

AGENCY FOR INTERNATIONAL DEVELOPMENT
 WASHINGTON, D. C. 20523
BIBLIOGRAPHIC INPUT SHEET

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Batch 72

1. SUBJECT CLASSIFICATION	A. PRIMARY Food production and nutrition	AE10-0000-G355
	B. SECONDARY Agricultural economics--El Salvador	

2. TITLE AND SUBTITLE
 Small agricultural producers credit programs: El Salvador, a case study

3. AUTHOR(S)
 Hatch, L.U.; Ames, G.C.W.; Davis, L.H.

4. DOCUMENT DATE 1977	5. NUMBER OF PAGES 105p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS
 AID/SER/PM/PS&CD

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)
 (In Case studies in development assistance, no.3)

9. ABSTRACT

This report is a study of public credit programs to stimulate agricultural output from small scale farmers. Five conditions must be satisfied: (1) there must be a more productive agricultural technology to encourage farmers to invest; (2) farmers must know about the new capital intensive technology and its profitability; (3) profitability depends on the timely availability of inputs and access to commodity markets; (4) public institutions must lend the bulk of their funds to small farmers; (5) and the value of the additional agricultural output must exceed the costs of the program. The Administracion de Bienestar Campresino (ABC), a supervised credit program in El Salvador, generally meets these conditions. The loans must be highly secured, are usually for less than one year, and have interest rates of from eight to twelve percent per year. Production has increased substantially with the availability of improved varieties of corn, rice and sorghum, and fertilizer and pesticides. Marketing seems to be a major weakness of the small farmer credit program; small farmers in Central America and the Caribbean do not have marketing leverage at harvest time. There are more loans to small farmers than to large commercial operations, but the amount of loans is greater to the large farmers. The major topics in this report include: the need for small farmer credit, program design for small farmer credit, the situation in El Salvador, a case study of the ABC small farmer credit program in El Salvador, and the impact of the program. The program is working to achieve objectives of increasing food production, increasing small farmer net income, and increasing rural employment.

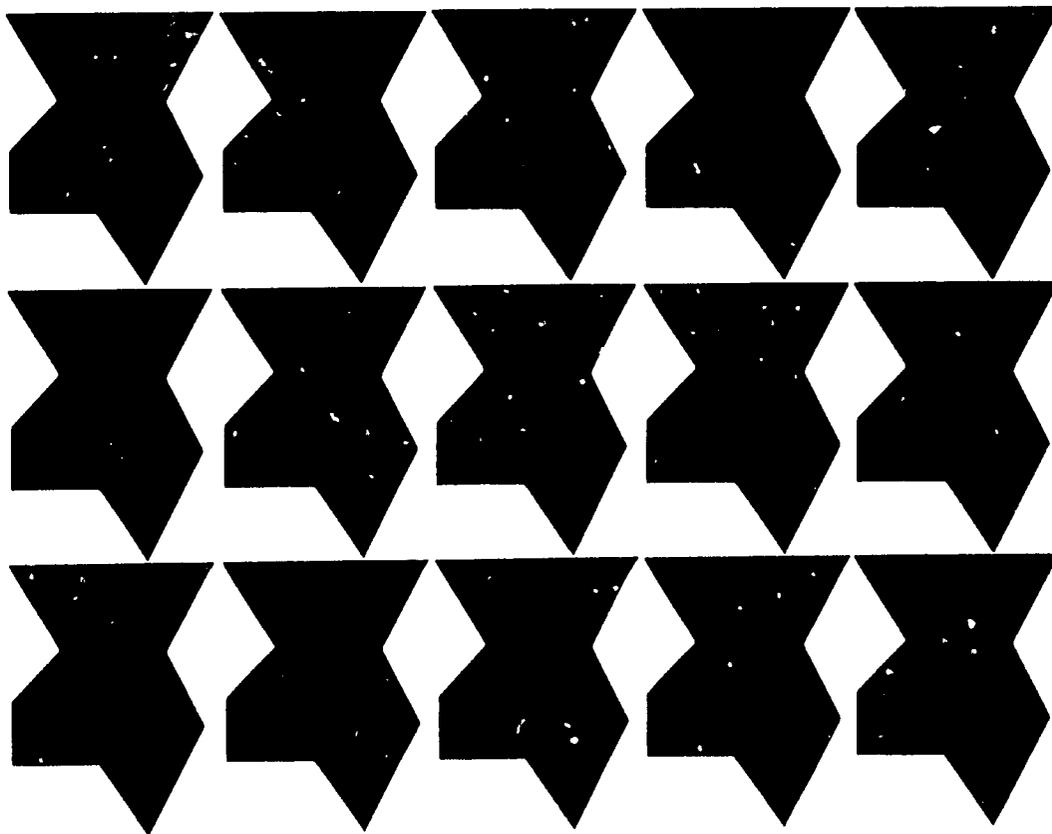
10. CONTROL NUMBER PN-AAE-588	11. PRICE OF DOCUMENT
12. DESCRIPTORS Credit Farms, small El Salvador Case studies	13. PROJECT NUMBER
	14. CONTRACT NUMBER AID/SER/PM/PS&CD
	15. TYPE OF DOCUMENT
Project planning Technical assistance	

PN-AAE-588
AID/SER/PM/PS+CD

DEVELOPMENT STUDIES PROGRAM

Case Studies in Development Assistance No. 3

Small Agricultural Producers Credit Programs: El Salvador



Agency for International Development
Washington, D.C. 20523

SMALL AGRICULTURAL PRODUCERS CREDIT PROGRAMS:

EL SALVADOR, A CASE STUDY

July 30, 1977

ACKNOWLEDGMENTS

This report has been prepared for the Development Studies Program (DSP), United States Agency for International Development, Washington D.C., under work order number AID/OTR-147-77-75. The case study is based on a literature review conducted at the University of Georgia, May 23 to July 30, 1977.

SMALL AGRICULTURAL PRODUCERS CREDIT PROGRAMS:

EL SALVADOR, A CASE STUDY

July 30, 1977

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ISSUES - PART I

1. What are the trade-offs of channeling development funds from international sources through local institutions already serving farmers or creating a new agency for the specific objective of small-scale farmer credit program. Why would AID consider the development of a new institution in a country with scarce marginal talent rather than expanding the capacity of existing banks and agencies? What are the acceptable levels of efficiency with regard to lending costs per unit of loan with a new institution versus using the same channels with as older institution.
2. What is the impact of land reform (e.g. dividing large plantations into small farms) on small farmer credit in terms of:
 - 1) economies or diseconomies of scale
 - 2) the equity and efficiency goals
 - 3) repayment rate
 - 4) adoption of new technology
3. The mobilization of savings has been suggested as an important source of additional credit in the agricultural sector (Adams). Describe the program you would implement for this purpose including the prerequisites for success and your credit policy. Have the prerequisites for a successful rural savings programs been initiated as a complement to the ABC small farmer credit program?
4. Among important technical issues is the availability of technology (seeds, fertilizers, methods of planting and harvesting) adaptable to the area where credit is being granted. What inputs can be purchased with credit? What is the return on operating loans when discounted for on-farm risks?

PART I.

WHY SMALL FARMER CREDIT?

Introduction¹

The importance of the agricultural sector in development programs has risen in recent years. In the 1950s economic development strategy centered around manufacturing. Early strategies for economic progress in less developed countries (LDCs) attempted to emulate the historical pattern of advanced western economies. LDCs policy makers thought that the advanced nations' basic strength lay in their ability to manufacture finished products while the weakness of the poorer countries could be traced to their industrial incapacities and resultant emphasis on raw material. The cure for this situation was to foster industrial activity. Development policy consisted primarily in decreasing dependence on manufactured goods from advanced nations. Industrial import substitution was usually achieved by placing high import tariffs on manufactured products competing with the nascent local industrial enterprise. Concurrently low import tariffs were placed on intermediate goods (machinery used for producing the final product). Under the import substitution and industrialization policy, national resources shifted from the agricultural to the manufacturing sector.

The weaknesses of such development policies have become more evident

¹The principal sources of material for this chapter are: Gordon Donald, Credit for Small Farmers in Developing Countries (Boulder, Colorado: Westview Press, Inc., 1976); selected articles and documents in the A.I.D. Spring Review of Small Farmer Credit (Washington, D.C., June 1973); George F. Patrick, Lawrence J. Brainard and Frederick W. Obermiller eds. Small-Farm Agriculture: Studies in Developing Nations, Purdue Agricultural Experiment Station, Stat. Bull, No. 101, West Lafayette, Indiana, September 1975; and selected journal articles on small farmer programs.

in the late 1960s and early 1970s as many policy makers have become aware of the importance of the inclusion of the agricultural sector in development programs. The LDCs face a significantly different economic environment than the one that existed during the development of advanced western nations. Much of the difference centers around employment problems, both unemployment and underemployment in urban and rural areas. There are no large unpopulated areas for migration available to ease pressures on employment opportunities. A further factor is a higher capital/labor ratio for new employment. The development of sophisticated machinery in advanced nations has significantly increased the amount of capital necessary to create employment.

Development policies are difficult to transplant from advanced western nations to the LDCs. Government strategies to foster economic development must be adapted to the local environment. The emphasis placed on the development of the manufacturing sector and the neglect of the agricultural sector has not brought sustained economic growth. A balanced, well-integrated development policy including all sectors of the economy will be necessary to realize long run economic progress.

This section outlines the important considerations in the decision to provide economic assistance in the form of credit to small farmers. This decision can be subdivided into three basic questions:

- 1) Why should economic assistance be aimed at the agricultural sector of less developed countries (LDCs)?
- 2) Why is the small farmer considered the appropriate recipient of developmental assistance?
- 3) Why is credit an appropriate mechanism for implementing small farmer development?

Each of these questions implies a decision for economic development policy makers in LDCs. Greater emphasis is beginning to be placed on agriculture in development policies in the LDCs because:

- 1) earlier development strategies tended to neglect agriculture almost completely due to emphasis on minerals, plantation crops and other extractive industries; and
- 2) urban employment opportunities have not increased sufficiently to meet population growth and internal migration [Lele and Mellor].

The employment issue leads directly into a consideration of the second question (why small farmers?). In almost all countries small farmers are the largest number of agricultural producers; also, they are the majority of the unemployed or underemployed. Although large farms tend to produce more per unit of labor, there is some evidence that small farmers in LDCs produce more per land area [IADP]. The underemployment of small farmers implies that the labor input is not being utilized to its potential. Consequently, given the decision to include the agricultural sector in development policy, emphasis on small farmers directly attacks the problems of employment and under utilization of national resources. It should not be inferred that large farmers have no place in economic assistance programs; in fact, large farmers usually respond rapidly to government assistance [Malone]. Short-run increases in agricultural production achieved through new technology have most often been linked to large farmers. Many development programs foster economies of scale in favor of large farmers, yet yield improving technology in some cases is neutral in regard to farm size. Therefore, if increasing agricultural production and employment are essential goals of a national development policy, small farmers will be

emphasized because:

- 1) they represent the greatest number of agricultural producers,
- 2) their underemployed labor is a resource that can be utilized, and
- 3) where arable land is becoming scarce relative to labor, higher output per land area becomes very important.

The need to supply additional credit to small farmers implies imperfections in the capital market. If private capital is relatively mobile, it will move in response to the increased agricultural demand caused by new technology. If capital markets in LDCs are reasonably efficient, additional capital supplied through public programs will not be necessary. However, due to the monopoly power that exists in the informal credit market, institutional programs will serve to supply credit to small farmers who would be unwilling to borrow at exorbitant rates. Also, if private lending decreases in response to increased public credit, the effect of the credit programs on the total supply of credit will have diminished.

Large farmers have been the principal beneficiaries of public credit programs. [Blair]. Public credit institutions tend to lend primarily to large farmers to minimize administrative costs, to avoid default, and to use credit for production increases. Average administrative costs per dollar rise as the average size of loans decrease; if loan supervision is involved, additional administrative costs rise in relationship to the number of loans approved. Also, the common belief of loan officers is that large farmers have a higher repayment rate and a higher adoption rate for new technology. In addition, many government credit programs are operated at concessionary interest rates; the lower interest rate makes covering administration costs for small farmer loans even more difficult.

Although public loans tend to be at lower interest rates than private lending, there is evidence that farmers often prefer private channels. Many farmers view the terms offered by public loan programs, other than the interest rate, as less attractive than private sources. The schedule of repayment and collateral requirements are areas in which farmers might consider private loans more favorable. Some studies indicate that accounting for such additional costs makes public credit as expensive as private loans. However, the demand for institutional loans has not been lacking. Many farmers take the loans because they feel they might not have to repay. A strong stand on the part of the loaning agency has tended to decrease demand. A successful credit program must insure that the small farmers are given access to funds at reasonable terms and there is enough net income generated above costs to pay reasonable interest rates and leave the farmer a significant return per unit of borrowed capital.

The essential disadvantages of putting emphasis on small farmer development is their widespread use of traditional farming methods and their slower rate of adoption of more productive techniques. These shortcomings are usually a result of their poor access to financing and greater risk aversion. Small farmer development policies must be viewed as long-run programs. Efforts to cause long-run increases in agricultural output, productivity, and mobilization of underemployed resources must place greater emphasis on small farmers than has occurred in early development strategies.

Who Are the Small Farmers?

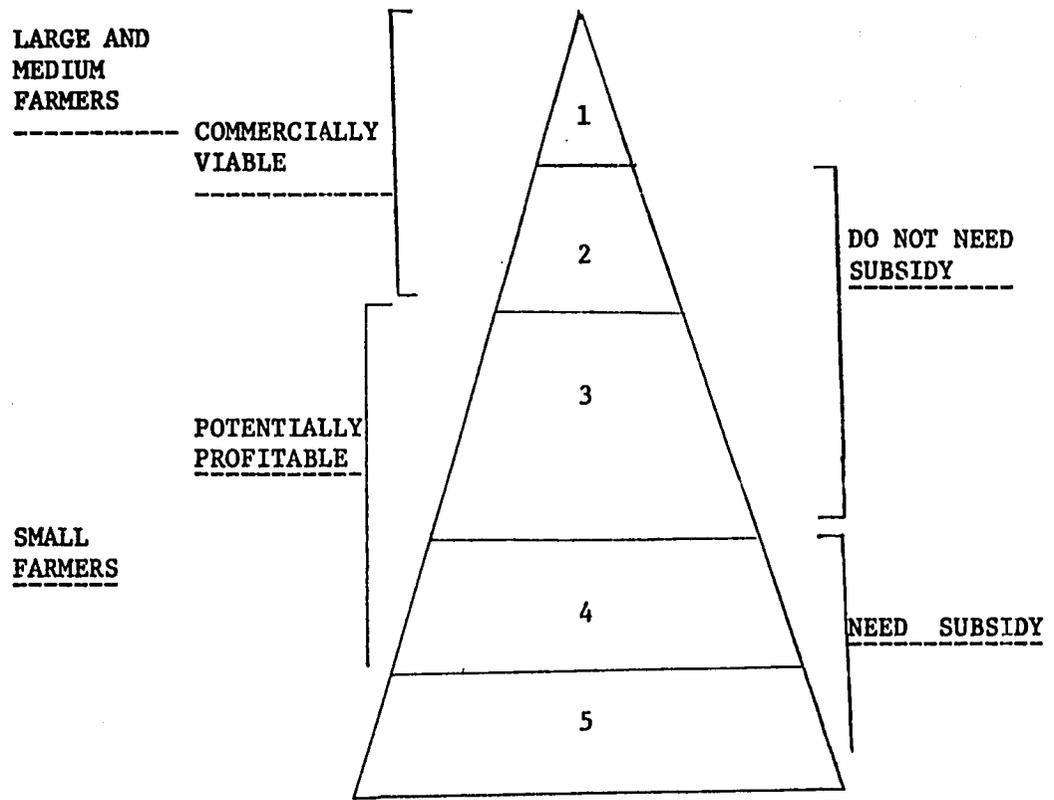
Identification of small farmers is an important aspect of formulating small farmer development policy. Given the decision to channel econ-

omic assistance to small farmers, the ability to identify those farmers who are the most appropriate recipients of assistance is essential. Traditional methods of classification have included some combination of: land size, income, and crops. Although no one of these variables alone can efficiently determine the target group, a farmer owning a small acreage, earning a low income, and growing subsistence crops will usually be the appropriate recipient for small farmer development programs. The Agency for International Development Spring Review of Small Farmer Credit derived an alternative classification (depicted in Diagram 1):

- 1) Large and medium sized farmers with easy access to commercial credit sources,
- 2) Small-sized farmers with some access to commercial credit,
- 3) Small-sized farmers with potentially profitable operations with no access to commercial credit,
- 4) Small-sized farmers with profitability obtainable only through some subsidization, and
- 5) Small-sized farmers with no profitability without permanent assistance.

This classification system can be helpful to administrators in determining the type of farmer who needs assistance and can use it profitably. Type 1 farmers have medium to large acreages, a profitable operation, and established credit with local private banks; these farmers would not be included in a small farmer assistance program. Type 2 farmers, though operating on a small scale, have a profitable operation with access to credit. These farmers do not need a special credit program; like the farmers of type 1, they are commercially viable. Type 5 farmers include landless laborers and part-time farmers. Even with improved access to technology, inputs, markets, and credit, their farming enterprise will be incapable of supporting a family without permanent government subsidies or signif-

DIAGRAM I



PYRAMID OF FARMER CATEGORIES IN CREDIT PROGRAMS

icant off-farm income, such as public works or small scale enterprises, i.e., village blacksmith, etc. Their resources are so limited as to place them outside the reach of the usual small farmer development programs.

