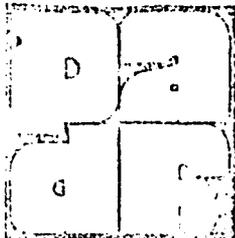


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Pan American Development Foundation

1889 F Street N.W. • Washington, D.C. 20006 • U.S.A. • Phone: (202) 789-3969 Cable: FUPAD Telex: 440251

ACCELERATED COCCA PRODUCTION PROJECT

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Country: Belize

Activity Title: Accelerated Cocoa Production Project

Total AID Request: \$755,000.

Activity Location: Belize

PVO Name & Location: Pan American Development Foundation
1889 F Street, N.W.
Washington, D.C. 20006

Central Location: Same as above

Contact Persons: Lewis Townsend, Vice President
Jack Cornelius, Agricultural Development Officer

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ACCELERATED COCOA PRODUCTION PROJECT

PROJECT SUMMARY

This is a proposal by the Pan American Development Foundation (PADF) to assist the Government of Belize (GOB) in developing a cocoa production industry and enhancing rural incomes and quality of life. It provides the impetus for a nationwide cocoa improvement program to expand small-scale cocoa production in order to transform available land area that is largely wasted into useful acreage to a highly profitable cash crops for export.

The essential elements of this project are the assembly of an improved cocoa production system -- the training of extension specialists of the Government of Belize (GOB) to design and deliver this system to cocoa producers on family farms; the training of cocoa producers on family farms to apply this improved technology, and the provision of improved seedlings to catalyze the expansion of cocoa production on family farms.

This project combines resources of the private sector with those in the public sector in an important country development project that likely could not be accomplished practically by either the private or public sectors alone. Two private voluntary organizations (PVOs), the Pan American Development Foundation and Volunteers in Technical Assistance (VITA), and a private corporation, Hershey Food Corporation, are providing the management and technical expertise required to implement this project.

The Pan American Development Foundation (PADF) is highly qualified to implement this project. The mission of PADF is to institutionalize development projects and development foundations in LDCs for the benefit of the people. To accomplish this mission, technical assistance is provided to local institutions and governments to develop their own training and development programs. PADF has projects in twenty-five countries in Latin America and the Caribbean. These range from institution building of private sector oriented local development foundations, credit programs, forestry projects, health, potable water development and agriculture.

VITA is an experienced and recognized PVO with worldwide experience in appropriate technology including agriculture, low income housing, health and sanitation related projects, agro-industry, and community development. Its access to volunteer experts gives it unusual adaptability and flexibility in meeting diverse development needs.

The Hershey Food Corporation is a recognized world leader in the cocoa and chocolate processing business and purchases (or markets) 25% of the world cocoa production. Hershey has in Belize exceptional cocoa production facilities and station operations support that will serve as headquarters for this three year project. This includes an 1800 acre cocoa plantation that will serve as the model for training, drying and fermentation facilities and a staff that will assist in the training of the farmer participants of this project. Access to this superb unit will enable the immediate implementation of project activities at minimal cost and work, and the direct involvement of a private corporation in a nationwide cocoa improvement project.

PADF has a working agreement with the Peace Corps. The United States Peace Corps will therefore assign three volunteers (PCVs) experienced in extension and communication techniques to assist in developing and institutionalizing a viable extension program to be carried on within and outside the original project area after the three year duration of this effort. Years one, two and three of the project are developmental in the sense that individual farms of the participants will be in a continuously developing state with housing being built and cocoa and other agricultural crops planted. At the end of the three year project the following are expected to be in place:

- 500 acres cocoa planted.
- 50 small farmers fully trained in the improved technology production and process of cocoa.
- 6 GOB extension personnel trained in the techniques of transferring the new technology to additional farms in the country.
- 50 farm families fully developing the newly established cocoa farms, and located in new houses.

The new technology packages will be introduced in locations outside the initial project areas.

