PD ABG-730

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: #1 — DOCUMENT CODE: 3

COUNTRY/ENTITY: EL SALVADOR

3. PROJECT NUMBER: 519-0327

4. BUREAU/OFFICE: LAC / 05

5. PROJECT TITLE (maximum 40 characters): AGRIBUSINESS DEVELOPMENT PROJECT

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 94

7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4)
A. Initial FY 87 B. Quarter 4 C. Final FY 91

8. COSTS ($000 OR EQUIVALENT $1 = ₡5)

A. FUNDING SOURCE	FIRST FY 87 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(4,200)	(5,916)	(10,116)	(14,280)	(18,720)	(33,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country		3,850	3,850		11,000	11,000
Other Donor(s)						
TOTALS	4,200	9,766	13,966	14,280	29,720	44,000

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) ARDN	250	000	17,854		13,000		33,000	
(2)								
(3)								
(4)								
TOTALS			17,854		13,000		33,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 220 | 840 | 920

11. SECONDARY PURPOSE CODE: 740

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code		BS	RDEV	COOP	PVON	TECH		
B. Amount								

13. PROJECT PURPOSE (maximum 480 characters)

To increase the production and export of non-traditional agricultural products.

14. SCHEDULED EVALUATIONS: Interim MM 06 YY 90 | MM 09 YY 92 | Final MM 10 YY 94

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [ ] 941 [ ] Local [ ] Other (Specify) CACM

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment)

To expand and enhance the technology transfer elements of the original Project.

MISSION APPROVAL:

Acting Mission Director
USAID/El Salvador

USAID Controller

17. APPROVED BY — Signature: — Title: Acting Assistant Administrador, LAC Bureau — Date Signed: MM DD YY

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

DRAFT PROJECT AUTHORIZATION
(AMENDMENT No. 1)

Name of Country/Entity:	El Salvador Salvadoran Foundation for Economic and Social Development (FUSADES)
Name of Project:	Agribusiness Development
Number of Project:	519-0327
Name of Country:	El Salvador

The authorization for this Project dated September 29, 1987 is hereby amended as follows:

A. "1. Pursuant to Sections 103 and 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Agribusiness Development Project Amendment No. 1 for El Salvador, encompassing a grant to the Salvadoran Foundation for Economic and Social Development (FUSADES) and involving planned obligations of not to exceed Thirty Three Million United States Dollars ($33,000,000) in grant funds over a seven-year period from date of this authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. The planned life of the Project is seven years from the date of initial obligation."

B. Except as expressly modified or amended herein, the original authorization remains in full force and effect.

Frederick W. Schieck
Acting Assistant Administrator
Bureau for Latin America and the Caribbean

Date:_____

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I. Summary and Recommendation

A. Recommendation

USAID/El Salvador recommends the authorization of a $13.0 million amendment and a two-year PACD extension to the Cooperative Agreement with the Salvadoran Foundation for Economic and Social Development (FUSADES), which supports efforts to increase the production and export of non-traditional agricultural crops. The additional funding brings the total AID contribution for the life-of-project costs to $33.0 million. The counterpart contribution to the seven-year project will finance the local currency equivalent of $11.0 million.

B. Summary

Due to the civil conflict, declines in world market prices for traditional crops, Government of El Salvador (GOES) inefficiencies, lack of new technologies and policy disincentives, the agriculture sector in El Salvador has deteriorated dramatically over the last eight years. An important part of the identified solution is to stimulate the production and export of non-traditional agricultural crops. Key constraints inhibiting progress in this area are penetrating foreign markets, suitable production technologies, capital resources and GOES policies. The Mission has begun to address these issues through the implementation of balance of payment policy dialog and several project interventions. Included in these project activities are approaches dealing with agribusinesses and processors, on-farm irrigation, strengthening cooperative institutions and their non-traditional production capabilities, and small farmer participation.

The Agribusiness Development Project (519-0327) is the latest effort to stimulate non-traditional agricultural exports. As a result of progress in project implementation, it has become increasingly evident that significant production opportunities remain untapped. The key constraint requiring resolution in order to take advantage of these opportunities is the lack of suitable production technologies. This constraint exists not only in terms of agricultural production, but in the areas of aquacultural production and quality assurance. The PP amendment is geared to addressing these obstacles to increased non-traditional production.

The goal of the Project is to increase employment and foreign exchange earnings. The purpose is to increase the production and export of non-traditional agricultural products. These remain unchanged from the original Project Paper. The Project continues to have two major components: (1) Assistance to Non-traditional, Export-Oriented Agriculture and (2) Institutional Support. The technology/technical assistance element of Component 1 and the Institutional Support Component will receive the additional assistance under this amendment. The amendment will not adjust nor provide incremental funds to the credit line under Component 1.

Under the technology/technical assistance element, the amendment will finance three new activities and the expansion of existing activities. The new activities are: a quality assurance program, an aquaculture experimental

station and a foreign investment promotion program. The existing program includes major activities such as: new product development, expansion of experimental plots, training and extension, and pest management and post harvest technologies with university-based assistance. The institutional support will cover central staff salaries, equipment, supplies and other capital expenditures.

The Agricultural Diversification Department (DIVAGRO) of FUSADES will continue to have implementation responsibilities. DIVAGRO's Marketing, Research and Development, Projects and Administrative divisions will continue to be the principal management units. Income generated from the loan portfolio, the quality assurance program and field station sales will provide increasing revenues from which to cover DIVAGRO's operating expenses as the Project progresses.

(C) (1) Project Amendment Development Team

Edward Landau	Projects Office
Frank Skowronski	Rural Development Office
Bruce Michener	Rural Development Office
Antonio Gonzalez	Rural Development Office
Mike Wise	Rural Development Office
Juan Buttari	Economics Office
Filadelfo Baires	FUSADES/DIVAGRO

(2) Project Review Committe

Henry Bassford	Mission Director
John Heard	Acting Deputy Director
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Tom McKee	Development Program Office
Deborah Kennedy	Projects Office
Laura McGhee	Contracts Office

II. BACKGROUND

A. The Deterioration of the Agriculture Sector

During the period 1962 through 1979 the value of agriculture production rose (in constant colones) from ₡537 million to ₡887 million, an average annual growth rate of 3.8%. The series of coups in 1979, followed by civil war early in 1980 initiated the reversal of the expansionary trend. Agriculture production dropped by ₡46 million in 1980.

The dislocations occasioned by continuing internal violence were compounded by other factors. Agrarian reform brought about the transfer of 218,000 hectares of crop lands from experienced private to less prepared collective owners. World market prices for some traditional exports declined severely. A

deepening estrangement between the GOES and the entrepreneurial classes reduced the productive role of the latter. GOES ineffciency in both policy-making and delivery of traditional agricultural services and credit exacerbated agricultural production problems. A substantial portion of the most qualified entrepreneurs were left laden with debt and unable to make the investments required for a resurgence of agriculture. Over eight years, these factors accounted in varying degrees to a drop in annual replacement coffee plantings from 17 million to four million trees, the removal from production of 21,000 hectares of coffee and of 70,000 hectares of cotton, and to the marginal utilization of the prime agricultural lands which had been transferred to cooperative ownership.

The cumulative effect of these factors resulted in a continuing decline in the value of agriculture production, exports, and employment. Production declined to a low of ₡720 million in 1986. Despite a minor recovery to ₡735 million in 1987, it is only 83% of its 1979 level (Colon values are in 1962 prices, unless otherwise noted). Highly sensitive to world coffee prices, the value of agriculture exports has shown an even greater decline, dropping from ₡661 million in 1979 to ₡306 million in 1987. Although employment statistics are sketchy, it is variously estimated that of the approximately 550,000 workers in the agricultural sector, only about 21% are fully employed.

Agriculture's performance has a profound impact on the overall Salvadoran economy. This sector traditionally employs 50% of the national workforce, generates 75% of the country's foreign exchange earnings, and contributes about 30% of total GDP. Earnings from the sector have, in large part, financed the growth of other sectors. The economic and social effects of agriculture's deterioration are of a major magnitude. Revitalization of the sector is essential to resumption of overall economic growth.

B. Constraints and Opportunities

Events of the past eight years revealed a serious structural weakness in Salvadoran agriculture — its over-dependence on a few export crops: coffee, cotton and sugar. With the exception of coffee, there was no future for expanding these crops that traditionally had earned foreign exchange and fueled overall economic activity. The resurgence of the agricultural sector and with it the renewal of economic growth would be conditioned by Salvadoran's ability to profitably produce new agricultural commodities. A depressed local market could not be expected to absorb production in the quantities required for full utilization of potential agricultural capacity, nor would sales in the local market produce the foreign exchange needed for industrial, commercial and social structure refurbishment and expansion.

Observers had long noted that of El Salvador's approximately 600,000 hectares of arable land, 40% of the soils were of alluvial or volcanic origin with fairly high natural fertility. The country had a southern exposure at a wide range of elevations producing climatic zones favorable to new production for

the winter market windows in the U.S. and Europe. Inasmuch as traditional crop land and a large portion of the labor force were unemployed, a shift to non-traditional export production would incur low opportunity costs. These observations were substantiated by various analytic exercises undertaken by USAID-funded consultants. In 1986, Fundación Chile, for example, identified six products which could be profitably produced for the duty-free U.S. market and could utilize 30,000 hectares of this fallow land. Market research and production tests carried out by DIVAGRO have subsequently identified foreign markets for 19 additional agricultural products. These market opportunities represented $150.0 million in potential foreign exchange. The analyses further revealed that, in comparison with basic grains and traditional crops, the proposed non-traditional export crops would produce higher returns-on-investment and absorb more workers per cultivated hectare.

Despite the opportunities presented, the growth of the non-traditional agricultural export sector is inhibited by a series of continuing constraints. The four most serious constraints to successful production and sales of non-traditional export crops that were identified in previous studies, including the Mission's CDSS, and continue today are:

1. Penetrating Foreign Markets

El Salvador has only a rudimentary food processing industry which served Central American markets. Most farmers and processors have little or no knowledge of world markets, their requirements and sales infrastructure. Further, although possessed of an adequate internal transportation and communications system, El Salvador has no Atlantic port and must use overland trucking through Guatemala and/or Mexico to serve Eastern and Central markets in the U. S. Its Pacific ports are marginally adequate, but the low product volumes handled by those ports make them uncertain and costly conduits. Air cargo services and space are limited.

2. Suitable Production Technologies.

Production requirements are always conditioned by market realities, i.e. the new products must meet quality, cost and time requirements of the markets. Salvadoran farmers are not only unfamiliar with cultivation practices required for production of the proposed new crops, but lack a tradition of quality control and delivery discipline. Moreover, although the previous studies indicated that there was preliminary evidence of the feasibility of such production in the country, it was by no means certain that appropriate varieties could be readily adapted to local conditions, and produced regularly at competitive costs.

3. Capital Resources

From its development fund, the Central Reserve Bank has formally allocated only $800,000 for the annual financing of non-traditional export crops over recent years. Due to this lack of support, new lines of credit were required to fund the proposed new production. The banking system has little or no

experience with non-traditional production and is unlikely to take on lending for such purposes, unless success stories can be demonstrated. Many of the larger farmers with adequate managerial skills have been decapitalized and cannot be expected to meet standard equity and collateral requirements of conventional lenders.

4. GOES Policies and Programs

Although some positive steps have been taken regarding industrial sector exports, the GOES has not developed adequate policies for active promotion of non-traditional agricultural exports and its existing policies in some aspects continue to hinder such promotion. The overvalued foreign exchange rate provides disincentives for export producers. There are duties on key agricultural inputs and a state-imposed acreage limitation on mariculture. Moreover, its research stations are only marginally functioning, the extension services are moribund, and there was little evidence of constructive leadership in the Ministry of Agriculture during the previous administration.

The new GOES administration, which assumed office on June 1, 1989, has indicated its intentions to emphasize export production as a "growth motor", and is expected to institute policies conducive to that purpose. It has staffed key institutions with persons who are apparently committed to reducing the government involvement in control and regulation of the productive processes. The Mission, therefore, expects an acceleration in desirable policy and program modifications. However, the mobilization of governmental resources to initiate projects which directly support non-traditional export producers and processors will require major and time consuming restructuring of the agencies and of their activities; some of which serve well organized constituencies. Constrained on one hand by the need to accomodate such constituencies and committed on the other to greater reliance on private sector developmental initiatives, it is not likely that governmental projects will play a significant non-traditional agricultural export support role for at least two years. We expect, instead, that GOES activities will be gradually adjusted to complement on-going activities of private sector organizations, notably FUSADES. GOES intentions to rely on FUSADES for leadership in the development of non-traditional agricultural export projects was recently signalled by the Minister of Agriculture. He stated that his Ministry would focus its efforts on basic grain production while cooperating with FUSADES to achieve advances in non-traditional production, since FUSADES' experience demonstrates that it is the pre-eminently qualified agency in El Salvador.

C. USAID Response

The USAID initiated its support for development of non-traditional agriculture exports in 1985 through a PVO, the Salvadoran Foundation for Social and Economic Development (FUSADES). For a description of FUSADES and the rationale for its selection as the implementing agency, see Section VII(A), Institutional Analysis Update.

Funding was provided to FUSADES through the private sector component of the Agrarian Reform Sector Support Project (519-0265) to promote non-traditional exports by carrying out a market identification effort, by establishing and operating adaptive research stations and by providing appropriate technical assistance to potential and actual producers. FUSADES was also the recipient of a grant under the Water Management Project (519-0303) for the promotion and financing of irrigated agriculture. It was already evident that irrigation would be required to enable Salvadoran growers to schedule production for market window periods. Demand for irrigation equipment was anticipated especially by melon growers whose products were finding acceptance in U.S. markets.

By late 1987, it was clear from the performance of the Agricultural Diversification Department of FUSADES (DIVAGRO) that the two projects were conceptually sound; the demand for irrigation-related loans were accelerating as anticipated and growers were responding to the market opportunities that DIVAGRO was defining. More than 80 producers began growing melons for the export market, several utilizing credits provided by the private sector component and virtually all receiving marketing and production assistance from DIVAGRO, which also was instrumental in resolving transportation problems. Melon exports increased eight-fold between 1983 and 1987, according to USDA/FAS. Production of marigold, ornamentals, loofah and cucumbers began with the advice and assistance of DIVAGRO. Technical assistance from DIVAGRO was followed by long-term credits from FIDEX to two food-processing companies, Quality Foods and Bon Apetit, doubling the export production capacity of the first and initiating export-oriented production in the second. The two plants exported products valued at $4.8 million in 1988, up from $2.0 million in 1986, and export sales of over $12.0 million are projected by 1990.

DIVAGRO assisted two local investor groups in negotiations which led to the formation of joint ventures with Shemesh (an Israeli-based firm) and with Sunworld of California. Crop tests initiated with the cooperation of Chiquita Brands, Del Monte and Vlasic appear quite promising and are expected to lead to additional joint ventures.

The export perspectives derived from the marketing efforts and from preliminary indicators of competitiveness were exceptionally promising, but it was clear that the two projects could not supply adequate resources to exploit them fully. The Agribusiness Development Project (519-0327) was designed in 1987 to supplement and extend the activities being carried out under Projects 519-0265 and 519-0303 by DIVAGRO. The new USAID Project provided funding for a long-term marketing staff and a market intelligence service, for an increase in the extent and intensity of field research, for the provision of technical assistance and training to export producers, for assistance to loan applicants for preparing applications and supporting studies, for credit to successful applicants, and for strengthening DIVAGRO's capacity to extend its services to a wider cross section of the agricultural community.

Significant social and political benefits have resulted already from the AID-supported Agrarian Reform program. AID enlisted DIVAGRO to assist the Agrarian Reform beneficiaries to realize the considerable economic potential

of the Reform cooperatives. Although already possessing much of the choice agricultural land and aquacultural sites in El Salvador, and with access to credit under the Agrarian Reform Financing Project 519-0307 and other lines available from the Central Reserve Bank, the coops' low managerial, technical and marketing capacities limited them to traditional crops. The Mission negotiated an agreement with the Central Reserve Bank to shift production priorities under Project 519-0307 to non-traditional agricultural export crops. DIVAGRO arranged with Bank authorities to provide technical assistance to participating coops. Concurrently, the Cooperative Production and Marketing Project (519-353) and the Rural Small Enterprise and Cooperative Development Project (519-0312) were adjusted to serve as transfer agents for DIVAGRO-developed technology and marketing information. Whereas earlier DIVAGRO assistance reached Agrarian Reform beneficiaries only through processor-employed field agents, it is now delivered through several networks.

DIVAGRO directly assists the cooperatives in pre-project and project design for various crop developments. It has carried out assessments of shrimp production potential for 20 coops and assisted in the design of a major cashew project. Currently, DIVAGRO is assessing freshwater prawn potential for selected cooperatives, and is training coop members in vegetable production on its field stations. It has become the major -- and most competent -- agricultural technology transfer agent in El Salvador.

DIVAGRO also has been an instrumental confederate in the Mission's effort to achieve policy reform. It has drafted new legislation for changing the restrictive and counterproductive regulations governing aquaculture; and has played a key role in the evolution of a GOES agriculture development strategy. FUSADES' policy-influencing activities have complemented those of the Mission, resulting in increased access to foreign exchange for capital goods. The Central Reserve Bank now permits exporters to sell foreign exhange to eligible importers. DIVAGRO and other units of FUSADES are expected to lobby actively for USAID-supported policy reforms in respect to changes in foreign exchange rates, taxation of exports, and the banking system.

D. Status of Agribusiness Development Project

The Project calls for expenditures of $26.7 million, $20.0 million of which was to be provided by an AID grant and the balance from FUSADES and private sector beneficiaries. After Amendment No. 3 of December 20, 1988,

which reprogrammed $1.1 million from the technical assistance and training components to support construction of FUSADES' central offices, the funds were allocated as follows:

Project 519-0327
Allocation of Funds (US$-000)

Component	AID	Coop. Cty	Total
T.A. & Studies	2,863	1,000	3,863
Training	637	200	837
Credit Program	10,000	4,500	14,500
Assistance to NTAE*			
Projects Subtotal	13,500	5,700	19,200
Operating Support	4,950	1,000	5,950
Building + Equipment	1,100	-	1,100
Evaluations/Reviews	180	-	180
Contingency	270	-	270
FUSADES Institutional			
Support - Subtotal	6,500	1,000	7,500
T o t a l to 1992	20,000	6,700	26,700

* NTAE: Non-Traditional Agricultural Export

The Project Agreement was signed in September of 1987 and conditions precedent to initial non-credit disbursements were met on January 26, 1988. Conditions precedent to credit disbursements were met on July 13, 1988, but no drawdowns for credit have been made under 519-0327 to date. Drawdowns for technical assistance, training and operating support began in August, 1988, when Project 519-0265, which had initially funded those activities, had reached its PACD. After seven months, as of March 1989, the Project has accrued expenditures of $1,666,700 to finance technical assistance, training and operating costs, i.e. at a rate of $260,000 per month. In addition, DIVAGRO is spending about $50,000 monthly from the related private-sector portion of 519-0303. Given current and planned disbursement rates, DIVAGRO estimates that $8.6 million in AID funds (both 0303 and 0327) will remain, as of the start of FY 1990 in October, to finance future work plans only to the end of 1991.

Comparisons of accumulated non-credit expenses originally planned (per Annex M of the Project Paper) pro-rata to March 31, 1989, versus actual spending by DIVAGRO under 519-0327 show overall expenses at 82% of budget. However, the operating support covered out of 519-0265 ended only last August, and the private-sector portion of Project 519-0303 will terminate in August, 1990, thereby implying a greater disbursement rate for the Agribusiness Project in the near term.

Operating Costs $-000 to 3/31/89	Budget 519-0327	Accrued
Outside T/A	600.0	808.2
Training	212.5	242.1
Operating Support	1,188.8	616.4
Evaluations	0.0	0.0
Contingency	80.0	0.0
TOTALs to 3/31/89	$ 2,011.7	$ 1,666.7

The Project has two major components: assistance to non-traditional export agribusinesses and institutional support for operations. The former contains two subcomponents: technical/technological assistance and credit assistance. The technical/technological assistance subcomponent encompasses marketing and production-related activities which are carried out systematically by three divisions within DIVAGRO. These divisions-- Marketing, Research and Development, and Projects-- have been fully staffed and are effectively functioning.

