

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I: PD-AAJ-280

1. PROJECT TITLE LAC Crop Credit Insurance Systems	2. PROJECT NUMBER 598-0579	3. MISSION/AID/W OFFICE LAC/DR/RO
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit (e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No., beginning with No. 1 each FY) _____ <input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES A. First PRO-AG or Equivalent FY <u>70</u> B. Final Obligation Expected FY <u>84</u> C. Final Input Delivery FY _____	6. ESTIMATED PROJECT FUNDING A. Total \$ _____ B. U.S. \$ <u>5,875,000</u>	7. PERIOD COVERED BY EVALUATION From (month/yr.) <u>8/78</u> To (month/yr.) <u>4/81</u> Date of Evaluation Review _____
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8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.) Restructure and refinance the project, taking into consideration the following: A. Assess and redefine the project objectives. B. Develop a strategy to achieve the objectives. The strategy will address: 1. Improved crop insurance model; 2. Project scope of work; 3. Work plan including operating conditions such as approval of proposed personnel, equipment and services and location; 4. Plan for post pilot phase. C. Identify new modes of financing to support present and follow-up project activities.	B. NAME OF OFFICER RESPONSIBLE FOR ACTION A. L. Brown and N. Maurice	C. DATE ACTION TO BE COMPLETED 12/31/81
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9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS		
<input checked="" type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input checked="" type="checkbox"/> Financial Plan	<input checked="" type="checkbox"/> PIO/T	<input type="checkbox"/> Grant _____
<input checked="" type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT	
A.	<input type="checkbox"/> Continue Project Without Change
B.	<input checked="" type="checkbox"/> Change Project Design and/or
	<input checked="" type="checkbox"/> Change Implementation Plan
C.	<input type="checkbox"/> Discontinue Project

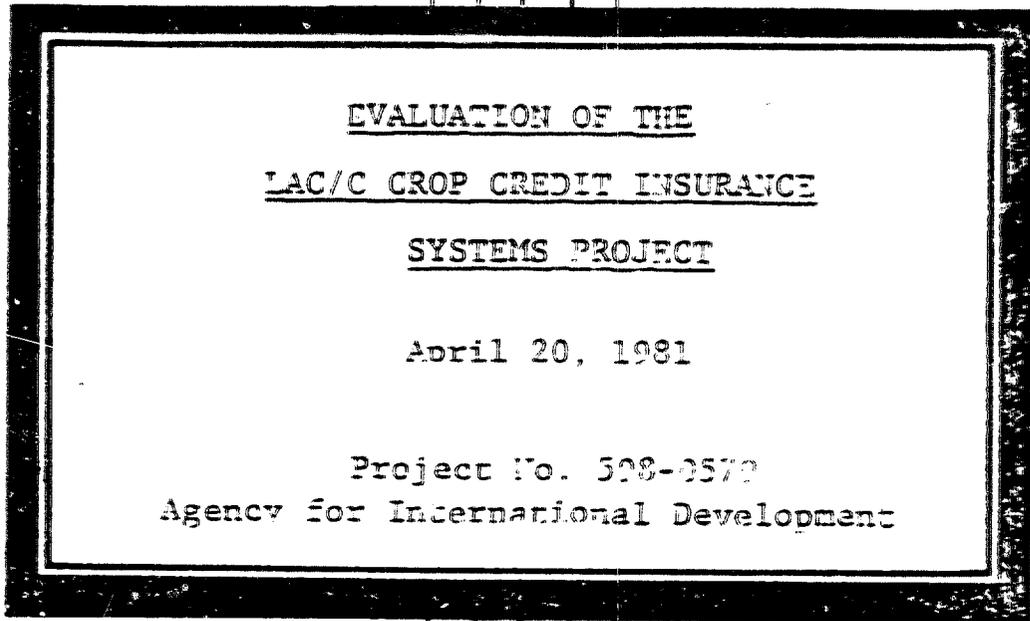
11. PROJECT OFFICER AND HOST COUNTRY OR OTHER BANKING PARTICIPANTS AS APPROPRIATE (Names and Titles) Albert L. Brown, Project Manager Nelson Maurice, Project Advisor
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12. Mission/AID/W Office Director Approval Signature _____ Typed Name _____
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Anthony J. Cauterucci
 Date: July 13, 1981