The total cost of the project during over three the initial years is \$1,762,000. An operational program grant fund from USAID of \$755,000 is being sought for PADF, a private voluntary organization, to partially support the project. Contributions from each of the organizations involved in the project in the first three years are: Belize Ministry of Agriculture, 21%; USAID 43%; Hershey Food Corporation 3%; Peace Corps 9%; participants 24%. No external funding is projected after the first three years in the original area as it is anticipated that the farmers will be firmly established and continue to institutionalize this effort.

PROJECT DESCRIPTION

The Government of Belize has requested assistance from the Pan American Development Foundation (PADF), and Volunteers in Technical Assistance (VITA) two private voluntary agencies experienced in institution strengthening and in technology transfer in developing countries. The government has specifically requested assistance in further developing a small farmer cocoa production technique in cooperation with the Hershey Corporation at its Hummingbird Farm near Belmopan, Belize, and to institutionalize this cocoa production and processing technology at two locations near Hummingbird. This will be accomplished through on the farm training and extension performed by the government extension service, Peace Corps volunteers with extension backgrounds and selected cocoa farm workers from the Hummingbird Farm.

The goal of the project will be to further develop and refine an improved cocoa production and processing technology that can be easily replicated in other areas in Belize and elsewhere for the purpose of increasing the income of small farmers. This phase of the project will be for three years. It is envisioned a second phase of three years will be necessary to firmly institutionalize this technology in various other locations. The project will serve as a model for improving small-farmer cocoa production and processing as higher yield alternative to the traditional method.

Background

Belize, in addition to being one of the numerous underdeveloped countries of Central America, holds the distinction of also being underpopulated, with only approximately 150,000 inhabitants, a population

density of six people per sq. km. It is bordered by Mexico on the north, Guatemala on the west, and the Caribbean Sea on the east.

Belize is not self sufficient in food although it is a net exporter of beef. The primary crops grown are typically tropical, consisting of citrus, bananas, sugar and cocoa: and utilizing only 15% of the arable land. Belize no longer exports lumber, despite the fact that forest exploitation was Belize's primary economic activity until two decades ago. In 1955 over 60% of export revenues came from lumber and chicle. By 1968 the value of once important mahogany, tropical cedar and pine had declined to only 5% of export revenues, while agriculture increased. Although there has been extensive deforestation in parts of the country, major forest reserves still remain.

The northwest part of the country is being settled by refugees from El Salvador. This settlement is encouraged by the government of Belize which sees it as a way to increase agricultural land use. In the face of traditional slash-and-burn farming traditions, new methods of intercropping are being encouraged coupled with non-traditional cash crops such as cocoa that have a more positive impact on the environment.

It is coincidental that this effort is coming on stream at the same time the major cocoa markets, including the Hershey Corporation, are looking for new and alternate sources of production. West Africa, which has in the past supplied 75% of the world market, is no longer a reliable source due to government policies brought on, in large, by an adverse political climate in the region.

The Hershey Corporation has initiated programs to improve reliability

and quality of cocoa in various countries. In the Dominican Republic, for example, its payments of an initial 10 cents per pound incentive for fermented cocoa has shifted the supply at the market to this preferred type. These improved production techniques, a guaranteed market and incentive payments for quality have had a positive effect on the economic climate in areas when it has been implemented.

In Belize, Hershey launched its most significant trial effort to improve Caribbean/Central American cocoa production. It has contacted the Pan American Development Foundation and AID for assistance to improve upon this effort, institutionalize the technique and develop systems for transferring the technology to farmers in two separate cocoa producing areas. During discussions with Hershey, it was agreed it is desirable to design a method during Phase I of the project to replicate this cocoa production system to other areas of Belize and possibly the Caribbean region, and elsewhere in Latin America.

The Pan American Development Foundation (PADF) has been actively participating in development projects and assisting in the formation and institutionalization of local development foundations that are designed to assist the small holder in Central America, South America and the Caribbean area for over twenty years. Many of these efforts have been in close cooperation with the USAID missions, multinational and other foreign aid organizations, Peace Corps, FVOs and other private organizations or corporations. All have had one common denominator -- to increase the incomes and better the quality of life for the small farmers and low-income urban dwellers -- and all have focused on mobilizing local private sector

support to benefit micro-producers in the private sector.