The Marketing division is charged with identification of specific markets, the terms and conditions for successful participation in those markets, and for evaluation of the present and future impact of activities of other participants in those markets. It arranges for Salvadoran participation in trade fairs and expositions, contacts U. S. and other buyers, and assists in negotiations between Salvadoran producers and foreign buyers. Division staff have to date identified specific export markets for more than $150 million in agricultural commodities that could be produced in El Salvador, thus setting the targets for research, development, technology transfer and project promotion efforts.

Although the Marketing division has successfully promoted the two joint ventures noted earlier, and continues its joint-venture efforts, it has not yet designed a strategy for systematic promotion of foreign investment in Salvadoran agribusiness. In view of the importance of such investment to the technology transfer process, this constitutes a serious problem which is addressed by this amendment.

The Marketing division continues to address transportation problems. The inadequacy of transportation facilities and their concomitant costs continue as marketing constraints. They will remain so until the volume of agriculture exports reaches a sufficient level to induce transport companies to provide regular and economical services from the Pacific Coast ports and for appropriate overland routes. The Mission has provided signicant support through its infrastructure projects and local currency program to maintain the internal transportation network. Other donors such as the Japanese and the Germans are examining the ports, and will possibly initiate projects to strengthen and expand these facilities. In the meantime, DIVAGRO and cooperating agencies have assisted in making arrangements which satisfy - albeit imperfectly - the current transport needs and for establishment of stable, long-term facilities. In conjunction with the Export Diversification and Investment Promotion Program (PRIDEX) of FUSADES, DIVAGRO participates in the ROCAP-sponsored transportation program of the "Private Entities Federation of Central America and Panama" (FEDERICAP), in the Council for Users of Export

Transportation, and it provides transport related assistance and information to a newly formed association of melon growers. DIVAGRO is assisting growers in negotiating with land and maritime shippers to maintain dependable and least cost arrangements for an increasing volumes of exports channeled through Guatemala and Mexico. It is now negotiating with Del Monte to expand its container services for trans-shipping through Guatemala and has completed arrangements with a major melon buyer to accept deliveries at Tapachula, México, thus reducing the risk of trans-México haulage.

In keeping with a long term strategy to develop substantial markets on the west coast of the U.S., DIVAGRO has persuaded Chiquita Brands to have one of its ships call at the Acajutla Port to take on cantaloupe and seedless watermelon. DIVAGRO expects such service, coupled with intensive marketing on the West Coast to give rise to regularly scheduled service.

Research and Development (R&D) activities respond to market possibilities. Three experimental stations are presently carrying out varietal and commercial production tests on 25 products. The R&D division has completed commercial testing, which yields production cost data, on 15 products. This information is provided directly to producers and to technical assistance teams for use in promotion efforts and to establish cost parameters for new projects. As an example, DIVAGRO funded the development of a higher yielding variety of baby corn; approximately 200 hectares will be produced commercially for export this year.

The R&D division also contracts out research on plant diseases. Responding to devastation of a cucumber crop whose production DIVAGRO has promoted, it contracted specialists from the University of California at Riverside, who identified the cause as an aphid-borne virus and recommended measures for prevention of new outbreaks. Recent trials have confirmed the diagnosis, and cucumber production has resumed.

The R&D division has established a pesticide control program for all projects assisted by DIVAGRO and utilizes its experimental stations for training of private sector farmers, agricultural students and more recently members of agrarian reform coops. In preparation for a major effort to promote mariculture, the division now utilizes short-term shrimp advisors to assist present producers and has issued an RFP for a long-term institutional contract with qualified shrimp consultants; the selection process is currently underway.

As the number of products entering the research and development stream has increased, resources and facilities have become strained. The division is working to full capacity, yet more remains to be done.

The Project division promotes investment in the production and processing of non-traditional agricultural export products. The division publicizes new opportunities, carries out seminars, and assists potential investors in preparing business plans. Since August, 1988, the division has assisted in the design of four projects; one was funded under the Water Management Project by FIDEX, the lending unit of FUSADES. The remaining three have been

financed by the commercial banking system. An important and beneficial consequence of this activity in the short-term has been the linkages established between DIVAGRO and the commercial banking sector. DIVAGRO's technical advice has achieved a high level of credibility with the banks. The emerging collaboration with commercial banks bodes well for the long-term sustainability of DIVAGRO's program.

In addition to its project design work, the unit makes technical evaluations of loan applications on behalf of FIDEX and monitors implementation of projects that are financed by FIDEX. At present, 27 loans to 18 companies are being monitored under the Water Management Project and this already heavy workload is expected to double over the next several years. The division's staff also serves as the main interface with potential or actual loan applicants, arranging for marketing or production assistance on their behalf. Currently, DIVAGRO provides technical assistance under cost-sharing contracts with 26 firms.

The Projects division also administers the "Field Agents" program under the Water Management Project. This extension program is important to the overall technology transfer role of DIVAGRO. About 22 field agents are employed directly by eight agriculture processors and are partially subsidized by DIVAGRO. The agents provide technical assistance to primary suppliers and monitor their growing and handling practices. Others, employed directly by FUSADES, provide similar services to 256 growers who are carrying out field trials or commercial production.

The field agents program has been successful in that the recipient farmers have adopted the technology and are successfully selling to processors. This approach has enabled processors to extend contracts to a wide range of growers, notably unexperienced cooperatives. Currently, the Water Management Project finances the field extension agents, since they primarily work with irrigation-related projects. However, given the success of the program, the Agribusiness Project will incorporate the existing group, and expand their numbers over the remainder of the Project.

As DIVAGRO's technical assistance networks have expanded there has been a direct impact on the well being of small farmers and cooperative members. At present, 19 cooperatives with a total membership of 4,306 families are receiving assistance from DIVAGRO or one of its cooperating technical assistance delivery agencies. Further expansion of assistance to coops and small farmers is called for in DIVAGRO's work plan for 1989. Technical assistance for coop investment in agriculture and aquaculture will be provided to support acceleration of the Agrarian Reform Finance Project.

FIDEX has not disbursed any of the $10.0 million credit component under the Agribusiness Development Project. FUSADES attributes the delay to a combination of factors, which will be only temporarily operative: less than a year has elapsed since the credit CP's were met; loan applications received during this period were eligible for lending under the Water Management Project and $8.0 million were approved for funding from that credit line; the

high liquidity of the commercial banking system, during this period, provided potential borrowers with more attractive credit alternatives; and many Salvadoran businessmen announced their intent to delay investments until after the new government assumed power in June 1989. However, FUSADES also concurred with USAID observations regarding the lack of credit movement, i.e. excessively conservative banking practices and limited promotional efforts by FIDEX had reduced the effective pool of borrowers.

Changes in FIDEX policy and practices have been made to bring them more in line with acceptable developmental lending criteria. FIDEX now has agreed to broaden eligibility requirements while tightening project analyses and establishing more agile processing procedures. The lending unit will place more emphasis on aquaculture, where demand for development lending has been ignored by other lenders. FIDEX has received authorization to utilize a limited amount of grant funds to take equity positions. To implement these changes and to accelerate the lending process, FIDEX has employed an additional experienced banker.

The new emphasis on project promotion, the reduction in commercial bank liquidity and the likelihood of new governmental policies favorable to private enterprise are expected to lead to accelerated lending. Approximately $5.0 million in new loan applications are currently being processed.

III. Project Amendment Description

A. Relationship to the Country Development Strategy

The amended Project conforms directly with the thrust of the Mission's approved CDSS. Our program support will be directed primarily at the country's 250,000 small farm families. Our assistance will be geared to help these growers increase their incomes by diversifying their production regime through the addition of export commodities to their traditional cropping.

The CDSS recognized that diversification via non-traditional agricultural development in El Salvador is as risky as it is necessary. The CDSS identified technological constraints as key obstacles to targetting the non-traditional sector. The amended Project will undertake the strategy of assisting processing and marketing firms to overcome technological constraints and link these agribusinesses with small farmer and cooperative producers. Although the ultimate target group is the small farmers, the Project will use agribusiness investors and cooperatives as implementers. In accordance with the CDSS, the amended Project will solidify linkages with other ongoing Mission projects, which address agrarian reform production constraints, thereby making these efforts more efficient and more productive. DIVAGRO, through the implementers, will pass on technical assistance, technology packages, and market information to small farmers who will plant off-season, high-value crops for sale and export. The intensive farming techniques will benefit upwards of 11,000 small farmers and create additional employment opportunities for rural laborers, thereby fostering

equity with economic growth. The benefits deriving from these agribusinesses are expected to multiply quickly as growing export sales increase the demand for raw product. This will generate employment in processing and expand opportunities for small farmers to supply production in accordance with the principles of the CDSS.

The amended Project, in addition, will have a significant impact on women in accordance with CDSS objectives. The increasing ties with cooperatives will enable much greater female participation, since in some cooperatives, women farmers constitute upwards of 30% of the membership. The expansion and growth of the processing industries will provide greater employment opportunities for rural women, since females constitute the majority labor force in these plants.

The amended Project supports the CDSS by recognizing that agribusinesses are innovators and diffusers of technology. It utilizes those who have vested interests in assured quantities and qualities of market production to transfer technology that will increase the intensity with which the small farmer uses his land and labor. With new markets and technical assistance provided by the processors and marketers of non-traditional agricultural exports, subsistence farmers can fully utilize their land and family labor resources and earn important new cash incomes. In this manner, the Project will provide income opportunities to those otherwise unable to invest in risky ventures.

B. Rationale

The commercial, economic, technical and administrative assumptions underlying the original project design have been validated. The basis for expansion and intensification of DIVAGRO's activities is now established and promises to have major impacts on non-traditional production and export sales. Demonstrated effective demand for Salvadoran agricultural products exceeds present supply capacities and there is evidence from potential buyers that the U.S. and European markets can readily absorb incremental supplies from El Salvador in quantities well beyond levels anticipated in the original project. The experimental output of DIVAGRO and the commercial production of farmers and processors indicate that El Salvador can produce competitively. The nation's underutilized agricultural infrastructure and labor, and its more progressive management practices, provide a resource base and comparative advantage upon which such production can be expanded. As mentioned earlier, due to initial results achieved by melon and vegetable growers and processors, both private and cooperative land owners are increasingly willing to enter into production. The non-traditional agricultural export sub-sector is now recognized as having major developmental potential. The practicality of pursuing that potential is acknowledged by both the private sector and the GOES.

DIVAGRO has been instrumental in bringing about such recognition. Its demonstrated successful work with processors and growers and the value of the research and development efforts have made DIVAGRO the most effective export

promotion and assistance entity in the country. Initially hostile to the FUSADES, government agencies have increasingly availed themselves of its facilities. Now the Central Reserve Bank has entered into formal relations with FUSADES in promoting and financing non-traditional agriculture exports on the agrarian reform cooperatives. DIVAGRO's experimental stations are utilized for training agricultural students and personnel of cooperatives. DIVAGRO's annual plan for CY-1989 includes the provision of direct project development and technical assistance to agrarian reform cooperatives. Two AID-funded PVO's -- Technoserve (519-0312) and the National Cooperative Business Association (519-0353) -- also draw on DIVAGRO marketing and R&D services in support of their own promotional and technical assistance services to the coops.

With the inauguration of the newly-elected government, cooperation between FUSADES and public-sector agencies is increasing. The Mission believes that the new government will institute policy reforms in respect to foreign exchange rates, export taxes and the financial structure, and will initiate and implement programs to foster the growth of non-traditional agriculture.

As noted earlier, export opportunities for Salvadoran non-traditional agriculture products are far beyond current production capabilities. Production constraints now mainly impede the desired acceleration in foreign sales. Although marketing efforts will continue unabated, they must place greater emphasis on inducements to foreign investment in agribusiness. Such investment with its concomittant transfer of technology will directly contribute to the productive capacity of El Salvador. Whereas at earlier stages of development of non-traditional agriculture, potential foreign buyers and investors were understandably reluctant to commit themselves to a Salvadoran exposure, now the country is being recognized as a stable and growing supply source to the U.S. food products industry and U.S. firms have expressed new interest in establishing facilities here.

Even with substantial foreign investment, it is clear that local farmers/processor will continue to provide the major source of new production. Their successful response to the opportunities presented ($150 million identified) in export markets will require a massive project development effort, which implies greatly expanded technology transfer efforts. The inclusion of agrarian reform cooperatives within the client pool of DIVAGRO opens up production possibilities on the most fertile lands of the country, as well as enhancing production opportunities for female-owned and operated farms. The coops already have access to about $60 million in credit under the Agrarian Reform Finance Project and from other substantial credit lines of the Central Bank. Therefore, transfer of technology is the major requirement for activating non-traditional crop production by the coops.

Successful penetration of the U.S. foods market requires that Salvadoran products meet standards imposed by consumer tastes and by government safety regulations. In recent years, increasing concerns over introducing both exotic pests and prohibited agro-chemical residues have caused the U.S. government to tighten regulation and inspection of imported foodstuffs. Salvadoran products have not yet been detained on residue violations, due partly to the positive impact of DIVAGRO's pesticide control program amongst

agricultural exporters. However, with the planned growth of exports stimulated by this Project, some of these products may fail to meet the new U.S. standards. Penalties can be severe, including automatic blanket detention of all produce from a violating origin (i.e. from innocent, as well as guilty, exporters) and heavy fines. To protect the acceptability of produce from El Salvador, and in the absence of a public Salvadoran quality assurance lab, efforts must be made to provide new export producers with technical assistance to meet the more rigorous U.S. import inspections. A recognized and effective quality assurance program will be required as a key marketing instrument. The transfer of technologies to institute and maintain a national quality assurance program is now essential to the success of the agricultural export effort.

Due to the greater number of potential exports identified relative to those planned in the original project design, and the expanded research and testing performed by DIVAGRO, the funding for maintenance of DIVAGRO's basic programs would expire about six months prior to the currently-scheduled PACD in 1992. Provision for continuation and expansion of the program must be made in order to continue and enhance required functions through 1994. By that time, DIVAGRO can be expected to have made a major impact on export production, and the income stream from the two agricultural credit lines would fund selected services.

C. Goal and Purpose

The goal of this Project is to increase employment and foreign exchange earnings. The purpose is to increase the production and export of non-traditional agricultural products. These remain unchanged from the original Project Paper. This amendment will add and direct resources for technology transfer and operational support to enhance attainment of the goal and purpose; no addition to the credit sub-component is proposed. This amendment will also extend the PACD to September 30, 1994.

D. Component Description

Component 1: Assistance to Non-Traditional, Export Oriented Agriculture.

Two elements make up this component: technical/technological assistance and credit assistance. As noted, this amendment will not adjust nor provide incremental funds to the credit line. Should the credit line be drawn down prior to the PACD, the Mission will consider providing incremental funding or will assist FUSADES in obtaining funds from other sources.

a. New Technical and Project Promotion Activities

As noted earlier, expansion and acceleration of technology development and transfer are critical to timely exploitation of El Salvador's competitive position. Three new programs, and the strengthening of several current

DIVAGRO programs, will enhance the technology transfer deemed necessary for the attainment of DIVAGRO's production target of $61 million annually in non-traditional crops by 1994.

The first is the establishment and operation of a quality assurance program (QAP), modeled in part, on the successful Fundación Chile program. The QAP will link public and private sector initiatives for integrated pest management (IPM) within the context of GOES regulatory policy. Backed by the analytical capability of a new laboratory, DIVAGRO will provide technical assistance, extension educational activities, and training in chemical-use monitoring and product inspection to gradually impose the necessary discipline on export growers and processors who need to comply with sanitary requirements and grading standards of importing countries.

To the private sector, quality assurance begins with soil and water testing of croplands for potential export production, to determine the fertilizer and irrigation requirements and a pesticide plan using EPA-approved agrichemicals. The amended Project will integrate DIVAGRO's present pesticide control program into the Quality Assurance Program. By training a network of agronomists -- directly and through the "Field Agents" and CLUSA cooperative technical assistance programs— DIVAGRO can transfer new cultivation technology based on biocontrol, pest management based on pest surveillance and carefully-timed chemical application, and harvest decisions based on recommended withdrawal periods to avoid chemical residues. The agronomists will become "certified inspectors" in a field sampling program designed to (a) guide farmers in controlling pests and diseases and (b) assist packers in meeting quality grades and export packing and labelling requirements. The QAP will include testing for pesticide residuals during on-farm, in-plant and pre-shipment inspections. For food processors whose products need microbiological analyses, the QAP will provide advice in upgrading personnel and facilities of existing Salvadoran laboratories.

The GOES maintains an acceptable registration and monitoring system for agrichemical formulations at the distributor level and a quarantine system for fresh food imports. However, inspection of exports for insect, disease, chemical, and bacterial contaminations is very limited. In order to involve public regulatory agencies in the export quality assurance process, DIVAGRO will extend information on the ever-changing overseas status of agrichemicals, their approved uses and tolerance levels. Upper-level GOES technical personnel will be trained, as appropriate, in such areas as sample taking, chemical registry, record keeping, plant pest and disease identification, and inspection skills. Chemical residue, soil, and water testing will be offered to regulatory entities desiring to contract for these lab services.

The Quality Assurance Program will require establishing and equipping a laboratory to be managed by DIVAGRO's Marketing division. Study of existing Salvadoran laboratories, both private and public, did not uncover any one that could offer the required testing, efficiently, on a contract basis. The largest, at CENTA (the public R+D counterpart of DIVAGRO), suffers from disruptive labor disputes, a crippling requisition system for perishable lab

reagents, a different "research" focus, and badly deteriorated facilities. The others have very narrow capabilities and mandates. The QAP budget includes $552,000 to build and equip a new lab, plus $1.2 million in supplies over the next five years. Salaries for top laboratory staff, competent to train others in-country, will cost about $800,000 over the next five years, offset only in part by the projected $500,000 in testing fees.

A permanent technical advisor will guide QAP policy. With solid experience in USDA/APHIS and FAO procedures and in dealings with Central American regulatory agencies, he/she will assist the GOES in updating plant protection legislation, and in training new leaders in IPM and quarantine techniques. Another 60 man-months will be contracted on an intermittant basis through either a PASA with USDA/OCID or Memoranda of Understanding with EPA, FDA, and/or other US agencies, as required. This outside technical assistance is budgeted at $1.2 million total over the next five years.

The QAP will also require an agreement between the Ministry of Agriculture, FUSADES, and the appropriate US goverment agencies, in order to secure the services of an on-site USDA instructor/inspector and FDA certification for the new lab. The agreement will include details on the roles and responsibilities of each institution in the process. The private and public sector linkages created will be crucial to the success of this activity, since ultimate responsibility for quality control, including enforcement actions, lies with the government. However, the DIVAGRO quality control program will be the catalyst and the standard from which the Salvadoran government can improve its procedures in this area.

The second new activity is the establishment of an aquaculture experimental station. The $2.1 million budget covers five years of operations. DIVAGRO intends to utilize its aquacultural experiment station to test and cost various shrimp growing techniques and to disseminate the appropriate technologies to actual and potential producers. The disparities in growing conditions along the Salvadoran coasts and the rapid changes in technology and concomitant productivity requires careful and knowledgeable development of each new productive area. The station will also be utilized to orient and train entrepreneurs, managers and workers in hatchery and pond operations. Participation in such training will be required of all loan applicants and their proposed staff, but will also be offered to all shrimp growers. The station, consisting of two hectares of ponds and a small hatchery, will be operated by a four-person team of contracted aquaculturists who will also provide direct technical assistance to DIVAGRO's clients.