~~PD AAF-281~~
XO-PAF-380-A

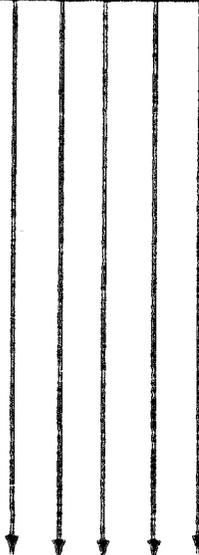
Washington Evaluation Associates



EVALUATION OF THE
LAC/C CROP CREDIT INSURANCE
SYSTEMS PROJECT

April 20, 1981

Project No. 508-0572
Agency for International Development



8105 Glenmore Spring Rd., Bethesda, Md. 20034

April 20, 1981

U.S. Department of Agriculture
Office of International Cooperation
and Development
Attention: Mr. John McAlpine
Room 104 PP
1735 N. Lynn Street
Arlington, Virginia 22209

Dear Mr. McAlpine:

I am pleased to attach a final report entitled EVALUATION OF THE LA/C CROP CREDIT INSURANCE SYSTEMS PROJECT (598-0597), as agreed under Contract No. 53-319 R-1-9.

The evaluation was initiated in October 1980 with a two-day visit to Panama to consult with IICA and ISA officials on the scope of the evaluation and the data required. In October and November, between field visits, AID officials and selected technical experts were interviewed. From November 16-22, 1980, two man-weeks were spent in Costa Rica to examine data on the research effort, IICA's general administration, and country efforts in Bolivia and Ecuador. From December 1-5, 1980, the Panama Program was reviewed.

All of the central IICA professional staff working on Rural Credit Insurance and the IICA representatives stationed in Bolivia and Panama were interviewed. We received full cooperation from IICA and ISA officials in seeking to determine the status of the Project and suggested redirection at this early stage.

The questions set forth in the Contract are answered specifically in Chapter VI, General Conclusions.

I was assisted in the field inquiry by Messrs. Richard Hall, an agricultural economist, and Douglas Grove, a crop insurance specialist, FCIC.

Sincerely,



Herman L. Myers
Director

Attachment

Acronyms and Abbreviations

AID/W	Agency for International Development/Washington
AJAE	American Journal of Agricultural Economics
ALARA	Latin American Agricultural Reinsurance Agency
ASBA	Bolivian Agricultural Insurance Agency
BAB	Bolivian (Government) Agricultural Bank
BDA	Panamanian (Government) Agricultural Development Bank
COLAC	Latin American Confederation of Credit Unions
CONASA	Ecuadorian National Agricultural Insurance Company
CRILA	Latin American Center for Rural Insurance
FCIC	US Federal Crop Insurance Corporation
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IDIAP	Panamanian Agriculture Research Institute
IICA	Inter-American Institute of Agricultural Sciences
ISA	Panamanian Agricultural Insurance Institute
LA/C	Latin America/Caribbean
MACA	Bolivian Ministry of Agriculture
MAG	Ministry of Agriculture
OPG	AID Mission Operating Program Grant
PCGP	AID Productive Credit Guaranty Project
TA	Technical Assistance
USAID	AID Country Field Mission

TABLE OF CONTENTS

Acronyms and Abbreviations		i
Chapter		
I. EXECUTIVE SUMMARY		I-1
II. SUMMARY OF FINDINGS AND RECOMMENDATIONS		II-1
Introduction		II-1
Project Title		II-1
Small and Medium-size Farmers		II-2
Relocation of IICA Insurance Division		II-3
Project Budget and Timetable		II-4
Subgrant Scheduling		II-4
Role and Status of Research		II-5
Sources of Reinsurance		II-6
IICA Regional Salary Policy		II-7
Supply of Inputs		II-7
Role of Consultants and Training		II-8
Third Country Training		II-9
AID Insurance and Guarantees		II-10
Financing ASBA		II-11
AID Relations		II-11
III. PERFORMANCE 1978-1980		III-1
Implementation Plans		III-1
Country Burden Sharing		III-3
Definition of Small Farmer		III-4
Consultation with IICA and USAIDs		III-6
Input Availability		III-7
Insurer Solvency		III-7
Legal Chartering of Insuring Agencies		III-8
Specific Objectives		III-8
Prior Research Results, Mexico		III-14
Quarterly and Special Reports		III-15
IV. COUNTRY PROGRAMS		IV-1
PANAMA		IV-1
Introduction		IV-1
Organization and Management		IV-2
Crop or Agricultural Insurance		IV-4
Livestock/Animal Insurance		IV-7
Financing of the Program Operations		IV-8
Reserves for Catastrophe		IV-10