This project will be implemented by PADF in close cooperation with the Hershey Food Corporation, the GOB, Development Finance Corporation of Belize (DFC), U.S. Peace Corps, VITA and the USAID mission to Belize.

The project will work closely with fifty to sixty selected farmers in two locations using the Hummingbird Farm as a base for its project activities and a training center. In addition to the farmers to be trained under an on-the-farm training program on improved cocoa production using the methods Hershey has developed, it is envisioned that the Hummingbird Farm will also be the center to upgrade the specialized extension skills of fifteen to twenty government extension agents and the three Peace Corps volunteers assigned to the project. These groups will be the primary beneficiaries of the project in the short term.

A method to transfer this technology as a package to groups of farmers in other areas will be developed during the third year of this phase. This technique when implemented will have an accelerated multiplier effect that will reach several hundred farmers. It should be recognized that while this project has as its focal point the very low income farmers in the two areas of operation the technique for increased production will be available to all including large producers.

Accomplishments to be Expected

Belize's development is heavily dependant upon the performance of several key economic subsectors. However, because of world supply and the

price structure, there does not appear to be a bright future for sugar, bananas or citrus unless a European market can be developed for the traditional export crops or for example unless a domestic citrus byproduct market is expanded in connection with the livestock industry. In contrast to these rather sobering market conditions are new prospects for cocoa production, for which the Hershey Corporation is guaranteeing an export market. By the end of this project we predict that one of the country development strategy statement (CDSS) more important objectives, non-traditional agriculture commodities exports, will be achieved. By the end of a possible Phase II diversification away from world market surplus crops will be well on its way. This should have the effect of stabilizing and increasing the income of all participants (farmers who engage in cocoa production).

Since this is a relatively new endeavor in Belize the export market for cocoa, and the number of farmers growing cocoa can be measured very specifically. This will be the primary base line used in measuring progress toward end of project goals.

It is hoped that with the successful conclusion of this Phase I project a second phase would be authorized to further expand cocoa production in other areas of Belize. A second phase may or may not adopt the mode of this project in a different area. It is anticipated that the participants in the present project will continue cocoa production using the acquired technology without additional outside funding. The skills they will have learned and use will instill a sense of security and commitment to their newly acquired business.

Project Administration and Implementation

Overall administration of the project will be the responsibility of PADF. Field staff will include a Chief of Party with broad administrative and overseas experience with an agriculture bias, a community development advisor, and locally hired secretary.

The Chief of Party will be located in Belize with full authority for directing the "day to day" operations of the project activities and to serve as liaison officer to the GOB, the USAID mission and other interested parties as the project progresses. He will supervise all personnel assigned to this project in a professional capacity. The Chief of Party will be responsible to PADF for all management and financial activities of the project. PADF in turn will be accountable to the Government of Belize and to USAID. It is intended for this project manager to stay in close contact with the USAID Mission and the concerned officers of the GOB to keep them current on the project status. A locally hired secretary will perform the normal secretarial duties and record keeping required of a project of this type. She/he will be offices at the Hummingbird Farm office in space furnished by the Hershey Corporation.

The project manager and community development technician will each be furnished a project vehicle and the FOCs with motorcycles for official use.

During the last six months of this phase/project the techniques that have proven most successful and adaptable will begin to be replicated in

other project areas as a package. This will take the form of training a few more extension aides, identifying small-scale farmers, possibly also a mid-size farmer as a demonstration area. The successful implementation of this demonstration activity will serve as evidence of substantial progress towards end-of-project goals and lay the basis for a Phase II project if appropriate.