In addition to shrimp mariculture the station will carry out, in its own or cooperating facilities, experiments in the production of freshwater prawns, red fish, other selected saltwater finfish, and oysters. DIVAGRO anticipates that the station can provide extension services to develop between 5,000 to 10,000 hectares of aquacultural production units ranging from large semi-intensive ponds to small highly intensive ponds, operated by small holders. These plans are predicated on the results of studies carried out by RDA International and by Tropical Research Associates.

The third activity, the institutionalization of a systematic foreign investment promotion program, will require the establishment of an extensive network of highly experienced and knowledgeable agribusiness personnel who evaluate the changing needs of U.S. agribusiness firms and who have access to the decision makers within those firms. The personnel will be expected to present El Salvador as an alternate site for growing and processing of agricultural products which are encountering cost or agronomic problems in the U.S. or elsewhere. These individuals will have possession of Salvadoran production cost data as a promotion tool, and will be able to arrange technical assistance and to assist in the structuring of attractive financing through FIDEX or the banking system. The personnel will represent DIVAGRO in generating interest in investment and in creating conditions for its realization.

DIVAGRO has proposed that selected personnel be employed periodically within the U.S. to carry out the promotion efforts. These individuals will respond to an overall strategy which they will help to devise. They will also carry out specific promotion activities based upon the analysis of defined subsectors of the U.S. agribusiness community. DIVAGRO has contacted some U.S. technical assistance sources as potential suppliers of these services. One such PVO is the International Executive Service Corps, which currently has more than 3,000 retired agricultural executives and specialists on its volunteer rosters. The ready availability of these highly qualified and experienced volunteers could make the IESC a highly effective promotional vehicle and could overcome the prohibitively high cost of mounting the intensive and professional investment promotion campaign now needed by El Salvador.

b. Expansion of Existing Activities

In addition to the three new programs, DIVAGRO will intensify and/or expand the on-going research and technical assistance activities which are deemed essential for timely expansion of non-traditional export production. Market search activities have, as noted earlier, greatly expanded the lists of El Salvador's potential product lines. The research and technical assistance efforts will focus on anticipating and resolving production problems for the identified commodities and transfering production technologies to Salvadoran growers. As varietal and commercial tests are conducted, products will be selected on the basis of value and the degree of competitiveness for prioritized production.

The organizational and physical infrastructure of the research program is now almost complete. A new experimental station to be located in San Miguel will be used primarily as a demonstration and training center in that isolated area for farmers who have been unable to participate previously in DIVAGRO's programs. The three existing stations are fully functioning and, supplemented by on-farm testing sites, will be able to accelerate varietal and commercial testing programs. The on-farm testing sites will, for the most part, be located on agrarian reform cooperatives, thus enabling DIVAGRO to train coop members in agronomic practices as a prelude to their own commercial production

of the tested commodity. The on-site testing will also support the investment promotion efforts of DIVAGRO's Project division by establishing production capacities upon which processors can predicate expansion plans. Similar test plantings will occur on private lands especially for ornamentals and those fruits or vegetables which require special climatic conditions.

Plans are well advanced for utilization of foreign research entities to support or complement DIVAGRO's in-house research. Crop protection, e.g. disease and pest control research, was initiated earlier by the University of California at Riverside and will continue. Additional assistance will be contracted with universities which have special expertise in tropical plant pathology and entomology. Similary, contractual assistance will be obtained from external agencies which have special expertise in production of selected crops under tropical conditions. CIAT of Colombia, Zamorano in Honduras and the University of Florida are being considered as resource centers, respectively, for production of legumes, asparagus and tropical tree fruits.

A new research initiative supporting an attempt to penetrate European markets is being structured as a result of contacts with a major Dutch seed producer and food importer, Bejo Zaden. Where previously DIVAGRO had assisted individual processors in producing for perceived niches in the European market, i.e. haricot vert beans, Bejo Zaden offered its assistance in responding to the new market opportunities which it anticipates will result from reduced farm subsidies and from Spain's full entry into the EEC. The company is predicting its own business strategies on those developments. Anticipating sharp upward increases in the costs of European vegetables from 1992 onward, the Company has offered technical assistance in the adaptation of European vegetable seeds and for their use in developing a supply source in Central America. The Company will provide technical personnel at no cost to DIVAGRO, which will utilize its experimental plots and other sites to carry out varietal and commercial tests.

Delivery systems for training and extension will be modified to accomodate the expanded clientele group, including private-sector entrepreneurs whose interest in non-traditional production has been whetted by demonstrated advances of DIVAGRO, and the Agrarian Reform cooperatives which, through an agreement with the Central Reserve Bank, will now receive project-related assistance from DIVAGRO. Technical assistance will incorporate, in most cases, orientation and training at experimental stations followed by production and harvesting assistance at farm sites. The activities implemented under the Water Management Project (principally irrigated agriculture and the field agents program) will continue within this effort.

In this activity, DIVAGRO will undertake a special effort to increase the number of female beneficiaries under the Project. DIVAGRO will develop supplemental plans to identify female beneficiaries and implement strategies to strengthen promotion, technical assistance and extension efforts geared towards women. Part of this effort will consist of using existing and identifying new mechanisms to assist in the promotion and transfer processes, e.g., previously identified Mission projects. The technical assistance,

training and extension efforts will consider and incorporate strategies to obviate any cultural constraints to female participation. This approach will foster expanded opportunities and increased participation in agricultural diversification and non-traditional exports for women.

Section VII (B), Technical Analysis Update, discusses specific programmatic and technical processes in elaborating the technology and project development activities. This section also examines current development activities and future plans.

Component 2: Institutional Support

The funds provided under this Amendment will continue to support the strengthening of the institutional capabilities of DIVAGRO, as well as some central FUSADES' administrative functions. DIVAGRO will continue in its managerial role covering project implementation responsibilities. Its Marketing, R&D and Projects divisions will implement the technology transfer activities. The Marketing division will add a new subdivision that will implement the Quality Assurance Program. The Amendment funding will cover salaries, rent, office supplies, office furniture, publications and general overhead costs to facilitate the new and expanded activities under the Project.

As part of the institutional strengthening approach, DIVAGRO has received authority from the FUSADES' Board of Directors to contract for personnel services and goods using the central procedures approved by AID. DIVAGRO, through its administrative division, has used this authority well. The Administrative division will utilize the funding under this Amendment to continue its contracting functions to provide the additional staff, technical assistance, training, equipment and supplies for the activities performed by the other divisions. Key contracted capital expenditures for the amendment will be the building and equipping of the quality assurance program lab, the equipping of the aquaculture experimental station, and replacement of some drip irrigation equipment and vehicles. Any contract over $100,000 requires prior AID approval.

Due to the Quality Assurance Program, the full-time staff of DIVAGRO will increase from its present level of 28 employees to 34 employees. Short-term and medium-term technical assistance will play an important role for initiating the new activities. Experts will train permanent DIVAGRO staff to assume control over all facets of a given activity. This on-the-job training approach, supplemented with additional internal and external training opportunities, has served DIVAGRO well in building in-house expertise and in enhancing overall management performance for ongoing activities.

Given the multiple tasks performed by DIVAGRO, a staff of 34 will be remarkably small. In comparison to the 400 professionals at CENTA, a government agency with similar responsibilities to traditional agricultural sectors, DIVAGRO appears lean and higly cost-effective.

As an additional indicator of the level of institutional strengthening, the Mission expects DIVAGRO (through FUSADES) to assume a greater share of its operational support and technical assistance costs as the Project proceeds. Interest earnings from the loan portfolio, testing fees by the QAP laboratory, local and foreign sales for the field stations and other revenue generating activities will provide the financing to cover the increasing share of these expenses.

E. End of Project Status

As originally designed the Project anticipated that by 1992, its activites would directly cause or influence the generation of $21.3 million in foreign exchange and generation of 6,000 person/years of employment; and that FUSADES would have enhanced its ability to promote and support export-oriented agribusiness.

The export projections, in light of advances made to date and the perspectives derived from the expanded technical assistance program proposed herein, can be revised upward. DIVAGRO projects that its programs will contribute by 1992 to annual non-traditional agricultural export sales of $29.0 million, with the side benefit of another $4.5 million saved through import substitution. By the end of 1994, the Project's momentum would generate $49.0 million annually in foreign exchange (plus another $12.0 million saved by import substitution). Employment generation would then total 12,600 jobs (fulltime equivalents) on 23,300 hectares. Important production and employment increases will continue to register after the PACD.

IV. COST ESTIMATES AND FINANCIAL PLAN

A. Financial Plan and Analysis

This Project, as amended, will total $44.0 million, of which $33.0 million (75%) will be AID grant-funded from the Agriculture and Rural Development appropriation account. An estimated $11.0 million in local currency equivalent and in-kind contributions will be made by FUSADES and participating beneficiary groups. AID funds are obligated through a Cooperative Agreement with FUSADES. The life of project is seven years, beginning in FY 87 and ending in FY 94. The Summary Financial Plan is shown below. Annex 2 contains an annual disbursement schedule for AID's contribution by activity for the next five fiscal years, reflecting costs of the new activities mentioned in the amended Project description.

Allocation of New Amendment Funds to 0327 US$-000

Elements	AID	Coop. Cty.	Total
T/A + Studies	3,100	1,000	4,100
Training	1,700	700	2,400
Credit Program	-0-	-0-	-0-
Operating Support	6,500	2,500	9,000
Building + Equipment	900	100	1,000
Evaluations	100	-0-	100
Contingency	700	-0-	700
TOTAL	13,000	4,300	17,300

Summary Amended Financial Plan ($000)

	AID* FX	AID* LC	Total AID	Cooperating Country	Total
Component I Assistance to NTAE Projects					
TA & Studies	4,000	1,963	5,963	2,000	7,963
Training	1,700	637	2,337	900	3,237
Credit Line	3,000	7,000	10,000	4,500	14,500
Subtotal	8,700	9,600	18,300	7,400	25,700
Component II Institutional Support					
Operating Sup	4,500	6,950	11,450	3,500	14,950
Bldg + Equipment	600	1,400	2,000	100	2,100
Eval/Aud/Rev	180	220	400	-0-	400
Contingency	300	550	850	-0-	850
Subtotal	5,580	9,120	14,700	3,600	18,300
TOTAL	14,280	18,720	33,000	11,000	44,000

* Allocation of funds between foreign exchange and local currency is an estimate. The division of funds between the two currencies may be adjusted during implementation to meet financing needs as they arise.

No funds will be added under this amendment to the credit program, which remains at $14.5 million or 33% of total Project costs. Using $10.0 million of AID grant funds, the program will finance export-oriented agribusinesses and suppliers in foreign and/or local currency. Foreign currency portions of loans will be used to finance foreign procurement costs, while local currency

portions will finance local procurement and working capital costs. The amounts are unchanged, but the Mission has insisted, and FUSADES has accepted, modifications to credit policy and criteria. At least $4.0 million must go to aquacultural projects. Up to $2.5 million of the credit fund can be used to invest FUSADES equity in highly-developmental projects that need additional capital.

An estimated $7.9 million ($4.1 million under this Amendment), or 18% of total project costs, will finance outside technical assistance and studies, reflecting the more intensive involvement in technology development and transfer. The cooperating country contribution includes direct payments made by recipients when accessing this assistance.

Approximately $14.9 million ($9.0 million under this Amendment), or 34% of total project costs, will fund operating support. This level reflects expansion in various technical activities undertaken by DIVAGRO staff, particularly relating to export quality assurance (of which $2.5 million is operating support) and aquaculture ($1.3 million). This operating support assumes FUSADES financing a greater share of these costs as the project progresses.

The building and equipment line item incorporates financing for the FUSADES central office building under Amendment No. 3 to the Agreement. The proposed Amendment to the Project Paper will add $ 1.0 million, of which $900,000 are AID funds: $552,100 in equipment and space for the quality assurance laboratory, $231,000 of infrastructure for an aquaculture experimental station, and $116,900 in vehicle and equipment replacement.

The Project has programmed two major evaluations and five financial reviews at a cost of $400,000. The project also provides $850,000 for contingency funding. This amount is relatively small, since some slack has been built into the other line items. In additon, future interest earnings from both agricultural credit lines (0303 and 0327) could cover some unforeseen costs.

B. Assessment of Methods of Implementation and Financing

The methods of implementation and financing for this grant, as established in the original Project Paper, remain valid and in place for activities under this amendment. The summary table of these methods include:

Inputs	Implementation	Financing
TA and Studies	HC PSC & small Hc contract with firms	Periodic advances with direct reimbursement
Training	FUSADES makes direct arrangements	Periodic advance with direct reimbursement
Operating Support	FUSADES contracts, procures & makes arrangements directly	Periodic advance with direct reimbursement
Building & Equipment	FUSADES contracts, procures & makes arrangements directly	Periodic advance with direct reimbursement
Evaluations & Financial Reviews	USAID contracts evaluations FUSADES contracts audits	Direct payment Periodic advance with direct reimbursement
Contingency	—	—
Credit Program	Trust Agreement FX loans Commercial Acct LC loans	Periodic advance with direct reimbursement

C. Impact on Recurrent Costs and Project Sustainability

The sustainability of DIVAGRO beyond the PACD will be conditioned by three factors; its level of activities, the containment of activity costs and its level of income. Funds provided by this amendment will in the short run expand DIVAGRO's activity levels, and thus enable the unit to address and resolve a back-log of urgent technology transfer concerns within the Project's time frame. As the back-log is eliminated residual activities are expected to be substantially reduced. Having met all of its major capital and start-up costs during the life of the project, future costs will primarily be incurred for core operations.

Containment of those operating costs will be difficult in view of continuing inflation. By increasing the user-cost of its services, DIVAGRO could compensate for inflationary pressures. Moreover, the attainment of high levels of competence by DIVAGRO's permanent staff will greatly reduce the need for external consultants, which will be a major cost item as the backlog of problems are addressed. The Amendment thus permits DIVAGRO to carry out critical and urgent development tasks, create a knowledgeable and profitable non-traditional agricultural sub-sector, and positions it to maintain essential services in the future.

The Amendment makes a major contribution to increasing DIVAGRO's revenue base. Of twelve income-generating possibilities evaluated by external consultants and FUSADES staff, three are considered as significant income generators over the next five years; and each of these will be enhanced by the amendment.

The first consists of interest earnings from the Water Management and the Agribusiness Development Project loan components. The potential annual interest payments available to DIVAGRO will range between $1.2 million to $1.6 million, as the credit portfolio develops over the next five years. These projected amounts are net of a full share of FIDEX overhead costs, net of expensed bad debt, and net of a $300,000/annum contribution to central FUSADES' overhead. The nature, level and risk elements of the Agricultural Portfolio will be directly influenced by activities proposed under this amendment. The intensified and accelerated R&D and technical assistance efforts are expected to provide FIDEX with a greatly increased project pipeline, leading to rapid attainment of an optimum portfolio level and concomitantly improved revenue flow. Although such variables as bad debt levels and local currency devaluation cannot be predicted accurately, we should expect at least $6.0 million of interest income available to support DIVAGRO from the two agricultural credit lines over the next five years to the new PACD of September 1994.

The second source of income is produce grown on the four experimental stations, incidental to the commercial field trials, on 45 hectares multiple-cropped under drip irrigation. Such sales are projected to yield $168,000 per annum or $840,000 total over the next five years. The third source, fees for chemical analysis and quality certifications obtained under the Quality Assurance Program are expected to produce about $500,000 over the next five years.

Minor revenues are earned by fees charged to participants at seminars and short courses. Other options within DIVAGRO's present capabilities are being pursued, such as sales of technical information and hybrid seeds, and fees for feasibility studies and contracted technical assistance. However, these are high-cost operations and will not generate big margins. To these potential inflows may be added additional revenue from specific undertakings on behalf of the GOES, if, as has been proposed, some aspects of government-supplied agricultural assistance are privatized. A detailed schedule of anticipated income to DIVAGRO through 1994 appears at the end of Annex 2.

These revenues together offer a substantial income base for continuation of DIVAGRO's programs at a reduced but significant level. After the PACD in September, 1994, potential income from identified sources could fund about 90% of essential core services. Based on a synthesis of three studies from Development Associates and Development Alternatives commissioned by the Mission during the past 12 months, and including recent discussions with FUSADES' management, annual revenues of $1.6 million can be projected against the $1.8 million continuing budget for a modified program of non-traditional agricultural export technology promotion, adaptive R&D, and extension.

A suggested "core" program would include only two field stations, the Quality Assurance Program without the outside technical assistance, about half the current Projects division effort, present levels of seminars, marketing information services, and the "field agents" program. At least a one-third reduction in present staff levels would occur. By slowly increasing cost-sharing requirements for recipients from 35% to 75%, $100,000 of DIVAGRO resources could leverage upwards of $400,000 in technical assistance. After the PACD, the aquacultural research station, two of the horticultural field

stations, and the U.S. investor promotion programs could be terminated. They will have produced the desired results and/or different mechanisms will be established for their funding.

A "post-Project" DIVAGRO might include (US$-000 per annum):

Quality Assurance		500.0
Outside technical assistance		100.0
Seminars and courses		120.0
2 Field stations, demo plots		200.0
Field agents program		40.0
Subtotal Program Expenses	$	960.0
Salaries + benefits		500.0
Equipment replacement		40.0
Employee travel		40.0
Publicity + promotion		25.0
Admin O/H + services		250.0
Subtotal Operating Expenses	$	855.0

Total post-Project DIVAGRO budget $ 1,815,000 for core services.

V. AMENDMENT IMPLEMENTATION PLAN

A. Implementation Responsibilities and Administrative Arrangements

The $13.0 million Amendment to the authorized $20.0 million grant will be obligated by means of amendments to the existing Cooperative Agreement with FUSADES. Through FY 88, $17,854,000 had been obligated for the Project, including the entire $10.0 million for the credit program. At present disbursement levels averaging about $260,000 monthly, DIVAGRO's non-credit (i.e. technology transfer) activities could continue into FY 1991. This Amendment adds $7.3 million in three new technology transfer activities, beginning immediately and budgeted through FY 1994. In FY 89, the Mission will obligate $11,046,000, with the $4.1 million balance obligated in FY 90 or 91 agreement amendments, subject to the availability of funds and Project requirements.

1. Coordination and Management of Project Implementation

The strategy enunciated in the original Project Paper remains in force. The DIVAGRO department will take the leadership role in project implementation. Its Marketing, R&D, and Projects divisions will implement the technology transfer activities under the Amendment. The OAP will necessitate the creation of a new subdivision within the Marketing division to implement those activities. FIDEX will take the lead role in analyzing credit application and monitoring the loan program coordinating closely with DIVAGRO. FUSADES central will provide support to project activities when necessary. The Mission will continue to monitor activities in a manner that supports FUSADES' independence and reinforces attainment of Project objectives.

2. Implementation Plans

The requirement that DIVAGRO submit specific, annual work plans continues in force. The work plans identify the specific crops to be exploited, the activities required to properly test the crops' potential, needed procurements, estimated timetables, estimated funding requirements and personnel levels of effort. Recently submitted, amended work plans indicate that initial activities under the quality assurance, the aquaculture station, and foreign investor promotion programs will commence in late 1989 through late 1990.

3. Application of PD-15 (Bumpers Amendment) to Project Implementation

The Mission and FUSADES have established mechanisms, as outlined in the original Project Paper, to insure against violation of PD-15. These include: (a) the cooperative agreement contains a provision prohibiting AID-financed assistance to an enterprise that conflicts with PD-15; (b) the lending criteria approved by the Mission includes an eligibility restriction precluding AID-financed inputs financing any activity that conflicts with PD-15; (c) any project which shows plans to export to a third country is examined by DIVAGRO as to the crop in question, the potential importing country, the volume, the marketing season and the volume of U.S. exports to that market to determine possible conflicts; and (d) loans of over $500,000 are approved by the Mission.