In general, the target group will be type 3 and type 4 farmers. Type 3 farmers have the potential for establishing profitable farms if they have access to technology, inputs, markets, and credit. Their need is for a package or complete set of inputs and improved marketing channels for their increased output [examples: India, I.A.D.P., SFDA, MFAL]. However, their current enterprises are not profitable, making them ineligible for crop production credit. Farmers of type 4 need special programs to achieve profitability. They require supervised credit while type 3 farmers do not. Type 4 farmers require a subsidization for some period of time. In summary, farmers of type 1, type 2, and type 5 may not be included in small farmer assistance programs. Type 3 farmers can be assisted through unsupervised credit programs while type 4 will need supervised credit and technical assistance.

Why Agricultural Credit?

In an agricultural economy investment is the principal source of growth in output or in dollar terms, income. Economists analyze about production function relationships, concepts which can either be applied at the level of the entire economy or at the individual farm level (micro-economics). Investment becomes the key factor in shifting the production process:

$$Y = f (L, K, Q, T)$$

where: L = labor

K = capital

Q = land, resources

T = technology

Y = income

To increase Y, we must increase the variables of our function and generally this translates into the need for investment. An increase in Q, capital stock (machinery, more and better livestock, and land) depends on investment. The development of new technology depends on investment. Investment funds can come from any number of sources including gifts, savings and borrowing. In the world of modern agriculture, it is difficult for the average farmer to save enough capital to establish an economically viable enterprise. In many LDC's many small farmers are near the subsistence level; that is, at the end of the production cycle there are few if any savings. In such cases, there is no investment, no expansion of plant and equipment unless credit is available. The role of credit, in summary, is really a means of short-circuiting the individual savings process to expand investment in farming.

In addition, sometimes investment credit is allocated for what economists call reasons of equity, or improving distribution of income. Income distribution may be highly skewed and there may be a deliberate policy to improve distribution to small farm sector. Development policy may be promulgated to increase production of a certain food crops of enterprise and credit is channeled into that enterprise to encourage production.

Controversy surrounds the decision about whether credit is an appropriate mechanism through which welfare or equity objectives should be achieved. Most of the arguments focus on the fact that once the granting institution begins to forgive defaulted loans or grant loans at "below market" interest rates, its future financial integrity is severely impaired. Another more serious problem, is that when capital is relatively cheap compared to other productive resources, farmers tend to substitute capital for other factors. If credit can be borrowed at

low costs, farmers may tend to use these funds to acquire machinery and other such goods which tend to displace jobs. This could be a serious dilemma in a labor intensive economy. Moreover, if the use of low interest loans are not closely supervised, farmers may use it to acquire non-agricultural goods, such as urban apartments and houses.

There are several classifications of agricultural credit; however, farmers mainly borrow funds for either of two purposes, either consumption or productive investment. Consumption or production credit can be further classified by time, purpose, security, lender, and type of borrower. In respect to time, credit can either be short, intermediate, and long-term credit. Usually short and intermediate-term loans are for annual production or marketing expenses whereas long-term loans are for capital improvements. Short-term involves repayment in one season; intermediate loans in one or more seasons; and long-term over several seasons. The specific purposes of credit include:

- 1) Consumption - food and clothing during the off-market season
 - 2) Production - seed, fertilizer, labor, cattle, etc.
 - 3) Capital investments - real estate, land, building, irrigation
 - 4) Marketing loans - expenses, finance, storage and transportation
- loans can be secured or unsecured; unsecured loans are often day-to-day consumption loans from money-lenders, storekeepers and truckers in the LDC's. Loans can be secured with chattel mortgages on crops, and livestock, warehouse receipts (marketing) and by real estate (land title mortgage).

Credit assistance is often emphasized because of its flexibility.

The efficiency of such assistance is dependent upon;

- 1) the ability of the farmer to judge his credit needs,
- 2) the ability of the farmer to act upon these needs,
- 3) social desirability of institutional credit,
- 4) the ability of the institution to deliver credit at a low administrative cost in time to purchase inputs prior to planting, and to collect repayment within acceptable socio-economic norms of the society.

Small farmers have had limited access to credit through commercial banking channels. The flexibility of credit assistance, assuming the rationality of individuals, should allow a greater utilization of resources. Credit, however, will be useless without programs to provide further assistance in adoption of new inputs, and without favorable product markets. Credit allows small farmers to take advantage of benefits gained through marketing and production programs.

The use of small farmer credit programs as an important component of development policy in LDCs is increasing because it directs economic assistance:

- 1) to a sector of the economy (agriculture) that has often been neglected,
- 2) to a portion of the population that has been ignored, and
- 3) in a flexible form (credit) that has not been available to the target group.

The poor results compiled in many LDCs under previous development strategies signaled the need for a new direction in economic assistance programs.

PROGRAM DESIGN FOR SMALL FARMER CREDIT

Conditions for Success

In addition to the diversity among farms in terms of size, technolo-

gy and agronomic conditions, multiple objectives of small farmer programs make planning difficult. The major objective of most credit programs is increasing production and nutritional value of farm commodities to feed growing populations. A second objective focuses on increasing farm income, including the value of home consumption. A third objective may be to increase rural employment. However, the success of a credit program is usually measured by the extent to which the value of additional production exceeds the cost of the program. An ideal credit program for small farmers will proceed as follows:

- 1) a national institution approves a credit program for small farmers,
- 2) the loan funding is channeled through a combination of the central bank, the agricultural bank, or cooperatives to the farmer,
- 3) the farmer combines his labor with productive inputs (fertilizer, seed, insecticide, herbicide, etc.) to produce more output than under traditional methods,
- 4) the revenue from the additional output is sufficient to repay the loan plus interest and improve the farmer's financial outlook,
- 5) the funds from farmer repayment are sufficient to regenerate lending capital to cover administrative costs and interest payments on the government loan (assuming that the original funds came from an international agency).

There are four principal participants to the success of a credit program: farmers, credit institutions, improved technology and markets. If there is no new technology in which the small farmer can invest, there will not be any significant increase in production. Likewise, without

markets to provide needed inputs and purchase additional output, the potential success of a credit program is undermined. There must exist institutions which will lend to farmers at favorable terms and farmers must be willing to borrow, to make the needed investments, and to repay the loans. Given favorable agronomic conditions output will increase; the success of the program is then dependent upon its ability to cover its costs.

There is some disagreement over the effect of the availability of capital on small farmer productivity. It has been argued that a lack of capital was a constraint on the productivity of small farmers, but evidence tends to discount this hypothesis [Schultz]. Small farmers as a whole have been able to obtain sufficient capital for efficient production under traditional techniques of cultivation. Consequently, additional capital is necessary only if new more productive techniques are available. Farmers will not invest if there is no new technology; loans will be used for non-productive expenditures, often home consumption. Many small farmers prefer to avoid debt, but will accept inexpensive government credit (i.e. low interest loans). Consequently, educating farmers in the potential commercial nature of farming and the profitability of new techniques may be an essential step before making credit available. Adequate demonstrations are essential to convince the small farmer that new technology will work for them at the farm and market level. Secondly, there must be a new more capital-intensive technology, otherwise the farmer could adopt the innovation without additional investment.

Marketing constraints, both on the input and output sides, have a major influence on the success or failure of a credit program. The profitability to the farmer of new techniques is dependent upon his input and output markets. The additional productive inputs needed for the new tech-

nology must be easily available at reasonable prices; also, there must be a market for additional output. If the marketing system is unable to provide the additional inputs, the increased demand for inputs caused by the new techniques will simply raise input prices. In addition, poor marketing facilities may tend to lower the price of the outputs because it cannot reach distant markets. An adequate marketing infrastructure is essential for provision of the additional input and sale of the increased output.

The discussion thus far has centered on the ability to raise the value of agricultural production. The success of public credit programs is not only in fostering production increases but also in providing greater benefits than costs. The value of the additional output must exceed the cost of the program; otherwise greater social value might be derived from an alternative program. Quantification of these costs is often impossible, therefore making a precise judgment of a credit program difficult. However, decision makers must keep their costs in mind in deciding between alternate assistance programs.

On-Farm Considerations

Previous sections have dealt with small farmer credit from a national and institutional viewpoint. This section will focus on the small farmer's outlook and environment. The farmers' managerial decisions are made in a logical economic framework, given the relevant level of technology. Planners and administrators need to uncover the on-farm considerations that affect the success of small farmer credit programs. Many of the past attempts to foster development through credit to small farmers have demonstrated two principal shortcomings:

- 1) no significant increases in productivity or farm income and
- 2) high rates of default.

Greater success in future programs can be attained from a more complete understanding of the farmer's economic decision process. However, data about on-farm conditions is often lacking in the planning process.

Additional credit will benefit small farmers only to the extent that some investment opportunity exists that will increase production. Many economic studies of small farmers in LDCs find that the expansion of traditional technology shows little promise, i.e. production increases will arise only from innovations such as new varieties of seeds, fertilizer, plant protection, irrigation and planting techniques. Although this conclusion seems correct in most areas, changes in land tenure, leasing arrangements, and credit availability may lead to increases in production under traditional methods in some areas. Many studies have indicated that additional investment opportunities do not exist utilizing traditional techniques. However, other economists have found credit programs over-emphasizing yield improvements with little attention given to increases in farm areas, intensification of land use, diversification, and labor productivity.

Land expansion may have some possibilities, especially in Africa and South America, but expansion has proven difficult and expensive in most areas. Output is often increased by expanding the area cultivated, through the rental or purchase of additional land, and/or increasing the area cultivated by intensive use of existing land in the farm through double cropping, intercropping and cultivating pasture and marginal land. In general, there are few profitable investment opportunities for small farmers using existing levels of credit and technology. Consequently, the introduction of new technology will be necessary to foster growth in farm income.

Many credit programs have started under the assumption that profitable new technology exists for the small farmer; the main thrust of such

programs has simply been to get the additional credit to the farmer. Little technical assistance has been provided through such programs. Credit policy makers have assumed that the availability of modern inputs provides the needed new technology. However, these innovations have often not been adapted to the local agronomic conditions faced by small farmers. In addition, once modern inputs have demonstrated this ability to increase yields (on local experiment station plots and/or local farms) they must also pass the test of profitability. While some high yielding varieties of seed have shown their profitability in certain areas, the added input costs usually incurred through modern input use have sometimes made the new varieties less profitable than traditional varieties. This has been particularly true in dry land farming situations faced by many subsistence farmers.

The low adoption rates of existing new technology has often been shown to be an indication of small farmers' economic expertise. A direct relationship has been found between the rate of adoption and its monetary return to the farmer [Fogg]. The added risk of new technology is a further hinderance to its adoption. Therefore, an essential step in any assistance program should be rigorous testing of new techniques under local conditions to assure that improved technology does not greatly increase the risk (in terms of output, income and employment) to the small farmer.

A rigorous analysis of profitability must not only include consideration of the additional physical output it must also take into account the relative price of inputs and outputs, risk, knowledge, and the marketing system. Without the availability of such investment opportunities,

additional credit can only achieve a limited impact through the expansion of traditional practices.

Research Needs of Small Farmer Programs

Although the new high-yielding varieties have tended to be neutral to farm size, small farmer adoption rates have been lower than for larger farmers. Credit has been suggested as a reason for this lower rate; however, studies of this hypothesis have reached conflicting results. The Agency for International Development Spring Review of Small Farmer Credit undertook a compilation of research possibilities aimed specifically at small farmer problems. These potential areas of research include:

- 1) new water management techniques for storing and using water, including the economics of small scale irrigation projects,
- 2) water-nutrient interactions for crops presently grown on small farms as well as those with potential, i.e. horticultural crops, fruits and nuts, especially under less than ideal rainfall or irrigated conditions,
- 3) new output-increasing techniques for the more traditional crops such as cassava, potatoes, and legumes and for live stock activities,
- 4) information on the sensitivity of yields to land preparation and timing,
- 5) feeding rations utilizing the increased output from the traditional crops,
- 6) seeds with high yields but with less variation under different climatic conditions,
- 7) new animal powered farm implements,

- 8) mechanical tillers and other small power implements, as needed,
- 9) low-cost and effective on-farm storage and drying facilities,
- 10) new techniques of multiple -- and inter-cropping to increase incomes and reduce risk,
- 11) techniques for improving managerial skills

Some research groups, particularly the International Rice Research Institute, have begun to carry out research programs directly aimed at small farmers. An example of its research is the study of multiple cropping and intercropping. It was found that intercropping significantly increased total production. These findings point to the need for assistance recommendations that include more than monoculture crop production. Additional research indicates more labor intensive production techniques may be able to improve production while decreasing unemployment. In Africa, a possible research and extension project could be increased use of animal power.

Benefits of New Technology

The benefits of new technology are not always equally distributed. In some countries of Asia, Africa and Latin America technology improvements have often worked to the detriment of small farmer tenants and landless laborers. Under existing land tenure systems, increased production through the use of high-yielding variety technology has sometimes led to eviction of small farmer renters by landlords [CADU program Ethiopia, Lele and Mellor]. Consequently, production innovations without structural changes in land tenure practices may lead to farm labor displacement. Recent research (Hayami and Herdt) indicates that new technology in agriculture "tends to transfer income from large commercial farmers and

landlords to the urban poor and the rural landless classes." Increased employment opportunities improves the landless laborers' income while lower food commodity prices decrease large farmers' incomes and increase the buying power of the poor. However, efforts to extend new technology to subsistence food crops, grown primarily by small producers, must be made to realize an equitable distribution of benefits from the new technology. Assistance programs must be sensitive to the effects of new technology on farm size, employment and income distribution.

Risk and New Technology

Risk aversion has a significant impact on the adoption of new technology. The additional risk involved in the use of improved technology is often the determining factor in small farmer adoption rates. Risks faced by small farmers include:

- 1) yield variability,
- 2) price variability,
- 3) the variability in the supply of inputs, and
- 4) the uncertainty of services.

Yield variability is probably the most important of these risks; the new techniques have consistently shown greater yield variability than traditional farming methods.

Price variability of inputs and outputs is very important. Price stabilization programs have shown positive results in fostering new technology through a decrease in income variation. The availability of modern inputs and technical assistance is an important uncertainty in small farmer planning decisions. Development projects must appreciate the degree to which adoption of new technology is dependent upon the farmer's assessment of the associated risks.

Extension and Educational Assistance

Inclusion of extension or educational assistance in small farmer development projects has often been neglected. The successful programs in LDCs have been those that have combined new technology, extension, and credit. Extension personnel are the best suited to implement adjustments in new technology to local conditions. The training of such personnel has often been a stumbling block. If the LDCs are unable to find such training, instructional development agencies should include a portion of the total project funding for technical training. A loan-extension agent can better coordinate the adoption of new technology. He can supervise the provision of modern productive inputs and credit, identify weaknesses in technical recommendations under local conditions, and coordinate production and marketing activities. With one person supervising the entire process the previously mentioned risks to small farmers will be greatly diminished.

Household Consumption and New Farm Programs

Household consumption is an integral part of the small farmers cash management. Food requirements for the family can be equally as important as cash for farm operations. A consideration of his financial behavior must include both consumption and production.

The small farmer is usually dependent upon credit from local money-lenders if family financial resources are not available. The interest rates incurred are exorbitant and tend to restrict production possibilities. The short-term nature of such sources of credit will constrain potential long-term capital investments (land improvements, buildings, and equipment). Informal sources of credit reduce marketing flexibility. The terms of the loan may require either immediate repayment at harvest

or in-kind repayment; the farmer's ability to gain from price variability has been removed. The low level of cash reserves held by small farmers can not only restrain the amount of physical inputs but also labor inputs. Family labor may be used to pay for the inputs, thereby decreasing the amount of labor employed on the family plot.

The household cannot be separated from the firm. Daily consumption expenses and occasional unpredicted events (weddings, funerals, and other traditional activities) are just as essential to successful farm management as purchase of inputs and sale of outputs. Due to the minimal amount of assets small farmers attribute a higher value to the maintenance of cash reserves or highly-liquid cash substitutes. To the extent that farmers believe in the permanence of a credit program it can serve as such a reserve. However, most programs have fallen short both in perceived permanence and flexibility; loans are usually confined to production. The farmer values his ability to borrow because of the liquidity provided. It is particularly true for small farmers because of their limited liquidity. The opportunity cost of using his borrowing ability is high. Small farmer credit programs can decrease this problem only to the extent that loan flexibility allows farmers to use the funds for consumption and cash management.

Social and Cultural Environment

Social and cultural factors play a major role in small farmer participation in public credit programs. Farmers, tabbed "unmotivated or tradition-bound," are usually reacting to the insensitivity of government programs to their cultural and social values. Many programs have the underlying assumption that economic incentives will guarantee farmer participation. The traditional sector has the advantage of demonstrated permanency, adaptation to local conditions and reasonable predictability

of farm income. These factors can often outweigh the potential economic growth opportunities of public assistance projects.

"Modern" institutions are difficult to transplant directly to different cultural environments. Administrative officials must appreciate the different cultural environment that exists in rural areas. Small farmer credit programs need to shift more emphasis to the small farmers' point of view. Such a revision will require an examination of the conditions in which farmers live, their world outlook, and the stimuli to which they respond. This reformation of small farmer credit policy will further necessitate the realization of small farmer rationality.