The project area will be located in two separate areas with the Hummingbird Farm acting as project headquarters and the seat of the extension activities. One project location will be designated for selected participants presently employed by the Hershey Corporation. They will each be allocated twenty five acres of land to develop, including land clearing and the building of a residence. Approximately, ten acres of this land area will be planted in cocoa using improved technology being developed by the Hershey Corporation with the remainder planted in various crops to be recommended by the extension personnel. A similar but larger area (with fifty acres per farmer) will be designated in the Valley of Peace. The participants located in this area will be other small farmers who meet a performance criteria to be developed by personnel associated with this project.

The Peace Corps has agreed to designate three volunteers with an extension and agriculture background to assist in these activities along with regular government agriculture workers and selected employees of Hershey's Hummingbird Farm. It is predicted, with this continuity, there will be a maximum of uniformity in the two project areas.

Community Organization and Development

The community organization advisor, in conjunction with appropriate GOB officials, USAID staff, and project beneficiaries will establish community priorities and implement a development scheme. The resources of this advisor will be available to all project participants but it is expected that the needs of the participants in the Valley of Peace are such that they will consume the larger portion of his/her time.

Based on the experience of the existing Valley of Peace program and baseline information about the target group, needs and priorities will be determined. Once these goals are identified, the specific information required for defining community integration mechanisms and guidelines for implementing corresponding programs will be compiled. While organizational goals can usually be articulated without excessive detailed study, the methodologies and routes for achieving them must be based on considerable information. The advisor will be responsible for compiling and applying this information.

To insure the long-term enthusiastic involvement of beneficiaries, they must participate throughout the survey, design, and implementation phases. Furthermore, a continual feedback and evaluation process will be used to minimize difficulties and assure ongoing participation. This process will be coordinated with a parallel system in the agricultural activities.

One of the major responsibilities of this program will be education. Given the innovative nature of the overall project, "lessons learned" throughout will be of value to the GOB departments, USAID officials, and development agencies actively involved with the project. Information will be well documented, analysed, and reported so as to inform and facilitate associated efforts.

The community development advisor's role will be to help plan and manage the organizational process and to operate in a manner which is complementary to the agricultural aspects. It is anticipated that special emphasis will be developed in the following:

1. Community information and outreach. To identify resources and effectively apply them to the major needs. To develop this capability within the participants for continued development.
2. Women participation in economic activities. To provide organization and/or training in those areas which represent sustainable opportunities for income generation.
3. Support the development of basic social infrastructure. To assure access to essential services for health, water, housing, education, and transportation.
4. Institutional support for self-reliance and stability. To facilitate the establishment of chosen organizations, enterprises, cooperatives, and social groups. To assure the capacity for ongoing management and development.

Housing

The project staff will liaise with the Cooperative Housing Foundation in Belize to identify suitable low-cost house designs, and develop and implement an effective, self-help housing scheme as appropriate. Particular attention will be given to addressing the needs, preferences and resources of the project beneficiaries.

A preliminary anthropological assessment has already been conducted of the project by a PADF social anthropologist and it is the consensus of design personnel that flexibility in housing configuration should be allowed. This is based on the experience of a similar type of project in the area. It is anticipated that the majority of participants and their families will choose to live in a small community setting; however a certain number will choose to live on their land, also it is thought as the cocoa trees become older and begin to bear fruit more will move to their farms.

The community development advisor will assist the participants to acquire credit when it is available for purchase of housing materials. Types and sizes of houses to be built will depend on the present income and savings of the farmers. Thus, designs of different house sizes and types will be possible; farmers will be able to select the type and design most suited to his needs and income level -- a farmer will be assisted to build a larger home if he can demonstrate to the lender his ability to repay the loan. The philosophy and program strategy that PADF applies to its National Development Foundation funded programs will be applied here.

Water and sanitation improvements will be integrated with the self-help housing scheme. An assessment will be made in the first six months of the project to determine local conditions -- soil type, water table level, amount of rainfall, water and sanitation demand, available construction materials, etc. -- which may influence the systems used. Based on this assessment, the community development advisor, assisted by the volunteer advisory board, will select those water and sanitation systems to be utilized and develop and implement a mechanism to install them.

