

AGROCRED 07-80

OCTOBER - 1980

***CROP CREDIT INSURANCE PROJECT
IN LATIN AMERICA
FINANCIAL PLANNING REPORT***

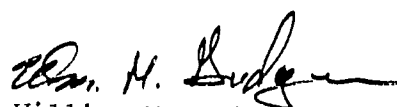


INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS – OEA

PROYECTO DE SEGURO AGROREDITICIO



Con atento saludo de


William M. Gudger

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EXECUTIVE SUMMARY

The Crop Credit Insurance being carried out by IICA with financing and support from AID-Washington under the terms of Grant AID/LAC/IGR-1297 is designed as the initial operational test of the viability and cost-effectiveness of crop credit insurance as a development tool for small farmers. IICA was chosen to implement the project because of its small farmer orientation, its strong infrastructure in the countries selected by AID (Panama, Ecuador, and Bolivia) for the pilot project, and a membership structure that permits IICA to carry out its work despite rapid government turnovers. This latter has been extremely helpful in Bolivia and Ecuador. The project began operations in October 1978 and is funded through August 31, 1983. The specific objectives of the project are set forth in Attachment 1 of the Grant Letter and can be summarized as follows:

- A. Assist and/or promote the establishment and/or development of three national crop credit insurance institutions which serve small farmers and train specialized personnel as necessary.
- B. Coordinate and/or direct research into the economic desirability and feasibility of crop credit insurance and the impact of the system upon farmer's welfare, public finances and production.
- C. Determine the technical and economic feasibility of and design a regional crop credit reinsurance mechanism.
- D. Produce reports, case studies and documents which can be helpful in planning and developing crop credit insurance institu-

tions and present a final report analyzing the benefits, feasibility and potential for the system as a development tool and present a plan for the implementation of additional projects as appropriate.

ACCOMPLISHMENTS AT MID-PROJECT

Since the initiation of the project, IICA has moved rapidly to contract and train the required staff. At the outset there were no people trained in agricultural insurance; only the Coordinator had previous insurance experience. Agricultural development professionals were intensively cross-trained in insurance. Two of the countries, Ecuador and Bolivia had no insurers capable of carrying out the project. In both cases, the project designed the new institutions and negotiated the terms of participation of the various ministries and banks in the operations of the insurer. The single most difficult task was to secure the counterpart financing for the reserve. No AID Grant money may be used for risk capital. The IICA crop credit insurance project has adopted the norm of not proceeding with a project until the insurer can pay any and all losses. Therefore, IICA had to negotiate the contributions required to constitute the reserve. In Bolivia we were able to negotiate a single \$1 million grant from P.L.480 funds. Ecuador will capitalize its insurer with \$3.6 million over the life of the project. At mid-point, we are able to report the creation of two new, financially stable Latin American insurers; one of which, Bolivia, is already issuing potato policies and the other, Ecuador, will begin operations within three months.

The results of the Project's work to date by country and by program element can be briefly summarized:

PANAMA

The IICA crop credit insurance project began working with the newly created Instituto de Seguro Agropecuario (ISA) and quickly doubled its rate of growth in both its agricultural and livestock portfolios. We have assisted ISA with the inclusion of two new crops, beans and industrial tomatoes, in addition to its rice, corn, and sorghum programs. Our technical assistance has helped upgrade the insurer's operational and financial planning, data processing and promotion as well as having provided extensive training to the field staff. At present, the Panama project is clear proof that the insurance can reach small farmers and can do so at a reasonable and acceptable cost. Over 2/3 of the insured farmers have less than \$10,000 in fixed assets while over half of the livestock producers have fixed assets of \$20,000 or less. The average premium for crop protection is about 5%, which is comparable to the U. S. Federal crop Insurance Corporation's premium, while the livestock premium of 3% is probably the lowest in the world. The IICA program is currently assisting ISA to add a new life insurance coverage for all its policyholders thus making available for the first time in many rural areas this protection. In addition, IICA has helped negotiate reinsurance coverage from a Lloyds of London reinsurer. That commercial reinsurance can be obtained

at this early stage is a strong indicator of the financial and administrative viability of the insurer.

Panama has been the principal laboratory for the development of our research program. The results of that work are reported in a comparison document Proyecto de Seguro Agrocrediticio en América Latina: Informe de Avance de las Investigaciones-1980.

At present, an independent AID-financial evaluation of the project is being carried out by a team headed by Herman L. Myers of the Washington Evaluation Associates. The evaluation which focuses upon Panama should be completed before the end of the year.

BOLIVIA

The IICA crop credit insurance project has been the principal force promoting the creation of the new insurer, Aseguradora Boliviana Agropecuaria (ASBA). Despite a series of governmental changes, we have been able to obtain approval of the various decrees to establish the insurer. A \$1 million grant from P.L. 480 established a reserve for the insurer. ASBA has begun operations despite the paralization of the Banco Agrícola Boliviana credits. We were able to negotiate with the Banco Central the release of \$b4 million so that insurance operations could begin this year. At present the insurer is issuing potato insurance in Cochabamba. ASBA currently has about 8 people trained by IICA in the field to implement the program and carry out the research. The principal focus of our work in Bolivia is to determine if insurance as part of a credit and

technology package can accelerate technology adoption and enable farmers to return to production quickly after a severe loss. The clients are very small and traditional potato producers who have been unable to utilize modern inputs

ECUADOR

IICA has negotiated the establishment of the new insurer, Compañía Nacional de Seguro Agrícola (CONASA) and the contribution of \$3.6 million by the Ecuadorian government to form the reserve of a new company. On November 15, IICA will sign its technical assistance agreement with the new insurer. Early in 1981 we expect to have recruited and trained staff and to be able to initiate insurance operations.

RESEARCH

As the project moves into the second two years of the grant, the research component becomes increasingly important. In Panama our research is well advanced and data analysis can now begin. Data collection is underway in Bolivia and our analysis will begin as soon as the results of the first cycle are in. In Ecuador, baseline studies of the areas where insurance is to be offered are being conducted. The overall research design is now well developed. The companion document to this report explains in detail the work that will be carried out. Briefly, however, the research component has developed three sets of models to measure changes produced by the introduction of insurance at the farm, bank and sectoral levels.

It should be noted that the research in Mexico has been halted as we have determined that the funds available (\$35,000 for 3 years and \$15,000 for the fourth year) are inadequate to produce the expected results and due to the fact that the Mexican insurer is undergoing a complete restructuring.

TRAINING

IICA has carried out two training courses in Mexico, the U. S. and Puerto Rico to train both the IICA staff and the national insurers personnel. We have trained Panamanians and Bolivians and will soon train Ecuadorians in both managerial and technical field operations.

OTHER ACTIVITIES

As a result of the AID Grant, IICA has established a Division of Agricultural Insurance and Credit to carry out IICA funded projects. At present, we are negotiating a technical assistance agreement with Venezuela. The division has also answered requests for agricultural insurance assistance from Costa Rica, the Dominican Republic, Trinidad-Tobago, and Chile.

PROJECT RESOURCES

The current grant is for \$4,046,000. As of December 31, 1980 we estimate the project will have expended \$1,400,000. The currently available resources can finance the project until the end of 1982. In order to complete the objectives of the project set forth above, we estimate the project should be extended until December 1983 in Panama, until December 1984 in Bolivia and until June 1985

in Ecuador. Earlier terminations would be especially prejudicial to the research as sufficient time would not be available to generate data and analysis to measure the impact of the introduction of insurance. To complete the project, we estimate a total cost of \$8,150,000. Of this amount, we estimate that \$3,850,000 or 47.2% is needed for subgrants to the insurers and about \$1,800,000 or 22.1% is required to carry out the research. The remaining funds, (30.7%) would cover the project's operational costs, technical assistance to the insurers, and training costs. In addition, we estimate that the supervision of the project and the technical assistance offered by AID would cost about \$600,000 during the 1978-85 period, \$329,000 of which has been obligated.