The kind of society in which the small farmer lives and his position in that society will often determine the availability of productive resources. Family relationships will not only affect his access to (1) land but also his (2) financial responsibilities and (3) relative power within the community.

Also, family membership may determine the availability of credit and the existence of alliances with or against other groups. In addition to family ties, relationships are formed by common membership in political groups, traditional ritual sects, or "clubs" or associations. Economic transactions may result more from the interaction of such memberships than from a mere calculation of profitability. Higher status may have greater access in terms of economic relationships but it may also require greater community responsibilities.

Also, sexual division of labor may prescribe specific roles for crop production, marketing and income allocation. The savings pattern in a rural society can determine the existing expenditure or consumption criteria for any additional revenues.

Researchers have found that while some cultures place a high value on consumption, others put emphasis on long-term capital improvement. Demonstration of wealth is not purely consumptive; in some cultures a member of a lower prestige group may elevate himself by conforming to the consumption patterns of the higher prestige group. In this way, consumption expenditures can have a greater effect than simply satisfaction of short-term consumption needs. Also, certain property might have greater value than income. A single increase in income may not be valued as highly as land or cattle increases; therefore, the extent to which a farmer can convert potential additional income to a valued property will affect farmers' participation in income increasing assistance projects.

The political environment of the local community can greatly influence the success of credit programs. A strong political leadership might be helpful in realizing high repayment rates but might tend to use the loans as political favors. Within an electoral setting, candidates may use the credit program to compete for votes; unfortunately farmers may view their debt repayment through voting, not cash repayment. Such patron-client relationships are an essential aspect of many societies. Although the patron tends to be the favored party in the relationship, the client does gain some measure of security. Short term economic considerations are usually less compelling than such ties. Disrupting the patron-client relation to obtain a government loan will often be perceived by the small farmer as irrational.

The values, attitudes, and beliefs of small farmers must be understood. Cultural factors associated with farmers' participation in credit programs and potential repayment include attitudes toward:

- 1) work and leisure,
- 2) division of labor,
- 3) time,
- 4) savings,
- 5) indebtedness, and
- 6) government

The Bureaucracy and Credit Programs

The authority in bureaucratic credit programs flows through an established chain of command to minimize ambiguities in decision-making and standardize agency activities. Operators are directed from the top -- the most distant person from the borrower. Procedures tend to meet the objectives of the internal functioning of the program; the borrower and the field representatives often view such formalities as encumbrances. Detailed application forms are difficult for both the field agent and the farmer. Formalized hiring practices are an example where rigid criteria, such as educational requirements, are used to the detriment of more important factors, particularly on-the-job achievements. Higher educated personnel tend to have greater communication problems with uneducated farmers. Increasing the educational level of agency personnel, usually from urban backgrounds, may only serve to increase the communication gap with the rural poor. Government agencies might obtain better results by placing more emphasis on "farmer understanding" in hiring and promotion criteria.

The attitudes and values of loan agents will also have a significant effect on the success of such programs. Government agency staff will often have an attitude of superiority over their clients. They seek upward

movement into "white collar" jobs; consequently, agents might minimize the time spent out in the field, paperwork becomes more important. Because the default rate is used primarily as the measure of success, field agents will attempt to avoid repayment problems by seeking out the most trustworthy applicants. From the agents' point of view, this will most often be a medium or large scale farmer. Such farmers are more likely to be able to complete complicated application forms and possess land for collateral. Also, they are more familiar with the value of credit and more comfortable in the bank environment. Such experience might give the larger farmer a more "respectable" outward appearance and convince the loan agent that such a farmer will be less likely to default.

The interaction between borrower and lender is usually a client-expert relationship. The field agent is convinced of the benefits of modern technology; the interaction centers around convincing the farmer that such technology will benefit him. Unfortunately, the loan agent is rarely an expert in the local conditions faced by the farmer. Trials on the farmer's land are not often made. The small farmer, though unfamiliar with new technology, does have significant knowledge of his own growing condition, availability of inputs, and his market. The dominant position of the agent will decrease or eliminate a two-way flow of information. The farmer may become intimidated and non-communicative. With such a breakdown in communications the field agent will rarely convince the farmer of the potential gains through the use of modern technology and credit because the agent is unaware of the farmer's concerns and situation.

Many projects involve an integrated effort between several government agencies; bureaucratic rivalries can undermine the success of such undertakings. Because the decision making process is often at the national or international level the needs of the local population are not emphasized. Decisions from outside the local sphere which tend to disregard local conditions decrease farmers' confidence and participation in such programs.

Summary of Non Economic Factors

Non-economic factors are very important in a small farmer credit program. Although economic incentives, particularly greater income, are essential aspects of a successful credit project, the social and cultural environment must not be overlooked. The basic implication is that a lack of communication between borrower and lender can undermine the program. The Agency for International Development Spring Review of Small Farmer Credit suggested the following means of improving communications:

- 1) forming farmer organizations with the capacity of communication upward,
- 2) extending the bank hierarchy downward by employing village agents,
- 3) motivating bank staff toward two-way communication with clients,
- 4) starting with instructors' promotions based on positive field results,
- 5) influencing top policy with appropriate studies of client cultures by disinterested specialists outside the lending institution, and
- 6) inclusion of villagers on bank boards of directors.

Program Evaluation

Small farmer credit programs need periodic evaluations to determine if the program objectives are being achieved and if farmers are receiving the benefits of the program. Decisions to increase funding, reformulate or discontinue a program must be made by some criteria. Goals or objectives are needed as a judgment of the program effectiveness and an indication of weakness. The formulation of program goals is the first step in the evaluation process. The Agency for International Development Spring Review of Small Farmer Credit developed the following outline of program evaluation:

A. Performance

1. Apparent uses of credit (the formal record)
2. Effects on:
 - a. Production, farm income
 - b. Technology
 - c. Savings
 - d. Employment
 - e. Political and social structure
3. Progress toward other objectives
4. Image:
 - a. Farmer attitudes
 - b. General image of program

B. Evaluation Procedures and Feedback:

1. Program evaluation procedures
2. Feedback, changes in program

C. Problems:

1. At government level
2. At agency level
3. At farm level

D. Conclusions about small farmer credit

The goals of small farmer credit programs can be placed in three categories -- efficiency, equity, and institutional viability. The efficiency goal refers to the economic efficiency of investments made possible by additional credit. The ability of a program to distribute its benefits equally or to reach the most disadvantaged group falls under the equity category. The objective of institutional viability is concerned with the financial status of the agency through which credit is channeled.

Specific issues used to evaluate a program include:

- 1) default rate,
- 2) interest rate,
- 3) supervision,
- 4) profitability,
- 5) lending criteria,
- 6) technology, and
- 7) outreach.

These issues will not coincide with any one of the three broad categories of efficiency, equity and institutional viability; consequently, evaluation often entails a measure of success in one area and not in another. A low default rate might be a success measured in terms of institutional viability but fail in reaching the equity goal. Likewise, concessionary interest rates to small farmers may satisfy the equity criteria, but de-

crease the possibility of reaching the institutional viability goal. Strict lending criteria involving agency evaluation of repayment ability is logical to establish financial viability; however, in terms of efficiency the existence of profitable new technology will determine current repayment ability not past repayment record. The poor results indicated in many small farmer credit programs may be caused by conflicting goals and objectives. Although the goals are not mutually exclusive, the complexities of combining the three goals must be faced.

The two goals most frequently in conflict are equity and efficiency. The CADU project in Ethiopia is a good example of a project that showed great success in reaching one goal and was a dismal failure in the other. The project was very successful in fostering the adoption of modern technology and increasing production and yields. These improvements, however, led to a negative effect in terms of equity. Large landholders evicted small farmer renters to reap the benefit of the new technology for themselves. Success in the efficiency goal caused failure in the equity goal. A thorough analysis of the problem situation, the methodology, and objectives before the enactment of a project can minimize the potentially conflicting goals, providing data is available. Certain questions can be asked to establish the priorities of the project:

- 1) will gain in meeting one objective balance off losses in another?
- 2) do other gains exist within the same objective that will tend to counterbalance losses in another area under that objective?
- 3) can the time table of the program be changed to alleviate a potential goal conflict?

Institutional Viability

Although the equity-efficiency conflict is most often cited as a major stumbling block in the evaluation process, criteria to analyze the institutional viability of a small farmer credit program are also essential. Garland Wood has developed a modular system to assist such an evaluation of the institutions involved in credit programs [Wood, et. al.].

Six modules were developed:

1. Systemic linkages among national institutions;
2. Intra-institutional status-role study among administrators and personnel;
3. Institutional interfaces in governmental environments;
4. Farmer clientele;
5. Leadership characteristics of institutions; and
6. Communication flows within institutions and to clientele.

The modules represent target areas; they are not mutually exclusive. Insights into the operations of the institution are sought to analyze its structure and performance. The modular system was utilized in Costa Rica; the findings centered around the importance of understanding small farmers' political views.

Summary of Problems in Evaluation

This discussion should not imply that goals must remain fixed throughout a project. Reformulation of goals is often necessary once the project is underway and experience dictates certain changes. During the course of a credit program it might become necessary to alter some objectives due to unexpected progress in some areas. Also, successful results are often achieved in areas not specifically outlined in the goals. The CADU project in Ethiopia is an example of such a case. The project made a point of

not utilizing complicated machinery (imported trucks, tractors, and sprayers); instead it concentrated on the use of simple, local equipment. Farmers were already accustomed to plows and animal-powered carts. The project realized great success at using traditional equipment and developing improved locally-tested equipment, including simple harrows and threshers. The evaluation process should not overlook successful aspects of a credit program that do not relate to specified goals. Such success can be instrumental in a decision to continue or redirect a project.

PART II.

EL SALVADOR: COUNTRY SITUATION

Economic Trends and Government Policy, 1960-1971

El Salvador is the most densely populated country in Central America. Its total land area of 8,260 square miles contained 3.55 million persons in 1971; this amounted to a population density of 430 persons per square mile. The average annual population growth rate between 1960 and 1972 was 3.6 percent, with approximately 60 percent of the population living in rural areas. The Gross National Product (GNP) was \$1,062 million in 1971 with a per capita GNP of \$302. The agricultural sector was estimated to contribute 26.6 percent of GNP. Deflated GNP showed an average increase of 4.9 percent between 1968 and 1971 (Table 1).

The government of El Salvador has taken a conservative financial path. There have been no extreme fluctuations in the economy with no severe balance of payment problems (Appendix Table 1). The rate of inflation has been low until the mid 1970s (Table 2). Small national budget deficits have been financed through expansion of local money supply or government borrowing with little detrimental effect on the economy. The level of foreign reserves is largely dependent on local production and world prices of its principal export crop, coffee. Reserves ranged from \$16 million in 1961 to \$52 million in 1971. Consumer prices increased by an average of one percent over the ten-year period.

This monetary and fiscal policy may have caused a certain amount of stagnation. The first half of the 1960s was characterized by a strong expansion, due to the introduction of the Central American Common

Table 1. El Salvador, Population, Gross Domestic Product and Per Capita Share, 1960-76

Years	Population	Gross Domestic Product		Per Capita GDP, Estimated
		Current Prices	Constant Prices 1962 base year	
	--1,000 persons--	--Million Colones--		---colones---
1960	2503	1383	1383	552
1961	2586	1432	1431	553
1962	2665	1603	1603	601
1963	2748	1694	1672	608
1964	2857	1867	1827	639
1965	2954	1992	1926	652
1966	3057	2110	2064	675
1967	3168	2216	2176	687
1968	3283	2292	2246	684
1969	3400	2382	2324	683
1970	3516	2565	2394	681
1971	3632	2681	-----	---
1972	3747	2845	-----	---
1973	3863	3237	-----	---
1974	3983	3939	2924	734
1975	4108	4564	3070	747
1976	4270	5250	3239	759

SOURCE: Banco Central, El Salvador and FAO, Production Yearbook, 1975 Vol. 29 (Rome: United Nations, 1976).

Table 2. El Salvador Annual Changes in Consumer Prices; all Items and Food, 1960-65 and 1965-70 Averages and Annual 1970-76

Years	All Items	Food Items
	----- percent -----	
1960-65	0.2	1.1
1965-70	1.1	2.2
1970-71	0.3	0.3
1971-72	1.8	1.1
1972-73	6.4	7.5
1973-74	16.8	17.2
1974-75 ^{1/}	19.1	N.A.
1975-76 ^{1/}	6.9	N.A.

^{1/} Estimate

SOURCE: FAO, The State of Food and Agriculture 1975 (Rome, United Nations, 1976), p. 148.

Market (CACM) and the first five-year plan. However, the second half of the decade saw real per capita growth fall. Also, while employment rose in the early 1960s, unemployment and underemployment rose sharply in the later part of the decade. Some economic growth did occur in the manufacturing sector fostered by the high tariffs of CACM, but the capital-intensity of this development policy undermined potential growth in employment. Likewise, imports of intermediary goods rose to support the growing manufacturing sector. A discussion of the early impact of the CACM on industry and agriculture in Central America can be found in the Battelle Institute Report.

A fixed minimum wage and social security costs have combined to favor capital investments over labor. The minimum wage policy may reduce employment in low labor productivity jobs. Social security costs are an additional factor that might convince a production manager to replace labor with capital.

The high tariff set on manufactured goods from non-CACM members were an incentive to domestic production of manufactured goods. Tariffs within the common market were almost non-existent. This policy led to a greater market for Salvadoran manufactured goods than existed simply within the country. A further stimulant to manufacturing was lessening of tax on investment and production of export goods; the negligible tariff on intermediate goods increased the trend toward the manufacturing sector. The combination of three policies brought a move from labor-intensity toward capital-intensity, increased investment in manufacturing for local and CACM needs, and greater dependence on imported intermediary goods. In general, El Salvador has been following the industrial development strategies described in Part I.

Exports, especially to CACM countries, rose significantly over the decade; CACM exports rose 495 percent whereas non-CACM exports increased by only 48 percent. The exports to non-CACM countries were almost entirely agricultural goods -- coffee, sugar, and cotton -- while exports to CACM members were mostly manufactured goods [Unclassified AID loan Document AID-DRC P-1098]. Selected statistics on El Salvador's agricultural imports and exports are presented in the Appendix Tables.

El Salvador's public and private investment record has been poor in comparison with other Latin American countries. Its ratio of total investments to GNP declined from eleventh to seventeenth of the eighteen Latin American countries. Public investment was only 3 percent of GNP whereas private investments averaged 10.7 percent. Its inability in tax collection is at the root of El Salvador's low level of public expenditures. Over the decade it ranked twelfth in percent increase in tax collection and eighth in ratio of tax collection to GNP. This ratio averaged 14.6 percent for all Latin American countries whereas El Salvador averaged 13.5 percent [FAO Statistics].

The regressiveness of the tax system tended to increase the skewedness in income distribution. Income, inheritance, and property taxes amounted to only 28 percent of total tax collections; taxes on consumer goods accounted for 48 percent. Additional data on public revenues is presented in Appendix Table 1.

Investment has tended to be in those areas which have had the lowest levels of employment expansion. Private investment in agriculture averaged approximately 25 percent of manufacturing while employment in agriculture rose significantly and in manufacturing increased only slightly. Investment in transportation and construction was also high while employment was stagnant. Investments in construction, transportation, and manufacturing have concentrated on labor-saving equipment. This investment pattern

is reflected in sectoral contribution to GNP: agriculture's share of GNP fell from 32 percent to 26 percent over the decade 1960 to 1970. Concurrently, the share of GNP from the manufacturing sector rose from 15 to 19 percent.

Development Policy

Development policy has not sufficiently faced the problem of income distribution. Some progress has been made in medical facilities, land distribution, and education. The high population growth rate has been a significant negative factor for per capita growth. Higher income and education have been associated with smaller family size, but the high rate of population growth has tended to nullify potential gains in per capita income and educational facilities.

The Five Year Plan (1973-1977) was developed to attack some of these problem areas. It projects growth in GNP at 6.7 percent annually compared to a rate of 3.7 percent in the previous five-year period. Unfortunately, a 3.5 percent population growth rate almost eliminated any gains in per capita GNP in that period. The basic problems for development policy center around income distribution, GNP growth, and population growth. The latter two problems have been discussed thoroughly but income distribution must also be considered an important aspect of development strategies. Agriculture, education, and health have all tended to support the historic pattern of inequitable income distribution. Land ownership and access to financial resources in the agricultural sector have given large landowners continuous financial growth while farmers with small and medium landholdings have not attained significant upward economic mobility.

Access to educational facilities is often dependent on income; children from high income families are provided the best educational opportunities. Good schools are either unavailable to poor children or their family situation does not allow them to take advantage of an educational opportunity because they must share the burden of the economic stability of the household. In addition, improved health facilities for the poor have been neglected. The problems of GNP growth, population growth, and income distribution will require a balanced, well-coordinated development policy; previous government policy has tried to select a certain area for concentration - usually manufacturing - in the hopes gains in a certain sector might pull the entire economy with it.