Analysis of Benefits to Women

A great amount of consideration has been given to the living style of participants in this project. As mentioned elsewhere in this proposal, we have concluded that a flexible and self-determined living style is desirable and appropriate. During the period of investigation of this issue it became evident that the women involved in this project will play major roles.

Although women are not as intimately involved in agricultural production in Belize as in some other parts of the world they play a major role in the structure of family living and community interrelationships. In particular, women will play critical roles in deciding housing locations, housing sizes and styles, and even communal sanitary facilities where small village living is selected.

It is evident from all information that several different nationalities will be co-mingled in this project area. This means that cultural differences will require and be reflected by female participation at the community level. One of the foremost reasons for including a community development specialist in this project is to assure adequate response to different situations that arise when new villages, particularly in the Valley of Peace, are organized and people of different cultures are brought together.

It is not completely clear what agricultural farming system will emerge within this project. However, the training program for cocoa production and processing is designed to accommodate both men and women at the same level of participation. The project's end result will be increased and sustainable income for both men and women.

Among the project beneficiary groups, there will be Indians and Central Americans of Spanish and English tradition. In some of these, women have typically managed household finances and marketed produce. When it is appropriate women will have direct access to the agricultural and housing credit component of the project on an equal basis with men. Because of farm work schedules of the men that the women emerge as the dominant community and household influence.

Procurement Plan

Selection and procurement of project commodities listed under the USAID grant will be the responsibility of PADF. When possible, purchases will be made locally. Vehicles and equipment will be acquired in accordance with AID regulations and requirements.

A source/origin waiver will be required for the three Japanese motorcycles as the size and type required for this project is not available from U.S. manufacturer.

Project Evaluation Plan

Because of the unique nature of this project involving both the public and private sectors close monitoring of the project progress is essential and desirable. PADF intends to carry out a continuous evaluation plan that we will call "process documentation." Ongoing data collection will be used as a tool for a learning process approach in the implementation of this project. In other words, documentation for ongoing feedback will be used so that errors in project design or obstacles in the bureaucracy can be identified and dealt with on the spot. This is then an implementation method and tool for impact analysis that permits a local evaluator or social scientist to visit the project regularly to collect the information needed by the implementing organization. The continuous nature of the information-gathering distinguishes it from the standard method which tends

to take place "after the fact." It is envisioned that the evaluator will visit the project sites each quarter for several days. These visits will include talks with family members of participants, community leaders and close coordination with the community development specialist assigned to the project.

It is important to note that the evaluation is seen as having two key functions: 1) to document this project for purposes of replication and, 2) to provide management with timely information in order to make necessary improvements and adjustments. In order to best serve these ends one must see the evaluation and schedule as flexible. A PADF evaluation officer made a pre-project visit to Belize, participated in final project design discussions and is preparing the questionnaire for baseline data, consequently a special trip will not be required and further baseline requirements can be handled in-country by the project manager as farmers register for the project. This will be a relatively simple task. For example the implementation schedule will list certain benchmarks at various stages of the project and to measure the actual progress will require site visits to observe the activities. After each of these visits a "give and take" discussion will be held with representatives of all the organizations involved. They will be appraised of the project status at that time. This should: 1) provide on going information by which the project is or is not proceeding toward its objectives. 2) it should show the impact the project is having on the participants, their families and the new community. 3) it will be a vehicle for making known the views of the farmers (participants) themselves.

Assumption

Aside from the obvious condition of availability of funds, successful completion of this activity is closely related, if not dependent on, early action by the GOB in securing the necessary appropriate land for the project sites, credit for housing construction, and the assistance in clearing the initial house site.

An additional assumption impacting on the successful conclusion of the project will be Hershey's continued interest in production techniques, technology transfer and market guarantees.

Social Analysis

The primary target population of this project is the farmer and his family who is being encouraged to produce the food and export crops for Belize. The problem being addressed is the urgent need to replace world surplus cash crops with a high income and deficit commodity, and also to begin producing domestic [food] crops and reduce dependence on imported foods in the local market. The demonstration impact of the project is expected to stimulate other family farmers to enter the cash sector and produce food for local consumption.