INTRODUCTION

Agricultural Credit Insurance is a mechanism which, when made available to small and medium size farmers, protects them in the event of natural disasters. Its aim is to protect investment against the catastrophic effects of natural hazards and diseases that cause crop failure, animal death or loss of their functions. By purchasing an insurance policy, the farmer protects his loan (or a portion of it) and hence if the harvest (or part of it) is lost or if the animal dies, the insurance agency pays the bank the amount due from the farmers. Thus, the farmer is left without debt and can obtain a loan for the following cycle. He can return to production with the same resources. Insurance therefore serves not only to protect the farmers' capital but also to enable him to obtain credit after a disaster that would have left him indebted. In addition, insurance dramatically alters the farmer's capital-to-equity ratio and permits him to absorb far more debt than his capital investment alone could guarantee. As a result of increased debt-bearing capacity, he is able to invest in productive new technologies that were previously so expensive that a single failure with them would have endangered the enterprise. Insurance not only levels income fluctuation across years but also permits a much larger credit absorption on a given resource base. Insurance is therefore increasingly viewed as a necessary component in modern rural development programs.

With insurance, while the occurrence of an individual loss is generally unpredictable, considered with a large number of similar losses, its occurrence or probability becomes to a large extent predictable. Insurance lessens the

burden of losses in one season or in one or more areas by spreading it over a number of seasons and over wider areas. As far as the farmers are concerned, they are assured of a minimum protection against the uncertainties of crop yield. From the lenders point of view, the insurance is a very strong guarantee of recovery. From the point of view of the system, insurance obviates the need to mount expensive ad-hoc disaster efforts as the insurance system itself is able to offset the losses from the reserves collected in good years and in unaffected areas.

Crop credit insurance, by substituting regular premium payments for irregular and unpredictable losses, spreads risk among producers and various crops and over regions and time. In spreading risks, insurance not only contributes to the security and stability of farm income, but to the greater economic stability of the rural community in general. By assuring payment of loans, crop credit insurance will prevent the decapitalization of credit sources which serves the community while at the same time requiring less recapitalization on the part of the government to the bank for the indebtedness of farmers as a consequence of natural disasters. As a result, the lending agency is able to destine a larger portion of its portfolio to projects to increase production and productivity.

These theoretical advantages have been known for many years and in fact most of the developed and some developing countries have set up insurers to take advantage of them. To date however, no comprehensive research has been carried out on the structure, administration, financing or the economic results of these insurers. While it is widely held that crop credit insurance could be an important addition to a supervised credit program, no knowledge exists about

how these insurers should be designed and operated. At the theoretical level, there are numerous studies of the hypothetical impact of risk on the farmers' decision making process but to date there is not one single empirical investigation of actual behavioral changes after insurance is introduced.

Likewise, it is frequently held that insurance is a good idea whose time has not yet come in the developing world. This view holds that insurance is the last component to be introduced in well developed agricultural sectors as it is too expensive for small farmers in the developing world and has generally failed when it has been introduced prematurely. Despite considerable evidence that insurance works well when properly structured and well administered, the view that it is technically and financially infeasible has persisted without a careful reexamination of the premises and the experiences of the developing countries for almost twenty years.

The experimental pilot project now being implemented by the Instituto Interamericano de Ciencias Agrícolas (IICA) under the terms of an Agreement with the Agency for International Development through which AID has granted more than \$4 million for developing crop credit insurance programs in Panama, Ecuador and Bolivia to serve small farmers is the first operational field test of the cost effectiveness of insurance as a development tool. The principal focus of the project is to create (or strengthen in the case of Panama) national crop credit insurers and provide them with guidance and financial support during their initial start-up phase. At the same time, the project has a research objective which is to determine the economic, financial and

social costs and benefits of crop credit insurance within a rural development strategy. The testing of the various administrative and financial models and the research activities are designed to provide a basis for decision making not only in the project countries but also throughout the hemisphere. Based upon the work carried out during the project, interested countries and development agencies will have a firm basis for evaluating the feasibility of crop credit insurance in terms of administrative and financial feasibility as well as the economic and social costs and benefits of an insurance system.

At the end of the project, for the first time decision makers will have empirical data and will be able to make judgements as to whether and under what conditions an agricultural insurer is a wise investment and what one may reasonably expect it to produce. In addition, for the first time, firm guidance on feasible administrative and financial structures for the insurers will be available so that those who decide to go ahead will have several models that can be adapted to local circumstances.

The transfer and adaption of highly complex insurance technology to the Latin American milieu is lengthy process fraught with the possibility of the failure of one or more of the insurers due to the frequently turbulent political and economic conditions of the region. As of mid-point in the project, the perspectives are very bright indeed that the project will be able to realize almost all of the goals set forth in the original grant document. Although unexpected government changes in Ecuador and Bolivia have delayed the initiation of the project in those countries, both have now responded positively to our efforts and have established insurers with adequate reserves to carry out the pilot projects. We in IICA are confident that the pilot

projects can now procede and that they will in the next years begin to produce invaluable information about the feasibility of crop credit insurance as a development tool.

1. PROJECT OBJECTIVES

The Specific Objectives of the Crop Credit Insurance Project are those stated on Attachment 1 of Grant Letter AID/LAC/IGR-1297 and they can be summarized as follows:

- A. Assist and/or promote the establishment and/or development of three national crop credit insurance institutions which serve small farmers and train specialized personnel as necessary.
- B. Coordinate and/or direct research into the economic desirability and feasibility of crop credit insurance and the impact of the system upon farmer's welfare, public finances and production.
- C. Determine the technical and economic feasibility of and design a regional crop credit reinsurance mechanism.
- D. Produce reports, case studies and documents which can be helpful in planning and developing crop credit insurance institutions and present a final report analyzing the benefits, feasibility and potential for the system as a development tool and present a plan for the implementation of additional projects as appropriate.

A specific program or project, although it has its own objectives and pursues its own internal goals, is generally part of an overall strategy.

Although the Crop Credit Insurance Project has as its principal focus the realization of the project objectives set forth above, it is part of a larger strategy to make available the newly created knowledge if it should be demonstrated that crop credit insurance has a significant developmental impact.

The Project Paper prepared by AID foresaw a three phase project in which each subsequent phase depended upon the results of the preceding phase. These three five year projects formed the overall strategy within which the present project was funded. The overall strategy has been divided as follows:

A. Phase One

To establish three pilot projects and support them until they are in conditions to operate on their own. To analyze the economic impact of the crop credit insurance programs and generate studies to be used in later decisions. To develop, from these pilot projects and from the efforts in other countries, a proposal to create a regional system of agricultural reinsurance. (This is a five years phase).

B. Phase Two

To support the consolidation of the three original projects and to begin five new ones. To establish and support the regional insurance system. (This is a five years phase).

C. Phase Three

To support the consolidation of the projects started on Phase Two. To support the development of the regional reinsurance system. (This is a five years phase).

Within this context is important that the first phase be done well and completely as it is to form the basis of subsequent decision making by both development agencies and host governments. In order to accomplish the project's objectives and as a main element to determine the length of this program, we believe it is necessary to develop an adequate statistical base to reach valid conclusions about the impact of crop credit insurance and thus that a minimum at least four years of data should be available to form the basis of future decision making. The same time span would seem adequate to create administratively and financially sound institutions capable of self-sustained growth and requiring only occasional technical assistance. Equally important is the process of developing a highly competent field staff upon which the insurer success depends in large measure and integrating the efforts of the insurer with those of Ministries of Agriculture, development banks, extension services and other agencies working in agricultural development. Again, a four year time frame from the outset of operations should provide the project with the needed time to help train personnel and assist in developing the necessary institutional linkages between the insurer and the national administrative system.