The Economic Situation in 1976

1. The Salvadoran economy grew rapidly during the first half of 1976, spurred by unprecedentedly high coffee prices and by economic recovery in the United States and Central America, the country's principal markets. During the second half of 1976, private sector confidence was shaken by expropriation provisions of the government's new agrarian reform program, which caused some capital flight and reduction in investments. Real economic growth was estimated up only moderately in 1976 to 5.5 percent. Further growth in 1977 will be fueled by strong exports. However, the unprecedented influx of revenue from exports and expected wage increases will generate strong upward pressures upon prices. Adverse effects of the agrarian reform upon private investment may also be a limiting factor. The population was estimated at 4.27 million in 1976, an increase of 3.4 percent over the previous year.

2. Agricultural output was estimated up sharply in 1976 as increased production of export crops and livestock products offset drops in basic food crops. Coffee and sugar areas were up slightly while cotton plantings expanded 11 percent in response to attractive world prices; harvests were near records. Area and yields of grains and other basic food crops were lower as a result of a 1-month drought which occurred at a critical time in the middle of the rainy season. Production of livestock products increased 11 percent. Poultry production has been increasing rapidly because of higher consumer incomes and its price advantage relative to beef.

3. Although planting is several months away for the 1977-78 season, the high cotton prices are likely to divert area from other crops. In contrast, low sugar prices imply the likelihood of a decline in cane planting. Grain prospects are good for the coming season due to price increases resulting from the short crops in 1976. Beyond the likely importation of some corn, the country should be relatively self-sufficient in basic grains. The rate of increase in beef production in 1977 could exceed that of 1976; current export prices are favorable and higher incomes could encourage expansion. 1/

Agricultural Sector

Development strategies in agriculture has focused on the expansion of export commodities. Coffee, cotton, and sugar have been promoted through tax and credit policy. Readily available labor, low taxes, and easy access to credit were all instrumental in this expansionary trend. The remainder of the agricultural sector, however, was not included in development strategies.

The principle food crops -- corn, beans, sorghum, and rice -- achieved little progress (Appendix Table 7-10). Corn yields improved and area and production increase but per capita availability fell; production increases were nullified by population growth and export policy. Beans, a major food crop, showed particularly poor results. Although bean area expanded somewhat yields, production, and per capita availability fell significantly through the 1960s. Diseases, shifts to less productive land and lack of improved seeds limited bean production. Sorghum showed similar results while rice was actually imported during much of the decade. In general, the 1950s and 1960s were a period of significant expansion in export crops in terms of area cultivated, production, yields, and net exports; concurrently, the situation in food crops for local consumption was allowed to deteriorate (Table 3).

¹USDA, Economic Research Service, Western Hemisphere Agricultural Situation Review of 1976 and Outlook for 1977. Foreign Agricultural Economic Report No. 136, April 1977..

The Battelle Memorial Institute's projections of supply for agricultural commodities in Central America, based on the performance of the 1950's and early 1960s, were optimistic for the export crop sector but unfavorable for some of the major food crops. "Agriculture in Central America is highly complex, varying from the very modern and sophisticated cotton production in El Salvador ..., to the very primitive corn and bean production by subsistence farmers in remote locations of each country," [Battelle]. Major problems in agricultural production included poor transportation and marketing systems, and financial resources. "Agricultural credit is inadequate ... short-term operating credit appears to be very limited. Money is available for large-scale projects, such as land development, but little is available for day-to-day farming operations," [Battelle].

Nevertheless, the Central American farmer was considered a rational individual, who would respond to economic stimuli if investments were made in agriculture, but this was generally not the case in the 1950s and early 1960s. Rough estimates of the investment in agriculture as a percentage of total investment were about 18 percent for El Salvador, with only Guatemala having a lower rate of 14 percent. The agricultural sector also received a small percentage of the total loans made by the Inter-American Development Bank (IADB). During the 1961-65 period, loans for agriculture from IADB were only 8 percent of total loans to El Salvador, the lowest percentage by far of the Central American countries [Battelle]. The bulk of public investment in domestic agriculture was in long-term projects such as land colonization and irrigation.

El Salvadoran development strategy proved particularly vulnerable to world events and prices when, in 1966, world prices for its exports

much of the decade. In general, the 1950s and 1960s were a period of significant expansion in export crops in terms of area cultivated, production, yields, and net exports; concurrently, the situation in food crops for local consumption was allowed to deteriorate (Table 3).

El Salvadoran development strategy proved particularly vulnerable to world events and prices when, in 1966, world prices for its fell sharply and resulting economic pressures caused a depression in the economy. A poor harvest, particularly cotton, compounded the problem; this situation started a chain of economic setbacks. Lower prices discouraged production which resulted in a decrease in the value of exports. This drop brought decreases in savings and investment. El Salvador's membership in the common market (CACM) further influenced the halt in economic growth. Since the other countries of CACM were under the same economic conditions, deflationary pressures were expanded by the lack of demand from its principal trading partners. The conflict with Honduras in 1969 produced a critical situation. Honduras had accounted for 10 percent of El Salvador's exports. Growth in per capita GNP was low from 1966-1969 and per capita agricultural production fell 12 points from 1963 levels (Table 4). These poor results dictated a change in development policy.

A more balanced growth strategy was necessary. Expansion of the internal market would decrease the country's susceptibility to external forces such as occurred in the 1966-1969 period.

Income increases were to be gained from improvements in the production of basic food crops. A comprehensive sectoral analysis of agriculture was undertaken to direct development policy decisions [See, Robert

TABLE 3. El Salvador: Aggregates of Agricultural Production at Constant Prices, Average 1961-65, Annual 1961-75.

Year	Crops	Livestock	Total Agricultural	Total Food
-----Million Dollars at Constant Prices-----				
Average 1961-65	132.1	30.0	162.1	65.5
1961	121.0	29.5	150.5	58.4
1962	127.9	29.6	157.5	67.8
1963	141.5	30.6	172.1	68.5
1964	147.2	29.7	176.9	66.7
1965	125.4	30.5	155.9	69.1
1966	131.8	32.0	163.8	77.1
1967	144.7	32.5	177.2	77.6
1968	138.0	32.6	170.6	84.2
1969	154.8	33.2	188.0	80.1
1970	157.1	32.1	189.2	88.9
1971	184.7	31.3	216.0	94.3
1972	160.2	32.8	193.0	87.4
1973	178.7	34.1	212.8	106.0
1974	222.6	35.2	257.8	103.5
1975	176.8	35.7	212.5	109.9

SOURCE: Indices of Agricultural Production for the Western Hemisphere, (ERS-Foreign 264), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., Revised, April 1971; and Indices of Agricultural Production for the Western Hemisphere, (Statistical Bulletin, No. 552), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., May 1976.

TABLE 4. EL SALVADOR: Indices of Total Agricultural and Food Production, Average 1961-65, Annual 1961-75.

Years	Indices of Production					Index of Population
	Crops	Total Agriculture	Total Food (1961-1965 = 100)	Per Capita Agriculture	Per Capita Food	1961-65 population = 2,778,000
Average 1961-65	100	100	100	100	100	100
1961	91	93	88	99	94	93.5
1962	96	97	103	100	106	96.7
1963	107	106	104	106	104	100.0
1964	111	109	101	105	98	103.4
1965	94	96	105	90	98	106.9
1966	100	101	118	91	106	110.9
1967	110	109	118	95	103	114.8
1968	104	105	129	88	109	118.8
1969	117	116	122	94	99	123.1
1970	119	117	136	92	107	127.1
1971	140	133	144	101	110	131.0
1972	121	119	133	88	98	135.0
1973	135	131	162	94	116	139.7
1974	169	159	158	110	109	144.3
1975	134	131	168	88	113	148.7
1976*	--	148	163	96	106	----

** Preliminary estimates.

SOURCE: Indices of Agricultural Production for the Western Hemisphere, (ERS-Foreign 264), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., Revised, April 1971; and Indices of Agricultural Production for the Western Hemisphere, (Statistical Bulletin, No. 552), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., May 1976.

R. Nathan Associates, Inc., Agricultural Sectoral Analysis for El Salvador, December 1969]. Specific areas where increased investment was recommended included:

- 1) reorganization of public agricultural institutions
- 2) large increases in foreign borrowing
- 3) land tenure improvements
- 4) adequate incentive policies and substantial improvements in the rural social infrastructure
- 5) technological development
- 6) improved credit access to farmers
- 7) agricultural diversification
- 8) research and extension
- 9) marketing
- 10) price stabilization
- 11) irrigation
- 12) storage
- 13) agricultural transportation network

The government took action on the recommendations; the principal changes included reorganization of the Ministry of Agriculture, land reform, and an integrated program of research extension and education. However, a better 1970 export crop reduced the urgency of reform in the view of government officials; the pace of reform has slowed considerably. Small farmer development is a high priority of the El Salvador government but the extensive recommendations of the sectoral analysis have not been met. The present Five Year Plan (1973-1977) has a much greater emphasis on unemployment and income distribution inequities. The objectives of the Five

Year Plan are:

- 1) raise agricultural income,
- 2) improve its distribution,
- 3) establish new employment,
- 4) strengthen the external sector,
- 5) promote more balanced regional development,
- 6) improve social development and mobility, and
- 7) conserve and improve the natural resource base.

Public investment in agriculture is projected at \$132 million.

Agricultural Institutions and Development

There are several important public institutions involved in agricultural development policy in El Salvador. The Central Bank, agricultural bank, cooperatives, extension service, and price stabilization institutes all influence agricultural policy and development. Many of these institutions have received financial support from the Agency for International Development and other international institutions. The role of AID in supporting these institutions is summarized in L. Harlan Davis, "Foreign Aid to Small Farm: The El Salvador Experience."

National Center for Agricultural Technology

In 1972, the government of El Salvador established the National Center for Agricultural Technology (CENTA) with its principal objective being the coordination of research, education, and extension activities to obtain higher production yields. As discussed in Part I, the coordination of development activities can greatly increase the rate of adoption of

new technology and the adaptability of that new technology to local conditions. A CENTA Advisory Council was established by the Ministry of Agriculture; it consists of eleven members from the Ministry of Agriculture, CENTA, agricultural cooperatives, the marketing institute (IRA), the colonization agency (ICR), the agricultural professional society, and the University of El Salvador. The council's principal function is to establish program priorities, review implementation plans, evaluate, review expenditures and approve annual budgets.

Greater emphasis is being placed on small farm production problems; CENTA is shifting its major target to basic food crops away from the previous emphasis on export crops. The availability of trained personnel and the funds to pay such employees adequately are the major stumbling blocks for CENTA.

Instituto Regulador de Abastecimientos (IRA)

Instituto Regulador de Abastecimientos (IRA) was created to stabilize agricultural prices. However, IRA has been basically unsuccessful in this objective because of insufficient storage capacity. It has been estimated that price stability could be achieved with a 20 percent storage capacity; IRA has an estimated 7 percent capacity [James W. Lemley quoted in Jesús Cutié, p. 29]. An additional constraint has been the lack of reliable information at the farm level. Jesús Cutié lists seven basic factors that have contributed significantly to IRA's inability to regulate agricultural prices:

- 1) the institution has been forced to operate under the influence of the private grain marketing system, which in fact contradicts the results expected from a price stabilization program
- 2) it has had little or no influence on prices at the farm level

- 3) because the storage facility is so small, only a little demand has developed for its commodities
- 4) commitments of money by the Central Bank are not sufficient to permit purchase of enough grain to affect prices
- 5) due to the limited number of locations where the IRA receives and buys grain, few farmers can take advantage of the stabilization program
- 6) the location and distribution of the IRA silos are such that the entire northern half of the country is excluded from the possibility of marketing through this institution
- 7) the system under which the farmer must file an application to qualify for the IRA eligibility is too cumbersome for the average farmer.

A stable price for the farmer's produce at harvest is one of the "Conditions for Success" of a small farmer credit program, described in Part I. If price stability is to be achieved, increased public investment in storage facilities and in financial reserves for crop purchases will be necessary

Agricultural Credit in El Salvador

In a report to the Agency for International Development on the supervised credit program, Administracion de Bienestar Campresino (ABC), summarized the institutional agricultural credit system of El Salvador as follows:

The institutional agricultural credit system of El Salvador is composed of a Central Bank, seven private banks (two of which are foreign owned), one semi-private mortgage bank (Banco Hipotecario), a Federación de Cajas de Crédito, ABC, a public supervised credit agency (Administración de Bienestar Campesino), a cotton cooperative (Cooperativa Algodnera Salvadoreña, Ltda.), and coffee institute (Compañía Salvadoreña

del Café). Of lesser importance, but still part of the system, are FID, a private development bank (Financiera de Sesarrollo), INSAFI, an industrial development bank (Instituto Salvadoreño de Fomento Industrial), a private company financing subdivision of farm lands (Parcelaciones Rurales, S.A.), ICR, a semi-autonomous government institution financing farm land purchases (Instituto de Colonizacion Rural), FEDECACES, a credit union federation financing agricultural cooperatives (Federación de Cooperatives de Ahorro y Crédito de El Salvador) and several fertilizer suppliers making in-kind loans to producers.

In general agricultural loans must be highly secured, are usually for less than one year, and carry interest rates which range from 8 to 12 percent per year. For all practical purposes only ABC, the Federación de Cajas de Crédito and FEDECACES provide loans to small farmers. FEDECACES only initiated substantial activities in 1972, ABC in 1964, and the Cajas in the early 1940s. Each of these agencies also provides credit to medium and some large size farmers. FEDECACES and Cajas have substantial lending activities for non-agricultural purposes. ^{2/}

The major sources of institutional agricultural credit in El Salvador from 1966 to 1970 are presented in Table 5. Of the \$324 million total only \$24 million was channeled through agencies providing credit to small farmers. Of the \$24 million probably less than half went to small farmers. During 1971 the institutional credit covered approximately 4.9% of the farms with less than 5 hectares. Yet, this category included 86.9 percent of the total farms of El Salvador. The main credit sources were provided by ABC, which accounted for almost 50 percent of the amounts granted; followed by "Federacion de Cajas de Credito" who provided almost 22 percent of the amounts granted (Tables 6 and 7). The lack of credit availability to small farmers in El Salvador is a result of many factors summarized in Part I.

²Richard A. Vasquez, Gustavo Solis and David E. Weisenborn, "The Supervised Credit program in El Salvador 1961 to the Present," Small Farmer Credit in Mexico and Central America, Volume 1, A.I.D. Spring Review of Small Farmer Credit, February 1973.

TABLE 5. TOTAL AGRICULTURAL CREDIT PROVIDED BY
INSTITUTIONS IN EL SALVADOR

(1966 - 1970)
(Thousands of Dollars)

AGRICULTURAL SUB- SECTOR	Mortgage & Commercial Banks		Administración de Bienestar Campesino		Federación de Cajas de Crédito	
	Operation*	Capital*	Operation	Capital	Operation	Capital
1966	32,446	2,966	1,570	-	820	88
1967	42,428	2,547	2,200	-	917	84
1968	55,861	1,757	2,955	48	1,030	97
1969	53,150	686	2,786	296	1,183	271
1970	61,517	1,021	3,200	224	1,203	104
TOTAL	245,402	8,977	12,711	568	5,153	644
LIVESTOCK SUB-SECTOR						
1966	982	706	29	116	250	88
1967	1,020	422	28	251	253	84
1968	2,487	785	456	35	342	97
1969	3,543	1,038	350	39	484	271
1970	2,866	745	842	-	492	104
TOTAL	10,898	3,696	1,705	441	1,821	644
TOTAL BOTH SUB-SECTORS	256,300	12,673	14,416	1,009	6,974	1,288

(continued on next page)

*Operation loans are defined as having terms of one year or less. Capital improvement loans carry payment terms of over one year.

Table 5. Cont.

AGRICULTURAL SUB-SECTOR	Cooperativa Algodonera Salvadoreña		Compañía Salvadoreña del Café		TOTALS		GRAND TOTAL
	Operation	Capital	Operational	Capital	Operation	Capital	
1966	2,924	-	4,369	-	42,147	3,054	45,201
1967	2,151	-	4,397	-	52,093	2,631	54,724
1968	1,398	-	4,953	-	66,197	1,902	68,099
1969	1,343	-	4,283	-	62,745	1,253	63,998
1970	1,293	-	4,782	-	71,995	1,349	73,344
TOTAL	9,127	-	22,784	-	295,177	10,189	305,366
LIVESTOCK SUB-SECTOR							
1966	-	-	-	-	1,261	910	2,171
1967	-	-	-	-	1,301	757	2,058
1968	-	-	-	-	3,285	917	4,202
1969	-	-	-	-	4,377	1,348	5,725
1970	-	-	-	-	4,200	849	5,049
TOTAL	-	-	-	-	14,424	4,781	19,205
TOTAL BOTH SUB-SECTORS	9,127	-	22,784	-	309,601	14,970	324,571

SOURCE: Ministerio de Agricultura y Ganadería, "Diagnóstico del Financiamiento Institucional al Sector Agropecuario (1966-1970)" En Vásquez et. al. "The Supervised Credit Program in El Salvador 1961 to the Present."