Economic Analysis

An analysis of the total benefits derived directly from cocoa

production, and sale on the world market after production begins is presented in Table I.

Whereas this analysis includes total project costs during the three year project period, the production directly from this project area represents a minor portion of the total benefits expected to be claimed. Additional major benefits that are not readily quantified include 1) the training of Belizean cocoa extension specialists who will be able to direct and advise similar activities throughout the country on a continuing basis; and 2) the catalytic role of this project in setting a continued national cocoa production program in motion to utilize the abundant land resources of the country to produce high quality cocoa for the export market. It is reasonable to project an economy of scale will be reached in year 7 after the start-up of this project.

Technical Analysis and Plan

The primary constraint to cocoa production in certain Central American countries including Belize has been the absence of a reliable market. Limited production has been tried using traditional methods without any serious production problems, however the production of the varieties usually available for planting have been of low genetic origin.

Because of a corporate decision, Hershey has developed an 1800 acre plantation type cocoa farm in Belize. This has served to dispell any idea that cocoa production and the use of improved technology is not

appropriate. Average production from traditional methods in Africa and Latin America is approximately 200-300 lbs. per acre. The Hershey Hummingbird Farm production, however, is expected to average 800-900 lbs. per acre, with the more mature plantings producing 1500-1800 lbs. per acre. There is also potential for a significant increase when new varieties of seed are introduced this year.

Planting techniques, that include selectively cutting trees on a phased basis to allow for new plantings to be uniformly located and to ensure proper shade to the different age trees, will increase the management capability of each farmer and reduce risk of disease spreading.

Financial Plan

The proposed \$718,000 grant will provide 40% of the three-year costs of small-farmer cocoa production for export and increased domestic cash crop production in Belize. Although the initial start-up costs will be relatively large to cover personnel, ordering of commodities and start-up of training, the expenditures over the remaining years will decline.

The OPG will support the project field staff including travel costs, part of the local training costs, housing and land preparation, and evaluations.

Additional funds from Hershey, GOB and Peace Corps will contribute

approximately 36% with the small-farmer participants contributing 24% (labor in-kind).