2. PROGRAM ACCOMPLISHMENTS

The Crop Credit Insurance Program now has two years of operation, with the Coordinator beginning on October, 1978. The accomplishments of this period can be summarized as follows:

A. PANAMA

On March 16, 1979, IICA and the Instituto de Seguro Agropecuario (ISA) signed an agreement for a joint Pilot Project for expanding and improve agricultural and livestock insurance programs. As a result of this cooperation in the 1979-80 agricultural year, ISA more than doubled the growth rate of its portfolio with the addition of two new crops, beans and industrial tomatoes, as well as the expansion of rice, corn and sorghum programs, according with the following figures:

ISA CROP CREDIT INSURANCE PROGRAM

(dollars in thousands)

Agricultural Year	Hectares		Coverage		Premium Income	
	No.	Growth	\$	Growth	\$	Growth
1977-78	5,410	-	1,129.6	-	58.7	-
1978-79	7,307	35.1%	1,887.5	67.1%	103.7	77.7%
1979-80	13,988	91.8%	4,575.7	142.4%	358.7	160.0%

Source: ISA

The program has also contributed to strengthen livestock insurance, started in 1978 and which in 1979-80 reached coverage of 11,600 head of cattle, swine and horses.

The bulk of the insured are small farmers, and currently almost seventy percent have less than \$10,000 in fixed assets, while most of the cattle raisers have less than \$20,000 in fixed assets. The Program has rapidly and successfully established a single insurer to serve the small and medium scale farmers, at low premium rates that average 5% for agricultural insurance and 3% for livestock insurance.

Also, the institutional upgrading at ISA has begun with the contracting of visiting actuaries. Technical assistance is being provided on management, budgeting, computing and communication systems. A proposal for establishing a complementary farmer's life insurance is now under negotiation with private insurers due to ISA's legal restrictions to operate non-agricultural lines. Reinsurance has now been offered by a Lloyds of London direct brokerage firm and will probably be in place early next year. The Panamanian government has agreed to pay the cost of this coverage.

ISA itself has been particularly helpful in collaborating with the newly created insurers and has provided training to a group of technicians from Bolivia and to the members of the Board of Directors of the recently organized crop insurance company of Ecuador, the later financed by AID-Quito.

The past two years of work in Panama have helped a highly competent manager turn the insurer into a model for the developing world. It is administratively sound and has developed an excellent internal dispersion of risk. The reinsurance will help ISA to obtain an even better risk spread and will contribute to making the institute financially able to withstand a major catastrophe. It is also an ideal research laboratory and will produce the first hard data on the impact of crop credit insurance.

B. BOLIVIA

IICA was the prime mover in drafting and promoting the legislation creating the Aseguradora Boliviana Agropecuaria (ASBA). It was constituted through the Supreme Resolution No. 191655 as a public company, with administrative autonomy and its own assets. Once ASBA had been created, its officers appointed and its offices installed, an Agreement was signed with IICA to provide technical and financial cooperation for the pilot project. Most recently another Agreement was signed with the Ministerio de Agricultura y Asuntos Campesinos (MACA) and the Banco Agrícola de Bolivia (BAB) to coordinate credit and technology transfer. The Government assigned \$1,000,000 from P.L.480 - Title III funds to cover the technical reserve. Although BAB has halted all credit operations after the recent coup, IICA has successfully negotiated with the Central Bank a disbursement to BAB of \$4 million so that the Cochabamba office of the BAB will be able to make loans to the new insurers clients.

IICA together with the new staff of the insurer has conducted the studies to determine alternative project sites and for preparation of regulations, forms

and accounting procedures necessary for providing its services. These have all been approved by the Superintendencia de Seguros.

The pilot project operations began insuring potato crops of small farmers in Cochabamba, where a local office was established to work closely with BAB's local branch and so help integrating credit and insurance activities. The initial group of insured farmer have as an average about one hectare under cultivation. The new insurance and credit program offers three technological packages ranging from very traditional to one with large amounts of modern inputs. Both the credit and the insurance are designed to offer significant incentives to farmers who opt for the more productive packages. The credit covers a larger part of the production cost while the insurance offers more coverage for the modern packages. There has in the past been a very marked resistance in the area to adopting modern inputs. A basic focus therefore of our project is to test whether insurance sufficiently alters the farmers' risk calculation so that the rate of technological adoption is accelerated.

C. ECUADOR

IICA carried out the initial legal and financial studies in Ecuador and in cooperation with the Ministerio de Agricultura y Ganadería, selected possible zones and crops. On the basis of these studies, a proposal was submitted to the Government. After long negotiations, the Compañía Nacional de Seguros Agrícolas (CONASA) was constituted, as a parastate entity

with the participation of the private sector. An Agreement between IICA and CONASA will be signed on October 15 for technical and financial cooperation. The Junta Monetaria, Ecuador's supreme monetary and financial authority, approved a contribution of nearly \$3,600,000 over the life of the project, to finance the technical reserve and some organization expenses. Insurance operations, once all the preparations are completed, will begin early next year.

The first crops to be insured will be corn in the mountains and rice in the costal areas. At the same time we are hopeful that we can begin livestock insurance operations.

The Ecuadorian insurer's structure is worthy of note. While in Bolivia, the cooperative movement is represented on the board, the capital and control of the insurer is in the hands of the state. In Ecuador, three private sector lending agencies have contributed capital and are represented on the board. In addition, the insurer is open to other lenders who wish to contribute capital and participate, including existing cooperatives and groups especially organized for the purpose of obtaining insurance. Thus, in Ecuador, we have constructed a quite different model, moving away from a state venture to a mixed capital enterprise and from an insurer whose clients are to a large extent selected by the official bank to one that draws on the Japanese and Israeli experience and permits a wide variety of groups, each with its own sources of credit, to take part as partners in the insurance. The very large reserve contributed by the state makes possible a rapid growth of the portfolio to cover the risks of groups desiring insurance protection.

D. RESEARCH

Most of the current year was dedicated to the designing of the conceptual framework and methodology for research of the effect of crop credit insurance at the farm level, the agricultural sector and the banking system. The research is being planned on these three separate but interrelated levels of analysis. We have developed a farm level model to measure the impact of insurance on the farm in terms of changes in the income stream, technological adoption, and cropping patterns as well as changes in the debt-to-equity ratios and the speed of recovery after disasters. At the level of the insurer and lending agency we are developing a linear programming based portfolio model to measure the impact of varying the composition of the portfolio or adding new options on the overall performance of the portfolio. Finally a sectoral model to be used in the latter part of the project is under development. The collection of data and organization efforts is under way in Panama and Bolivia, and most of the information already available is in IICA's computer center in San José. The empirical analysis has been so far very limited but it is expected that 1981 will be most rewarding in this regard. Full information and the model structures for research activities are contained in the companion Document Agrocred 06-80-Informe de Avance de las Investigaciones.

E. TRAINING

A well trained insurance staff is critical to the eventual success of the newly created agencies. Our program has since its outset placed

emphasis on the creation of agricultural insurance professionals. Our advisors are all agricultural development professionals who have been intensively cross trained in insurance. The technical staffs in the countries are recruited from agencies working with small farmers, such as credit institutions, extension services, and community development agencies.

The result of this training has been to produce about 20 new agricultural insurance professionals who can serve not only in their own countries but can assist in the training of the staff of other countries. The staff of the Panamanian insurer is for example assisting both Bolivia and Ecuador.

Several existing insurers have offered their cooperation in our training programs. The U. S. Federal Crop Insurance Corporation has received all the project personnel and offered technical and managerial training as well as having supplied actuarial experience to Panama. The Mexican insurer, ANAGSA, and Farm Insurance of Puerto Rico have also provided training and sent personnel to Panama, Ecuador and Bolivia.

The project's initial training courses have provided the field and managerial staffs an adequate working knowledge for them to be able to function effectively. Part of our ongoing technical assistance is to continue the on-the-job education of the staffs through consultants who offer seminars in the specialized areas of management, financial operations, re-insurance, field operations, and actuarial calculations and through the interchange of personnel of the insurers.