B. Procurement Plan

The procurement strategies and approaches, outlined in the original Project Paper, for technical assistance/studies, training, FUSADES institutional support and evaluations, audits and financial reviews remains in force. The Administrative division of DIVAGRO has authority to contract technical assistance, training, equipment and supplies directly using AID-approved procurement procedures. Upon signature of the amended agreement, DIVAGRO will initiate contract actions to expand central staff to meet the expanded needs of the technology transfer activities. DIVAGRO will then move to contract the technical assistance to aid in the planning and implementing of new and expanded activities. It has already started the process to hire shrimp experts for the aquaculture program. In the short-term, and with the assistance of the technical experts, DIVAGRO will procure the elements necessary to undertake the Quality Assurance Program. This will require the purchase or construction of a building to house the laboratory equipment as a first step. The technical experts will have to delineate carefully specifications for the lab equipment. Site preparation and activities for the aquaculture station will start in the near term since the technical experts should arrive no later than September. The new foreign investment promotion network will contract liaison personnel or volunteers in the U.S. over the next six to 12 months. DIVAGRO will contract some field agents in the near term to supplement existing positions. Prior to the completion of the Water Management Project in August 1990, DIVAGRO will ensure that the remaining

field agents are under contract. Infrastructure for the new demonstration site at San Miguel is being installed now. The procurements for the other continuing activities will continue in accordance with the approved action plans.

Specific procurement plans are submitted as part of the annual work plans. As per Amendment 3 to the Project Agreement, the clients must pay directly a minimum of 25% for non-credit assistance.

C. Schedule of Major Events for the PP Amendment

August 1, 1989	Project Amendment Authorized
August 20, 1989	Cooperative Agreement Amendment Signed
June, 1990	First Project Evaluation Completed
September, 1992	Second Project Evaluation Completed
September, 1994	Project Completed

VI. MONITORING AND EVALUATION PLAN

The Mission and FUSADES have implemented the planned monitoring responsibilities, as discussed in the original Project Paper. The first evaluation was scheduled for March 1989. However, due to slow start of the project, several external and internal studies, and the recent evaluations of FUSADES operations, the Mission has decided to postpone the first evaluation until June 1990. This will enable implementation of all elements of the project for a solid year. It is important to note that the studies of activities under the Project and the evaluations of FUSADES' operations carried out over the last two years have consistently shown DIVAGRO as a well-managed division. In a programmatic sense, DIVAGRO has received praise for identifying markets, researching and testing new products and promoting new products to local investors. The evaluators have lauded DIVAGRO's leadership for the administrative reforms undertaken, which have served to increase effeciency and effectiveness of their operations. DIVAGRO has received plaudits for its forward planning and management by objectives techniques. The analyses have noted how DIVAGRO has become an increasingly important actor in stimulating agricultural production, diversification and exports in El Salvador. These studies have recommended that AID continue to assist DIVAGRO, given its position in the Salvadoran agriculture sector.

The second planned evaluation will be pushed back to September 1992. This will enable the Mission and FUSADES to gain a fuller comprehension of the project impacts and to examine how DIVAGRO is moving towards an operational level of self-sufficiency.

The Mission completed the first stage of a planned assessment relative to the operating procedures used under the credit component in April 1989, leading FIDEX to modify its lending criteria. Since the combined Agribusiness and Industrial Stabilization (519-0287) approved-loan portfolio recently reached $4.65 million, the Mission is undertaking the second stage of the assessment with outside assistance in July of 1989.

The evaluation strategies and approaches touched upon in the original Project Paper remain valid. In addition, the evaluations will be supplemented with data collection and analysis of the role and level of participation of women in this Project. The Project amendment will have DIVAGRO make a special effort to target female beneficiaries. The evaluations will examine how well this effort has been structured and what is its impact. The evaluations will also analyze the lives of female beneficiaries relative to income generation, labor allocation, household expenditures, and access and control of resources to the extent possible. The evaluators will tap into other data resources being developed within the Mission to assist in this process, e.g., the Land Use and Ownership Study. As a result of each evaluation, the Mission will gauge the positive and negative consequences of the Project interventions, and will seek to adjust the activities accordingly.

VII. PROJECT AMENDMENT ANALYSIS UPDATE

A. Institutional Analysis

The institutional analysis contained in the original Project Paper generally remains valid. The following section supplements the original and modifies any statements requiring changes.

FUSADES was, in 1985, selected as the most suitable agency to carry out a major agricultural diversification program. The conditions and requirements which led to its selection remain operative today. The program, involving coordination and scheduling of complex tasks, had to be initiated and implemented rapidly. The agency charged with the implementation would have to have or be able to muster a superior staff with a wide range of marketing, production, promotional, financial, administrative skills and organize that staff under highly skilled management. Further, the agency would have to be credible and trusted by the agribusiness community whose participation would be essential to the success of the program. In addition, the agency would have to be and perceived to be apolitical while being capable of operating within a politically-charged ambience.

No governmental agency was appropriately mandated, budgeted, and staffed to undertake a diversification program predicated on the assumptions outlined above. The dispersion of agricultural related responsibilities throughout diverse public sector entities and the bureaucratic rigidities which characterized those agencies precluded the possibility of developing a coordinated governmental diversification program within any reasonable time frame.

Beyond the institutional constraints, which by themselves were sufficient to eliminate government agencies from consideration as implementation agents, were equally serious policy and political constraints. The GOES was committed, at least notionally, to a food policy that emphasized production of basic grains, heavily preoccupied with land reform issues, and generally unsympathetic to the traditional land owners and businessmen whose participation would be essential to a successful diversification program.

Although relations between government and the agribusiness sector have improved dramatically since the inauguration of the new GOES on June 1, 1989, all other conditions which led USAID to opt for a non-governmental implementing agency in 1985 are still operative.

In reviewing private sector institutional alternatives, USAID found no agricultural or agribusiness organization with adequate membership, staff or developmental commitments to readily undertake a major diversification effort. With the exception of the coffee growers, who were concerned with their own problems, the agricultural associations did not have the required capabilities or stability.

FUSADES, an apolitical developmental foundation, had demonstrated an ability to attract and retain excellent staff,and was dedicated to the reinvigoration of the private sector. Its board and membership represented important and respected members of the industrial, financial and agricultural sectors, and its management was skillful and displayed considerable political finesse. In short, it had unique organization attributes and characteristics which suggested excellent potential for success, but it lacked, at that time, a mandate for developing an agricultural diversification program and the resources to carry it out. Upon its agreement to implement the private sector component of the Agrarian Reform Sector Support Project (519-0265), it accepted that mandate and the concomitant resources, and established a separate unit, DIVAGRO, to implement the project. The subsequent performance of DIVAGRO has justified its selection as the ag-diversification implementing agency, and has established its competence to take on an expanded work load. Project 519-0265 met or exceeded all of LOP outputs, and established realistic production and commodity development objectives which will drive DIVAGRO activities in subsequent years, and it provided the substantive basis for the Agribusiness Development Project (519-0327).

The unit also undertook full responsibility for the implementation of the private sector component of the Water Management Project (519-0303) when it became apparent that CORPREX, an association formed to implement important elements of that project, was an unsuitable implementing agent. In the two years since DIVAGRO assumed full implementation responsibility for the project, it has met 80% of its LOP approved-loan targets and 80% of its LOP food processing plant targets.

DIVAGRO, as it assumed additional implementation responsibilities, adjusted its organizational structure to reflect defined functions and to integrate individual projects under a programatic umbrella. As it has matured in the last year, DIVAGRO's organizational structure and its activity priorities clearly reflect a commitment to management by objectives. While DIVAGRO still sets objectives and develops work plans for their attainment and has responsibility for implementation of programatic elements, as a result of an overall reorganization of FUSADES, final coordination responsibilities among FUSADES' departments are vested in the Chief Executive of FUSADES. In the organization, lending of the credit funds provided under the Water Management project was transferred to FIDEX, a unit that already excercised

responsibility for other FUSADES credit programs. Technical review of loan applications which were to be funded from the Water Management Project and from the Agribusiness Project remains the responsibility of DIVAGRO, as does the responsibility for monitoring approved loans. Credit decisions, however, come under the purview of the FIDEX Credit Committee.

PRIDEX, a unit charged with marketing responsibilities for the industrialization programs of FUSADES, was given responsibility for agricultural marketing of new or proposed products. However, the agricultural marketing responsibility within PRIDEX proved to have few positive results, due to the unique requirements of export agriculture and to the need to integrate marketing to the design of all other planning and operational activities of DIVAGRO. Therefore, the marketing responsibility has shifted back to DIVAGRO.

The rationale for these functional reallocations stems from FUSADES' desire to utilize fully the specialized skills of its various divisions, to eliminate duplication of skill requirements and to engage all appropriate units under a programatic configuration rather than to administer a number of projects as discrete and independent activities. Additionally, it expects to achieve greater uniformity in the procedures and conditions affecting the implementation of its diverse programs.

DIVAGRO is now able to concentrate its efforts on three elements of the diversification effort for which it is preeminently qualified: (a) the development and promotion of new exportable agricultural commodities, (b) the promotion of new investment for production and processing of non-traditional crops; and, (c) provision of technical assistance to producers and processors.

DIVAGRO has adjusted its organizational structure to reflect its new role and to intensify and accelerate the research and production development responsibilities for which it is now responsible. It is composed of four departments: Administration, Marketing, Research and Development, and Projects.

The Administrative Division, staffed by five persons is charged with personnel management, purchasing, budgeting and internal reporting.

The Marketing Division, with four profesionals and two secretaries, identifies specific markets and the conditions for successful participation in these markets, develops and reports market information on currently-exported commodities, and evaluates the present and future impact of other market participants. Its Miami representative contacts U.S. and other foreign buyers, and assists in negotiations between them and Salvadoran producers. The marketing division promotes foreign investments and sets overall export targets for DIVAGRO.

The Research and Development Division, staffed by 10 persons, is charged with selection and development of commodity varieties which can be competitively produced in El Salvador. Experimental and commercial test planting are

carried out in three test sites, located in different climatic zones. These were initially managed entirely by consultant personnel, but DIVAGRO staff is gradually assuming direct management responsibility of the sites. Short-term consultants are utilized extensively. An Israeli team, funded by A.I.D./Washington, has been integrated into the R&D effort, to provide technical assistance for and demonstration of drip irrigation.

The Projects Division, staffed by seven, is charged with promoting investment in the production and processing of non-traditional products. When R&D can validate the feasibility of competitively producing a new agricultural product in El Salvador, the Projects Division publicizes the new opportunities, carries out seminars, assists potential investors in preparation of business plans, and carries out technical evaluations of loan applications.

All four present divisions of DIVAGRO are staffed by exceptionally well-qualified personnel. Of the present 28 employees, 17 are professionals. Four of these exercise supervisory roles and the others perform technical functions. The addition of the quality assurance program will emulate the evolution of the other DIVAGRO offices. The initial organizational plans of this unit followed accepted management practices.

The Project Amendment adds six men under the Marketing division charged with implementing the Quality Assurance Program. Given FUSADES demonstrated ability to integrate new functions in an efficient manner, as well as DIVAGRO's excellent management records, the addition of this function and staff will not adversely affect the project administration.

The personnel, programs and organizational structure of DIVAGRO were evaluated by Development Associates Inc. Its team concluded that management systems met acceptable international standards and that DIVAGRO is well positioned by virtue of its experience and professional competence to take on an expanded role in developing diversified agriculture.

Regarding FUSADES, the Rutgers University PID of March, 1988 noted that "FUSADES constitutes the only available pad from which to launch a major effort on non-traditional exports....Program management in FUSADES is of high quality; and the private business connections of the Foundation match nicely with the requirements of non-traditional export expansion."

B. Technical Analysis Update

The technical analysis contained in the original project paper is supplemented with the following discussion.

1. Functions and Procedures

The assistance efforts of DIVAGRO are designed to address in varying degrees the six requirements for development of export-oriented agriculture: access to markets, production technology, quality control, adequate transport, appropriate financing, and the creation of an ambience in which business can

effectively function. The requirements are interrelated and may be addressed through various mechanisms and activities.

DIVAGRO, through contractual mechanisms, institutional networks and private sector relationships, maintains a continuing market search and evaluation system. The system serves to identify (a) markets for products which can be reasonably expected to be served competitively from El Salvadoran sources, (b) specific buyers and distribution channels within those markets, and (c) the operative exogenous factors which may affect the Salvadoran competitive positions in those markets. The qualitative and seasonal requirements of each market are evaluated, as well as the performance of present suppliers to those markets. Thus, DIVAGRO is able to determine whether Salvadoran exports can penetrate and maintain competitive positions in those markets.

The marketing exercise gives rise to the selection of production research. If the potentially marketable commodity is currently produced in the country, its suitability for meeting export quality is determined. If it is inappropriate, research is undertaken to establish a standard variety of the commodity which will meet export market requirements. If the commodity is not currently being produced, new varieties are introduced, grown and tested. Varietal testing is carried out by DIVAGRO's Research and Development Division at three research sites. A fourth agricultural experimental station and one aquacultural station will be added under this amendment. Although most varietal testing has been initiated as a result of DIVAGRO's internal selection process, increasingly, private companies have requested special testing programs. Processors, potential producers, agricultural schools and government agencies are appraised of results and prospects. When varietal tests are successful, commercial-sized plantings are made and harvested, data is collected on agronomic techniques, costs and yields. This is compiled and analyzed for use by potential producers and becomes a major predicate of subsequent business plans.

Frequently, commercial plantings are tested under irrigation through assistance from the Water Management Project or the A.I.D./Washington-funded Israeli irrigation project.

From the time that commercial crop testing starts, DIVAGRO's project office initiates a promotion campaign to interest potential producers in growing the product. At that time, the appropriate marketing, production and transport data are bought together to enable a potential producer to elaborate a business plan with which to support his own investment decision and to secure credit from the agricultural credit lines of FUSADES or through the commercial banking system. Appropriate technical assistance for preparation of a business plan and for initiation of production is provided by DIVAGRO. The grower is also, as appropriate, given assistance for expanding his markets, negotiating transport arrangements and for complying with import regulations in the market area.

Over the past two years, DIVAGRO has provided technical assistance to processors in both processing technology and production technology. It has

provided support to the processors for extending field production technology to their suppliers. Thus, it has established a nascent technical assistance delivery system that can be expanded. The system has been successful in extending technology and market discipline to the suppliers who, with increasing frequency, are beneficiaries of land reform laws.

DIVAGRO maintains informal relations with government agencies whose operational mandates impact on its diversification activities. It has recently evaluated the laws and regulations which affect shrimp mariculture and is proposing changes in administrative procedures. While relationships with the agencies have been tenuous and intermitent, useful exchanges are increasing in frequency. Marketing data and technical information are now regularly shared with government agencies, and government personnal regularly attend DIVAGRO seminars and workshops. Discussions with the transition team of the new GOES administration presage a period of much closer collaboration.

There is little question that the DIVAGRO method of assisting in diversification is theoretically sound and practiced with competence. It is respected by the private sector, which generally views the division as responsive to its needs and as a source of valuable information. The recently completed independent evaluation concludes that "DIVAGRO strategies, operating procedures and objectives do not require changing..."

Within the short time span of its existence, DIVAGRO has been instrumental in bringing 460 hectares of land under drip-irrigated production, in the construction or expansion of four processing plants, and engendering a pipeline of loan applications that are expected to exhaust the Water Management line of credit within another year. Probably, a third of the available credit funds of the Agribusiness Project will be comitted in the same time period. Perhaps of greater importance, DIVAGRO has created efficient technical processes to effect major accomplishments in the years ahead.

2. Program and Activity Schedules

Marketing information and research data have led DIVAGRO management to conclude that selected products within four major commodity groupings can be produced competitively in El Salvador: (1) aquaculture, (2) fruits and vegetables, (3) flowers, and (4) spices and colorants. In some cases, the feasibility of competitive production has been reasonably established; in others, additional research and development will be required.

a. Commercialization

DIVAGRO's Project Division is preparing to assist in the expansion of commercial production of such commodities as: freshwater prawns, saltwater shrimp, melons, Leatherleaf fern, tropical cut flowers, loofah, cashew nuts, onions, tomatoes, and okra. In most cases, the commercialization efforts will be a continuation of promotional programs, technical assistance and lending programs already initiated. However, pond production of shrimp will be a major new initiative.

With consultant assistance, DIVAGRO has recently completed a Master Plan for shrimp mariculture. The first phase of the shrimp plan calls for development of approximately 1,000 hectares of shrimp producing ponds by 1992, along with establishment of at least one hatchery, training of a cadre of shrimp technologists and growers, and fuller analysis of potential sites throughout the coastal regions. These activities are expected to establish the basis for a take-off of the industry. In the second phase, DIVAGRO will assist in developing an additional 4,000 hectares of shrimp ponds. It is currently reviewing responses to an RFP for consultant services to assist in implementing the plan.

Seminars and workshops on the technology and economics of shrimp mariculture are currently being offered to potential investors, government officials, and the banking community. DIVAGRO-contracted technical assistance has assisted in the improvement of the approximately 200 hectares of shrimp ponds that are currently operating and assisted in improving the technology and business plans of six firms that may apply for shrimp production loans totalling about $6.0 million. It has provided intensive technical assistance to an existing fresh water shrimp hatchery and to one commercial grow-out facility. These activities have created renewed investor interest in production, while establishing a standard technology for dissemination to those investors through the technical assistance process.

The expansion of the okra production is predicated on excellent market demand for local processors/exporters. Provisions of the Water Management Project now permit lending for furrow irrigation, the only appropriate system for okra. This will enable DIVAGRO to assist growers in design of appropriate systems and in preparation of loan applications. DIVAGRO's promotional efforts will take advantage of new improved varieties which have been tested by the R&D division.

Tomato production is expected to supply both local and export markets. Processors are reportedly prepared to buy tomatoes for canning. Technical production problems have been resolved and DIVAGRO's efforts will be largely promotional, coupled with financial assistance from FIDEX.

Production and export sales of cut flowers and colorant have expanded slowly but steadily and DIVAGRO expects that future growth will come primarily from expansion of present growing facilities and sub-contracting arrangements between present producers and neighboring, small landholders. Technical assistance and marketing for the smallholders will be provided by the present producers. DIVAGRO will continue to make intermitent specialized technical assistance available, maintain a market search program, and assist in preparation of loan applications. Lack of adequate water supply in the mountain areas, which are suitable for flower and colorant production, currently constrains growth of these sub-sectors. DIVAGRO is working with appropriate government agencies to create water impoundments in those areas.

Cashews are presently produced in El Salvador under relatively primitive technology. DIVAGRO has interested a number of investors in developing new production groves, which will supply a modern cooperative processing plant that receives DIVAGRO marketing guidance.

b. Testing

Commercialization activities for 1990 onward will be conditioned by the results of the R&D work described below. It is anticipated that the following products now in the last stages of commercial testing will be ready for commercialization in 1990: Jalapeño peppers, string beans, baby corn, seedless watermelons, cucumber, onions, bell peppers and carrots.

The Research and Development Division initiated trials with haricot vert beans and Jalapeño peppers at the request of local processors who anticipate excellent market reception for these commodities in Europe and the U.S. The processors will carry out processing tests as the production trials proceed.

DIVAGRO has successfully produced a new variety of baby corn that yields approximately 400% higher than previously-used varieties. The R&D Division will conduct commercial plot trials in cooperation with two local processors, and about 200 hectares will be planted this year.

Trials of seedless watermelons were initiated in 1989, with the assistance of a California producer, and two containerloads were exported. About 100 hectares are planned for the 1989-90 season.

Cucumber planting have been subjected to damaging viral infections. DIVAGRO, with the assistance of ROCAP-provided technicians, has established a dependable viral-control technique. The commercialization of this product will proceed in 1989-1990.

Asparagus production will be initiated through a three-year production testing period followed by a longer period of commercialization. Long-term production and processing consultants will be contracted to assist this effort.

Research and Development activities scheduled for the period 1990-1991 include production trials for Oyster and Frogs. These have been identified by maricultural consultants as potentially profitable product lines for El Salvador. Redfish trials will be conducted with the assistance of a Louisiana producer who has expressed a willingness to invest in production facilities. Striped Bass production in freshwater impoundments will also be investigated and tested during this period.

DIVAGRO plans to experiment, in conjunction with local processors, in production of miniature or "baby" vegetables for the gourmet export market. Berry production will also be explored, along with other products identified by the market search mechanism.