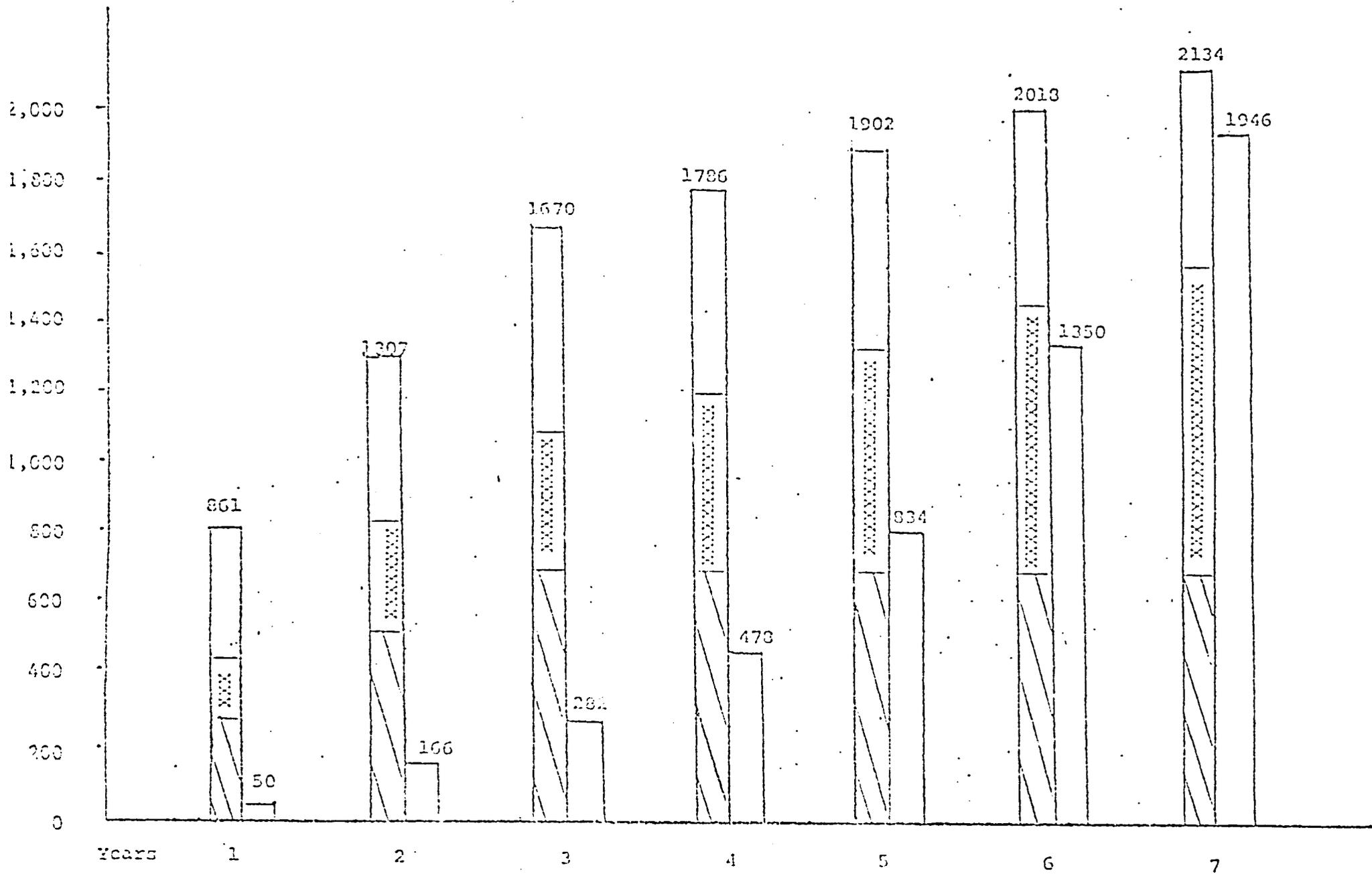
The GOB contribution includes six agricultural agents, a minimum of 1875 acres of highly productive farm land, and loan funding for participants for housing and planting materials.

Detailed budget information in Table II.

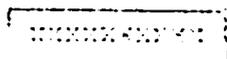
IMPLEMENTATION SCHEDULE	1st Month	2nd-6th Month	7 Month - 1 Year	2nd Year	3rd Year
Project approval	X				
Grant agreement signed	X				
Recruit Chief of Party	X				
Chief of Party on site	X				
Recruit secretary	X				
Recruit community development advisor	X				
Community development advisor on site	X				
Project headquarters in place	X				
Commodities ordered	X				
AID agricultural funds available		X			
Land acquired by GOB		X			
Guidelines for housing loans agreed upon with DFC			X		
Selection of GOB extension personnel		X			
Anthropological follow-up study (preliminary study made pre-project)		X			
PCVs assigned to project		X			
Training PCVs		X			
Training extension agents		X			
Extension personnel working with farmers		X			
Selection 1st group Hershey farmers		X			
Selection 1st group Valley of Peace farmers		X			
1st formal training of farmer		X			
1st planting of seedlings at VOP		X			
Begin land clearing of house sites at Hershey		X			
1st planting of seedlings at Hershey			X		
Surveys for farmers begin		X			
Construction of housing begins (Hershey Component)		X			
Completion of farmer selection at Hershey			X		
Completion of farmer selection at VOP		X			
1st evaluations			X		
One half of land area planted in cocoa				X	
Agriculture domestic crop producing				X	
Technical package available for extension					X

Accumulated expenses Income

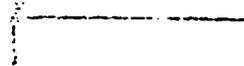
U.S.\$ (000)



A.I.D.



FARMER



OTHERS