F. HEMISPHERIC ACTIVITIES

One of the original goals of AID in placing this project in IICA was to begin the process of creating a regional source of technical assistance for countries developing insurance programs for their agricultural sectors. One important result of the project in IICA is that the Institute has institutionalized the response capacity in the new Division of Agricultural Insurance and Credit. The activities of the new division are financed out of IICA funds. The Division's basic mission is to meet the needs of the member states for technical assistance in agricultural insurance.

In the division's first year of existence it has prepared a diagnosis of the Costa Rican crop insurer and developed a technical assistance program to assist the Instituto Nacional de Seguros in reorganizing the system, linking it to the credit system and orienting it toward small farmers. Preliminary negotiations are underway to obtain financial assistance from the Government of Spain to carry out the project.

The Division has also answered a request from Venezuela's Fondo de Crédito Agropecuario to assist in designing an insurance system for the country. At present, the Aseguradora Nacional Agrícola, Compañía Anónima (ANACA) is being organized. An Agreement between the new company, ANACA, and IICA is now in the final stages of negotiations. Under the terms of the agreement IICA will provide the Venezuelan government with four years of technical assistance at a cost to Venezuela of about \$1.4 million.

Venezuela has announced funding of almost \$8 million for the new insurer.

Preliminary studies have also been carried out in the Dominican Republic to outline a crop credit insurance pilot project. Although the government would like to initiate operations this year with IICA's technical assistance, the country does not have the funds to finance the estimated \$2 million cost of the project. However, IICA is continuing some activities such as training Dominicans in insurance so that when the country is able to finance the cost of the project, the basic studies will be ready and some of the personnel will be trained.

Finally, the Division has offered technical assistance to the governments of Chile and Trinidad-Tobago. The Chileans are planning to begin a fruit insurance program in December of this year and the Division's staff is working with the private insurer who will offer the protection to help establish the details of the program. IICA expects to play an active part in future insurance activities in Chilean agriculture. We also expect that Trinidad-Tobago will establish an agricultural insurance program within two to three years.

3. MATCHING FUNDS

As mentioned before, the project has already generated important local contributions in Ecuador and Bolivia totaling \$4,600,000 and IICA has contributed with \$50,000 from its own funds for promotion activities mainly in Costa Rica, Venezuela, and the Dominican Republic. These local resources generated in the first two years of the project already exceed IICA Grant. In Venezuela, the Government has approved the funding of about \$8,000,000 for the Crop Credit Program and negotiations concerning IICA's technical assistance are in progress. The assistance to INS in Costa Rica has been estimated in approximately \$500,000 for four years. IICA is expected to complement AID Grant with a total of \$250,000 through its annual budgets, for promotional activities aimed at meeting the strong demand for crop credit insurance assistance.

The following figure shows a detail of the funds generated by the Project from sources other than AID and a comparison with the Grant.

AID/IICA GRANT AND MATCHING FUNDS

(U.S. Dollars in thousands)

S O U R C E	AID GRANT	AUTHORIZED RESOURCES	RESOURCES IN NEGOTIATION
AID/IICA Grant ^{1/}	4,375.0	-	
IICA		50.0	200.0 ^{5/}
BOLIVIA ^{2/}	-	1,180.0	-
ECUADOR	-	3,600.0	-
VENEZUELA ^{3/}	-	-	9,400.0
SPAIN ^{4/}	-	-	500.0
T O T A L	4,375.0	4,830.0	10,100.0

1/ Includes AID supervision and support.

2/ P. L. 480 - Title III funds. Includes earned and accrued interest for the first year only.

3/ Preliminary figures \$8 million destined to reserves and operations and \$1.4 to cover the cost of IICA's technical assistance.

4/ Preliminary figures for technical assistance to Costa Rica's Crop Insurance Program.

5/ Estimated, not committed, assignments based on IICA's annual budgets for the period 1981-1985.

4. PROJECT'S FINANCIAL CONSTRAINS

The staff of the crop credit insurance project has for the past year been engaged in an extensive analysis of the operating costs of the three pilot projects and the technical assistance and research components based in San José. In March of this year, the project's staff held a meeting to inform AID-Washington of the financial status of the project. At that meeting, we agreeded to continue our analysis and to present our conclusions to AID later in the year. Based on the last eight months of analysis we can report the following conclusions:

1. Personnel cost, administrative costs and the Sub-grants to participating insurance institutions absorb 85.4% of the total resources. These amounts have very little flexibility and thus we have labeled them "Fixed Costs". Administrative costs are contractually predetermined as are the sub grants amounts.

2. Operational or "variable" costs are financed out of the remaining 13.5% of the total resources (or less than \$600,000) with which we must cover the following expenses:

- a) Operational of the Hemispheric component including supervision, technical cooperation, and the management of financial support to the pilot projects.
- b) Operational costs of all Research activities including field surveys, data processing, consultants, publications, and travel.

- c) Operation costs of IICA's technical assistance to Panama, Bolivia, and Ecuador including maintaining a technician in each country.

3. A single research specialist working from San José in Panama, Ecuador, and Bolivia cannot possibly develop all the conceptual and methodological aspects as well as conduct or supervise the collection of data. A glance at this report's companion document will clearly illustrate the impossibility of one person carrying out all the planned work.

4. The initial project anticipated an immediate start up of the projects. In Bolivia and Ecuador, the new governments had no initial commitment to the project and were unwilling or unable to contribute the large cash reserve required. IICA had to convince these governments of the worth of the project and negotiate the contribution of scarce local funds to create the reserve. This process was very costly in time. The project originally anticipated that we would have four years of experience by August 1983. In Bolivia, we will not have those four years of experience until 1984 and in Ecuador not until 1985.

5. Price level increases have not been foreseen in the budget. The project is coming under increasing pressure in some countries when the dollar exchange rate is fixed or is artificially fixed. As an illustrative example in Bolivia, according with official figures issued by the Ministerio de Industria y Comercio the general price level increased between 1979 and 1980

in 45.0% while the dollar rate increased only 22.5% which means an erosion of the dollar internal purchasing power in Bolivia of 18.4%.

6. With the present resources assuming the very high inflation rates and artificial exchange rate prevail in 1981 and 1982, we anticipate that we will have to begin curtailing activities and letting contracts expire in mid-1982. We will be able to sustain the three insurers only until the end of 1982. The critically important research project will have to begin wrapping up its field work about July 1982 and try to finish its analysis of the then existing data before the end of the year. The result will be that data for only one and one half years will be available in Bolivia and only one year in Ecuador.

7. The need for additional resources to complete the pilot project necessitated by several factors. In addition to much higher than expected inflation and the artificially low exchange rates, the initial budget for the project significantly underestimated the costs of operating the pilot crop credit insurers. Personnel costs were much underestimated in terms of the number of personnel required, especially in the field, the salaries that nationals earn and the cost of the benefit packages, which under Bolivian and Ecuadorian law add 30-40% to salary costs. Research costs were not specifically provided for in the initial budget but were to be financed out of the general operational budget. The field survey research and the extensive data processing that are required have proved to be quite expensive.

5. REVISED FINANCIAL PLANNING

a) INTRODUCTION

To clarify the limitations of available resources and the funding to fulfill the Project's basic objectives, we have prepared a Chronogram (see the following page) and a revised Budget. An important premise for the development of this budget, is in first instance that to reach acceptable valid conclusions on research it is necessary to have a minimum four years of agricultural cycles to record and analyze, especially considering that probably during the first year of operations of the newly created institutions, the volume of information is somewhat reduced due to the difficulties in reaching, at the beginning, a large number of farmers.

Secondly, this period is also necessary to test and improve the organizational strategy and operational procedures for the insurance agencies as part of the efforts to help strengthening the insurers administratively and financially. An early termination of the technical assistance program would expose them to risk of failure.