C. Social Analysis Update

The social analysis contained in the original project paper remains valid for the purposes of this amendment.

In summary, the study of the sociocultural context, within which this Project operates in El Salvador, found no substantive obstacles to its implementation. Intensive, non-traditional agriculture and processing plants have operated successfully for some time and have expanded under the implementation of the ongoing Project; thus additions can be made with appropriate training and on-site instructions.

Increased profits from agriculture and wages for the jobs generated are anticipated to help improve the living conditions of many rural families. The direct beneficiaries were identified as the agriculture and aquaculture producers, related business activity groups and farm owners/operators. These groups include a substantial portion of women. Increased profits are forecast for all beneficiaries. Workers on the farms, and in the processing and transportation groups will benefit directly from the Project. The principal labor force of the processing plants consists of women, whose employment opportunities will increase as a result of this Project. Many indirect beneficiaries include: families of producers and employees, shopkeepers, and service providers. An increase in foreign exchange earnings will bring benefits to the overall economy and thus to a wide spectrum of the population.

Samples of all the beneficiary groups had some involvement in the design of the Project and this amendment. Intensive interviews and some exchanges of ideas were conducted with the appropriate DIVAGRO divisions and FUSADES' general administration. Agribusinessmen, professionals working with local consulting firms, association members and officers, government officials, bankers, and members of chambers of commerce were given an opportunity to make suggestions. Information was gathered from those same groups and from government institutions, agrarian reform cooperatives, small farmers, and from universities.

Probable impacts were ascribed to both the direct and indirect beneficiaries; the social analysis, in conjunction with the economic analysis, suggested an overall ratio of seven indirect beneficiaries (family members, indirect jobs) to one direct beneficiary for the Project. Important economic benefits are anticipated for the agrarian reform cooperatives that enter into contracts with the agribusinesses; similar benefits are expected for small farmers. Impact differentials will be viewed in some parts of the country, especially those that still experience terrorist violence; investment cannot be expected to flow to those areas as rapidly as to secure areas.

The issue of relieving the high unemployment has already been mentioned. Women are an important part of the processing and farm labor force and should benefit substantially from these activities. As a result of the civil conflict, women have increasingly become owners and operators of small farms. There is sometimes a perception held by many in Salvadoran society, including women themselves, regarding women's limited capabilities to produce non-traditional agricultural crops. The amended Project will attempt to address this issue by taking special measures to promote the program, increase

technical assistance and expand outreach through various mechanisms to stimulate female participation in agricultural diversification activities and to enjoy the benefits of the program. Careful monitoring is used to assure that the Project activities reach as many persons as possible.

Overall, the social soundness analysis discovered no serious obstacles to the implementation of the Project. On the contrary, it is well within the country's sociocultural context. Substantial numbers of direct and indirect beneficiaries will participate, and the impacts on them are positive: both economic and social. Some variation in potential impact is perceived for areas with security problems. The Project amendment can be recommended on the merits of the assessment of the sociocultural benefits to the direct participants and useful income increases to those in the indirect categories. The Project should thus contribute to the eventual stabilization of the country.

D. Environmental Analysis Update

The Initial Environmental Examination prepared for the PID recommended a negative determination based on the finding that this Project was not a major action which would have a significant impact on the human environment. Therefore, an Environmental Assessment was not required.

In the interim, evidence has emerged that serious problems existed regarding the misuse, overuse and unsafe handling of pesticides within the general El Salvador context. In 1988, a study team from the Consortium for International Crop Protection (CICP) issued an environmental assessment of pest management practices and pesticide use in El Salvador. Although the team did not specify any problems with the Agribusiness Development Project, they indicated that several opportunities existed to initiate integrated pest management (IPM) techniques and to reduce the use of unsafe chemicals, given the export emphasis of the project.

The CICP study put forth five major recommendations to improve the general IPM environment in El Salvador. The recommendations covered the following concepts: (1) distribution and demonstration of less toxic chemicals; (2) altering foreign exchange and credit policies to make it easier to promote alternative methods of pest control; (3) training for Salvadoran bank officers regarding alternative pest control technologies; (4) research and development of alternatives and options for IPM technologies geared to particular recipients whether non-traditional exporters or small farmers; and (5) training in safe pesticide use and alternative pest management techniques as part of every agricultural project in El Salvador.

Although the Mission has not formally approved the CICP environmental assessment, several of the recommendations listed above are already being addressed under the Agribusiness Development Project and will be enhanced through implementation of this amendment. For example, DIVAGRO, has initiated a pesticide control program and utilizes field trials on its experimental farms to train private-sector farmers, coop members and agricultural students

in biocontrol and safe usage of agrichemicals. Along with their own research, DIVAGRO has contracted and will expand contract relationships with U.S. universities and international institutions to examine alternative IPM technologies. The Mission will encourage DIVAGRO to develop linkages with the new ROCAP RENARM Project. Any credit analysis approvals by FIDEX are integrally dependent on the technical analysis of each commodity development project. The technical analysis delves into the types and uses of pesticides, as well as safety equipment required for proper handling. The planned Quality Assurance Program will ensure Salvadoran products meet importing country chemical standards, implying the use of less toxic pesticides.

The actions taken and planned by DIVAGRO indicate that its staff and the institution have internalized the importance of IPM and pesticide use control. Governmental institutions and commercial banks have watched the progress of the DIVAGRO program and have linkages to the technology transfer components. Although this project can not alter the actions of the institutions not under its purview, the examples displayed by DIVAGRO will have a better chance of being adopted by the government and the banks, and will set the framework for future efforts with those institutions.

Given the foregoing, the Mission believes that the Agribusiness Development Project meets environmental protection requirements for an activity of this nature.

E. Economic Analysis Update

As explained in the main section of the Project Paper, the Project Amendment seeks to enhance El Salvador's wealth and development by contributing to the expansion of efficient internationally competitive agricultural nontraditional activities. Such activities will provide a basis for higher real GDP growth, greater needed foreign exchange earnings, and higher labor incomes which raise the standards of living of low income population groups. To achieve such objectives, the project amendment provides resources for promoting technological innovation and transfer that will benefit the growers of nontraditional export crops and other entrepreneurs of nontraditional productive activities. The present economic analysis section assesses whether the Project Amendment is justified from an economic perspective and quantifies some key potential economic impacts.

Summary of conclusions

The Project Amendment makes economic sense and USAID/ES should undertake it. Depending on the assumptions, the Project Amendment economic internal rates-of-return range from well above 50 percent to close to 15 percent under a worst case scenario, significantly exceed the go/no-go critical returns to capital, and thus favorably compare with many alternative uses for the capital resources involved. Moreover, the Project Amendment is likely to be an efficient foreign exchange earner and has positive and strong potential impacts on GDP, foreign exchange, labor and farmers' earnings, and employment.

To ensure that the Project Amendment achieves its objectives, it is essential that the technologies be extended to as many units of lands as possible in the early years of implementation, and that the reasonable yields used in the economic analysis be secured.

Methodological framework

The analysis uses the economic internal rate of return (EIRR) as the fundamental criterion for measuring the economic worthiness of a project. Such a rate makes the net present value of the incremental flow of net economic benefits equal to zero. To calculate the EIRR one must use economic prices, that is, prices which reflect the true marginal value of production and the opportunity costs of resources. This involves adjusting financial or market prices when such prices do not reflect the true value to the society of goods and resources.

The present analysis measures Project Amendment impact, thus benefits and costs, on the basis of "with and without Project Amendment" scenarios which show physical production, sales proceeds, and costs pertaining to the growth of specific crops. Specifically, Project Amendment benefits are the difference in revenue product (physical production multiplied by sales price) between the with and without Amendment scenarios. The increase in revenue product for all land units (manzanas = 0.7 hectare or 1.7 acre) that will directly benefit from the Project Amendment is the index of total gross benefits. Costs reflect the sum of production costs at the farm level for given numbers of manzanas, plus the Project Amendment resources applied to technological development and transfer activities.

The time horizons used in the analysis were 10 and 15 years. All prices and costs were kept constant at 1989 levels and are on a farmgate basis. The level of technology assumed in this economic analysis is consistent with what can be easily transferred to small farmers; yields, costs, and profits per land unit are well below results from some advanced methods being tested by DIVAGRO.

In any technology development or transfer project there is uncertainty regarding the technological packages that are to be successfully developed and transferred. Accordingly, our analysis addressed uncertainty in the following way. First, it illustrated the economic impact of cultivating specific crops made possible by the adoption of technological packages in a first or baseline scenario. Second, it used sensitivity analysis to gauge how the economic worthiness of the Project Amendment would change under different assumptions regarding the amount of manzanas successfully cultivated, crop yields, and time horizon. Finally, the analysis has built in conservative assumptions in order to err on the side of prudence.

Considering Project experience to date, the technological packages would be applied to lands that have been fallow. However, to provide a conservative bias to the EIRR, it was assumed that a traditional crop, corn, would be grown in those lands in the "without Project Amendment" scenario. For the "with

Project Amendment" scenario, benefit and cost profiles or farm budgets were developed for four specific crops. Such budgets were consolidated into a composite budget for a model or prototypical manzana in which the four crops would be grown. The assessment of the project economic worthiness and impact was based on the comparison between model manzana and corn manzana budgets assuming that both are extended to increasing number of manzanas under alternative "with" and "without" Project Amendment situations.

The Project includes resources to processors, packers, and exporters of non-traditional agricultural products. Nonetheless, the analysis uses farmgate prices, and not the much higher FOB port prices that will most likely be paid to Salvadoran exporters. The use of farmgate prices for exports rather than FOB port prices biases the project amendment net benefits downward, measuring economic returns only to farmers from growing the crop. This methodological approach results in lower conservative EIRR, foreign exchange, and economic impact estimates.

In the analysis the critical value for the go/no-go internal rate-of-return was set at 15 percent--i.e., a project would be deemed as worthwhile if it showed an EIRR higher than 15 percent.

Data sources

The main sources of information regarding the farm budgets were records from the project experimental plots, published price data, and Banco de Fomento Agropecuario technicians. Estimates from USAID/ES agricultural specialists complemented information from such sources. Information regarding the number of land plots that could be cultivated through the Project Amendment was provided by FUSADES/DIVAGRO.

Procedures

After the basic data were collected and processed, the next step was to develop the farm budgets for the cultivation of sweet peppers, green beans, onions, and cantaloupe. Cost structures of these four crops are representative of those targeted for more extended cultivation in El Salvador under the Project Amendment (see tables 1 through 4). Such budgets were consolidated into a single composite model manzana budget which shows 25 percent of the manzana allocated for the growth of each crop (table 5). Market prices as actually paid or received by the farmers were used at this stage. The analysis with such prices sheds light on whether the financial incentives are to be attractive for the farmers.

After developing the financial prices budget for the model manzana, an analogous budget in economic prices was prepared (table 6). To such end the following adjustments were made :

For unskilled labor. If wages for unskilled labor reflected the value of the marginal product of unskilled labor, then the wages necessary to bid such kind of labor would provide a measure of the value of the goods and services

that would have been produced in other activities. However, as El Salvador suffers from significant underutilization of its unskilled labor, its society does not really give up any goods or services by using otherwise unemployed labor in the productive activities the project makes possible. Accordingly wages paid overestimate the true opportunity cost of unskilled labor and a downward adjustment to those wages is necessary in order to reflect opportunity cost. In the analysis the opportunity cost of unskilled labor was taken as 85 percent of the wages paid to such workers.

For foreign exchange. As El Salvador's currency is overvalued, the official foreign exchange rate undervalues foreign exchange. This means that the incremental value derived from additional exports, and the incremental costs associated with additional imported inputs, are underestimated. Therefore, the foreign exchange rate used to price exports and imports in colones was adjusted. In line with purchasing parity studies sponsored by USAID/ES, the equilibrium real exchange rate for the colon is estimated at colones 9 = $ 1. Accordingly, the market prices of imports and exports in colones at the official exchange rate of five colones to one dollar were adjusted upward by a factor of 1.8 (i.e., 9/5=1.8). An alternative scenario was analyzed at a shadow rate of 6 colones.

For tariffs and imported inputs. Imported inputs such as fertilizers or seeds are subject to duties. As such charges are transfer payments to the GOES, they do not reflect a loss of resources to the country. Accordingly, they must be deducted from the colon price of the imports. As input prices are on a farmgate basis and include port-to-farm transportation and related expenses, the following steps were employed to arrive at an appropriate conversion factor to obtain the economic prices for imported inputs.

Port-to-farm transportation and related expenses were substracted from the farmgate prices. This gave the colon cost of the item at the port of entry on an official exchange rate basis.

A tariff charge, estimated at 10% of the import price, was deducted from the port of entry price.

After the tariff charge was deducted, the remaining value was converted to economic border price by multiplying by the factor reflecting the foreign exchange premium, 1.8, as previously explained.

To convert border prices to a farmgate basis, the transportation and related expenses that had been deducted were added again. (See the footnotes to table 6 for a more detailed explanation of the methodology used.)

Finally, it is important to note that, under financial analysis procedures, interest payments are treated as a cost; in an economic analysis they are not. The reason for such treatment of interest in an economic analysis is that interest is part of the return to capital that the economic analysis measures. Accordingly, the crop budgets in economic prices do not show interest payments as a cost, nor have such payments been treated as a cost in the rate of return calculations.

Once the model manzana budget in economic prices had been estimated, analogous financial and economic prices budgets were estimated for the growth of corn, the alternative crop without the Project Amendment (tables 7 and 8). By comparing the respective model manzana budgets with the corn manzana budget, it was possible to determine the incremental net benefits per manzana associated with the nontraditional crops. After multiplying the incremental net benefits per manzana by the number of manzanas cultivated under the project, an estimate of unadjusted benefits for all manzanas was obtained (table 9).

In the baseline analysis the number of manzanas harvested in non-traditional export crops, thanks to the Project Amendment alone (excluding resources already committed), was taken to start at 1,000 in the initial year, FY 1990, increasing to 4,000 manzanas by 1992, and to 10,000 harvested per annum after 1993. Actual number of manzanas placed under irrigation may be less, due to double-cropping for processing vegetables, such as green bean and pepper. These baseline numbers of manzanas are more conservative than the estimates provided to USAID/ES by FUSADES.

Once the incremental benefits for all the manzanas under cultivation had been estimated, the colon equivalent of the Project Amendment resources were subtracted to arrive at the flow of Project Amendment net economic benefits. The economic rate-of-return was estimated on the basis of such flow of net benefits. In the exercise, the disbursement of the Project Amendment resources was assumed to take place in the first four years, rather than in five, in order to impart a conservative bias to the EIRR estimates. Naturally, for estimating the EIRR, the $13.0 million AID dollar component of the Project Amendment resources was priced at the exchange rate of 9 colones per dollar (table 9).

The next step consisted in analyzing the sensitivity of the EIRR estimate to differing assumptions concerning yields, number of manzanas cultivated, shadow foreign exchange rate, and the time horizon. The alternative assumptions are presented on table 10 along with the assumptions in the original scenario.

After the EIRR calculations, the impact of the Project Amendment on foreign exchange rate generations, GDP, factor incomes, and employment was calculated. These impacts were measured by comparing the results under the Project Amendment with what would have happened on the same lands without the Amendment.

To estimate the foreign exchange impact --see table 11--the foreign exchange used to pay for imported inputs, as well as the foreign exchange components of the Project Amendment resources in the "with Amendment" scenario were subtracted from the foreign exchange proceeds from exports. The comparison with the foreign exchange earnings or costs in the cultivation of corn gave the increment in foreign exchange that can be attributed to the project amendment resources. (Table 11, as well as other tables, present the detailed methodologies followed.)

Because in El Salvador increasing foreign exchange earnings or savings is an important objective, it is useful to determine how much it costs to earn or save foreign exchange through the Project Amendment. It is important to underline that it is not enough to earn or save foreign exchange by a given amount through given activities, it is necessary to assess whether such earnings or savings occur efficiently. Such assessment was made possible through the calculation of the Project Amendment domestic resource cost of earning and saving foreign exchange. The methodology consisted in calculating the present value of the earnings and savings of foreign exchange and comparing it with the present value of the domestic resource costs of achieving those earnings and savings. The methodology and results are presented on table 12.

To measure the Project Amendment's contribution to GDP, intermediate inputs were deducted from the value of production intended for domestic sales and for exports. The difference is value added or GDP. Such a difference or GDP is also equivalent to the sum of payments to labor, rents, interest payments, and profits. As information on such variables was collected or estimated from the farm budgets, by comparing with and without project amendment scenarios, it was possible to determine the impact made on those variables. The calculations are presented on tables 13 through 15.

Results and conclusions

The first point to note is that, as can be seen by comparing tables 5 and 7, the financial net benefits for the farmer are substantial. His gross sales increase four-fold and net earnings ten-fold by switching manzanas from corn to new export crops. Accordingly, the financial incentives should be powerful stimulants for the adoption of technologies that lead to the results shown.

As shown on table 9, for the baseline scenario with 1,000 manzanas cultivated in 1990 and rising to 10,000 manzanas (7,000 hectares) by EOP, the original yield estimates (tables 1 to 4), and a time horizon of 10 years, the EIRR is 84 percent. This result suggests that the project is highly profitable for the society as a whole. Under the same assumptions regarding yields and number of manzanas cultivated, but with a time horizon of 15 years, the EIRR rises very little to 85 percent (table 10). The EIRR is very sensitive, however, to the number of manzanas cultivated and the yields. Other things equal, if no manzanas are cultivated in the first year, the rate falls to 51 percent. If, as is not uncommon in agricultural activities, bad and good year crops alternate, a bad year crop meaning just half of expected yields, and zero manzanas are cultivated on the first year, the EIRR falls to 29 percent. If, under what one may call a worst case scenario, yields are only one third of expected levels and no manzanas are cultivated in the first year, the EIRR becomes 12 percent. It should be noted that such so-called worst case scenario results could be used as a proxy for the overall results that would be obtained if the technological transfers fail. Another point is that, even using a shadow foreign exchange rate of 6 colones to a dollar, significantly below what the rate would be on a purchasing parity basis, the project comes out as strongly worthwhile with EIRRs of 67 and 30 percent for the baseline and most probable scenarios (table 10).

Two implications are to be highlighted from the above results. The first one is that, even under the worst case scenario, the EIRR remains at levels close to the go/no-go level of 15 percent, a result which reaffirms the conclusion that the Project is sound from an economic viewpoint. Secondly, as would be expected, the returns are highly sensitive to both the pace at which the technological packages are transferred and implemented in actual land cultivation, and to yields. This means that in project implementation a premium should be placed on those factors which determine smooth and effective technological transfers, e.g.,acceptance by farmers.

The Project Amendment would have significant export, GDP, labor incomes, and employment impacts. During a 15-year time horizon the amendment impact under this illustrative model would give rise to some $194.0 million of foreign exchange earnings and savings—assuming baseline yields and number of manzanas cultivated. As an average, see table 11, the yearly earnings of foreign exchange would amount to over $12.9 million or about 2 percent of the officially projected 1989 foreign exchange earnings from exports of goods and equal to the dollar cost of the project amendment resources ($13 million). The present value of the flow of foreign exchange earnings and savings throughout the 15-year time horizon amounts to $42.0 million which comes close to 7 percent of 1989 exports of goods and to three times the dollar investment in the project amendment. As shown on table 10, also the results for a 10 year horizon would be substantial.

The domestic resource cost analysis of table 12 shows that the Project Amendment not only results in substantive foreign exchange earnings, but that the Amendment activities generate foreign exchange in a very efficient way. For the baseline scenario the cost of generating a dollar is approximately 3.3 colones; if yields and exports drop to 50% of expected levels every other year, then the cost would be 5.2 colones per dollar. Clearly, when one considers that purchasing parity estimates indicate that the real cost of generating foreign exchange for the Salvadoran economy is approximately 9 colones per dollar, the project comes out as a very efficient generator of foreign exchange.

