasibility Study Format. For pre-evaluation purposes, only the executive summary portion of the study must be submitted. If this passes the initial screening, the proponent is then required to submit the entire project feasibility study.</p>	<ol style="list-style-type: none"> <li>1. Land and improvements -90% of the appraised value</li> <li>2. Buildings- 80% of the appraised value</li> <li>3. Chattels- 60% of the appraised value</li> </ol>	<p><u>For Individual Projects-</u> Maximum project cost of P10M.</p> <p><u>For Common Service facilities-</u>Maximum project cost of P30M</p> <p><u>For Cultivation Projects-</u>Maximum loan equivalent to 60% of the project cost, excluding the cost of land</p> <p><u>For Processing Projects-</u>Maximum loan equivalent to 80% of the project cost, excluding the cost of land</p>	8.75% p.a.	15 years which includes a maximum grace period for a five years. The repayment period for a given loan varies a case to case basis.	Technology Resource Center

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TABLE IX  
EXPORT INDUSTRY MODERNIZATION PROGRAM (EIMP)

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity</u>	<u>Implementing Office</u>
<p>1. Exporters must be in woodworking, garments and textile manufacturing, food processing or metal fabrication;</p> <p>2. Total assets must not exceed P10 M after EIMP assistance; and</p> <p>3. Project must be export-oriented, resource based labor-intensive, or must generate substantial labor thru a linkage with other industries.</p>	<p>Loans will cover the following facets of financing:</p> <p>a) Plant b) Plant works c) Machinery and equipment d) Working capital</p>	<p>Application together with project feasibility study</p>	<p>1. 70% covered with hard assets from the projects, such as land, building and machines</p> <p>2. Co-financiers with commercial funds may impose their own collateral requirements for the portion of their exposure</p>	<p>P1 M to P 5 M</p>	<p>8.75% p.a. for soft-term EIMP money</p>	<p>5 to 10 yrs. with a grace period of 1-3 yrs. Generally determined on a project-to-project basis, depending on cash flow earnings, stability and risk flow expectations</p>	<p>Technology Resource Center</p>

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TABLE X

**MICRO-ENTERPRISE DEVELOPMENT ASSISTANCE LOAN (MEDAL)  
and INTEGRATION AND DEVELOPMENT OF ENTERPRISES ASSISTANCE LOAN (IDEAL)  
UNDER THE URBAN LIVELIHOOD FINANCING PROGRAM**

<u>Qualification of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents To Be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity (CB Term)</u>	<u>Implementing Office</u>
1. Small and medium scale enterprises	1. Machinery/equipment acquisition 2. Working capital and site improvement 3. Raw materials supply	1. Preliminary evaluation form 2. Income tax return-previous years 3. Financial statements, past three years and current year 4. Registration certificate, permit/license, Articles of Incorporation 5. Credit Investigation report 6. Copies of existing loan agreement from other banks and financiers/lenders 7. Assets Appraisal Report (loans above P50,000) 8. Evaluation of collateral requirements 9. List of stockholders/partners 10. Curriculum vitae of partners/major stockholders (include borrowers) 11. Secretary's Certificate or board resolution authorizing the company to borrow/authorized signatory	1. Torrens Certificate of Title 80% of appraised value 2. Chattel Mortgage 60% of the appraised value	P500,000 and above	prevailing interest rate	Based upon the project's capability to pay	Technology Resource Center