It should be remembered that "institutional building" is a lengthy process and therefore a minimum time must be allowed for the national "aseguradoras" to be capable of surviving on their own and to expand its service to a larger number of small farmers. This is especially true for institutions that are introducing a new element or rural development strategy.

b) TOTAL RESOURCES

Exhibit No.1 displays our current allocation of resources. Exhibit No. 2 sets out the current and additional resources that we believe

CROP CREDIT INSURANCE PROJECT - CHRONOGRAM OF ACTIVITIES - 1980 TO 1985

ACTIVITIES	CURRENT RESOURCES			ADDITIONAL RESOURCES		
	1980	1981	1982	1983	1984	1985
PANAMA						
PILOT PROJECT						
RESEARCH						
BOLIVIA						
PILOT PROJECT						
RESEARCH						
ECUADOR						
PILOT PROJECT						
RESEARCH						
REINSURANCE SYSTEM						
FEASIBILITY STUDY						
REPORT						
PROJECT INTERIM REPORT						
PHASE TWO PROGRAMMING						
CROP CREDIT INSURANCE OPERATING REPORT						
CONFERENCE						
PROJECT FINAL REPORT						

will be required to gather four years of experience in all three project countries. We estimate that the funds allocated to 1983 in exhibit No.1 will actually be used before the end of 1982. To accomplish the objectives and requirements of the Project, it is necessary to obtain additional financing totaling \$4,375,000.00 to cover the operations until December 1985.

According to these estimates, the total resources required by the Project for the period 1978-85 will be \$8,750,000.00, of which \$8,150,000.00 correspond to the IICA Grant, and the balance of \$600,000.00 to AID supervision and support.

c) Functional Costs

An analysis of functional costs for each component of the Project is shown in Exhibit No. 3. It is necessary to warn that it is troublesome to find a clear-cut divisions between functions in an endeavor with so many interrelations among its basic objectives. So, to clarify Exhibit No. 3, a brief explanation of items included in each function is required.

1. Economic and Social Impact Research

Includes the cost of Research staff hired by the Project and by the insurance institutions; operation costs such as travel, consultants, data processing, temporary field help and publications. 20% of the Project Coordinator cost was allocated to Research and has been increased to 30% on 1984 and 1985.

2. Organize and Strengthen Pilot Crop Credit Insurance Programs

Includes all the cost of national insurance institutions financed through the sub-grants excepted those directly related to Research.

3. Economic Feasibility Study of Crop Credit Reinsurance System

Includes the cost of the economic feasibility study for the reinsurance system. During the period 1981-83, 20% of the cost of the Project Coordinator and the Financial Specialist are attributable to this function.

4. Project Coordination and Support. Technical Improvement of Crop Credit Insurance

Absorbs the personnel costs, operation costs and equipment of Project Coordination, technical support to pilot projects and Project Financial Management (excluded the part of personnel costs allocated to other function). In 1984, it includes the cost of the final conference to be held tentatively in Washington D.C. to present the results and conclusions of the Project activities and research, to the Latin American countries, AID, and other development institutions.

It is important to mention that Personnel Costs in each function includes the proportional distribution of Administrative Costs (IICA Overhead) which is a 24.7% of personnel costs with a maximum of \$232,000.00 for the actual resources, and of \$268,000.00 for the additional resources.

d) Analysis of Costs by Country Project

Exhibit No. 4 presents an analysis of the cost of each of the components that the Crop Credit Insurance Program has established in each of the three project countries. This exhibit breaks out the cost of technical assistance as well as the sub grants made to each country to cover the operating costs of the insurer. In addition, we have broken out the costs of the Costa Rica-based program management. This component includes our supervision of the projects, the research work, the technical assistance as well as the financial management.

It should be noted that the higher costs of operating the projects in Bolivia and Ecuador compared to Panama are due to the fact that the project is absorbing all the administrative costs of the insurer. In Panama, the program covers approximately 1/2 of the operating costs. The fact that the subgrant need not cover all salaries, rent and utilities, greatly reduces the size of the subgrant to Panama.

e) Analysis of Personnel Costs

The Personnel Costs of the International Technical Staff are set out in Exhibit No. 5 while the National Staff costs are detailed in Exhibit No. 6. In our international staff, the growing complexity of the research design has demanded an increase in the personnel devoted to research. In addition to the Costa Rica-based researcher, it has been necessary to add

an associate researcher based in Panama to actually conduct the extensive field surveys and to do the data processing and initial analysis. In our National Technical Staff we have been able to locate a highly qualified Bolivian to fill the Crop Credit Insurance Specialist slot. Therefore after 1980, that cost is removed from Exhibit No. 5 and included in Exhibit No. 6.

f) Analysis of Costs of Sub Grants to Project Insurers

In Exhibits Nos. 7-10 we have displayed our current allocation together with the funds we estimate will be required to successfully complete the project of sub grant resources to the three insurers. Exhibit No. 7 summarized the costs for all three countries while the subsequent ones break out the costs by line item within each country. Approximately one half of the funding of the project is absorbed by these subgrants.

EXHIBIT N° 1
IICA/AID GRANT N° AID/LAC/IGR-1297
CROP CREDIT INSURANCE
ACTUAL BUDGET
(Current US Dollars)

	1978/79	1980	1981	1982	1983 (8 months)	TOTAL	
1. <u>PERSONNEL COSTS</u>							
International Technical Staff	175.297	172.165	209.436	199.952	181.500	938.350	
National Tech. & Admin. Staff	13.386	25.824	28.200	30.790	22.393	121.048	
<u>TOTAL PERSONNEL COSTS</u>	189.133	197.989	237.636	230.742	203.898	1.059.394	24.2
2. <u>ADMINISTRATIVE COSTS</u> ^{1/}	46.716	48.903	58.696	56.993	20.692	232.000	5.3
3. <u>SUB GRANT TO THE PROJECT INSURERS</u>							
Panamá	103.900	126.700	147.200	154.800	79.400	612.000	
Bolivia	75.100	257.200	201.300	211.800	108.600	854.000	
Ecuador	61.000	210.800	163.700	172.200	88.300	696.000	
<u>TOTAL SUB GRANTS</u>	240.000	594.700	512.200	538.800	276.300	2.162.000	49.4
SUB TOTAL "FIXED COSTS"	475.849	841.592	808.532	826.535	500.890	3.453.398	78.9
4. <u>OPERATION COSTS</u>	155.102	132.000	132.000	122.000	51.500	592.602	13.5
<u>TOTAL IICA GRANT</u>	630.951	973.592	940.532	948.535	552.390	4.046.000	92.5
<u>AID SUPERVISION AND SUPPORT</u>	51.300	79.200	76.500	77.100	44.900	329.000	7.5
<u>GRAND TOTAL</u>	682.251	1.052.792	1.017.032	1.025.635	527.290	4.375.000	100.00

1/ 24.7% of Personnel Costs with a maximum of \$232.000 during Grant life.

EXHIBIT No. 2

IICA/AID GRANT No. AID/LAC/1GR-1297 CROP CREDIT INSURAN

OVERALL COST RESUME

(current US Dollars)