Long-run Planning/Shared Expenses	IV-11
Relation to Other AID Programs: PCGP	IV-13
Obligatory Insurance and Farmer Decisions	IV-14
Training: Third Country	IV-16
Training: Internal	IV-17
USAID Relations	IV-17
Public Relations: Farmer Acceptance	IV-17
Summary	IV-18
Expected IICA Performance	IV-19
 THE DOMINICAN REPUBLIC	 IV-22
 Other Countries	 IV-24
 BOLIVIA	 IV-25
 ECUADOR	 IV-33
 GENERAL FINDINGS	 IV-37
 Exhibits: All Country Data	 IV-38
 V. PROJECT RATIONALE, STRATEGY, AND DESIGN	 V-1
Rationale	V-1
Strategy	V-3
Strategy for Developing National Rural Credit Programs in Latin America and the Caribbean	V-6
Financing (Inputs)	V-9
IICA Services (Outputs)	V-12
Organization of IICA	V-13
Physical and Geographic Restraints	V-14
Promotion of Credit Insurance	V-15
Summary of Findings	V-16
Pilot National Programs (Purpose)	V-16
Initial Benefits from Program (Subgoal)	V-18
Long-run Benefits (Goal)	V-21
 Exhibits	 V-23
 VI. GENERAL FINDINGS AND CONCLUSIONS	 VI-1
Status of Insurance Models	VI-2
Panama	VI-2
Bolivia	VI-3
Ecuador	VI-4
Research Strategy	VI-5
Project Management and Support	VI-11
 ANNEXES	
1. Losses by Size of Farm	VII-1
2. People Interviewed	VII-4
3. Photo of the Insurance Program in Bolivia	VII-5

PREFACE

This report is of a mid-project management audit to determine if the project is "on track" and, also, what additional resources and/or changes in project design or administration might be needed. It is not a detailed analysis of the impact of the crop credit insurance technology on the lives of Latin American farm families. This is one of the objectives of the project.

The project has four principal objectives. These are: (1) to develop, test and refine a crop credit insurance technology which can be utilized in developing countries; (2) to create or assist the development of crop credit insurers in three countries; (3) to measure the socio/economic impact of the insurance; and (4) to create a technical assistance unit which can provide competent, professional advice to other countries.

The concept upon which the project focuses is that the use of a formal risk management device, such as insurance, will engender greater benefits than costs. In this case, a fusion of traditional credit insurance and a type of crop insurance called "all-risk" is being created. In case crops fail, farmer's loans will be paid by the insurer. Expected benefits are that farmers will use more technology, will move to more optimal crop mixes, will use more credit, etc. Lenders will be more willing to make loans, and they will suffer less from delinquency. Corollary benefits, such as an improvement in the effectiveness of extension, are expected. Finally, farm income and national food production should increase.

MM

6/23/81

I. EXECUTIVE SUMMARY

Field evaluation of the LA/C Crop Credit Insurance Systems Project was completed as of December 1980. A draft report was submitted in February 1981 and a final report on April 20.

With minor exceptions, agricultural credit is essential to small commercial farmer production. Rural credit insurance is complementary to agricultural credit, protecting farmers' credit status and preventing decapitalization of credit institutions. Current pilot insurance programs provide extension services and upgrade small farmer technology. Systematic inspection partially reduces potential losses to the insurers, as does preventive inoculation of animals and promotion of certified seed. Rural credit insurance spreads risk of loss from natural causes throughout the agricultural sector. In many cases, farmer-financed insurance substitutes for government welfare programs. The program makes many smaller farmers credit-worthy and furthers US foreign policy objectives.