In connection with contribution to GDP, table 14 shows that, for 15 years and under the baseline scenario, the Project Amendment would give rise to an average yearly increment in GDP of 57 million colones. This amount is equivalent to close to 2 percent of the 1989 agricultural GDP. The present value of the flow of GDP increments over the 15-year time horizon comes to approximately 261 million colones which is equivalent to more than 7 percent of the projected 1989 agricultural GDP.

Table 14 also presents a breakdown of increments in payments to labor, rents, interest, and farmer profits. While no official data on payments to production factors are available, it is possible to note that the lion's share of the increase in GDP corresponds to payments to farmers as incremental profits. Accordingly, the project amendment will benefit especially small farmers adopting the new technologies. An order of magnitude of those benefits can be provided as follows.

If one takes the typical Agrarian Reform Phase III small farmer's family as representative of most small farmer families in the country, the average family in rural areas works a plot of land of about 2 manzanas. The number of manzanas harvested per year after Project maturity in 1994 is 10,000 manzanas. Accordingly, it is possible to infer that, as an average, 5,000 small farmer families per year will dedicate their lands to the cultivation of crops made possible by the project amendment. As shown on table 14, the increment in farmer's profits will exceed 45 million colones per annum after EOP 1994. Dividing by the 5,000 families, as an average, such families will see their family incomes rise by about 9,000 colones. Given that the typical small farmer family in El Salvador makes some colones 4,000 per year, the families benefiting from the project amendment technological packages would be multiplying their incomes by better than 2-fold.

Finally, as shown on table 15, the project amendment will generate 5,636 jobs at Project maturity or a total of 70,000 person-years of on-farm employment during the 15-year horizon. This is close to three times the amount of employment that would take place in the same land plots without the project amendment. When both total costs at the farm level, as well as the total project amendment resources are considered, the cost per person year of employment comes to less than $2,000. The Project Amendment, therefore, comes out as a low cost generator of jobs for a project with a high rate of economic return and significant foreign exchange, GDP, and farmers' incomes impact.

VIII. ISSUES SECTION

1. Given that FIDEX has not disbursed any of the credit funds and that the new government plans financial sector reforms, does the rationale still hold for maintaining the credit fund under this Project?

The credit line is an essential component of this project. The project designers reviewed the practices and capabilities of Salvadoran commercial banks and concluded that they had neither the inclination nor the experience, skilled staff and resources necessary to carry out "project lending" for previously untried agricultural ventures. This credit line supported by project funded technical analysts is designed to facilitate such lending.

The assumptions underlying the creation of the line remain valid. Although some commercial banks, responding to temporary excess liquidity, financed a few non-traditional agricultural export projects, the loans were made to clients of high net worth. The banks do not entertain loan applications which predicate repayment primarily on projected cash-flow. FIDEX is the only financial intermediary with the technical capability of making loans on that basis. Given the current and probable future illiquid condition of the banking system, there is no expectation that the commercial banks will play a role of any significance in non-traditional agricultural export financing in the short- to mid-term; except perhaps as cofinanciers with FIDEX -- possibilities of which are now being explored. The agribusiness credit line

remains the only reliable resource for financing the early growth of non-traditionals. Moreover, the credit fund is essential to the continuation of the DIVAGRO's technical assistance role beyond the PACD. Proceeds from lending activities are expected to be the major source of income to FUSADES, and self sustainability is predicated on a successful lending program. The conditions and events which contributed to the slow movement of the line have been noted on page 11. The externalities, e.g. high liquidity in the banking system, availability of loan funding under the Water Management project, and the approach of presidential elections will no longer negatively affect the demand for credit from this line. In fact, the present illiquidity and its expected prolongation conforms to the credit conditions envisioned by the project designers. This and the structural reforms now being discussed will enable the line to fulfill its function at increasingly higher interest rates.

Adjustments in FIDEX lending criteria will also facilitate loan emissions by effectively expanding its clientele pool; as will its new emphasis on aquacultural projects. In the past, FIDEX subjected proposed loans to fairly detailed analysis but made final approval contingent on the borrowers ability to provide collateral of 150% of the loan amount. The collateral requirements and other quasi-commercial bank criteria for loan approval denied access to a large portion of the entrepreneural community whose capital base had been erroded by effects of the civil war, and the collapse of cotton and sugar markets. Although the approval criteria provided for additional security during the infancy of FIDEX, maintenance of these criteria are not consistent with the developmental purpose of the credit line. FIDEX has agreed to loosen the terms of its loans so that good projects can be financed on the basis of projected cash flow; and to tighten project analysis to insure that projects can deliver the desired developmental effects and repay obligations from earnings.

FIDEX has initiated a limited "call program", which has resulted in generating projects for wood products, cassava and expansion of flower production. When fully staffed in July, FIDEX will design and initiate an intensive promotion campaign with special emphasis on hitherto inelligible groups of borrowers.

2. The quality assurance of exportable products is normally a function of the public sector. Why is this function being placed with a private institution?

It is true that quality assurance of exportable products is the ultimate responsibility of the government. This responsibility includes two functions: technical inspection and enforcement procedures. In several countries, the technical procedures have been passed to private institutions for efficiency reasons. In the case of El Salvador, the government institution responsible for quality assurance, the Ministry of Agriculture (MAG), does not have the resources nor capabilities to provide technical services required for a large expansion in non-traditional agricultural

exports. However, the government still must maintain its enforcement responsibilities. For that reason, the MAG and DIVAGRO will reach an accord on the roles and responsibilities for each institution in this process. The linkages will be spelled out in detail under that agreement.

It should be noted that quality assurance is a systematic approach. The Quality Assurance Program does not begin with the post-processing inspection. The whole technology transfer process under this Project is geared toward quality assurance; starting from research into seeds and planting regimes, continuing with the development of technology packages, providing outreach and extension activities, monitoring pesticide and fertilizer usage, devising improved harvesting and post-harvest techniques, fostering better processing technologies and controls, and assuring post-processing inspection. The inclusion of the technical inspection service is a natural step to assure quality and increase market sales. The location of a technical inspection service in the private sector also corresponds to the new government's proposed intentions to streamline the bloated bureaucracy and have the more efficient private sector assume a greater role in providing these services.

3. How does the Project have an impact on the poor and small farmers?

The project has increasingly developed linkages with other Mission programs, such as the Agrarian Reform Financing, the Cooperative Production and Marketing, and the Rural Small Enterprise and Cooperative Development Projects, that have provided additional mechanisms to reach thousands of small farmers who are members of Agrarian Reform cooperatives. The work with the cooperatives has also enabled the Project to promote participation of female owned and operated farms.

The project amendment will take additional measures to strengthen small farmer participation by developing coordinated plans with cooperatives, creating closer linkages between agribusinesses and cooperatives, adding and enhancing experimental farms, increasing the level of effort for outreach and extension activities, and working closely with the commercial banking sector to encourage loans for non-traditional export investments.

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Agribusiness Development (519-0327)

LOGICAL FRAMEWORK

ANNEX 1

Goal	OVI	MOV	Assumptions
To increase employment and foreign exchange earnings	-An estimated $49 million/year in foreign exchange earnings realized by 1994 -An estimated 12,600 person years of employment generated	-GOES Statistics -AID Surveys	-GOES policies and regulations will change to support investment, production and production and export activities. -The current civil conflict will continue at its current levels. -Foreign markets remain open and expanding.
Purpose			
To increase the production and export of nontraditional agricultural products.	-15 nontraditional crops being commercially produced and exported -One viable agricultural technology development program providing country-wide assistance -23,300 hectares under non-traditional production by 1994 (7,600 Has. by 1992)	-Project reports -evaluations -FUSADES statistics	-Salvadoran private sector demonstrate a willingness to participate in export-oriented activities. -FUSADES/DIVAGRO maintains its active role in private sector development and its non-political role in local political affairs.

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Outputs			
A functional technology transfer program instituted	-30 new products developed and technology disseminated -Four experimental plots functioning, testing new varieties and providing applied training to agribusiness, farmers, students and coop members -One sound pest control and post harvest program established and linked to U.S. research facilities and universities -One integrated T/A delivery system established reaching 40 agribusinesses, 20 agrarian reform cooperatives and 11,000 farm families -An established quality assurance program to assure sanitary and grading requirements are met by exporters -An established aquaculture program with an experimental station contributing to annual exports of $3 million by 1994 -A varietal research and seed production program established to serve El Salvador in penetrating European vegetable markets	-Project reports -FUSADES records -Evaluations -Bank records	-FUSADES/DIVAGRO has a managerially and technically competent staff. -Audits

Outputs	OVI	MOV	Assumptions
A functional credit program established	-$10 million in loans disbursed to MIAE projects -At least $4.0 million of above disbursed to aquaculture activities -A set of developmental criteria established to enable efficient and effective loan process		
A viable marketing capability developed.	-An office within DIVAGRO established that promotes DIVAGRO's programs in El Salvador and promotes El Salvador's products in international markets -A set of strategies developed to penetrate foreign markets. -One MIS system devised to accurately indicate ongoing and future marketing possibilities. -12 foreign investments in El Salvador promoted by DIVAGRO		
Income generating from program activities and supporting ongoing operations	-Interest income generated to support DIVAGRO initiated programs -Income from experimental field sales -Income from the OAP program		
Inputs			
Technical Assistance **Training** **Administrative Support** **Credit** **Buildings and Equipment** **Evaluations and Audits** **Contingency**		-Project Reports -Audit -Evaluations	

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Annex 2: Activity and Disbursement Schedule of AID Grant

The $7,637,800 of USAID contributions for the three new activities under the proposed $13.0 million amendment to 519-0327 are outlined below for the next five fiscal years to new PACD 30 September, 1994.

USAID Disbursements: New DIVAGRO Activities

$-000 for FYears 9/30	1990	1991	1992	1993	1994	TOTAL
Quality Assurance Program						
Outside T/A	279.5	247.3	226.4	226.4	226.4	1,206.0
Training	37.5	37.5	37.5	37.5	37.5	187.5
Component 1 Subtotal	317.0	284.8	263.9	263.9	263.9	1,393.5
Personnel	162.4	170.5	174.5	178.9	182.5	868.8
Supplies	360.0	228.1	228.1	228.1	228.1	1,272.4
Admin. O/H	51.3	50.4	54.3	58.5	63.1	277.6
Building & Equipment	552.1	—	—	—	—	552.1
Contingency	116.7	116.6	116.7	116.7	116.7	583.4
Component 2 Subtotal	1,242.5	565.6	573.6	572.2	590.4	3,544.3
Quality Assurance Activity TOTAL	1,559.5	850.4	837.5	836.1	854.3	4,937.8
Aquaculture Experiment Station						
Outside T/A	29.4	29.4	29.4	29.4	29.4	147.0
Training	67.2	67.2	67.2	67.2	67.2	336.0
Component 1 Subtotal	96.6	96.6	96.6	96.6	96.6	483.0
Personnel	16.8	16.8	16.8	16.8	16.8	84.0
Supplies	147.0	147.0	147.0	147.0	147.0	735.0
Admin O/H	96.6	96.6	96.6	96.6	96.6	483.0
Building & Equipment	219.4	2.9	2.9	2.9	2.9	231.0
Contingency	16.8	16.8	16.8	16.8	16.8	84.0
Component 2 Subtotal	496.6	280.1	280.1	280.1	280.1	1,617.0
Aquaculture Experiment Station Activity TOTAL	593.2	376.7	376.7	376.7	376.7	2,100.0
US Investor Promotion						
Outside T/A TOTAL	200.0	200.0	200.0	—	—	600.0
TOTAL NEW ACTIVITIES	2,352.7	1,427.1	1,414.2	1,212.8	1,231.0	7,637.8

Planned disbursements of USAID grant funds for existing programs during the next five fiscal years to revised PACD September 30, 1994 are listed in the next page. The total $13,962,200 comes from three sources: (a) the $1.3 million (est.) likely to be available as of September 30, 1989 under the Water

Manangement 519-0303 for DIVAGRO, (b) the $7.3 million (est.) from the original $10.0 million commitment for non-credit assistance to DIVAGRO under this Project 519-0327, and (c) $5,362,200 of the $13.0 million under this Amendment.

USAID Disbursements: Summary Existing Activity

$-000 FYears 9/30	1990	1991	1992	1993	1994	TOTAL
Outside T/A	1,140.0	1,200.0	1,077.0	200.0	200.0	3,817.0
Travel Costs	164.2	163.7	119.7	50.0	50.0	547.6
Seminars,etc.	165.7	119.1	145.4	50.0	50.0	530.2
Field Agents	64.6	72.4	70.0	60.0	45.0	312.0
Training	394.5	355.2	335.1	160.0	145.0	1,389.8
Component 1						
Subtotal	1,534.5	1,555.2	1,412.1	360.0	345.0	5,206.8
4 Field Stations	450.0	440.0	440.0	440.0	430.0	2,200.0
Personnel	653.8	619.2	663.0	719.3	797.4	3,452.7
Publications/PR	48.6	54.4	60.9	25.0	25.0	213.9
Supplies, O/H	206.9	205.6	230.2	257.9	288.8	1,189.4
DIVAGRO Op.Sup.	1,359.3	1,319.2	1,394.1	1,442.2	1,541.2	7,056.0
Bldg & Equipment	590.0	626.9	—	—	—	1,216.9
Contingency	50.0	50.0	50.0	50.0	32.5	222.5
Evaluations	50.0	50.0	60.0	50.0	50.0	260.0
Component 2						
Subtotal	2,049.3	2,046.1	1,504.1	1,532.2	1,623.7	8,755.4
TOTAL ONGOING ACTIVITIES	3,583.8	3,601.3	2,916.2	1,892.2	1,995.5	13,962.2

These disbursement schedules total $21.6 million of USAID resources for DIVAGRO technical assistance, operating support, and capital expenditures for the fiscal years 1990-94: the $8.6 million expected to be still available as of September 30 ($1.3 milion in Water Manangement and $7.3 million in Agribusiness Development) plus this $13.0 million Amendment to the 519-0327 Project Paper..

Under Agribusiness Development, accrued costs are expected to reach $2.7 million by September 30, 1989, of the $10.0 million committed for non-credit assistance. This Amendment would bring the total to $ 23.0 million over the full seven-year LOP. Another $10.0 million already committed for onlending by FIDEX to non-traditional agricultural exports puts USAID's total support at $33.0 million or 75% of the total project cost.

FUSADES is required to supplement AID funding over the life-of-project with $11.0 million in cooperating country support, of which $2.5 million has been contributed, as of March 31, 1989, leaving $8.5 million to be committed over

the next five fiscal years to new PACD 1994. FUSADES ability to honor this commitment is basically assured through interest income from its agricultural loan portfolio, managed by its financial arm, FIDEX. Due to the high-risk nature of lending to non-traditional export projects, the timing of such cashflows cannot be determined with any precision. However, even accounting for some bad debt and evaluation losses on the $20.0 million granted through Projects 519-0303 and 0327, FIDEX should be capable of generating $6.0 million over five years from these loans.

DIVAGRO itself will also generate revenues from (a) sales incidental to commercial trials on its field stations, (b) lab testing and inspection fees under the new Quality Assurance Program, and (c) training fees. Income from these activities and the FIDEX portfolio are projected below.

$-000 FYears 9/30	1990	1991	1992	1993	1994	TOTAL
Interest income	1,000	1,100	1,200	1,300	1,400	6,000
Produce sales	168	168	168	168	168	840
Seminars + courses	15	18	22	26	30	111
Q.A.P. fees	40	70	100	130	160	500
Total Available Cash Revenues	1,223	1,356	1,490	1,624	1,758	7,451

Other income sources have minimal impact. When appropriate, DIVAGRO sells some of its publications and charges for specialized services provided by its own staff. Other potential sources, such as hybrid seed sales, are still speculative.

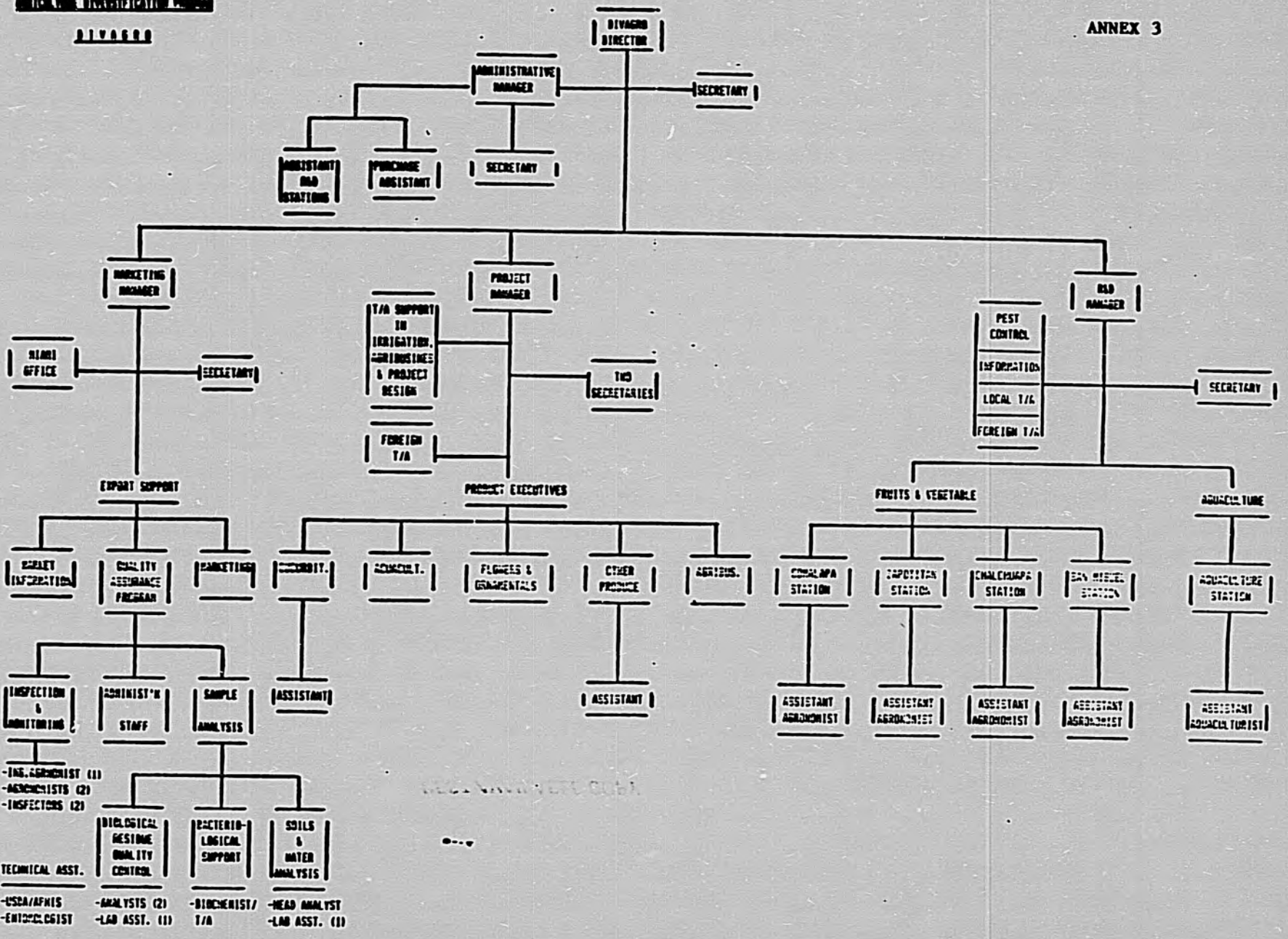
Not projected here, but counting as cooperating country contributions, are the cost-sharing payments by beneficiaries for specific outside technical assistance (presently at 35% of actual costs for consultants and 50% for travel) and the $4.5 million estimated equity input by FIDEX clients in their NTAE projects.

After termination of 519-037, DIVAGRO could continue with a core budget of $ 1.8 million, as detailed on pages 25-26, of which 90% could be funded from identified sources. Income from interest and seminars would likely continue at 1994 levels. By closing two field stations, produce sales would drop by $134,000. Volume of lab tests and inspection certificates by QAP are expected to increase beyond $190,000 per annum. Therefore, projected income to support DIVAGRO after PACD might be expected to total $ 1,654,000 annually.