	CURRENT RESOURCES					ADDITIONAL RESOURCES				TOTAL	%
	1978/79	1980	1981	1982	SUB-TOTAL	Δ 1982	1983	1984	1985		
1. PERSONNEL COSTS											
INTERNATIONAL TECHNICAL STAFF	173.410	186.374	240.278	290.808	890.870	--	327.159	302.066	305.013	1.825.108	--
NATIONAL TECHNICAL AND ADMINISTRATIVE STAFF	7.287	34.029	52.286	59.606	153.208	--	67.952	74.484	38.123	333.767	--
TOTAL PERSONNEL COSTS	180.697	220.403	292.564	350.414	1.044.078	--	395.111	376.550	343.136	2.158.875	24.7
2. ADMINISTRATIVE COSTS	44.632	54.440	72.263	60.665	232.000	--	97.592	93.008	77.400	500.000	5.7
3. SUB GRANTS TO THE PROJECT INSURERS											
PANAMA	94.340	208.700	166.860	185.500	655.400	28.000	246.600	--	--	930.000	
BOLIVIA	--	223.580	217.320	240.800	681.700	57.820	293.300	367.180	--	1.400.000	
EQUADOR	--	46.000	275.040	252.110	573.150	71.620	316.280	371.910	187.040	1.520.000	
TOTAL SUB GRANT	94.340	478.280	659.220	678.410	1.910.250	157.440	856.180	739.090	187.040	3.850.000	44.0
4. RESEARCH OPERATION COSTS											
TRAVEL & PER DIEM	2.050	16.500	20.000	22.000	60.550	--	24.200	26.600	16.500	127.850	--
CONSULTANTS	11.250	23.000	28.000	20.000	82.250	10.000	25.000	15.000	5.000	137.250	--
DATA PROCESSING	--	12.000	23.000	28.700	63.700	5.000	40.600	44.700	14.000	168.000	--
OTHER OPERATION COSTS	--	23.000	35.700	38.500	97.200	--	40.400	36.800	12.500	186.900	--
TOTAL RESEARCH OPERATIONS	13.300	74.500	106.700	109.200	303.700	15.000	130.200	123.100	48.000	620.000	7.1
5. TECHNICAL OPERATIONS COSTS											
TRAVEL & PER DIEM	61.880	38.000	50.000	48.000	197.880	5.000	55.800	66.100	23.500	348.280	
CONSULTANTS	14.778	30.000	28.000	20.000	92.778	10.000	25.000	15.000	5.000	147.778	
CONFERENCE OPERATION	--	--	--	--	--	--	--	70.820	--	70.820	
OTHER OPERATIONS COSTS	28.173	49.500	70.800	60.451	209.464	10.000	72.000	74.980	25.953	392.397	
EQUIPMENT	20.350	17.500	18.000	--	55.850	--	6.000	--	--	61.850	
TOTAL TECHNICAL OPERATIONS COSTS	125.721	135.000	166.800	128.451	555.972	25.000	158.800	226.900	54.453	1.021.125	11.7
TOTAL IICA GRANT	458.690	962.623	1.297.547	1.327.140	4.046.000	197.440	1.637.883	1.558.648	710.029	8.150.000	93.2
AID SUPERVISION AND SUPPORT	37.300	78.300	105.500	107.900	329.000	--	114.600	109.100	47.300	600.000	6.8
GRAND TOTAL	495.990	1.040.923	1.403.047	1.435.040	4.375.000	197.440	1.752.483	1.667.748	757.329	8.750.000	100.00

EXHIBIT No.3

FUNCTIONAL COSTS ANALYSIS

(current US Dollars)

	CURRENT AND ADDITIONAL RESOURCES								%
	1978/79	1980	1981	1982	1983	1984	1985	TOTAL	
<u>I. ECONOMIC AND SOCIAL</u>									
<u>IMPACT RESEARCH</u>									
PERSONNEL COSTS	26.306	79.964	165.278	200.392	236.391	242.434	199.317	1.150.082	20.7
OPERATION COSTS	13.300	74.500	106.700	124.200	130.200	123.100	48.000	620.000	
EQUIPMENT	--	20.000	--	22.000	--	--	--	42.000	
TOTAL	39.606	174.464	271.978	346.592	366.591	365.534	247.317	1.812.082	
<u>II. ORGANIZE AND STRENGTHEN</u>									
<u>PILOT CROP CREDIT INSURERS</u>									
PERSONNEL COSTS	29.580	171.610	337.290	422.030	498.680	424.250	119.330	2.002.770	42.0
OPERATION COSTS	18.560	164.960	237.900	278.980	276.250	207.600	59.230	1.243.480	
EQUIPMENT	46.200	109.100	52.000	99.600	42.500	75.880	--	425.280	
TOTAL	94.340	445.670	627.190	800.610	817.430	707.730	178.560	3.671.530	
<u>III. ECONOMIC FEASIBILITY STUDY</u>									
<u>OF CREDIT REINSURANCE SYSTEM</u>									
PERSONNEL COSTS	--	--	20.568	21.766	26.026	--	--	68.360	1.5
OPERATION COSTS	--	--	25.000	16.500	25.000	--	--	66.500	
TOTAL	--	--	45.568	38.266	51.026	--	--	134.860	
<u>IV. PROJECT COORDINATION AND</u>									
<u>SUPPORT, TECHNICAL IMPROVE-</u>									
<u>MENT OF CROP CREDIT INSURANCE</u>									
PERSONNEL COSTS	199.027	207.489	211.011	224.146	269.031	258.464	229.590	1.598.758	28.9
OPERATION COSTS	105.367	117.500	123.800	114.966	127.805	156.100	54.562	900.100	
CONFERENCE COSTS	--	--	--	--	--	70.800	--	70.800	
EQUIPMENT	20.350	17.500	18.000	--	6.000	--	--	61.850	
TOTAL	324.744	342.489	352.811	339.112	402.836	485.384	284.152	2.531.528	93.1
TOTAL IICA GRANT	458.690	962.623	1.297.547	1.524.580	1.637.883	1.558.648	710.029	8,150.000	
AID SUPERVISION AND SUPPORT	37.300	78.300	105.500	107.900	114.600	109.100	47.300	600.000	
GRAND TOTAL	495.990	1.040.923	1.403.047	1.632.480	1.752.483	1.667.748	757.329	8.750.000	100.0

EXHIBIT No. 4

IICA'S PROJECTS COST ANALYSIS

(current US Dollars)

	CURRENT RESOURCES					ADDITIONAL RESOURCES				TOTAL	%
	1978/79 1/	1980	1981	1982	SUB-TOTAL	Δ 1982	1983	1984	1985		
PILOT PROJECT-PANAMA											
Sub-Grant to ISA 2/	94.340	208.700	166.860	185.500	655.400	28.000	246.600	--	--	930.000	
Personnel Costs	37.173	54.907	92.400	97.888	282.368	--	117.199	45.992	--	445.559	
Operation Costs	9.200	24.000	40.500	38.700	112.400	--	41.200	22.500	--	176.100	
Equipment	15.000	2.500	--	--	17.500	--	--	--	--	17.500	
TOTAL PANAMA	155.713	290.107	299.760	322.088	1.067.668	28.000	404.999	68.492	--	1.569.159	18.0
PILOT PROJECT-BOLIVIA											
Sub-Grant to ASBA 3/	--	223.580	217.320	240.800	681.700	57.820	293.300	367.180	--	1.400.000	
Personnel Costs	36.774	34.518	29.545	31.683	132.520	--	38.397	43.772	--	214.689	
Operation Costs	5.000	14.000	25.000	37.300	81.300	--	40.900	32.300	--	154.500	
Equipment	--	--	13.250	--	13.250	--	--	--	--	13.250	
TOTAL BOLIVIA	41.774	272.098	285.115	309.783	908.770	57.820	372.597	443.252	--	1.782.439	20.4
PILOT PROJECT-ECUADOR											
SUB-GRANT CONASA 4/	--	46.000	275.040	252.110	573.150	71.620	316.280	371.910	187.040	1.520.000	32
Personnel Costs	30.037	37.020	65.974	93.935	226.966	--	112.440	126.604	140.036	606.046	32
Operation Costs	3.000	13.000	32.000	36.200	84.200	--	40.900	45.200	21.600	191.900	
Equipment	--	12.500	--	--	12.500	--	--	--	--	12.500	
TOTAL ECUADOR	33.037	108.520	373.014	382.245	896.816	71.620	469.620	543.714	348.676	2.330.446	26.6
COORDINATION, RESEARCH AND TECHNICAL SUPPORT- COSTA RICA											
Personnel Costs	121.346	148.398	176.908	187.530	634.182	--	224.667	253.190	280.306	1.392.345	
Operation Costs	101.470	138.500	158.500	125.494	523.964	40.000	160.000	179.180	81.047	984.191	
Conference	--	--	--	--	--	--	--	70.820	--	70.820	
Equipment	5.350	5.000	4.250	--	--	--	6.000	--	--	20.600	
TOTAL COORDINATION	228.166	291.898	339.658	313.024	1.172.746	40.000	390.667	503.190	361.353	2.467.956	28.2
TOTAL IICA GRANT	458.690	962.623	1.297.547	1.327.140	4.046.000	197.440	1.637.883	1.558.648	710.029	8.150.000	93.2
AID SUPERVISION AND SUPPORT											
	37.300	78.300	105.500	107.900	329.000	--	114.600	109.100	47.300	600.000	6.8
GRAND TOTAL	495.990	1.040.923	1.403.047	1.435.040	4.375.000	197.440	1.752.483	1.667.748	757.329	8.750.000	100.0

1/ IICA's Projects Operation Cost analysis began on July 1979, therefore its distribution for 1978/79 is an estimation.