Table 6. Institutional Credit Situation in El Salvador: Sources, Amounts and Users
(Consolidated Figures 1971)

Farm Size (Ha)	Number of Farms		Total Amt. Granted	From Bank		A.B.C.		Cajas Credito	
	Total	w/Credit		Farms	Amt.	Farms	Amt.	Farms	Amt.
	---number---		-colones-	No.	-colones-	No.	-colones-	No.	-colones-
Less than 1	132,907	2,894	3,524,721	70	20,704	717	1,117,138	189	1,203,136
1 to 1.99	59,842	3,974	9,529,214	40	12,617	1326	4,734,995	310	2,527,358
2 to 4.99	44,002	4,807	21,307,066	99	605,028	1959	11,085,911	640	3,739,690
Total	236,751	11,675	34,361,001	209	638,349	4002	16,938,044	1139	7,470,184

Note: During 1971 the institutional credit covered only 4.9% of the farms located in size categories under 5 hectares. Yet, this category included 86.9 percent of the total farms of El Salvador. The main credit sources were provided by A.B.C., which accounted for almost 50 percent of the amounts granted; followed by "Federación de Cajas de Crédito" who provided almost 22 percent of the amounts granted.

SOURCE: El Salvador, Dirección General de Estadística y Censos. "Censos Nacionales de 1971. III Censo Agropecuario." (Cifras Preliminares), pp. 102-103; in Jesús, Cutié, Diffusion of Hybrid Corn Technology: The Case of El Salvador, Ph.D. dissertation, University of Wisconsin - Madison, 1975.

**Table 7. Non-institutional Credit Situation in El Salvador:
Sources, Amounts and Users (Consolidated Figures 1971)**

Farm Size (Ha)	<u>Buyers and Middlemen</u>	
	Farmers	Amount
	No.	-colones-
Less than 1	682	188,321
1 to 1.99	763	300,657
2 to 4.99	930	1,853,550
Total	2,375	2,342,528

SOURCE: El Salvador, Dirección General de Estadística y Censos. "Censos Nacionales de 1971. III Censo Agropecuario." (Figuras Preliminares), pp. 102-103; in Jesús, Cutié, Diffusion of Hybrid Corn Technology: The Case of El Salvador, Ph.d. dissertation, University of Wisconsin - Madison, 1975.

Land Tenure

The distribution of landholdings shown in Table 8 gives a clear indication of the land tenure situation in El Salvador and the problems of reaching the small farmer. Of the 374,700 rural families in 1970, 66.40 percent owned less than 7 hectares (17.29 acres) and 26 percent were landless. Most of these small landowners are dependent on outside employment, usually on the large plantations. These large landholdings grow mainly export crops (coffee, sugar, and cotton). The government has stated its intention to formulate a widespread land reform program, but the political volatility of the issue has tended to thwart implementation. The pattern of landownership in El Salvador is a representative example of the negative impact that can be expected on the distribution of rural income by a regressive land tenure system.

Table 8. Distribution of Productive Units Based on Size and Relative Importance 1970

Size Categories	AREA		No. Farms or Families	
	<u>Ha.</u> (1,000)	<u>Percent</u>	<u>Units</u> (1,000)	<u>Percent</u>
Landless Workers	---	---	97.5	26.0
less than 0.7	21	1.3	91.0	24.3
0.7 to less than 4.0	202	12.3	134.0	36.0
4.0 to less than 7.0	86	5.2	23.0	6.1
7.0 to less than 35.0	275	16.7	18.2	4.9
35.0 to less than 350.0	553	33.6	7.6	2.0
350.0 and greater	508	30.9	0.7	0.5
Total	1645	100.0	374.7	100.0

SOURCE: SIECA-FAO, "Perspectiva para el Desarrollo y la Integración de la Agricultura en Centroamérica" 2 vol. (Guatemala, 1974) 2:109; in Jesús Cutié, "Diffusion of Hybrid Corn Technology: The Case of El Salvador," p. 3.

ISSUES - PART II

1. If El Salvador achieves self-sufficiency in grain production, except for corn, in 1977, what factors would explain this gain in production? (1) Agricultural credit policy, (2) price policy, (3) improvement in storage, processing, transportation and distribution or (4) a combination of all three factors.
2. What have been the major contributions of agricultural institutions such as the National Center for Agricultural Technology and the Price Stabilization Institute to the increase in agricultural output?
3. The Agricultural Sector Analysis recommended investment in 13 major areas. Which areas should be given priority due to El Salvador's limited resources for investment? Which factors in the agricultural sector would determine priority? Would agricultural credit policy receive priority?
4. How would you compare the performance of the export crops to food crops during the last 20 years? What factors contributed to the success of the one sector over the other? How would the factors contributing to success of a credit program compare with the improvements recommended by the Sector Analysis?
5. Has El Salvador's development policy stimulated rural employment?

PART III

IMPLEMENTATION OF A SMALL FARMER CREDIT PROGRAM:
CASE STUDY OF THE ADMINISTRACIÓN DE BIENESTAR CAMPESINO (ABC)
IN EL SALVADOR^{1/}

Institutional Development

The Administracion de Bienestar Campesino (ABC) was created in 1961 by the Ministry of Agriculture (MAG) of El Salvador. Initial capital was provided through PL 480 funds; the supervised credit program began operations in 1962 with \$665,826. ABC received additional funding of \$5,254,820 from the government of El Salvador (GOES) in 1964. This capital originated from an \$8.9 million loan from the United States Agency for International Development (USAID); \$5 million was earmarked for new loans and the remainder was appropriated to the purchase of equipment. In addition, ABC was provided operating capital by GOES. The original charter required that loans be made only to agricultural producers with 30 hectares or less and who lived on the farm; however, in 1968, these restrictions were lifted to include larger farms and renters.

The objectives of ABC were:

1. Through a broad supervised credit program, to increase agricultural production and provide higher incomes and a better standard of living for agricultural producers.
2. To convert the agricultural producer into an effective manager of his own enterprise, and active worker of the land and an effective producer by providing the necessary technical assistance and social and economic orientation to supplement his credit program.
3. Improve land tenure systems by granting loans with the provision that borrowers rights be expressly guaranteed in the land lease that they enter into with the landlords. This will also help increase, to the extent possible, the number of farm owners.

^{1/}The principal source of case study material of small farmer credit in El Salvador came from Ricardo A. Vásquez, Gustavo Solís and David E. Weisenborn, "The Supervised Credit Program in El Salvador 1961 to the Present," Small Farmer Credit in Mexico and Central America, Vol. 1. No. SR 101, A.I.D. Spring Review of Small Farmer Credit, February 1973.

4. To encourage plans for land development and reclamation, soil conservation, and improved methods of operation, in order to adequately and effectively use the land.
5. Grant loans for the cancellation of existing debts which are detrimental to the operation and maintenance of the farm and home, provided that the loan granted for this purpose is not specifically for the cancellation of the debt but is also made to improve the borrower's existing operation.
6. To finance and give technical assistance for the development or improvement of agricultural industries.
7. To provide funds and technical assistance to agricultural cooperatives and associations, by promoting their creation with emphasis on multi-purpose cooperatives. This will be done in collaboration with other agencies of the government which have the same objectives.
8. To help improve the marketing of agricultural products by providing funds and technical assistance for the establishment of rural markets.

Table 9 shows the distribution of ABC loans in 1970. Cotton and sugar loans represented 37.2 percent while other crops and livestock loans accounted for the remaining 62.8 percent. Export crop producers - coffee, sugar, and cotton - are almost entirely medium and large farmers whereas the majority of loans for "other crops and livestock" went to small producers. Farmers with less than 10 hectares obtained 5,500 loans for a total of \$1.7 million while large scale operations obtained 500 loans worth \$1.0 million.

Although ABC makes loans to agricultural cooperatives its emphasis is on credit for productive inputs to individual farmers. In-kind loans (usually for fertilizer or insecticide) and its cotton program are the only ABC loans on which restrictions on the use of credit are made. The purpose of the different types of ABC loans are:

- 1) Credit for family farms (utilizing family labor) is used for operating expenses - animal feeds, seed, fertilizer, insecticide, herbicide, fungicide, wages, machinery, and maintenance.

Table 9. Use of Administración de Bienestar Campesino (ABC) Credit, 1970

Product Group	Amount	Per cent
-- million dollars--		
Cotton and sugar	\$1.6	37.2
Other crops and livestock	<u>2.7</u>	<u>62.8</u>
Total	\$4.3	100.0
Loans to producers with 10 Has. or more	\$1.0	(23.3)
Loans to producers with less than 10 Has.	\$1.7	(39.5)

SOURCE: Memoria of ABC, 1970 and USAID estimates in Vásquez et. al.

- 2) In-kind loans for basic grains and vegetables are made to farmers with no more than 5 hectares for no more than \$200 to finance inputs - seed fertilizer, and insecticide - for corn, rice, beans, sorghum, and vegetables.
- 3) Credits to cooperatives for agricultural purposes
- 4) Post-harvest credits for financing marketing of products for ABC borrowers, usually for payment of loan installments, storage fees, and other farming expenses.
- 5) Cotton production loans for operating expenses - land preparation, planting, inputs, labor, and harvesting - with a maximum loan of \$234 per manzana (1.73 acres).
- 6) Coffee production loans for replanting trees, labor, inputs and harvesting.
- 7) Sugar cane production for new planting or maintenance of cane fields two or more years old for farms of 50 manzanas (86.5 acres) or less.

Table 10 indicates that short-term loans (less than 18 months) accounted for over 90 percent of the number of loans in each year from 1966 to 1971. However, the amount of loans made over the same period has ranged from 89.3 percent in 1969 to 72.8 percent in 1971.

In 1972 ABC's organizational structure was composed of a central office in San Salvador and 15 regional offices throughout the country. The basic organizational structure follows traditional supervised credit programs with field officers able to approve loans up to a certain level. Field agents are responsible for contacting loan applicants, preparing farm plans, monitoring, and collection. Half of the ABC personnel work in the field while the others are employed in the central office. The number of loans applied for and approved is given in Table 11.

Table 10: Number and Amount of Loans by ABC by Term of Loan, 1966-1971

Year	Short-term Loans				Long-term Loans			
	Number	%	Amount	%	Number	%	Amount	%
			-dollars-				-dollars-	
1966	2787	96.1	1,497	87.3	112	3.9	218	12.7
1967	5708	95.7	2,116	84.0	259	4.3	403	16.0
1968	8185	96.0	3,045	87.1	343	4.0	449	12.9
1969	7532	97.1	3,100	89.3	222	2.9	372	10.7
1970	6004	92.9	3,475	81.5	460	7.1	791	18.5
1971	7005	92.3	3,775	72.8	583	7.7	1,413	27.2

^{1/} Short-term loans are less than 18 months.

SOURCE: ABC Memorias, 1966-71 in Vásquez et. al.

Table 11. Number of Loans Applied for and Granted by ABC, 1962-71

Year	Number of Loan Applications	Number of Loans Granted
1962	n.a.	12
1963	n.a.	872
1964	n.a.	2,413
1965	n.a.	3,345
1966	4,377	2,899
1967	8,412	5,967
1968	9,674	8,528
1969	10,102	7,754
1970	7,939	6,464
1971	8,557	7,588

SOURCE: ABC Memorias, 1966-71 in Vásquez et. al.

Lending Policies

The following restrictions are placed on a farmer in qualifying for a loan:

- 1) 21 years of age
- 2) capable of managing a farm operation
- 3) small or medium farmer (this policy has changed several times)
- 4) good reputation in his community, and
- 5) approval of farm plan

ABC has been involved in some integrated projects, for example the Zapotian irrigation project and the Price Stabilization Institute (IRA). Each year loans are reviewed and causes of default are analyzed; continued participation of defaulting producers is approved if the cause was determined to be beyond his control. At present, farmers with good ABC repayment records have not been able to shift into the use of commercial banking institutions. To some extent this situation arises from ABC's natural desire to retain borrowers with proven repayment ability but the essential cause appears to be the lack of commercial institutions to accommodate such individuals. Collateral requirements, especially land, of the commercial banking system disqualifies most ABC borrowers. Because ABC has the most lenient qualifications at a low interest rate within the institutional credit system, it may be the only source of credit (outside of moneylenders, truckers and storeowners) for many of its borrowers. Data concerning ABC borrower's past, present, or future sources of credit is not available.

The collection record was so poor in its first three years of full-operations - 1963-1965 - that a more conservative policy in the number of loans approved was enacted in 1966. Table 12 provides the number and amount by year and by type of loan for the period 1966-71; the total number of loans by year for 1962-1965 is given in footnote 4. Since 1966 the

Table 12. Number and Value of ABC Loans by Type of Loan, 1966-1971
(In thousands of U.S. Dollars)

Type	1966		1967		1968		1969		1970		1971	
	No.	Amount										
Regular	1675	\$1,052	2070	\$1,455	2841	\$1,871	3400	\$1,557	2380	\$2,199	2410	\$1,921
In-kind	1022	54	3588	222	5321	377	3588	306	3408	325	4400	424
BACEN <u>2/</u>	202	610	309	842	366	1,246	410	1,387	454	1,617	759	2,396
Post-harvest <u>3/</u>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	365	222	222	125	n.a.	n.a.
Cooperatives <u>4/</u>	n.a.	n.a.	19	447								
Total <u>5/</u>	2899	\$1,716	5967	\$2,519	8528	\$3,494	7754	\$3,472	6464	4,266	7588	\$5,188

1/ Loan Funds from the Central Bank for cotton, coffee, and sugar cane. Also includes funds from the Central Bank Economic Development Fund. The bulk of the loan funds under BACEN were for cotton. In 1970, BACEN was for cotton and sugar: cotton - 367 loans for \$1,520 and sugar cane - 87 loans for \$97. In 1971, BACEN was as follows: cotton - 489 loans for \$1,753, sugar cane - 153 loans for \$70, coffee - 3 loans for \$1, and Economic Development Fund - 114 loans for \$572.

2/ Prior to 1969 and for 1971 loans for post-harvest were included in one or more funds of the other categories.

3/ Prior to 1971 loans for cooperatives were included in one or more funds of the other categories.

4/ Prior to 1966, ABC made the following: 1962- 12 loans for \$9, 1963- 872 loans for \$441, 1964-2,2,413 loans for \$2,296, and 1965 - 3,345 loans for \$2,698.

SOURCE: ABC Memorias, 1966-71 in Vásquez et. al.

amount of loans made has increased each year except 1969 (the year of the war with Honduras). A particularly strong expansion has occurred in the in-kind loans; the number of type type of loan increased from 1022 in 1966 to 4400 in 1971. It appears that the in-kind arrangement is more conducive to small farmer operations.

Table 13 illustrates the number and value of loans by loan size for 1970 and 1971. Loans of \$400 or less accounted for 71 and 75 percent of the number of loans in 1970 and 1971, respectively. However, this loan size group accounted for only 15 percent of the amount of loans in 1970 and 1971. The cotton production loans represented over one-third of the total amount loaned and averaged over \$4,000 per loan.

Over three-fourths of the acreage financed by ABC was for basic grains and cereals - corn, sorghum, beans, and rice - while export crops - cotton, sugar, and coffee- accounted for most of the remainder, (Table 14).

According to ABC's charter the interest rate cannot exceed 8 percent; it has been fixed at that rate with a 2 percent service charge. The market rate has averaged 12 percent. Collateral requirements include at least one of the following:

- 1) chattel mortgage on crops or livestock
- 2) co-signer, and
- 3) land mortgage

If the applicant is able to meet these basic requirements, he is interviewed and an application form is completed. If the basic information provided seems satisfactory to the field agent he will compile a farm plan under which the loan might be approved. Loans of \$2000 or less can be approved by a committee of agents and the local supervisor at the regional office. If the application is rejected by the field committee or over \$2000 it is sent to the central office for approval.

Table 13. Number and Value of ABC Loans by Loan Size Groups, 1970-71

Loan Size Group	1970				1971			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
	(\$1,000 dollars)				(\$1,000 dollars)			
Up to \$400	4607	71.3	\$ 641	15.0	5716	75.3	\$ 801	15.4
\$ 401 - 1200	796	12.3	539	12.6	942	12.4	711	13.7
\$1201 - 2000	174	2.7	240	5.6	187	2.5	303	5.8
\$ 2001 - 3200	139	2.1	287	6.7	82	1.1	210	4.0
4 3201 -4000	39	0.6	142	3.3	59	0.8	216	4.2
\$ 4001 or more	112	1.7	464	10.9	103	1.3	746	14.4
Cooperatives	8	0.1	308	7.2	19	0.3	448	8.6
Cotton	367	5.7	1,520	35.6	489	6.4	1,753	33.8
Post-Harvest <u>1/</u>	222	3.4	125	2.9	n.a.	--	n.a.	--
Total	6464		\$4,266		7588		\$5,188	

1/ In 1971, these loans were included in other categories.

SOURCE: ABC Memorias, 1970 and 1971, in Vásquez et. al.