ANNEX 3

AGRICULTURE DIVERSIFICATION PROGRAM

DIVAGRO



ANNEX 4

TABLE 1

AGRIBUSINESS TECHNOLOGY TRANSFER PROJECT

CASH FLOW PER 0.25 HECTARES (In USD colones)

SWEET PEPPERS OF COMMERCIAL PERIODS
0000000000000000

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield	10,000	10,000	11,250	11,250	11,250	11,250	11,813	7,875	7,875	8,250
price (colones per unit)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Total Domestic	720	720	579	579	579	579	591	394	394	413
Exports										
yield	22,500	22,500	27,000	27,000	27,000	27,000	27,563	26,250	26,250	27,000
price	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total exports	2,250	2,250	2,700	2,700	2,700	2,700	2,756	2,625	2,625	2,700
Total Gross Benefits	2,970	2,970	3,285	3,285	3,285	3,285	3,347	3,244	3,244	3,713
GROSS COSTS										
Land preparation										
plowing										
imported	9	9	9	9	9	9	9	9	9	9
domestic	16	16	16	16	16	16	16	16	16	16
harrowing										
imported	24	24	24	24	24	24	24	24	24	24
domestic	16	16	16	16	16	16	16	16	16	16
furrowing										
imported	12	12	12	12	12	12	12	12	12	12
domestic	6	6	6	6	6	6	6	6	6	6

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 1 cont.)										
Intermediate Inputs										
seeds										
imported	14	14	14	14	14	14	14	14	14	14
domestic	2	2	2	2	2	2	2	2	2	2
fertilizer										
imported	108	108	108	108	108	108	108	108	108	108
domestic	31	31	31	31	31	31	31	31	31	31
chemicals										
imported	102	102	102	102	102	102	102	102	102	102
domestic	18	18	18	18	18	18	18	18	18	18
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	4	4	4	4	4	4	4	4	4	4
other int inputs										
imported	44	44	44	44	44	44	44	44	44	44
domestic	16	16	16	16	16	16	16	16	16	16
Labor	338	338	338	338	338	338	338	338	338	338
Administration	33	33	33	33	33	33	33	33	33	33
Land rent	43	43	43	43	43	43	43	43	43	43
On farm transportation & Storage										
imported	33	33	33	33	33	33	77	33	33	33
domestic	33	33	33	33	33	33	23	33	33	33
Total Gross Costs before interest	1,106	1,106	1,106	1,106	1,106	1,106	1,106	1,106	1,106	1,106
Interest	77	77	77	77	77	77	77	77	77	77
NET BENEFITS	1,737	1,737	2,000	2,000	2,000	2,000	2,184	2,200	2,200	2,449

TABLE 2

AGRIBUSINESS TECHNOLOGY TRANSFER PROJECT

CASH FLOW PER 0.25 HECTARES (in 1989 colones)

GREEN BEANS (FINANCIAL PRICES)
0000000000000000

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield	5	5	6	5	5	5	5	6	6	6
price (colones per unit)	77	77	77	77	77	77	77	77	77	77
Total Domestic	385	385	308	385	385	385	385	462	462	462
Exports										
yield	7	7	8	8	9	9	9	10	10	10
price	141	141	141	141	141	141	141	141	141	141
Total exports	924	924	1,128	1,128	1,269	1,269	1,269	1,410	1,410	1,410
Total Gross Benefits	1,309	1,309	1,432	1,513	1,654	1,654	1,654	1,872	1,872	1,872
GROSS COSTS										
Land preparation										
planing										
imported	9	9	9	9	9	9	9	9	9	9
domestic	16	16	16	16	16	16	16	16	16	16
harrowing										
imported	20	20	20	20	20	20	20	20	20	20
domestic	16	16	16	16	16	16	16	16	16	16
furrowing										
imported	3	3	3	3	3	3	3	3	3	3
domestic	2	2	2	2	2	2	2	2	2	2

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	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 2 cont.)										
Intermediate Inputs										
seeds										
imported	304	304	304	304	304	304	304	304	304	304
domestic	34	34	34	34	34	34	34	34	34	34
fertilizer										
imported	66	66	66	66	66	66	66	66	66	66
domestic	22	22	22	22	22	22	22	22	22	22
chemicals										
imported	7	7	7	7	7	7	7	7	7	7
domestic	3	3	3	3	3	3	3	3	3	3
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	4	4	4	4	4	4	4	4	4	4
other int inputs										
imported	110	110	110	110	110	110	110	110	110	110
domestic	20	20	20	20	20	20	20	20	20	20
Labor	130	130	130	130	130	130	130	130	130	130
Administration	25	25	25	25	25	25	25	25	25	25
Land rent	63	63	63	63	63	63	63	63	63	63
On farm transportation & Storage										
imported	24	24	24	24	24	24	24	24	24	24
domestic	24	24	24	24	24	24	24	24	24	24
Total Gross Costs before interest	900	900	900	900	900	900	900	900	900	900
Interest	30	30	30	30	30	30	30	30	30	30
NET BENEFITS	467	467	533	640	720	720	720	960	960	1,122

TABLE 3

AGRICULTURAL TECHNOLOGY TRANSFER PROJECT

CASH FLOW FOR 0.25 HECTARES (in 1989 colones)

ENDING OF FINANCIAL PROGRAM
00000000000000

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield	26	26	39	39	39	39	39	13	13	14
price (colones per unit)	30	30	30	30	30	30	30	30	30	30
Total Domestic	780	780	660	660	660	660	660	390	390	420
Exports										
yield	38	38	46	46	46	46	46	54	54	56
price	30	30	30	30	30	30	30	30	30	30
Total exports	1,140	1,140	1,380	1,380	1,380	1,380	1,380	1,620	1,620	1,680
Total Gross Benefits	1,920	1,920	2,040	2,040	2,040	2,040	2,040	2,010	2,010	2,100
GROSS COSTS										
Land preparation										
planting										
imported	19	19	19	19	19	19	19	19	19	19
domestic	32	32	32	32	32	32	32	32	32	32
harvesting										
imported	12	12	12	12	12	12	12	12	12	12
domestic	0	0	0	0	0	0	0	0	0	0
farming										
imported	12	12	12	12	12	12	12	12	12	12
domestic	6	6	6	6	6	6	6	6	6	6

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 3 cont.)										
Intermediate Inputs										
seed										
imported	75	75	75	75	75	75	75	75	75	75
domestic	0	0	0	0	0	0	0	0	0	0
fertilizer										
imported	65	65	65	65	65	65	65	65	65	65
domestic	31	31	31	31	31	31	31	31	31	31
chemicals										
imported	119	119	119	119	119	119	119	119	119	119
domestic	36	36	36	36	36	36	36	36	36	36
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	0	0	0	0	0	0	0	0	0	0
other int inputs										
imported	64	64	64	64	64	64	64	64	64	64
domestic	16	16	16	16	16	16	16	16	16	16
Labor	720	720	720	720	720	720	720	720	720	720
Administration	30	30	30	30	30	30	30	30	30	30
Land rent	63	63	63	63	63	63	63	63	63	63
On farm transportation & Storage										
imported	14	14	14	14	14	14	14	14	14	14
domestic	14	14	14	14	14	14	14	14	14	14
Total Gross Costs before Interest	1,391	1,391	1,391	1,391	1,391	1,391	1,391	1,391	1,391	1,391
Interest	90	90	90	90	90	90	90	90	90	90
NET BENEFITS	490	490	490	490	490	490	490	290	290	640

TABLE 4

AGRIBUSINESS TECHNOLOGY TRANSFER PROJECT

CASH FLOW FOR 0.25 HECTARES (in PHP estimate)

CAVALERIE OF FINANCIAL PROGRAM

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield	0	0	0	0	0	0	0	0	0	0
price (cashmere per unit)	0	0	0	0	0	0	0	0	0	0
Total Domestic	0	0	0	0	0	0	0	0	0	0
Exports										
yield	175	175	175	175	175	175	175	175	175	175
price	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Total exports	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
Total Gross Benefits	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
GROSS COSTS										
Land preparation										
plowing										
imported	27	27	27	27	27	27	27	27	27	27
domestic	40	40	40	40	40	40	40	40	40	40
harrowing										
imported	72	72	72	72	72	72	72	72	72	72
domestic	40	40	40	40	40	40	40	40	40	40
furrowing										
imported	36	36	36	36	36	36	36	36	36	36
domestic	10	10	10	10	10	10	10	10	10	10

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 6 cont.)										
Intermediate Inputs										
seeds										
imported	200	200	200	200	200	200	200	200	200	200
domestic	6	6	6	6	6	6	6	6	6	6
fertilizer										
imported	200	200	200	200	200	200	200	200	200	200
domestic	34	34	34	34	34	34	34	34	34	34
chemicals										
imported	400	400	400	400	400	400	400	400	400	400
domestic	141	141	141	141	141	141	141	141	141	141
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	12	12	12	12	12	12	12	12	12	12
other int inputs										
imported	200	200	200	200	200	200	200	200	200	200
domestic	60	60	60	60	60	60	60	60	60	60
Labor	300	300	300	300	300	300	300	300	300	300
Administration	63	63	63	63	63	63	63	63	63	63
Land rent	63	63	63	63	63	63	63	63	63	63
On farm transportation & Storage										
imported	75	75	75	75	75	75	75	75	75	75
domestic	75	75	75	75	75	75	75	75	75	75
Total Gross Costs before Interest	2,330	2,330	2,330	2,330	2,330	2,330	2,330	2,330	2,330	2,330
Interest	132	132	132	132	132	132	132	132	132	132
NET BENEFITS	1,886	1,886	1,886	1,886	1,886	1,886	1,886	1,886	1,886	1,886

TABLE 9

AGROINDUSTRIES PROCESSING PROJECT

CASH FLOW FOR Maize (in 1000 colones)

MODEL BANANA OPTIMIZING PROGRAM
0000000000000

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Total Domestic Sales	1,908	1,908	1,908	1,908	1,908	1,908	1,908	1,908	1,908	1,908
Total Exports Sales	8,709	8,709	9,285	9,285	9,781	9,781	9,776	10,280	10,280	10,760
Total Gross Benefits	10,664	10,664	11,091	11,193	11,390	11,388	11,382	11,796	11,796	12,289
GROSS COSTS										
Land preparation										
planing										
imported	64	64	64	64	64	64	64	64	64	64
domestic	111	111	111	111	111	111	111	111	111	111
harrowing										
imported	132	132	132	132	132	132	132	132	132	132
domestic	88	88	88	88	88	88	88	88	88	88
furrowing										
imported	63	63	63	63	63	63	63	63	63	63
domestic	34	34	34	34	34	34	34	34	34	34

GROSS COSTS (Table 3 cont.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Intermediate Inputs										
seeds										
imported	392	392	392	392	392	392	392	392	392	392
domestic	39	39	39	39	39	39	39	39	39	39
fertilizer										
imported	619	619	619	619	619	619	619	619	619	619
domestic	157	157	157	157	157	157	157	157	157	157
chemicals										
imported	627	627	627	627	627	627	627	627	627	627
domestic	248	248	248	248	248	248	248	248	248	248
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	24	24	24	24	24	24	24	24	24	24
other int inputs										
imported	479	479	479	479	479	479	479	479	479	479
domestic	120	120	120	120	120	120	120	120	120	120
Labor	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913
Administration	157	157	157	157	157	157	157	157	157	157
Land rent	200	200	200	200	234	230	230	230	230	230
On farm transportation & Storage										
imported	145	145	145	145	145	145	145	145	145	145
domestic	145	145	145	145	145	145	145	145	145	145
Total Gross Costs before Interest	5,813	5,813	5,813	5,813	5,813	5,813	5,813	5,813	5,813	5,813
Interest	330	330	330	330	328	330	330	330	330	330
NET BENEFIT	4,671	4,671	4,670	4,988	5,095	5,098	5,139	5,604	5,604	6,044

TABLE 6

[illegible] TECHNOLOGY PROJECT

CASH FLOW PER [illegible] (in [illegible] [illegible])

MODEL [illegible] ([illegible] [illegible] [illegible] AT FARM LEVEL ONLY)
[illegible]

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Total Domestic Sales	1,905	1,905	1,407	1,264	1,264	1,264	1,576	1,246	1,246	1,449
Total Exports Sales	15,708	15,708	17,[illegible]	17,230	17,303	17,303	17,307	18,991	18,991	19,369
Total Gross Benefits	17,663	17,663	18,737	18,814	19,067	19,067	19,173	20,237	20,237	20,817
GROSS COSTS										
Land preparation										
plowing										
imported	105	105	105	105	105	105	105	105	105	105
domestic	111	111	111	111	111	111	111	111	111	111
harrowing										
imported	216	216	216	216	216	216	216	216	216	216
domestic	88	88	88	88	88	88	88	88	88	88
furrowing										
imported	105	105	105	105	105	105	105	105	105	105
domestic	34	34	34	34	34	34	34	34	34	34

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 6 cont.)										
Intermediate Inputs										
seeds										
imported	971	971	971	971	971	971	971	971	971	971
domestic	30	30	30	30	30	30	30	30	30	30
fertilizer										
imported	687	687	687	687	687	687	687	687	687	687
domestic	157	157	157	157	157	157	157	157	157	157
chemicals										
imported	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029
domestic	240	240	240	240	240	240	240	240	240	240
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	24	24	24	24	24	24	24	24	24	24
other int inputs										
imported	705	705	705	705	705	705	705	705	705	705
domestic	120	120	120	120	120	120	120	120	120	120
Labor	1,636	1,636	1,636	1,636	1,636	1,636	1,636	1,636	1,636	1,636
Administration	157	157	157	157	157	157	157	157	157	157
Land rent	230	230	230	230	230	230	230	230	230	230
On farm transportation & Storage										
imported	230	230	230	230	230	230	230	230	230	230
domestic	140	140	140	140	140	140	140	140	140	140
Total Gross Costs	7,140	7,140	7,140	7,140	7,140	7,140	7,140	7,140	7,140	7,140
NET BENEFITS	10,322	10,322	11,377	11,474	11,927	11,927	12,032	13,096	13,096	13,477

footnotes : prices of imported inputs consist of CIF price of import plus part to farm transportation all that adjusted to reflect the true value of foreign exchange.
Methodology took tariffs rate as being 10% of international CIF prices and part to farm transportation as equivalent to 2% of the farmgate price. Shadow foreign exchange rate was taken as Colones 9 per US dollar
Let I= international price of imports and T=financial price we have. Then T-(.02T)-I=(.1I)
From this expression one can find that (T0.9I)/1.1 equals I and that, therefore
(T0.9I/1.1)+(T0.02)=T0.9I=the financial farmgate price of the input including transportation but deducting tariffs.
As 1.8 represents the foreign exchange rate adjustment coefficient (19/5)=1.8), T1.9I(1.8)=T3.42 produces the economic farmgate price of the input after deducting tariffs. Accordingly, financial prices of imports were multiplied times 1.64 to get the relevant economic prices.
Economic cost of labor was taken to be 85% of financial cost.

TABLE 7

AGRIBUSINESS TECHNOLOGY PROJECT

CASH FLOW FOR MANZANA (in 1989 colones)

CORN (FINANCIAL PRICES)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield (qq)	55	55	55	55	55	55	55	55	55	55
price per qq	45	45	45	45	45	45	45	45	45	45
Total Domestic	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475
Exports										
yield	0	0	0	0	0	0	0	0	0	0
price	0	0	0	0	0	0	0	0	0	0
Total exports	0	0	0	0	0	0	0	0	0	0
Total Gross Benefits	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475
GROSS COSTS										
Land preparation										
plowing										
imported	0	0	0	0	0	0	0	0	0	0
domestic	0	0	0	0	0	0	0	0	0	0
harrowing										
imported	96	96	96	96	96	96	96	96	96	96
domestic	64	64	64	64	64	64	64	64	64	64
furrowing										
imported	13	13	13	13	13	13	13	13	13	13
domestic	7	7	7	7	7	7	7	7	7	7

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS COSTS (Table 7 cont.)										
Intermediate Inputs										
seeds										
imported	46	46	46	46	46	46	46	46	46	46
domestic	5	5	5	5	5	5	5	5	5	5
fertilizer										
imported	229	229	229	229	229	229	229	229	229	229
domestic	100	100	100	100	100	100	100	100	100	100
chemicals										
imported	131	131	131	131	131	131	131	131	131	131
domestic	62	62	62	62	62	62	62	62	62	62
water										
imported	0	0	0	0	0	0	0	0	0	0
domestic	16	16	16	16	16	16	16	16	16	16
other int inputs										
imported	0	0	0	0	0	0	0	0	0	0
domestic	0	0	0	0	0	0	0	0	0	0
Labor	714	714	714	714	714	714	714	714	714	714
Administration	47	47	47	47	47	47	47	47	47	47
Land rent	230	230	230	230	230	230	230	230	230	230
On farm transportation & Storage										
imported	30	30	30	30	30	30	30	30	30	30
domestic	14	14	14	14	14	14	14	14	14	14
Total Gross Costs before Interest	1,838	1,838	1,838	1,838	1,838	1,838	1,838	1,838	1,838	1,838
Interest	119	119	119	119	119	119	119	119	119	119
NET BENEFITS	347	347	347	347	347	347	347	347	347	347

TABLE 8

AGRIBUSINESS TECHNOLOGY PROJECT

CASH FLOW FOR [illegible] (in [illegible] colones)

CASH (ECONOMIC PRICES)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
GROSS BENEFITS										
Domestic Sales										
yield (qq)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
price per qq	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Domestic	2,[illegible]	2,[illegible]	2,[illegible]	2,475	2,475	2,475	2,475	2,475	2,475	2,475
Exports										
yield	0	0	0	0	0	0	0	0	0	0
price	0	0	0	0	0	0	0	0	0	0
Total exports	0	0	0	0	0	0	0	0	0	0
Total Gross Benefits	2,[illegible]	2,[illegible]	2,[illegible]	2,[illegible]	2,[illegible]	2,475	2,475	2,475	2,475	2,475
GROSS COSTS										
Land preparation										
plowing										
imported	0	0	0	0	0	0	0	0	0	0
domestic	0	0	0	0	0	0	0	0	0	0
harrowing										
imported	137	137	137	137	137	137	137	137	137	137
domestic	64	64	64	64	64	64	64	64	64	64
furrowing										
imported	22	22	22	22	22	22	22	22	22	22
domestic	7	7	7	7	7	7	7	7	7	7

GROSS COSTS (table 8 cont.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Intermediate Inputs										
seeds										
imported	75	75	75	75	75	75	75	75	75	75
domestic	9	9	9	9	9	9	9	9	9	9
fertilizer										
imported	375	375	375	375	375	375	375	375	375	375
domestic	100	100	100	100	100	100	100	100	100	100
chemicals										
imported	213	213	213	213	213	213	213	213	213	213
domestic	42	42	42	42	42	42	42	42	42	42
water										
imported	0	0	0	1	0	0	0	0	0	0
domestic	16	16	16	11	16	16	16	16	16	16
other int inputs										
imported	0	0	0	3	0	0	0	0	0	0
domestic	0	0	0	0	0	0	0	0	0	0
Labor	606	636	606	604	606	606	606	606	606	606
Administration	67	67	67	67	67	67	67	67	67	67
Land rent	230	230	230	230	230	230	230	230	230	230
On farm transportation & Storage										
imported	63	63	63	63	63	63	63	63	63	63
domestic	14	14	14	14	14	14	14	14	14	14
Total Gross Costs	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
NET BENEFITS	300	300	300	300	300	300	300	300	300	300

TABLE 9

INCREMENTAL NET ECONOMIC BENEFITS AND ECONOMIC INTERNAL RATE OF RETURN BASELINE SCENARIO

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Net Benefits per Hectare from Crops with Amendment	10,302	10,500	11,207	11,674	11,907	11,927	12,032	13,006	13,006	13,677
Net Benefits per Hectare from Crops without Amendment	300	300	300	300	300	300	370	300	300	300
Incremental Net Benefits per Hectare from Crops	10,135	10,135	11,207	11,304	11,337	11,337	11,643	12,707	12,707	13,307

YEAR	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number of Cultivated Hectares	1,000	2,000	4,000	7,000	10,000	10,000	10,000	10,000	10,000	10,000
Incremental Net Benefits per Hectare	10,135	10,135	11,207	11,304	11,337	11,337	11,643	12,707	12,707	13,307
Unadjusted Benefits for All Hectares	10,132,000	20,268,606	44,880,192	78,988,336	113,370,200	113,370,200	116,427,700	127,068,100	127,068,100	132,072,600
[illegible] Value Equivalent of Project Amendment Resources at Economic Values	30,420,000	30,420,000	30,420,000	30,420,000	0	0	0	0	0	0
Flow of Project Amendment Net Economic Benefits	(20,092,172)	(14,357,304)	10,[illegible]3,192	44,363,336	113,370,200	113,370,200	116,427,700	127,068,100	127,068,100	132,072,600

Economic Internal Rate of Return (10 Years) 88.30% for 1000 hectares in 1990 and increments growing to 10,000 HE in 1994 [illegible].