2/ Instituto de Seguro Agropecuario

3/ Aseguradora Boliviana Agropecuaria

4/ Compañía Nacional de Seguros Agrícolas.

EXHIBIT No.5

COST OF INTERNATIONAL TECHNICAL STAFF

(current US Dollars)

POSITION	POST	CURRENT RESOURCES					ADDITIONAL RESOURCES			TOTAL
		1978/79	1980	1981	1982	SUB-TOTAL	1983	1984	1985	
PROGRAM COORDINATOR	1/ COSTA RICA	44.705	40.423	44.500	50.063	179.691	56.320	63.360	71.280	370.651
FINANCIAL SPECIALIST	2/ COSTA RICA	33.188	31.730	37.971	42.717	145.606	48.057	54.064	60.822	308.549
RESEARCH SPECIALIST	3/ COSTA RICA	12.130	35.043	41.286	46.447	134.906	52.253	58.784	66.132	312.075
ASSOCIATE RESEARCHER	4/ PANAMA	-	10.866	32.598	36.673	80.137	41.257	30.942	-	152.336
ASSOCIATE RESEARCHER	5/ ECUADOR	-	-	18.218	40.990	59.208	46.114	51.879	58.363	215.564
CROP INSURANCE SPECI	6/ ECUADOR	24.087	26.470	30.226	34.004	114.787	38.255	43.037	48.416	244.495
CROP INSURANCE SPECI	7/ BOLIVIA	29.490	13.211	-	-	42.701	-	-	-	42.701
CROP INSURANCE SPECI	8/ PANAMA	29.810	28.631	35.479	39.914	133.834	44.903	-	-	178.737
T O T A L		173.410	186.374	240.278	290.808	890.870	327.159	302.066	305.013	1.825.108

1/ Started October 1978

2/ Started January 1979

3/ Started October 1979

4/ September 1980 to August 1984

5/ Will start July 1981

6/ Started March 1979

7/ March 1979 to March 1980. Replaced by National Specialist

8/ March 1979 to December 1983.

NOTE: 1980 and 1981 estimates based on IICA's budgeting figures. Beginning in 1982, in addition to the 10.0% annual price level increase 2.5% per annum was added in accordance with IICA's policies of increasing the salary classification a step per year.

NOTE: Personnel Costs include: Salary, bonus, post adjustment, and fringe benefits.

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EXHIBIT No.6
COST OF NATIONAL TECHNICAL AND ADMINISTRATIVE STAFF
(current US Dollars)

POSITION	POST	CURRENT RESOURCES					ADDITIONAL RESOURCES			TOTAL
		1978/79	1980	1981	1982	SUB-TOTAL	1983	1984	1985	
CROP INSURANCE SPECIALIST	1/ BOLIVIA	--	11.536	18.000	20.250	50.056	23.393	26.668	--	100.117
SECRETARY -AGRICULTURAL INSURANCE DIVISION	COSTA RICA	7.287	6.823	7.095	8.088	29.293	9.221	10.512	11.984	61.010
SECRETARY -AGRICULTURAL INSURANCE DIVISION	COSTA RICA	--	4.985	5.184	5.910	16.079	6.737	7.680	8.755	39.251
SECRETARY - RESEARCH	2/ COSTA RICA	--	--	5.931	6.647	12.478	7.578	8.639	9.848	38.543
SECRETARY	3/ PANAMA	--	4.534	6.021	6.864	17.419	7.825	5.940	--	31.184
SECRETARY	4/ BOLIVIA	--	2.934	5.693	6.490	15.117	7.399	8.434	--	30.950
SECRETARY	ECUADOR	--	3.217	4.462	5.087	12.766	5.799	6.611	7.536	32.712
T O T A L		7.287	34.029	52.286	59.606	153.208	67.952	74.484	38.123	333.767

1/ May 1980 to December 1984

2/ Will Start January 1981

3/ To August 1984

4/ December 1984

NOTE: 1980 and 1981 estimates based on IICA's budgeting figures. Beginning in 1982, in addition to the 10.0% annual price level increase a 4.0% was added for one step increases of salary classification.

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EXHIBIT No.7

SUB GRANT TO THE PROJECT INSURERS

(current US Dollars)

	CURRENT RESOURCES					ADDITIONAL RESOURCES					TOTAL	%
	1978/79	1980	1981	1982	SUB TOTAL	Δ 1982	1983	1984	1985			
<u>P A N A M A</u>												
PERSONNEL COSTS	29.580	87.320	100.110	112.090	329.100	--	123.300	--	--	452.400	48.7	
OPERATIONAL COSTS	18.560	69.080	66.750	73.410	227.800	12.000	80.800	--	--	320.600	34.5	
EQUIPMENT	46.200	52.300	--	--	98.500	16.000	42.500	--	--	157.000	16.8	
TOTAL	94.340	208.700	166.860	185.500	655.400	28.000	262.600	--	--	930.000	100.0	
<u>B O L I V I A</u>												
PERSONNEL COSTS	--	80.080	120.170	149.930	350.180	16.720	202.750	223.080	--	792.730	56.6	
OPERATIONAL COSTS	--	82.700	79.150	90.870	252.720	19.100	90.550	99.600	--	461.970	33.0	
EQUIPMENT	--	60.800	18.000	--	78.800	22.000	--	44.500	--	145.300	10.4	
TOTAL	--	223.580	217.320	240.800	681.700	57.820	293.300	367.180	--	1.400.000	100.0	
<u>E C U A D O R</u>												
PERSONNEL COSTS	--	16.820	149.040	168.510	334.370	10.020	211.380	232.530	127.810	916.110	60.3	
OPERATIONAL COSTS	--	13.180	92.000	83.600	188.780	--	104.900	108.000	59.230	460.910	30.3	
EQUIPMENT		16.000	34.000	--	50.000	61.600	--	31.380	--	142.980	9.4	
TOTAL		46.000	275.040	252.110	573.150	71.620	316.280	371.910	187.040	1.520.000	100.0	
GRAND TOTAL	94.340	478.280	659.220	678.410	1.910.250	157.440	856.180	739.090	187.040	3.850.000	--	

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EXHIBIT No.8
PANAMA - SUB GRANT
(current US Dollars)