Table 14. Number of Hectares of Crops Financed by ABC, 1967-71

Crop	1967	1968	1969	1970	1971	Distribution of loans (1971 percent)
<u>Cereals:</u>	<u>23,748</u>	<u>41,443</u>	<u>32,756</u>	<u>33,444</u>	<u>35,374</u>	76.0
Corn	14,574	23,544	18,911	20,463	26,543	57.0
Sorghum	2,259	7,846	6,183	6,428	1,066	2.3
Beans	1,450	2,828	4,793	3,769	3,997	8.6
Rice	5,465	6,225	2,869	2,784	3,768	8.1
<u>Vegetables:</u>	<u>350</u>	<u>1,139</u>	<u>892</u>	<u>1,354</u>	<u>823</u>	1.8
<u>Fruit:</u>	<u>664</u>	<u>84</u>	-----	<u>45</u>	<u>193</u>	0.4
<u>Pasture & Other:</u>	<u>1,547</u>	<u>883</u>	<u>335</u>	<u>708</u>	<u>624</u>	1.3
<u>Export Crops:</u>	<u>5,274</u>	<u>6,611</u>	<u>6,769</u>	<u>8,127</u>	<u>9,526</u>	20.5
Cotton	4,433	6,205	6,511	7,416	8,827	19.0
Sugar	841	406	258	628	653	1.4
Coffee	-----	-----	-----	83	46	0.1
Total	31,584	50,160	40,752	43,678	46,540	100.0

SOURCE: ABC Memorias, 1966-71, in Vásquez *et. al.*

The repayment record has not been outstanding; especially in the early stages of the program, 1963-1965. The lowest repayment rate was registered in 1965 with nearly a 30 percent default rate; the best record was in 1970 with only a 3.1 percent default rate. Possible explanations for low repayment include the collection method, the appraisal and approval method, and the weather. Collection is usually performed by the field agent who was involved with the loan from the start. However, payment is sometimes made at the regional offices. All repayment is made in cash except for the in-kind loans; the latter type of loan is channeled through the Price Stabilization Institute (IRA). Refinancing of unpaid loans is allowed if it is determined that the circumstances are beyond the farmer's control; in this case greater security is sought in the second loan.

Administrative Costs and Coordination

High default rates makes financing the program's operations difficult. As shown in Table 15, administrative costs are considerable. The deficit between these costs and government support (GOES) must be made up by interest on loans; consequently, default undermines institutional viability. Although the average cost per dollar loaned decreased from \$.47 in 1966 to \$.18 in 1971, ABC requires continued external support even with the funds provided by GOES. A perfect repayment record in 1970 would have provided \$500,000; consequently, in most years a small deficit will remain with no defaults and the existing GOES support. Without further external financing or costs reductions, the funds available for new loans will decrease. Unfortunately cost reductions can most easily be achieved through an increase in the average size of loans; however, such a policy change conflicts with one of the original program objectives - increased small farmer credit. Equity and institutional viability can dictate conflicting policies.

Table 15. ABC Administrative Cost, and Government of El Salvador Support, 1966-71

Year	Personal Services (salaries ect.)	Non-Personal-Services (Rent, Maintenance)	Materials and Supplies	Interest Expense	Depreciation & Other	Total	GOES Support
			--dollars--				
1966	n.a.	n.a.	n.a.	n.a.	n.a.	771,569	678,117
1967	478,144	118,904	54,179	121,213	55,231	827,671	508,987
1968	485,028	89,276	58,298	121,564	55,819	809,985	200,000
1969	528,101	94,459	67,385	118,759	55,742	864,446	400,000
1970	554,023	91,321	80,796	125,750	53,728	905,618	400,000
1971	578,694	100,999	79,248	130,640	48,617	938,198	400,000

SOURCE: Vásquez, et. al

The existence and ability of field personnel to make new technology available to small farmers is a major concern to ABC. The in-kind loans portion of the program has been the most effective mechanism in increasing small farmer use of modern inputs. This type of loan can best control farming methods by direct provision of selected seed, fertilizer, or insecticide. Field agents conduct conferences with participating and non-participating farmers before planting season. At such meetings the benefits of new technology and ABC are promoted. The agents discuss their expertise in soil preparation, planting, insect and disease protection, weed control, harvesting, and storage. Technological packages have been slow to develop; although they exist for basic grains and beans, improvement is necessary. A \$4 million loan was made by USAID for the purpose of development of research, extension, and education. Coordination of these activities with ABC lending activity is essential.

The distribution network for fertilizers and insecticides is adequate except in very remote areas. ABC provides these inputs to the farmer in the case of in-kind loans; otherwise, ABC participants use loan funds to deal directly with input distributors.

Summary and Implications^{1/}

El Salvador's formal or institutional credit system consists of the Central Bank, several commercial banks, several commodity oriented cooperatives, and the Administracion de Bienestar Campesino (ABC). These institutions are in business to service agricultural credit needs in the country, and receive their funds mainly through the discounting procedure

^{1/}The main theme of the summary can be found in L. Harlan Davis, "Seminar on Rural Credit for Agency for International Development." Paper presented at the Agency for International Development, Washington, D.C., February 3, 1976.

of the Central Bank, loans from foreign banks and international aid agencies. There are about 374,000 farm families, most of whom live on small plots with limited resources. A very small number of farmers, growing mainly for the export market, have received the bulk of the institutional credit. On the premise that credit would help increase production of basic food crops and at the same time improve the welfare of the small-scale producers, the government established ABC in the early 1960's with a \$500 thousand AID loan.

Originally, ABC was (1) to service only those producers of 30 hectares or less, (2) to provide supervision or technical assistance along with its credit funds, and (3) to provide long-term credit for land and capital improvements along with short-term production and marketing loans. ABC started off with about 4 field offices staffed by agronomists, most of whom had two years of agricultural training beyond high school. It began in 1962 by making only 12 loans but the number rose to 872 in 1963. Convinced that ABC could handle a larger amount of money, AID approved an 8.9 million dollar loan in 1963. The number of loans went from almost 2,500 in 1964 to over 3,000 in 1965 at interest rates about 4 percent lower than the market or commercial rate.

A high default rate and average costs per loan approved created a situation where it became extremely expensive to channel credit through ABC. Next, Central Bank discount privileges were reduced, jeopardizing a principal financial source. In addition, there were serious "technical problems" which exacerbated the financial problems; these technical problems were related to ABC field agents, loan processing, administrative costs and marketing. It might be hypothesized that technical problems caused the financial problem.

ABC had to take on a number of field agents to provide the supervision of the loans as well as do collections. Many of these field agents were not prepared for the task. They had a minimum level of formal training, little practical experience in agriculture, and less in banking. ABC did not provide the logistics to make them mobile; that is, they were short of vehicles and other means of transportation.

Processing of loans slowed down and funds did not arrive in time for planting needs. The central farm supplies (much of the credit was provided in-kind) such as seeds, fertilizer and insecticide were not available and they were not always appropriate to farm needs. Seed was not always adapted to the area nor were fertilizers applicable to soil and crop conditions.

ABC's reaction to this situation was to build up its central staff to monitor field operators more carefully rather than building up the field staff. Administrative costs per loan, defaults and delinquencies went unchecked. Furthermore, there were serious problems on the marketing side for small farmer produce. Prices fluctuated wildly during the crop year and sometimes, particularly at harvest, were so low they did not cover production costs. If large quantities of produce had arrived at the market place as a result of the increased output response due to inputs purchased by ABC credit, then prices would have dropped drastically in the produce market. Fortunately, this was not entirely the case.

By the late 1960's, ABC had become such an inefficient channel of farm credit with such high costs and poor service that AID and the Central Bank pressured for its re-organization. ABC's administrative overhead was reduced substantially, field agents became more mobile, and appropriate inputs were provided. AID helped build a marketing program in 1973 to guarantee a firm source of outlet at prices favorable to the farmer. How-

ever, as a result of increasing pressure to improve administration, reduce default, and lower costs, ABC has had to turn increasingly to larger borrowers. Recall the earlier discussion concerning institutional division of credit by farm size and default.

ABC finds it is expensive to administer a large number of small loans at less than market interest rates. Average loan size in 1975 is at least \$1,000 above the average in 1966. ABC is seemingly becoming an agency to finance larger farmers. However, large farmers have a well-developed commercial credit system they can use for loans. Also, why should commercial farmers receive credit at subsidized rates? And even so, ABC in 1971 was reaching less than 8,000 producers, only a fraction of the approximate total of 300,000 that were receiving no credit prior to ABC's establishment.

In seeking improved financial status, ABC has tended to compromise some of its original objectives. A cutback in the number of field offices and the elimination of restrictions on farm size were undertaken to reduce administrative costs; unfortunately, these actions also decreased ABC's contact with small farmers. With fewer field offices ABC is less capable of improving the availability of new technology and the coordination of extension activities with credit. The in-kind loans for productive inputs have become the most highly utilized channel of ABC credit to small farmers. The integrated programs with the Price Stabilization Institute (IRA) appears to have been one of the more favorable aspects of ABC's activities.

ISSUES - PART III

1. What assumptions does the Agency for International Development and the recipient government agency make, in this case El Salvador, concerning the agricultural year? Do they always assume a normal year?
2. Extreme price and production variations are typical of agricultural production due to drought, flood, insects and disease. Agricultural disasters contribute to the delinquency problems of small farmer credit program to adjust for price and production variability? What types of mechanisms are available for developing country situations? What would AID and the lending institutions be concerned with agricultural declines when they have loan collateral?
3. What are some useful analytical tools that a small farmer credit agency, such as the Administracion de Bienestar Campesino (ABC), could develop to measure the impact of their loans on agricultural production, net farm income and employment?
4. How would ABC's analytical tools be used in institutional evaluation, annual program evaluation and inter-agency agricultural program evaluation?
5. What would the ultimate benefits of an analytical program be to (1) the institution, (2) the ministry of agriculture and (3) the small farm?
6. To what extent has ABC met the "Conditions for Success" discussed in part I? What changes in ABC policy would you recommend?
7. The case study of El Salvador shows that critical supplies are not always physically available; that bank technicians are not always mobile; and that bank loans granted in kind may be delayed because of lengthy administrative procedures. How have these problems affected ABC's institutional performance and returns at the farm level?

PART IV

IMPACT OF THE PROGRAM, CONCLUSIONS AND EVALUATION PROCESSES

A precise identification of the factors associated with small farmer credit programs in El Salvador is beyond the scope of the case study analysis, and perhaps beyond the reach of any such analysis given the available data base. However, gross estimates of the impact of the small farmer programs are available to indicate how the program has worked toward achieving the important objectives of (1) increasing food production, (2) increasing small farmer net income, and (3) increasing rural employment. The broad program objectives of efficiency, equity and institutional viability in small farmer credit programs are very important considerations in planning for new programs in developing countries or continuing existing ones.

Agricultural and Food Production Increases Associated with Credit

There have been no studies of the ABC program which would show, in a quantitative way, its effects on the agricultural sector. However, in general, aggregate production of cotton, coffee and sugar has increased over the 1962-63 level (Appendix Table 4, 5, 6 and 11). Part of the increases can be attributed to an expansion in the area cultivated as well as improvements in yields. These improvements can be attributed, in part, to the financial resources provided by the ABC program to farmers. World market prices and CACM prices for these export crops also may have been important factors in explaining the changes in output.

Foreign Aid for Small Farmers

The results of the strategy [to maximize production, income and employment opportunities in small scale agriculture]..., are beginning to be seen. Small farmers have benefited greatly from the development and application of modern technology and from the availability of credit to procure it. Government-sponsored hybrid corn seed production

increased from 17.6 thousand quintals (cwt.) in 1968 to over 44.0 thousand quintals in 1972, and such seed is being sold to the farmers at the lowest existing per-unit price in Central America. An earlier extension and aid-sponsored program, which put on over 10,000 hybrid corn field demonstrations, helped introduce the new varieties, and it is estimated that over 30 percent of all farmers in El Salvador are now using improved corn seed. Also, chemical fertilizer consumption is up significantly: on a per-hectare arable land basis, El Salvador is currently one of the largest consumers in Latin America. And institutional credit for agriculture increased over 31 percent between 1967 and 1971, from 457 million colones (\$182.8 million) to 160 million colones (\$244.0 million).

These developments have resulted in a rapid rise in yields of the basic crops produced by small farmers. Excluding the United States, El Salvador's per-hectare grain yields are among the highest in the hemisphere. Increased productivity has meant relatively lower production costs, such that the small farmer could in 1972 market corn, rice, and sorghum at prices below those prevailing in other Central American republics. For example, in 1971-72, the wholesale price per 100 pounds of corn in El Salvador was \$2.76, compared with \$2.82 in Guatemala, \$3.33 in Honduras, \$3.89 in Nicaragua, and \$4.99 in Costa Rica. Thus, not only is the small farmer benefiting from this process but also the low income consumer.

Using 1966-67 as a base period, in 1971-72 the quantity index of corn production was 141.8; of bean production, 222.5; and of sorghum production, 133.3. In terms of growth rate of total per capita food production, El Salvador has been among the top five countries in Latin America during the 1967-71 period and has been one of three Latin American nations in 1972 with net grain exports. The production outlook continues favorable. Ironically, the country that was thought to have a relative advantage in industry seems to have it in agriculture¹.

Dramatic improvements in the production of food crops, mainly corn, beans, sorghum and rice, have been the major accomplishments of El Salvador's agricultural development plan. Production and yields of corn, beans, sorghum, and rice have increased the supply of these basic food crops to the extent that El Salvador could be nearly self-sufficient, except for corn in 1977. In terms of yields in quintals per manzana (one manzana equals 1.73 acres), corn yields increased from 16.4 in 1962-63 to 27.3 in 1971-72, and sorghum from 16.2 to 18.9, rice from 23.3 to 37.0, and beans from 8.5 to 13.2 during the same period

¹/ L. Harlan Davis, "Foreign Aid to the Small Farmer: The El Salvador Experience," Inter-American Economic Affairs, Vol. 29. No. 1, 1973, pp. 87-88.

(Appendix Tables 7, 8, 9, 10 and 11; Vásquez et. al.). Since small farmers are the major producers of these basic crops (Appendix Table 12) and they are the major target group of the ABC credit program, it can be assumed that small farmers have benefited from the credit program and contributed to the growth in agricultural output.

The available cost and returns data on crop and livestock production are very limited; consequently, it is not possible to perform a detailed analysis on the profitability of technology at the farm level. Budget and production function analysis based on survey data would be useful to determine if farmers are using their inputs at the most profitable level, subject to farm level prices and compared to Ministry of Agriculture (MAG) extension service recommendations. The Farm Business Record System, developed by Cornell University, would be a useful guide to developing such a data base.

Additional analysis, on a less rigorous level, could identify the factors associated with increased production on farms participating in the small farmer credit program and non-farm participants. When comparing credit to non-credit farms the important differences to identify would be: (1) differences in land use such as increasing cultivated areas or intensification of land use by multiple cropping and interplanting, (2) differences in crop composition from food export commodities, and (3) changes in crop technology and marketing practices.

Studies in other Central American countries have indicated that the impact of credit on farm output is related to changes to higher valued crops, especially for the very small farm with less than 3 hectares. The output response of farms with 4 to 10 hectares is mainly in intensification of existing land use by cultivating more of the land, leaving less in pasture and increasing double cropping and/or interplanting. Therefore,

agricultural credit becomes instrumental in bringing idle cropland into production and in inducing shifts in crop composition with a resultant effect on net farm income. It would be useful to measure these factors in El Salvador relative to the increase in rural employment as farmers change to more intensive cropping with higher value crops. This would have an effect on the demand for institutional credit in the future. In addition, it is important to have an overview of these activities from all institutions on the entire agricultural sector.

Market Forces and Credit System Performance

ABC has conducted annual evaluations since 1966 but they have been limited to repayment records, cash flow and central office management rather than an integrated evaluation of the program's impact on farm income and rural employment. The impact of small farmer credit from ABC may have been less than optimum due to marketing conditions, land rents and the subsidy situation.

The marketing system in Central America and the Caribbean countries limits small farmers' bargaining position and thereby their net income growth due to increased output. The small farmers suffer serious access problems and low harvest prices.

At harvest, faced with limited market information, transportation, and storage, the producer generally turns to an independent trucker. The trucker generally is able to purchase the product at price levels which are below the already low harvest price levels. The trucker may further have increased his leverage by loaning the producer money during the planting season thereby committing the producer to sell to him at harvest. The IRA [price stabilization institute] and ABC programs have been attempts by the GOES to help break this system, but, to date, have been largely ineffective. There is no doubt that market access problems have seriously restricted GOES attempts to raise producer incomes... There is, however, an agreement between ABC and IRA whereby some ABC borrowers can deposit their products in the IRA warehouses and participate in the IRA price support program. Eligibility of a borrower depends upon whether he is producing a product which IRA will accept (currently corn, rice, sorghum, or beans) and whether or not IRA has remaining capacity to handle the product at the time the producer tries to sign a contract to participate. If

the borrower qualifies he agrees to deliver all or some specified part of his production to IRA at harvest and this is credited to ABC. When IRA sells the products (or purchases them for their own account), they deduct storage and handling charges and pay the balance to ABC [which] then deducts the loan amount, and remits the balance to the producer².

Land Rents and Agricultural Credit

In addition to imperfect markets, there are institutional barriers to generating a self-sustaining small farmer credit program in the short-run. If farmers obligate their crops to truckers in exchange for loans during the planting and growing season, it is an indication that income from the new technology is not sufficient to provide for the farmers' consumption and operating needs. One reason for the lack of financial resources may be that a large share of the profits from additional production goes to pay higher rents. Since the output from the small farmers has increased, landlords can be expected to increase their rents.

The link between IRA and ABC has also had an income effect by providing an alternative outlet for some beneficiaries thereby eliminating the need to sell to an independent trucker at lower prices. On the other side, however, non-land owners have found that income increases generally lead to land rent increases by the land owner. The GOES has attempted to control this practice through legislation to stabilize land rents but it still exists in many parts of the country. The ABC program has no method of controlling producer land rental rates³.

The higher rents indicate that small farmers may continue indefinitely depending on ABC for crop production credit since they cannot accumulate sufficient operating capital.