**TABLE XI**  
**VENTURE CAPITAL FINANCING**

<u>Qualifications of Borrower</u>	<u>Purpose of Loan</u>	<u>Documents to be Submitted</u>	<u>Required Collateral</u>	<u>Loan Value</u>	<u>Interest Rates</u>	<u>Maturity</u>	<u>Implementing Office</u>
<p>1. Project may either be a start-up or an existing or an expanding company</p> <p>2. Cottage enterprises must have total assets of not more than P250,000</p> <p>3. Small scale enterprises total assets ranging from P250,000 to P2.5 million</p> <p>4. Medium scale enterprises must have total asset base of over P2.5 million but not more than P10 million</p> <p>5. Enterprises must be at least 60% Filipino owned.</p>	<p>1. Equity Financing</p> <p>2. Project Financing</p> <p>3. Acquisition of Loans</p>	<p>1. Summary statement of the purpose and goals of the enterprise</p> <p>2. Clear description of the proposed financing needed from inception to maturity</p> <p>3. Description of the type of market activity the venture would pursue</p> <p>4. History of the firm</p> <p>5. Audited financial statements since the start of operations, or at least for the past two consecutive years if operating already</p> <p>6. Biographical sketch of stockholders, Board of Directors and key management personnel, together with personal, business and technical references</p> <p>7. A copy of the SEC approved Articles of Incorporation and By-Laws. For non-corporations, a copy of Certificate of Registration with the Ministry of Trade and Industry</p> <p>8. A detailed list of equipment owned and/or to be acquired at Acquisition Cost or Book Value.</p>	<p>Business credentials such as purchase order, letter of credit, inventories</p>	<p>Based on the additional capital requirements of the project but not to exceed 50% of the final equity of the enterprise including VCC's participation. Also based on the needs of the business, paying capacity of the applicant and growth potential of the enterprise</p>	<p>Market rates or profit sharing</p>	<p>Depends on the project being financed but in no case be indefinite</p>	<p>Participating commercial banks:</p> <p>CBE</p> <p>Equitable</p> <p>Far East</p> <p>IBAA</p> <p>Interbank</p> <p>Manilabanque</p> <p>METC</p> <p>P&amp;Com</p> <p>PNS</p> <p>Philtrust</p> <p>Philbancor</p> <p>Producers</p> <p>Prudential</p> <p>RCSC</p> <p>RPS</p> <p>Solid Phils</p> <p>Veterans</p>

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April 28, 1986  
USAID/Manila

Mr. Charles W. Greenleaf  
Assistant Administrator  
Bureau for Asia and Near East  
Agency for International Development  
Washington D. C. 20523

Dear Mr. Greenleaf:

It's report card time. I'm ending my one-year training at the Asian Institute of Management (AIM) on May 9. I am pleased to report that I am was on the Dean's list for the third semester and may have made the distinction list for the year. The selection of the top four will not be announced until graduation day on May 11. In any event I did gain from the training and I am now eager to get to Cairo for my next assignment.

Over the last months I have tried to take every opportunity to do A.I.D.-related research and consultancy work. I am enclosing a copy of a research paper I completed on satellite farming. During my time with USAID/Manila there was considerable interest and discussion on the subject but there is little, if any, documented experience or framework to structure programs. My research does confirm that in the Philippines there are good opportunities but there are also serious constraints. I have sent a copy of the study to the Office of Investment, Bureau for Private Enterprise, since they seem to be taking the lead in promoting the system. A second copy is being sent to Peter Bloom, ANE/PD. I believe that it will be useful to other missions since there are some general lessons that have relevance worldwide.

As part of the AIM training I spent three weeks with the Asian Development Bank, Development Finance and Investment Banking Division. My focus was on equity investment operations. The experience will be applicable to my assignment in Cairo. I also organized a team of AIM-experienced managers studying with me to conduct an impact evaluation on the USAID-assisted Management Skills training program for Ministry of Local Government regional and provincial managers under the Rural Service Center Project. The team was very favorably impressed with this USAID effort and the positive changes the training has brought about. The recent political dislocation, however, is taking its toll on the morale of the trained staff. The senior managers are being replaced and the funding for projects has been cut.

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I will be in Washington on consultation in August and will try to get an appointment to give you a personal report on my studies. I appreciate very much your supporting my bid for training. It will be put to good use and I feel well prepared to tackle my Cairo assignment.

Sincerely,

*George M. Flores*

George M. Flores

cc: Mr. Peter Bloom, ANE/PD ✓