TABLE 10 SENSITIVITY ANALYSES FOR ECONOMIC INTERNAL RATES OF RETURN

SCENARIO		SHADOW FX EXCHANGE RATE	EIRR
Baseline	Original yields under probable levels of technology adoption; manzanas in new crops: 1,000 in first year, 2,000 in 2nd year, 4,000 in 3rd year, 7,000 in 4th year, 10,000 harvested annually by EOP 1994 and thereafter.	9/1	84%
		6/1	67%
50% Yield Every 2nd Year:	Yields alternate between original estimates and 50%, every other year, due to normal uncertainties in agriculture. Number of manzanas is baseline. This is most probable scenario.	9/1	44%
		6/1	30%
15 Years:	Baseline, but using 15-year horizon for impact of technology transfers	9/1	85%
	50% Yield Every 2nd Year, but using 15-year horizon.	9/1	47%
Delayed Impact & 50% Yield:	No manzanas are planted to new crops in first year; thereafter yields alternate between baseline and 50%.	9/1	29%
Low Impact & Delay:	Manzanas planted to new crops are minimal; none in first year, 1,000 in 2nd year, with 20% increments/year thereafter.	9/1	14%
Delay Only by 1 Year:	Same as Baseline, but technology adoption delayed by 12 months (no manzanas 1st year)	9/1	51%
Worst Case:	Yields one third of Baseline; no manzanas in the first year.	9/1	12%

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TABLE 11
AGRIBUSINESS TECHNOLOGY PROJECT
ANALYSIS OF FOREIGN EXCHANGE EARNINGS (In 1980 dollars/financial prices)

[illegible]	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Total Exports Per Hectare With Amendment	00,700	00,730	00,917	00,917	00,900	00,900	00,900	02,100	02,100	02,132
Minus Total Imports Per Hectare With Amendment	300	300	300	300	300	300	300	300	300	300
Foreign Exchange Earned With Project Amendment Per Hectare	1,305	1,305	1,012	1,012	1,900	1,900	1,900	1,805	1,805	1,832
Exports Per Hectare Without Amendment	0	0	0	0	0	0	0	0	0	0
Minus Imports Per Hectare Without Amendment	000	000	000	000	000	000	000	000	000	000
Foreign Exchange Earned Without Project Amendment Per Hectare	(0000)	(0000)	(0000)	(0000)	(0000)	(0000)	(0000)	(0000)	(0000)	(0000)
Foreign Exchange Earned or Saved Per Hectare Not Adjusted By Amendment Resources	1,305	1,305	1,323	1,323	1,300	1,300	1,352	1,717	1,717	1,739
Hectares Cultivated	1,000	2,000	4,000	7,000	00,000	00,000	00,000	00,000	00,000	00,000
Foreign Exchange Earned or Saved On All Hectares Not Adjusted By Amendment Resources	00,305,302	02,712,304	04,002,004	000,004,000	000,312,300	000,312,300	000,017,300	017,100,700	017,100,700	017,300,700
Minus Project Amendment Dollar Resources	3,230,000	3,230,000	3,230,000	3,230,000	0	0	0	0	0	0
Incremental Foreign Foreign Exchange Earnings Due To Project Amendment	(1,003,7000	(317,000)	2,042,004	7,011,000	00,312,300	13,312,300	13,017,300	17,100,700	17,100,700	17,300,700

Sum of Incremental Foreign Exchange Earnings Throughout 10 Year Time Horizon : 106,302,305 Sum in 13 Years Horizon:199,311,300

Per Year Average of Foreign Exchange Earnings Throughout 10 Year Time Horizon : 10,030,235 Average over 13 Years: 012,934,007

Net Present Value At 00% Discount Rate of Foreign Exchange Earnings Over 10 Year Time Horizon: 39,101,002

TABLE 12

THE PROJECT AMENDMENT DOMESTIC RESOURCE COST OF GENERATING FOREIGN EXCHANGE (financial 1989 prices)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Total Colon Cost Per Manzana With Project Amendment	6,193	6,193	6,193	6,193	6,193	6,193	6,193	6,193	6,193	6,193
Minus Colon Cost of Imported Inputs Per Manzana	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521
Cost of Domestic Inputs Per Manzana	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672
Cultivated Manzanas	1,000	2,000	4,000	7,000	10,000	10,000	10,000	10,000	10,000	10,000
Colon Cost of Domestic Inputs for All Manzanas	3,671,348	7,343,000	14,686,179	25,700,814	36,713,449	36,713,449	36,713,449	36,713,449	36,713,449	36,713,449
Plus Amendment Domestic Resources in Colones	5,375,000	5,375,000	5,375,000	5,375,000	0	0	0	0	0	0
Total Cost of Domestic Inputs in Colones	9,046,348	12,718,000	20,061,179	31,075,814	36,713,449	36,713,449	36,713,449	36,713,449	36,713,449	36,713,449
Incremental Earning Foreign Exchange Earnings Due to Amendment (in dollars)	(1,893,748)	(287,096)	2,042,404	7,411,048	10,312,300	13,312,300	13,617,300	17,168,700	17,168,700	17,288,700

Present Value of Domestic Input Costs at 12% Discount Rate: 127,806,042 colones

Present Value of Incremental Foreign Exchange Earnings: 39,101,002 dollars

Project Amendment Foreign: 3.26 colones per dollar

Alternative Scenario 0000
If yields and exports are held at original estimates in Years 1, 3, 5, 7, and 9 : 3.30 colones per dollar

TABLE 13

CALCULATIONS FOR ESTIMATING CONTRIBUTIONS TO GDP (1989 economy (financial prices)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Values per ouncums										
Value of production with project amendment	10,664	10,664	11,071	11,140	11,208	11,208	11,208	11,716	11,716	12,209
Minus :										
Sum of imported components in land preparation	209	209	209	209	209	229	229	229	229	229
Sum of intermediate inputs	2,716	2,716	2,716	2,716	2,716	2,716	2,716	2,716	2,716	2,716
Imported component of in-farm transportation and storage	148	148	148	148	148	148	148	148	148	148
Equals GDP Generated with Project Amendment	7,590	7,590	7,998	8,068	8,140	8,140	8,232	8,677	8,677	9,089
Broken down as :										
Payments to labor & admin @	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
Land-Related Payments @	208	208	208	208	208	208	208	208	208	208
Interest Payments @@	370	370	370	370	370	370	370	370	370	370
Farmer's Profit	4,671	4,671	4,870	4,938	5,008	5,008	5,150	5,604	5,604	6,066
Value of Production without Project Amendment	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673
Minus :										
Sum of imported components in land preparation	109	109	109	109	109	109	109	109	109	109
Sum of intermediate inputs	396	396	396	396	396	396	396	396	396	396
Imported component of in-farm transportation and storage	39	39	39	39	39	39	39	39	39	39

--table 13 continuation--

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Equals GDP generated without Project Amendment	1,734	1,734	1,734	1,734	1,734	1,734	1,734	1,734	1,734	1,734
Broken down as :										
Payments to labor & admin *	838	834	834	834	834	834	834	831	834	831
Land-related Payments **	264	264	264	264	264	264	264	264	264	264
Interest Payments ***	119	119	119	119	119	119	119	119	119	119
Farmer's Profit	347	347	347	347	347	347	347	347	347	347
Incremental GDP per manzana due to Project Amendment	5,813	5,813	6,220	6,297	6,438	6,438	6,304	6,946	6,946	7,330
Broken down as :										
Incremental Payments to Labor & admin *	1,469	1,460	1,469	1,469	1,460	1,469	1,460	1,469	1,469	1,469
Incremental Land-related Payments **	134	134	134	134	134	134	134	134	134	134
Incremental Interest Payments ***	280	280	280	230	280	230	230	230	230	230
Incremental Farmer Profits	3,984	3,984	4,214	4,438	4,390	4,370	4,642	5,086	5,086	5,097

* Includes domestic land prep costs, wages, and administration
** Includes land rent, farm storage, and transportation DOMESTIC component costs
*** Calculated at 13 percent/year

TABLE 14

TOTAL CONTRIBUTION TO GDP OF PROJECT [illegible] (1989 colones; financial prices)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Increment in GDP per manzana	3,013	3,013	6,220	6,297	6,438	6,438	6,304	6,946	6,946	7,330
Manzanas cultivated	1,000	2,000	4,000	7,000	10,000	10,000	10,000	10,000	10,000	10,000
Total Increment in GDP	3,013,300	11,626,307	30,879,992	44,078,906	64,373,523	64,373,423	68,042,725	69,026,349	69,026,359	73,303,069
Average Yearly GDP Increment	40,260,912 /year next 10 Years			57,371,000 /year next 15 Years						
Present Value of Total Increment in GDP	200,323,671 (discounted at 15 %)									
Increment in Payments to Labor per Manzana	1,469	1,469	1,469	1,469	1,469	1,469	1,469	1,469	1,469	1,469
Total Increment in Payments to Labor	1,469,000	2,938,998	5,877,990	10,286,485	14,694,973	14,694,973	14,694,973	14,694,973	14,694,973	14,694,973
Average Yearly Labor Payments Increment	10,874,202 /year next 10 Years			12,147,046 /year next 15 Years						
Present Value of Total Increments in Payments to Labor	48,043,174 (discounted at 15 %)									
Increment in Rent Payments per Manzana	131	131	131	131	131	131	131	131	131	131
Total Increment in Rent Payments	131,300	262,600	525,300	919,023	1,313,000	1,313,030	[illegible]	1,313,000	1,313,000	1,313,000
Average Yearly Rent Payments Increment	971,983 /year next 10 Years			1,088,700 /year next 15 Years						
Present Value of Total Rent Payments Increments	4,023,999 (discounted at 15 %)									
Increment in Interest Payments per Manzana	230	230	230	230	230	230	230	230	230	230
Total Increment in Interest Payments	230,466	460,932	1,003,004	1,809,262	2,304,660	2,304,660	2,304,660	2,304,660	2,304,660	2,304,660
Average Yearly Interest Payments Increment	1,912,640 /year next 10 Years			2,130,602 /year next 15 Years						
Present Value of Total Interest Payments Increments	7,922,324 (discounted at 15 %)									
Increment in Farmer's Profits per Manzana	3,934	3,934	4,264	4,438	4,370	4,370	4,642	5,086	5,086	5,099
Total Increment in Farmer's Profits	3,933,940	7,907,890	17,042,720	31,063,087	43,702,340	43,702,340	46,419,000	50,863,204	50,863,204	50,990,704
Average Yearly Increment in Farmer's Profits	30,207,027 /year next 10 Years			42,000,610 /year next 15 Years						
Present Value of Total Farmer's Profits Increment	143,134,974 (discounted at 15 %)									

TABLE 15

TOTAL EMPLOYMENT GENERATED THROUGH PROJECT ASSISTANCE

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Payment to Labor Per Manyana With Project Amendment	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Manyanas Cultivated	1,000	2,000	4,000	7,000	10,000	10,000	10,000	10,000	10,000	10,000
Total Payments to Labor	2,300,000	4,600,000	9,200,000	16,100,000	23,001,073	23,001,073	23,001,073	23,001,073	23,001,073	23,001,073
Person-Years of On-Farm Employment Generated With Project Amendment 8	364	1,127	2,256	3,945	5,636	5,636	5,636	5,636	5,636	5,636
Average Jobs Created (Person-Years) of On-Farm Employment during 10 Year Horizons	4,171		Jobs Created in 10-Year Horizons			4,159				
Sum of person-years of on-farm Employment during the 10 years	41,708		Sum Person-Years during 10 years			69,894				

Footnote : 8 The calculations are based on a daily wage rate of 14.37 colones and a work week of 5.5 days X 52 weeks.

FUNDACION SALVADOREÑA
PARA EL DESARROLLO ECONOMICO Y SOCIAL

FUSADES

ANNEX 5

June 28th,. 1989

Mr.
Henry H. Bassford
Director
USAID/El Salvador
San Salvador

Dear Mr. Bassford:

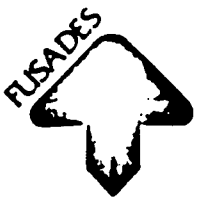
It is clear from the progress that DIVAGRO has made to date and from reasonable perspectives derived from that progress that conditions are appropiate for advancementes of the development of non traditional agricultural exports at a faster rate and to a higher level in quantity and value than we earlier foresaw. In order to pursue the opportunities now evident and to insure continued acceptance and growth of Salvadoran agriculture products in the U.S. and other markets, we, in conjunction with the agribusiness staff of USAID have defined three new activities which together are necessary to insure continued acceptance of Salvadoran agricultural products in the U.S. markets and contribute to increasing our participation therein.

The first is the establishment and operation of a quality control program for non-traditional agricultural export products. This program would insure that exported products meet all quality and sanitation requirements of the importing country. The second is the establishment of an aquacultural experimental station. This is necessary to permit rational and technically sound exploitation of a resource base which has been only marginally developed to date. The third is the design and operation of an extensive marketing and investment promotion program which will utilize a network of a highly experienced agribusiness representatives in the U.S.

In addition to these new activities we think it appropiate to accelerate our varietal and commercial testing and to expand our technical assistance activities to respond to our expanded clientelle pool, which now includes the Agrarian Reform Cooperatives.

FUNDACION SALVADOREÑA

PARA EL DESARROLLO ECONOMICO Y SOCIAL



We anticipate that the activities noted will require and extended time period to make the fully desired impact. We therefore request that the PACD be extended to September 30, 1994, and institutional support be continued through that date.

The additional costos of the program elements listed above are estimated at $ 13.0 million. We request that the grant under the agribusiness Development Project (519-0327) be increased by that amount.

Sincerely yours,

F U S A D E S

Eduardo Núñez
Executive Director

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified?

   Notified as part of FY 1989 Global Report

2. FAA Sec. 611(a)(1). Prior to an obligation in excess of $500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

   Yes

3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?

   N/A

4.	FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.)	N/A
5.	FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively?	Minor construction required under the project. It has been taken into account.
6.	FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	No
7.	FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	a. Yes. Non-traditional export production b. Yes. PVO implementor and private sector beneficiaries c. Yes. Cooperatives will participate d. Yes. Competition encouraged e. Yes. Technology transfer is the key component f. N/A
8.	FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	Credit will finance U.S. procurements. U.S. firms provide technical assistance. U.S. firms encouraged to invest and are eligible for loans.

9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	Recipient required to meet at least 25% of total project costs
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	No
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?	No
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?	No
13. FAA Sec. 119(g)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other	a. Yes. Pesticide control program b. No

wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?	c. No.
14. FAA Sec. 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)?	N/A
15. FY 1989 Appropriations Act. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government?	N/A
16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.?	Yes
17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained?	N/A
18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision).	Approximate date has been provided. The agreement has not been sent.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FY 1989 Appropriations Act Sec. 548 (as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?	a. No b. No
b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental	a. Small farmers will benefit through their relationship with agribusinesses, cooperatives and direct project training. b. Cooperatives will be a key linkage mechanism to pass through technology packages and technical assistance to small farmers

institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

c. Will spur non-traditional agricultural exports, a principle objective of the host country.

d. Women will be beneficiaries of the project as owners/operators of farms and as the key labor force in processing plants.

e. No.

c. FAA Secs. 103, 103A, 104, 105, 106, 120-2; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used? — Yes

d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? — Yes

e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? — Yes

f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? — Yes

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g.	FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.	Local PVO is the primary implementor; most technical assistance is provided by local people. The PVO will attain long-term self-sustainability.
h.	FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?	No
	Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?	No
	Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?	No
i.	FY 1989 Appropriations Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization?	No
	If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?	N/A

j.	FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	Yes
k.	FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?	Such organizations are eligible to compete. No estimate is available, however the project hopes to disburse at least 10% of technical assistance funds to these organizations.
l.	FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase	Complies with Regulation 16. Although the program does not specifically target the other activities mentioned, it will have a positive impact on improving the natural resource base in the country.

production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support traiping, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k)/utilize the resources and abilities of all relevant U.S. government agencies?

m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b)/take full account of the environmental impacts of the proposed activities on biological diversity? N/A

n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas?

a. No

b. No

o. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?

a. No
b. No
c. No
d. No

p. FY 1989 Appropriations Act. If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA;

N/A

(c) being provided, when conistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the renewable natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

q. FY 1989 Appropriations Act Sec. 515 If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified? — N/A

2. Development Assistance Project Criteria (Loans Only)

a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest. — N/A. Grant funded

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest? — N/A

c. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities? — Yes

3. Economic Support Fund Project Criteria

a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?	N/A
b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes?	N/A
c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N/A

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1.	FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?	Yes. Small and Disadvantaged Business participation is encouraged.
2.	FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or determined under delegation from him?	Yes
3.	FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?	Does not discriminate
4.	FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)	N/A

5.	FAA Sec. 604(g). Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)	N/A
6.	FAA Sec. 603. Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates?	No
7.	FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable?	Yes
	Will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?	Yes
8.	International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available?	Yes
9.	FY 1989 Appropriations Act Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?	Yes

10. FY 1989 Appropriations Act Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)? — Yes

B. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used? — Minor constructions requirements. Local procurement.

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? — Yes

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed $100 million (except for productive enterprises in Egypt that were described in the CP), or does assistance have the express approval of Congress? — N/A

C. OTHER RESTRICTIONS

1. FAA Sec. 122(b). If development loan repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter? — N/A Grant

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? — N/A

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? Yes

4. Will arrangements preclude use of financing:

a. FAA Sec. 104(f); FY 1989 Appropriations Act Secs. 525, 536. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; or (4) to lobby for abortion? Yes Yes Yes Yes

b. FAA Sec. 481. To make reimbursements, in the form of cash payments, to persons whose illicit drug crops are eradicated? Yes

c. FAA Sec. 620(g). To compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President? Yes

d. FAA Sec. 660. To provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes

e. FAA Sec. 662. For CIA activities? Yes

f.	FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?	Yes
g.	FY 1989 Appropriations Act Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for prior or current military personnel?	Yes
h.	FY 1989 Appropriations Act Sec. 505. To pay U.N. assessments, arrearages or dues?	Yes
i.	FY 1989 Appropriations Act Sec. 506. To carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)?	Yes
j.	FY 1989 Appropriations Act Sec. 510. To finance the export of nuclear equipment, fuel, or technology?	Yes
k.	FY 1989 Appropriations Act Sec. 511. For the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?	Yes
l.	FY 1989 Appropriations Act Sec. 516; State Authorization Sec. 109. To be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress?	Yes
5.	FY 1989 Appropriations Act Sec. 584. Will any A.I.D. contract and solicitation, and subcontract entered into under such contract, include a clause requiring that U.S. marine insurance companies have a fair opportunity to bid for marine insurance when such insurance is necessary or appropriate?	Yes