Image and Institutional Viability

The institutional image of small farmer credit programs may be influenced by the magnitude of government subsidies, rate of loan repayment, loan extension policies in the case of default, interface with the farmers, interaction with other agencies, relationships with the public

^{2/} Vázquez, et. al., The Supervised Credit Program in El Salvador 1961 to the Present, p. 34.

^{3/} Vázquez, et.al., p. 35.

media, and a host of other factors. Financial viability is the most important factor in determining institutional image, if the program continues over a long period of time. If interest rates on small farm loans are subsidized, then the agency cannot be self-sufficient even under ideal conditions.

The consumer price index rose 19 percent between 1974 and 1975, and the rate of inflation on imported agricultural inputs such as fertilizer and pesticides may have been even greater. Rising per acre operating expenses would indicate a need for larger loans and a higher rejection rate given the institutions limited operating capital. Therefore, the only reasonable policy might be to assume that the subsidized interest rates are a income transfer from the non-farm sector. Through this policy the risk of failure by trying to make the institution self-sufficient with profits from other lending activities, especially from large farmers who have avenues to political power, can be averted.

The institutional image of ABC over time has been less than favorable. The heavy default rates and losses in the early years did not help the situation. Also, many fail to realize that a supervised credit program is expensive and at subsidized interest rates, the agency could not be self-sufficient even under ideal conditions. Even though the program has matured and is functioning smoothly now, it appears that ABC will soon be converted into a two-window Agricultural bank. One window will serve larger producers and the profits of this will be used for the supervised credit window. This will tend to eliminate the need for GOES subsidy in the future⁴.

Summary

Public credit programs with the objective of stimulating agricultural output from small scale farmers must satisfy five basic conditions [Long]. First, there must be a more productive agricultural technology; if not, farmers will not invest. Second, small farmers must be informed of the new capital intensive technology and its profitability if they are going to

^{4/}Vásquez, et. al., p. 36.

borrow from a public institution for productive purposes. Third, profitability of the new technology depends on the timely availability of inputs and access to commodity markets. Fourth, public institutions must lend the bulk of their funds to small farmers for agricultural production purposes. Finally, the value of the additional agricultural output must exceed the costs of the program to society. In general, the ABC supervised credit program in El Salvador meets these conditions, with some exceptions.

New technology in the form of improved varieties of corn, rice and sorghum have been made available to small farmers and production has increased substantially. Other inputs such as fertilizer and pesticides have been made available to the small farmer, and yields of basic food crops have been impressive.

Marketing appears to be a major weakness of the overall small farmer credit program although it was not an initial objective of the program. If imperfections exist in the input and output markets, the objectives of increasing small farm income may not be achieved. Small farmers in Central America and the Caribbean simply do not have marketing leverage at harvest time. Small farmers may commit their crops to truckers prior to harvest at low prices due to their need for consumption credit. Data are not available to measure the loss of revenue due to prior harvest sales or lack of storage facilities at the farm level. If ABC continues to expand its operation, a marketing strategy combined with production credit may be needed.

There may be some discrepancies surrounding the ABC credit program in meeting the objective of serving small farmers. The number of loans approved for small farmers exceeds the number of loans to large commercial operations, but the amount of loans is greater to large farmers. Lower

unit costs favor larger loans. While accounting costs may demonstrate that fewer loans for larger amounts may lower administrative costs and the need for government subsidies, the output response on small farms may be equal if not greater than on large farms. The small farm loans may be of greater social value when employment objectives are considered with output and income generation. There is a need for further analysis in this area.

Finally, what about the small farmers' impact on the institutions serving them. Have small farmers communicated their changing needs to the institution so that new or alternate lending programs can be formulated? Are the needs for long-term credit more important than production credit as farmers exhaust their output potential without major on-farm improvements?

The social and political environment surrounding the institution may influence its life span and continuity of programs. Public institutions exists in the political environment which may change and alter the objectives of the program. All of these factors need to be considered in the long-term growth and development of the small farmer supervised credit in El Salvador.

ISSUES - PART IV

1. If small farmers in the ABC credit program sell their crops before harvest at sacrifice prices and receive substantially lower gross income, what possible marketing strategy could be combined with the loan program?
2. Should marketing be combined with credit? With credit in the same institution?
3. What could the role of the price stabilization institute be in the marketing program?
4. What would be the statistical base for a marketing strategy?
5. What are the monitoring mechanisms established in the small farmer credit institution and the AID mission which would signal a need for a program change in order to meet certain original objectives?
6. How would the agency know if loans were granted to large farmers rather than the target group, small farmers? What crops are actually being financed, export or food crops?
7. What problems might arise in correcting the flow of credit to the original purpose and target group? How would it be done?

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APPENDIX TABLES

Appendix Table 1. El Salvador, Budget Accounts and Public Debt, Calendar Years, 1963-74.

Items	1963	1964	1965	1966	1967	1968
	-----million colones-----					
Expenditure:						
Interest on public debt.....	7.5	2.38	2.31	2.20	2.09	2.10
Current transfers to:						
Private sector.....	--	13.05	14.47			
Independent agencies and local governments.....	--	25.72	25.10	48.76	47.25	53.89
Abroad.....	--	1.07	1.57			
Expenditure on goods and services...	--	116.56	125.73	131.70	138.80	145.43
Direct investment.....	--	18.03	18.45	25.13	16.31	13.07
Capital transfers.....	--	15.52	35.22	24.32	21.98	7.47
Total.....	174.7	192.33	222.86	232.11	226.43	221.96
of which:						
Educational and culture.....	39.8	43.64	50.30	52.87	55.55	58.83
Public health.....	--	18.64	18.80	23.00	25.86	30.05
Housing and urbanization.....	--	14.95	14.77	13.79	13.46	7.21
Other social and communal services.....	--	18.54	24.25	26.07	24.87	24.51
Agriculture and livestock.....	--	18.73	17.28	10.77	8.67	7.54
Industry and commerce.....	--	5.42	7.68	6.24	8.93	1.65
Transport and storage.....	--	8.30	11.05	12.55	10.80	2.31
Defence and internal security.....	21.3	19.98	22.63	23.00	23.65	23.11
Receipts:						
Tax on income.....	24.4	35.79	34.66	34.71	38.67	45.23
Tax on wealth.....		10.64	9.74	9.20	11.49	21.09
Import duties.....	60.2	63.93	62.74	62.68	59.39	52.91
Export duties.....	22.7	31.55	36.79	33.72	31.06	24.42
Excise duties.....	48.7	50.60	59.93	60.97	62.06	63.12
Other taxes.....		7.61	8.49	8.84	9.31	10.25
Other receipts.....	25.2	10.83	12.23	13.39	14.92	13.96
Total.....	181.2	210.95	224.58	223.51	226.90	230.98
Balance (+) or (-).....	+6.5	+18.62	+1.72	-8.60	+0.47	+9.02

Appendix Table 1. Continued

Items	1969	1970	1971	1972	1973	1974
	-----million colones-----					
Expenditure:						
Interest on public debt.....	3.06	4.1	5.2	6.8	7.8	8.9
Current transfers to:						
Private sector.....	17.69					22.2
Independent agencies and local governments.....	36.03	73.8	67.7	70.6	92.9	83.4
Abroad.....	1.14					3.7
Expenditure on goods and services..	151.32	154.6	170.7	197.9	212.8	258.0
Direct investment.....	28.96	26.9	35.0	52.0	65.6	82.7
Capital transfers.....	9.02	10.1	15.9	9.0	22.5	34.0
Total.....	247.22	269.5	294.5	336.3	401.6	492.9
of which:						
Education and culture.....	62.15	67.0	73.5	91.2	103.9	129.0
Public health.....	30.07	33.2	35.9	36.9	43.6	52.7
Housing and urbanization.....	7.86	7.2	2.3	4.8	20.3	1.7
Other social and communal services.....	23.80	39.8	30.6	39.8	38.8	42.5
Agriculture and livestock.....	9.79	11.9	14.8	18.0	25.2	44.8
Industry and commerce.....	1.16	2.9	3.6	3.2	2.9	5.4
Transport and storage.....	7.94	10.6	2.0	19.5	26.9	34.9
Defence and internal security.....	26.21	24.9	29.9	31.3	37.0	65.2
Receipts:						
Tax on income.....	38.06	39.7	45.4	52.1	62.6	80.0
Tax on wealth.....	24.82	24.9	24.5	23.5	30.8	--
Import duties.....	57.20	65.1	68.4	70.9	78.5	88.1
Export duties.....	27.40	48.5	38.2	47.5	76.1	93.2
Excise duties.....	68.45	71.7	77.1	82.1	93.2	5.0
Other taxes.....	10.64	14.6	25.3	28.8	34.9	187.0
Other receipts.....	16.08	17.3	20.8	21.5	26.6	143.4
Total.....	242.65	281.8	299.7	326.4	402.7	596.7
Balance (+) or (-).....	-4.57	+12.3	+5.2	-9.9	+1.1	+103.8

SOURCE: United Nations, Department of Economic and Social Affairs, Statistical Yearbook, 1975. New York: United Nations, 1976; and Statistical Yearbook 1969.

¹ Expenditure and receipts of the current and capital budget including earmarked taxes transferred to autonomous institutions. 1963: figures refer to general budget only. Operations of government enterprises (post, telecommunications, etc.) are included on a gross basis. Expenditure and receipts represent cash payments plus unpaid commitments and cash collections respectively for the year. Figures for 1964-1968 are not comparable with those for preceding years. Interest on public debt: 1963: including debt redemption. Current transfers to independent agencies: mostly to hospitals and educational institutions. Direct investment: outlays for buildings and construction, machinery and equipment; also financial investment. Tax on wealth: capital levies, property transfer taxes, death duties, tax on gifts, etc. Export duties: mostly on coffee. Other taxes: stamp duties, license and registration fees, miscellaneous charges. Other receipts: interests and dividends, profits from government enterprises and other commercial operations, other current transfer from the private sector, sale of fixed assets, etc.

Appendix Table 2. El Salvador, Agricultural Imports, 1967 to 1974

Commodity	Imports							
	1967	1968	1969	1970	1971	1972	1973	1974
	------(1,000 dollars)-----							
Total Merchandise Trade	223927	213514	209246	213600	247800	277300	371040	563680
Agricult Products, Total	33476	35853	35318	30837	32026	31031	44910	50825
Food and Animals	26384	27539	27150	23833	24885	24907	39333	42152
Live Animals	1258	1426	694	1015	850	602	602	903
Meat and Meat Prep	762	417	969	812	830	1044	966	1036
Dairy Products Eggs	4416	4466	3886	4458	5050	4958	5056	5286
Cereals and Prep	7376	8592	7743	5808	7571	7897	21385	20457
Fruit & Vegetables	6625	8360	6984	6421	3847	3564	4280	5362
Sugar and Honey	1478	1541	1438	1650	1448	1485	1528	2028
Coffee Tea Cocoa Sp	673	559	651	757	802	812	896	980
Feedingstuff	2003	1252	3496	1605	2811	2554	3420	4350
Miscellaneous Food	1793	926	1289	1307	1676	1984	1200	1750F
Beverages Tobacco	2165	1449	1804	1810	1605	1440	1516	1559F
Crude Materials Including	1750	2981	3085	2049	1894	1890	2100	2515
Hides and Skins								
Oilseeds								
Natural Rubber								
Textile Fibers								
Crude Mat., n.e.s.								
Animal & Vegetable Oil	3177	3884	3279	3145	3642	2794	1961	4599
Agricultural Requisites	17759	13807	19093	33485	13787	18577	24913	27930
Crude Fertilizer		13	----	109	163	170	---	---
Manuf Fertilizers	8311	8142	9524	10287	10301	12113	19898	20800
Pesticides	7227	4084	8184	21248	2008	2374	3000F	4500F
Agricultural Machines	1821	1568	1385	1841	1315	3920	2015F	2630F

F = FAO estimate.

SOURCE: FAO, Trade Yearbook, 1975 (Rome: United Nations, 1976), p. 491.

Table 3. El Salvador, Agricultural Exports, 1967-1974

Commodity	Exports							
	1967	1968	1969	1970	1971	1972	1973	1974
	----- (1,000 dollars) -----							
Total Merchandise Trade	207232	211705	202108	228320	227800	277600	358928	462480
Food and Agr. Products	139707	134006	128468	161881	160202	208955	234014	307381
Food and Animals	118860	115626	106893	136536	228436	166293	195224	255430
Live Animals	1973	1039	1087	914	476	445	406	391
Meat & Meat Prep.	376	167	161	68	161	5196	6607	8607
Dairy Products, Eggs	657	1079	1183	824	480	359	355	355
Cereals and Prep.	3914	4433	2534	2025	4137	3356	1395	768
Fruit & Vegetables	1253	739	617	130	272	467	572	464
Sugar and Honey	5572	10380	7088	8008	11293	20370	21343	44169
Coffee, Tea, Cocoa	100537	93651	89406	120971	107688	131609	159582	195110
Feedingstuff	2240	2079	3003	1931	2081	2624	3355	4040
Miscellaneous Food	2338	2059	1814	1665	1848	1867	1609	1526
Beverages Tobacco	217	188	154	204	209	203	200	200
Crude Materials	18923	16444	20372	24360	30408	41302	37906	51252
Hides and Skins								
Oilseeds								
Natural Rubber								
Textile Fibers								
Crude Mat., n.e.s.								
Animal & Vegetable Oil	1707	1748	1049	781	1149	1157	684	399
Agricultural Requisites	6052	6688	5762	5188	5885	6469	7090	7100
Crude Fertilizers	16	1	3	2	7	10		
Manuf. Fertilizers	2185	2972	3266	3211	3372	3500	4000	4300
Pesticides	3651	3574	2304	1920	2473	2839	3000F	2700
Agricultural Machines	200	141	189	55	33	120	90	100

SOURCE: FAO, Trade Yearbook, 1975 Vol. 29 (Rome: United Nations, 1976), p. 491.

Appendix Table 4. EL SALVADOR: COFFEE - Area, Production and Consumption, 1950-1975

<u>CROP YEAR</u> (Oct.-Sept.)	<u>AREA</u> (Acres)	<u>PRODUCTION</u> -----Bags of 60 Kilos-----	<u>CONSUMPTION</u>
1950-51	285,275	1,195,233	87,000
1951-52	288,530	981,333	88,000
1952-53	291,785	1,301,033	90,000
1953-54	295,040	998,967	92,000
1954-55	298,295	1,278,800	92,000
1955-56	301,550	1,209,800	94,000
1956-57	304,805	1,521,067	95,000
1957-58	308,062	1,399,167	97,000
1958-59	316,941	1,546,367	97,000
1959-60	325,820	1,634,533	98,800
1960-61	334,699	1,547,900	104,000
1961-62	343,578	2,044,700	106,000
1962-63	344,288	1,610,000	109,000
1963-64	344,998	2,031,667	122,000
1964-65	345,708	2,050,833	125,000
1965-66	346,418	1,766,400	130,000
1966-67	347,128	2,001,767	130,000
1967-68	347,838	2,369,767	135,000
1968-69	348,548	1,925,100	195,000 ^{1/}
1969-70	349,258	2,399,667	145,000
1970-71	349,969	2,170,000	155,000
1971-72	349,969	2,648,000	160,000
1972-73	361,273	1,918,615	N.A.
1973-74	361,273	3,334,919	N.A.
1974-75	361,273	2,441,097	N.A.

^{1/} Increased attributed to increased consumption by Armed Forces.

SOURCE: Banco Central, National Coffee Company, and Attaché Estimates; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; and Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 5. EL SALVADOR: COFFEE - Area, Production and Consumption, 1950-1975

<u>CROP YEAR</u>	<u>AREA</u> (Acres)	<u>PRODUCTION</u> (Bales)	<u>YIELD</u> (Lbs. Per Acre)
1950-51	47,582	27,089	284.6
1951-52	73,778	42,703	289.4
1952-53	69,646	46,736	335.5
1953-54	52,147	56,122	538.1
1954-55	73,065	89,058	309.4
1955-56	112,950	133,754	592.1
1956-57	94,826	140,793	742.4
1957-58	98,674	156,534	793.2
1958-59	127,876	172,559	674.7
1959-60	96,733	135,001	697.8
1960-61	143,751	182,363	634.3
1961-62	190,776	255,096	668.6
1962-63	218,428	314,630	720.2
1963-64	282,078	326,365	578.5
1964-65	274,205	355,183	647.7
1965-66	202,808	227,295	560.4
1966-67	122,067	169,078	692.6
1967-68	101,205	152,095	751.4
1968-69	125,944	195,562	776.4
1969-70	138,192	200,419	725.1
1970-71	154,403	240,194	777.8
1971-72	179,488	301,218	839.1
1972-73	210,042	330,000	785.6
1973-74	243,753	325,600	667.9
1974-75	217,455	259,600	596.9

SOURCE: Ministry of Agriculture except 1950-51 from C.A.S.; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December, 1972; Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976; and Indices of Agricultural Production for the Western Hemisphere, Statistical Bulletin No. 552, Economic Research Service, U.S. Department of Agriculture, Washington, D.C., May 1976.