	SALARY BASE 1981	CURRENT RESOURCES					ADDITIONAL RESOURCES		TOTAL
		1978/79	1980	1981	1982	SUB- TOTAL	Δ 1982	1983	
<u>A. PERSONNEL COSTS</u>									
FIELD AGENTS - AGRICULTURAL ENGINEERS	8.740	--	26.220	26.220	28.840	--	--	31.730	260
FIELD AGENTS - VETERINARIANS	8.740	--	24.040	26.220	28.840	--	--	31.730	
FIELD AGENTS - TECHNICIAN	4.160	--	3.120	4.160	4.580	--	--	5.040	
FIELD AGENTS - TECHNICIAN COMMUNICATOR	3.250	--	16.250	16.250	17.880	--	--	19.660	
RESEARCHER	7.390	--	7.390	7.390	8.130	--	--	8.940	
ACCOUNTANT	8.470	--	4.240	8.470	9.320	--	--	10.250	
LIFE UNDERWRITER	6.060	--	6.060	6.060	6.670	--	--	7.330	
	7.120	--	--	5.340	7.830	--	--	8.620	
TOTAL PERSONNEL COSTS		29.580	87.320	100.110	112.090	329.100	--	123.300	452.400
<u>B. OPERATIONAL COSTS</u>									
TRAVEL & PER DIEM		2.800	7.000	9.100	10.000	--	--	11.000	
TRAINING ABROAD		--	13.100	--	--	--	12.000	--	
TRANSPORTATION		5.770	22.000	27.500	30.250	--	--	33.280	
PROMOTIONAL ACTIVITIES		4.620	11.500	12.650	13.920	--	--	15.300	
GENERAL OFFICE		5.370	15.480	17.500	19.240	--	--	21.220	
TOTAL OPERATION COSTS		18.560	69.080	66.750	73.410	227.800	12.000	80.800	320.600
<u>C. EQUIPMENT</u>									
VEHICLES		38.070	28.500	--	--	--	16.000	34.500	
OFFICE FURNITURE & EQUIPMENT		8.130	23.800	--	--	--	--	8.000	
TOTAL EQUIPMENT		46.200	52.300	--	--	98.500	16.000	42.500	157.000
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TOTAL		94.340	208.700	166.860	185.500	655.400	28.000	246.600	930.000

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EXHIBIT No. 9

BOLIVIA - SUB GRANT

(current US Dollars)

	SALARY BASE 1981	CURRENT RESOURCES				ADDITIONAL RESOURCES			TOTAL
		1980	1981	1982	SUB TOTAL	Δ 1982	1983	1984	
A. <u>PERSONNEL COSTS</u>									
GENERAL MANAGER	16.580	14.350	16.580	18.240	--	--	20.060	22.070	
OPERATIONS MANAGER	11.970	9.980	11.970	13.170	--	--	14.480	15.930	
RESEARCHER	11.970	8.370	11.970	13.170	--	--	14.480	15.930	
ACCOUNTANT	11.970	8.370	11.970	13.170	--	--	14.480	15.930	
COMMUNICATOR	11.050	10.350	11.050	12.150	--	--	13.370	14.710	
LIFE UNDERWRITER	9.210	--	4.600	10.130	--	--	11.140	12.260	
FIELD AGENTS - AREA 1	9.210	12.440	18.420	20.260	--	--	22.280	24.520	
FIELD AGENTS - AREA 2	9.210	--	9.210	20.260	--	--	22.280	24.520	
FIELD AGENTS - AREA 3	9.210	--	--	--	--	10.130	22.280	24.520	
LEGAL ADVISOR (PART TIME)	6.450	5.910	6.450	7.100	--	--	7.800	8.580	
OFFICE CLERK	6.450	--	--	--	--	--	7.800	8.580	
EXECUTIVE SECRETARY	6.450	4.740	6.450	7.100	--	3.550	7.800	8.580	
SECRETARY	5.520	1.350	--	--	--	3.040	7.800	8.580	
SERVICES	4.600	4.220	11.500	11.500	--	--	16.700	18.370	
TOTAL PERSONNEL COSTS		80.080	120.170	149.930	350.180	16.720	202.750	223.080	792.730
B. <u>OPERATION COSTS</u>									
TRAVEL & PER DIEM		6.800	10.000	12.000	--	2.800	13.200	14.500	
TRAINING ABROAD		21.600	--	--	--	14.500	--	--	
TRANSPORTATION		3.000	8.200	10.800	--	1.800	16.000	17.600	
RENT		12.200	13.450	14.800	--	--	--	--	
UTILITIES		7.000	10.000	12.000	--	--	16.000	17.600	
PROMOTIONAL ACTIVITIES		6.000	10.000	11.000	--	--	12.100	13.300	
GENERAL OFFICE		26.100	27.500	30.270	--	--	33.250	36.600	
TOTAL OPERATION COSTS		82.700	79.150	90.870	252.720	19.100	90.550	99.600	461.970
C. <u>EQUIPMENT AND INVESTMENTS</u>									
VEHICLES		24.000	13.200	--	--	14.500	--	40.000	
OFFICE FURNITURE & EQUIPMENT		27.000	2.800	--	--	3.000	--	4.500	
OFFICE INSTALLATION		8.270	2.000	--	--	4.500	--	--	
TELEPHONE SHARES		1.530	--	--	--	--	--	--	
TOTAL EQUIPMENT COSTS		60.800	18.000	--	78.800	22.000	--	44.500	145.300
T O T A L									
		223.580	217.320	240.800	681.700	57.820	293.300	367.180	1.400.000

EXHIBIT No. 10

ECUADOR - SUB GRANT

(current US Dollars)

	SALARY BASE 1981	CURRENT RESOURCES				ADDITIONAL RESOURCES				TOTAL
		1980	1981	1982	SUB TOTAL	Δ 1982	1983	1984	1985	
A. PERSONNEL COSTS										
GENERAL MANAGER	24.840	6.210	24.840	27.320	--	--	30.060	33.060	18.180	
OPERATIONS MANAGER	16.560	2.760	16.560	18.220	--	--	20.040	20.040	12.120	
LIVESTOCK UNDERWRITER	13.250	--	13.250	14.580	--	--	16.030	17.640	9.700	
LIFE UNDERWRITER	13.250	--	6.630	14.580	--	--	16.030	17.640	9.700	
RESEARCHER	11.590	--	11.590	12.750	--	--	14.020	15.430	8.480	
COMMUNICATOR	11.590	1.930	11.590	12.750	--	--	14.020	15.430	8.480	
ADMINISTRATOR	9.940	2.480	9.940	10.930	--	--	12.030	13.230	7.280	
FIELD AGENTS - AREA 1	8.280	1.380	16.560	18.220	--	--	20.040	22.040	12.120	
FIELD AGENTS - AREA 2	8.280	--	16.560	18.220	--	--	20.040	22.040	12.120	
FIELD AGENTS - AREA 3	8.280	--	--	--	--	10.020	20.040	22.040	12.120	
EXECUTIVE SECRETARY	6.620	1.650	6.620	7.280	--	--	8.010	8.810	4.850	
SECRETARY	4.970	--	4.970	5.470	--	--	6.010	6.620	3.640	
OFFICE BOY	4.140	--	4.140	4.550	--	--	5.010	5.510	3.030	
PUBLIC ACCOUNTANT (PART TIME)	3.310	--	3.310	3.640	--	--	4.000	4.400	2.420	
SERVICE	2.480	410	2.480	5.450	--	--	6.000	6.600	3.630	
TOTAL PERSONNEL COSTS		16.820	149.040	168.510	334.370	10.020	211.380	232.530	127.810	916.110
B. OPERATIONAL COSTS										
TRAVEL & PER DIEM		2.000	15.000	16.520	--	--	18.100	20.000	10.980	
TRAINING ABROAD		--	16.000	--	--	--	7.000	--	--	
TRANSPORTATION		--	10.000	11.000	--	--	18.100	20.000	11.000	
RENT		2.000	12.000	13.200	--	--	14.550	16.000	8.790	
UTILITIES		1.000	5.000	5.500	--	--	6.050	6.700	3.660	
PROMOTIONAL ACTIVITIES		2.000	10.000	11.000	--	--	12.100	13.300	7.300	
GENERAL OFFICE		6.180	24.000	26.400	--	--	29.000	32.000	17.500	
TOTAL OPERATION COSTS		13.180	92.000	83.600	188.780	--	104.900	108.000	59.230	460.910
C. EQUIPMENT										
VEHICLES		--	24.000	--	--	39.600	--	24.000	--	
OFFICE FURNITURE & EQUIPMENT		10.000	10.000	--	--	22.000	--	7.380	--	
OFFICE INSTALLATION		6.000	--	--	--	--	--	--	--	
TOTAL EQUIPMENT COSTS		16.000	34.000	--	50.000	61.600	--	31.380	--	142.980
T O T A L										
		46.000	275.040	252.110	573.150	71.620	316.280	371.910	187.040	1.520.000