Appendix Table 6. EL SALVADOR: SUGAR AND MOLASSES - Area, Production and Yield 1950-1975

<u>CROP YEAR</u>	<u>AREA</u> ^{1/} (Acres)	<u>CANE</u> <u>PRODUCTION</u> (S Tons)	<u>CANE YIELD</u> <u>PER ACRE</u> (S. Tons Per Acre)	<u>SUGAR</u> <u>PRODUCTION</u> (S.TONS)	<u>MOLASSES</u> <u>PRODUCTION</u> (1,000 of Gallons)
1950-51	17,736	369,635	20.84	28,637	2,201
1951-52	13,646	407,894	29.89	29,558	2,813
1952-53	15,708	399,486	25.43	29,895	2,650
1953-54	17,739	434,890	24.51	32,898	2,488
1954-55	16,015	462,817	28.89	37,712	2,811
1955-56	17,101	435,081	25.43	38,805	4,311
1956-57	19,125	478,170	25.00	49,739	3,429
1957-58	20,279	506,418	24.97	46,088	3,574
1958-59	20,411	525,020	25.68	50,452	4,022
1959-60	20,848	628,226	30.13	52,654	3,524
1960-61	20,064	593,385	29.57	53,654	3,524
1961-62	21,146	616,595	29.15	69,433	3,700
1962-63	22,438	698,890	31.14	63,715	3,772
1963-64	23,258	712,421	30.63	68,573	3,814
1964-65	34,984	1,144,097	32.70	112,471	6,165
1965-66	38,162	1,293,020	33.88	119,952	8,220
1966-67	38,129	1,273,320	33.39	136,080	7,798
1967-68	40,703	1,401,630	34.43	146,864	9,282
1968-69	36,344	1,129,059	31.06	118,956	7,058
1969-70	36,823	1,241,760	33.72	127,233	7,929
1970-71	48,499	1,671,892	34.47	172,750	11,740
1971-72	56,121	2,010,030	35.81	206,000	13,630
1972-73	81,546	2,642,596	32.41	209,380	N.A.
1973-74	88,959	3,254,206	36.58	255,664	N.A.
1974-75 ^{2/}	93,901	3,306,000	35.31	283,214	N.A.

^{1/} Beginning with crop year 1955-56 area figures include the cane of which was bought by mills.

^{2/} FAO estimate.

SOURCE: Ministry of Agriculture and Livestock; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; and Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 7. EL SALVADOR: CORN - Area, Production, Yield and Availability, 1950-1975

<u>CROP YEAR</u>	<u>AREA</u> (Acres)	<u>PRODUCTION</u> (Metric Tons)	<u>YIELD</u> (Cwt. per Acre)	<u>EXTERIOR^{1/}</u> <u>TRADE</u> (Metric Tons)	<u>PER CAPITA^{2/}</u> <u>AVAILABILITY</u> (Lbs. per Capita)
1950-51	436,408	202,853	10.1	16,331	243.1
1951-52	389,847	178,547	10.0	11,676	204.1
1952-53	449,099	173,440	8.4	10,453	190.9
1953-54	452,667	159,841	7.7	23,556	190.5
1954-55	470,622	170,372	7.9	6,339	177.6
1955-56	426,355	144,311	7.4	23,961	163.5
1956-57	412,103	158,896	8.4	5,475	154.1
1957-58	385,140	148,532	8.4	23,442	155.7
1958-59	441,828	141,525	7.0	34,232	153.7
1959-60	440,458	150,554	7.4	19,699	143.7
1960-61	438,884	178,029	8.8	- 956	144.8
1961-62	383,705	144,655	8.2	34,760	140.7
1962-63	488,888	212,942	9.5	21,723	204.7
1963-64	426,767	207,077	10.5	35,135	189.0
1964-65	409,650	191,611	10.2	58,326	188.1
1965-66	477,169	203,006	9.2	59,226	190.3
1966-67	513,118	265,914	11.3	6,142	190.3
1967-68	474,184	208,840	9.6	46,564	172.3
1968-69	493,655	257,549	11.3	10,076	174.0
1969-70	479,729	278,967	12.8	-14,836	164.7
1970-71	508,966	363,078	15.7	-40,295	200.6
1971-72 ^{3/}	519,519	377,199	16.0	-21,244	209.0
1972-73	499,160	406,000	16.0	62,220	266.7
1973-74	521,400	353,000	13.3	^{4/} 15,000	203.3
1974-75	528,813	381,000	14.2	22,124	215.9

^{1/} Exterior trade is the excess of imports over exports in the second calendar year.

^{2/} Per Capita availability is based on production plus imports minus exports

^{3/} Preliminary.

^{4/} FAO estimate.

SOURCE: Ministry of Agriculture and Livestock, and Direccion General de Estadistica y Censos; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agricultural Organization of the United Nations, Rome, 1976; and Trade Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 3), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 8. EL SALVADOR: BEANS - Area, Production, Yield and Availability, 1950-1975

<u>CROP YEAR</u>	<u>AREA</u> (Areas)	<u>PRODUCTION</u> (Metric Tons)	<u>YIELD</u> (Cwt.per Acre)	<u>EXTERIOR^{1/}</u> <u>TRADE</u> (Metric Tons)	<u>PER CAPITA^{2/}</u> <u>AVAILABILITY</u> (Lbs. per Capita)
1950-51	72,524	31,206	9.4	1,440	36.2
1951-52	87,299	30,142	7.5	4,364	37.0
1952-53	92,334	32,921	7.8	3,475	37.8
1953-54	84,796	28,747	7.4	4,941	35.0
1954-55	86,161	28,794	7.3	1,657	30.6
1955-56	85,223	27,890	7.1	6,036	33.0
1956-57	66,608	18,667	6.1	7,944	25.0
1957-58	61,929	13,426	4.7	6,954	18.5
1958-59	41,693	10,406	5.4	10,333	18.1
1959-60	53,210	10,233	4.2	9,043	16.3
1960-61	49,573	10,380	4.6	12,516	18.6
1961-62	53,111	10,479	4.3	15,552	20.4
1962-63	81,386	18,352	4.9	13,941	28.2
1963-64	68,664	14,462	4.6	15,469	23.4
1964-65	52,836	12,378	5.1	16,112	21.4
1965-66	58,128	16,546	6.2	11,759	20.5
1966-67	65,327	15,462	5.1	11,483	18.8
1967-68	70,229	17,486	5.4	14,583	21.6
1968-69	78,317	21,270	5.9	11,122	21.1
1969-70	81,249	26,287	7.1	6,221	20.3
1970-71	89,268	29,877	7.4	1,937	19.8
1971-72 ^{3/}	98,610	34,500	7.7	N.A.	20.2
1972-73	111,199	37,000	6.6	3,780	23.2
1973-74	126,026	34,000	5.2	3,500 ^{4/}	20.7
1974-75	128,497	37,000	5.6	2,500	21.2

^{1/} Exterior trade is the excess of imports over exports in the second calendar year.

^{2/} Per Capita availability is based on production plus imports minus exports.

^{3/} Preliminary.

^{4/} FAO estimate

SOURCE: Ministry of Agriculture and Livestock and Direccion General de Estadistica y Censos; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; and Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 9. EL SALVADOR: SCRGHUM - Area, Production and Yield, 1950-1975

<u>CROP YEAR</u>	<u>AREA</u> (Acres)	<u>PRODUCTION</u> (Metric Tons)	<u>YIELD</u> (Cwt. per Acre)	<u>EXTERIOR^{1/}</u> <u>TRADE</u> (Metric Tons)
1950-51	180,818	77,464	9.3	5,244
1951-52	169,533	80,260	10.3	1,216
1952-53	204,469	89,327	9.5	2,385
1953-54	229,529	101,367	9.6	2,055
1954-55	238,842	109,906	10.0	51
1955-56	235,117	103,553	9.6	562
1956-57	230,269	115,648	10.5	871
1957-58	205,527	86,285	9.1	2,112
1958-59	220,276	77,700	7.7	3,472
1959-60	208,384	74,904	7.8	1,717
1960-61	215,515	81,734	8.2	-1,706
1961-62	243,013	84,433	7.6	623
1962-63	259,827	111,745	9.3	784
1963-64	233,547	95,082	8.9	- 15
1964-65	215,307	87,743	8.9	5,403
1965-66	274,551	105,611	8.4	1,680
1966-67	265,934	114,680	9.4	-6,758
1967-68	256,732	108,100	9.2	375
1968-69	281,125	124,209	9.6	-2,408
1969-70	281,255	128,069	10.0	-2,687
1970-71	306,902	147,186	10.6	-6,836
1971-72 ^{2/}	311,400	156,400	11.1	N.A.
1972-73	294,060	156,000	10.5	N.A.
1973-74	313,828	131,000	8.2	N.A.
1974-75	323,713	146,000	8.9	N.A.

NOTE: In recent years 80 percent of supply is consumed by animals;
20 percent by humans.

^{1/} Exterior trade is the excess of imports over exports in the second calendar year.

^{2/} Preliminary.

SOURCE: Ministry of Agriculture and Livestock and Direccion General de Estadistica y Censos; Brief on Salvadoran Agriculture; Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; and Production Yearbook 1975, Vol. 29 (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 10. EL SALVADOR: RICE (MILLED) - Area, Production, Yield, Trade and Availability, 1950-1975.

<u>CROP YEAR</u>	<u>AREA</u> (Acres)	<u>PRODUCTION</u> (Metric Tons)	<u>YIELD</u> (Cwt. per Acre)	<u>EXTERIOR^{1/}</u> <u>TRADE</u> (Metric Tons)	<u>PER CAPITA^{2/}</u> <u>AVAILABILITY</u> (Lbs. per Capita)
1950-51	27,737	14,819	11.6	1,857	18.5
1951-52	40,378	16,892	9.1	236	18.4
1952-53	42,804	17,616	8.9	201	18.5
1953-54	52,628	22,416	9.3	2,736	26.1
1954-55	49,151	21,982	9.7	3,182	25.3
1955-56	43,212	19,137	9.6	3,684	22.2
1956-57	38,467	18,065	10.2	549	16.9
1957-58	36,560	14,686	8.7	614	13.9
1958-59	29,913	12,281	8.9	3,244	13.6
1959-60	23,258	12,202	11.4	2,692	12.6
1960-61	26,924	13,100	10.6	618	11.2
1961-62	21,988	11,623	11.5	2,869	11.4
1962-63	26,848	16,662	13.5	928	15.4
1963-64	21,165	13,414	13.8	- 1,221	10.5
1964-65	36,590	21,498	12.8	- 1,264	16.2
1965-66	32,697	22,669	15.1	- 660	16.5
1966-67	48,748	32,777	14.6	-11,546	22.9
1967-68	69,200	50,600	15.9	-21,756	34.1
1968-69	67,470	51,750	16.7	-11,376	26.2
1969-70	26,469	23,193	19.3	- 3,360	12.4
1970-71	29,410	28,750	21.5	1,891	19.1
1971-72 ^{3/}	33,147	34,500	22.6	- 3,978	17.9
1972-73*	24,710	37,000	34.8	- 2,300	19.8
1973-74*	27,181	32,000	25.6	2,500	19.1
1974-75*	39,537	37,000	20.9	N.A.	19.8

^{1/} Exterior trade is the excess of imports over exports in the second calendar year.

^{2/} Per capita availability is based on production plus imports minus exports.

^{3/} Preliminary.

*Rice (paddy).

SOURCE: Ministry of Agriculture and Livestock and Direccion General de Estadistica y Censos; Brief on Salvadoran Agriculture, Office of the Agricultural Attaché, American Embassy, San Salvador, El Salvador, December 1972; Production Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 2), Food and Agriculture Organization of the United Nations, Rome, 1976; and Trade Yearbook 1975, Vol. 29, (FAO Statistics Series, No. 3), Food and Agriculture Organization of the United Nations, Rome, 1976.

Appendix Table 11. El Salvador Production by Commodity, Average 1961-65 and Annual 1961-75

Commodity	Average	1961	1962	1963	1964	1965	1966	1967
	1961-65							
-----1,000 metric tons-----								
Rice, Paddy	30	27	28	32	30	34	50	78
Corn	192	145	213	207	192	203	266	209
Sorghum	100	84	112	112	88	106	115	108
Beans, Dry	14	10	18	14	12	17	16	17
Tobacco	1	1	1	1	1	1	2	2
Cotton	66	56	69	73	82	51	39	35
Cottonseed	112	101	120	121	132	86	65	58
Coffee	113	114	99	120	124	109	118	144
Sugar, Raw (Centrifugal)	72	53	66	62	78	99	111	125
Sugar, Noncentrifugal	21	17	20	24	25	18	23	28
Cattle Exports in 1,000 head	18	18	21	29	14	8	19	21
Cattle Imports in 1,000 head	10	11	13	14	11	3	1	2
Beef and Veal	21	21	21	21	21	21	22	21
Pork	14	17	15	15	12	12	13	13
Milk	231	212	221	231	241	250	252	262

Commodity	1968	1969	1970	1971	1972	1973	1974	1975
Rice, Paddy	80	36	44	55	49	54	49	92
Corn	258	279	363	377	237	406	353	380
Sorghum	124	128	147	156	157	156	131	146
Beans, Dry	21	26	30	34	27	38	34	37
Tobacco	1	1	1	1	1	1	1	1
Cotton	44	46	54	68	70	75	74	59
Cottonseed	74	76	91	110	112	124	125	96
Coffee	114	150	130	156	126	124	208	130
Sugar, Raw (Centrifugal)	135	109	117	158	188	232	257	253
Sugar, Noncentrifugal	26	23	28	13	13	10	16	18
Cattle Exports in 1,000 head	10	18	17	5	1	0	0	0
Cattle Imports in 1,000 head	2	1	2	2	1	1	1	1
Beef and Veal	21	21	20	20	25	27	30	26
Pork	13	12	11	10	10	11	11	12
Milk	271	280	275	275	275	280	280	300

SOURCE: Indicies of Agricultural Production for the Western Hemisphere, (ERS-Foreign 264), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., Revised, April 1971; and Indicies of Agricultural Production for the Western Hemisphere, (Statistical Bulletin, No. 552), Economic Research Service, U.S. Department of Agriculture, Washington, D.C., May 1976.

Appendix Table 12. El Salvador - Area and Production of Basic Grains in Agricultural Year 1970-71

Farm Size (Ha.)	CORN				BEANS			
	Area Hectares	Percent	Production Metric Tons	Percent	Area Hectares	Percent	Production Metric Tons	Percent
Less than 1.0	53,680	21.26	86,505	19.59	8,876	19.57	8,880	20.17
1 - 1.99	56,219	22.27	87,750	19.87	10,423	22.98	8,813	22.00
2 - 4.99	60,818	24.09	102,348	23.18	10,443	23.02	8,824	22.02
5 - 9.99	26,780	10.61	46,918	10.63	5,105	11.25	4,198	10.48
10 - 19.99	17,364	6.88	31,198	7.7	3,310	7.30	2,753	6.87
20 - 49.99	13,959	5.53	25,747	5.83	2,622	5.78	2,263	5.65
50 - 99.99	7,360	2.91	15,992	3.62	1,870	4.12	1,290	3.22
100 - 199.99	5,415	2.15	13,176	2.98	881	1.94	892	2.23
200 - 499.99	5,178	2.05	14,350	3.25	645	1.42	817	2.04
500 - 999.99	2,659	1.05	7,841	1.78	513	1.13	925	2.30
1000 & more	3,014	1.19	9,696	2.20	677	1.49	1,211	3.02
TOTAL	252,446	100	441,521	100	45,365	100	40,066	100

Source: Directorate General of Statistics and Census
III Agriculture and Cattle Census.

Continued ---
following page

Appendix Table 12. (Con.) El Salvador - Area and Production of Basic Grains in Agricultural Year 1970-71

Farm Size (Ha.)	RICE				SORGHUM			
	Area Hectares	Percent	Production (Oro)* Metric Tons	Percent	Area Hectares	Percent	Production Metric Tons	Percent
Less than 1.0	660	4.82	1,253	4.61	26,002	21.15	30,651	22.92
1 - 1.99	1,465	10.69	2,605	9.58	30,726	25.00	33,862	25.32
2 - 4.99	3,035	22.15	5,909	21.73	31,141	25.33	32,775	24.51
5 - 9.99	1,853	13.52	3,236	11.90	13,007	10.58	13,848	10.35
10 - 19.99	896	6.54	1,462	5.38	7,863	6.39	7,946	5.94
20 - 49.99	997	7.27	1,853	6.81	7,034	5.72	7,132	5.33
50 - 99.99	1,085	7.92	2,354	8.66	2,679	2.18	2,625	1.96
100 - 199.99	531	3.86	943	3.47	1,786	1.45	1,937	1.45
200 - 499.99	1,563	11.41	3,468	12.75	1,674	1.36	11,930	1.44
500 - 999.99	1,377	10.05	3,321	12.21	563	0.46	646	0.48
100 & more	242	1.77	788	2.90	471	0.38	374	0.28
TOTAL	13,704	100	27,192	100	122,946	100	133,726	100

***Literally good, but refers to condition after processing to remove by-products or waste.

SOURCE: Directorate General of Statistics and Census
III Agriculture and Cattle Census.

Appendix Table 13. El Salvador, Table of Equivalents

1 square kilometer	= 0.386 square mile
1 kilometer	= 0.6214 mile
1 meter	= 3.28 feet
Degrees centigrade	= $\frac{5}{9}$ (degrees F. -32)
1 millimeter	= 0.03937 inch
1 hectare	= 2.471 acres
1 manzana	= 1.73 acres
1 metric ton (1000 kgs.)	= 2,205 lbs.
1 quintal	= 100 lbs.
\$1 U.S. Dollar	= 2.50 Colones