The purpose of the Project is to create new and to strengthen existing country rural credit insurance programs in Latin America and the Caribbean. The Project provides funding to establish an intermediary institution--the Agricultural Credit Insurance Division of IICA--to promote, and to provide technical assistance to, LA country programs.

An illustrative Project strategy suggests a three-phase seventeen-year AID-supported effort. During the first seven years, the IICA backstopping organization is to develop into an effective and viable institution. Although about eighteen months behind original scheduling at year-end 1980, the IICA organization is operational and is performing well. It has been successful in promoting new country programs in Bolivia and Ecuador, and has contributed significantly to growth and development of an existing program in Panama. The Evaluation recommends the recruitment of a Deputy and the relocation of the Insurance Division to Washington to strengthen and assure viability.

A major task of IICA is to develop a research methodology, utilizing pilot country data, to provide LA/C countries with an understanding of optimum portfolio mix, levels and variations of insurance rates, underwriting and loss adjustment systems, and country institutional and organizational models. Initial data are being collected and computerization at country and central office levels is in operation. Relocating the Insurance Division to Washington, D.C., will eliminate existing bottlenecks in research implementation. Useful research results can be expected at the farmer and insurer levels. Inadequate time and unavailability of data are likely to preclude attaining research objectives relating to credit sources and to the agricultural sector. Current research will not provide definitive answers to whether insurance will cause farmers

voluntarily to shift to higher technology.

The pilot country programs are in initial stages, only Panama providing insights of the manner in which a rural credit insurance program is likely to develop. ISA/Panama experience suggests that competent and dedicated management can overcome initial problems and become fully operational if no major natural catastrophe occurs within the first five years. ISA is proving to be an excellent regional laboratory for training of third country credit and insurance personnel. It is recommended that such training be systematically scheduled to maximize training effectiveness.

Rice has proven to be highly insurable, with relatively little loss despite original warnings from Ministry officials to the contrary. ISA insures animals as well as crops. It is accruing a reserve from the 40 percent of premium revenue which it retains after indemnification for losses to farmers. Despite this, initial operations costs have exceeded and will continue to exceed revenues until the Program volume is at much higher levels and variable premiums reflect risks as they differ by product and locality.

Other recommendations call for IICA to assist ISA to study the potential organization and management requirements at full target population; to clarify the relationship to the AID Productive Credit Guaranty Project; to assist the GOP to revise its insurance law to amplify the ISA Board of Directors, to permit life and machinery insurance, to strengthen government

guaranty; to include premiums in the insurance coverage; and to obtain cooperative cost sharing by other government agencies of TA and common operating functions.

The Bolivian Program is in its first year, insuring potato production in a selected locality. It is financially self-sufficient for the present but suffers from the lack of assured availability of credit for small farmers and of capital for the insurer, ASBA, once it reaches full-scale operations. Recommendations include allocation of PL-480 funding to provide self-sufficiency, exemption or adjustment of IICA wage policy to guarantee retention of its insurance specialist, and specific action by AID to free mobile equipment in Bolivian customs.

The Ecuadorian insurer, CONASA, is a mixed public-private entity and is expected to begin operations in May 1981. Over a four-year period, more than \$5 million will be invested by Ecuadorian institutions in CONASA for operations and underwriting of risk. IICA experience in Ecuador points to the importance of dealing with central financial organizations in the chartering of insurance agencies. This will prevent the loss of time that could occur if the Ministry of Agriculture is the sole government promotion agency.

The Evaluation recommends that AID/IICA adjust remaining annual country subagreements which disburse AID funds to a decreasing schedule to permit governments to gradually assume the financing of operations as the subgrants phase out.

In addition to coverage of crops and livestock, rural

life insurance is being introduced and, at a later date, coverage of machinery is likely to be added. The Dominican Republic and Venezuela appear to be immediately interested in starting insurance programs. Project strategy calls for from three to seven new country programs by 1984. During that period, moreover, IICA will promote private insurance company interest in reinsurance to permit speedy growth of country programs and, ultimately, to substitute for government coverage of risk from catastrophe. Joint seminars with international organizations, scholarly journal articles, and other staff activities are seen to further the understanding and acceptance of rural credit insurance and its financing.

Given continued support by AID for the life of the Project and acceptance of rural credit insurance by new LA countries, the Insurance Division can be expected to add staff and to outgrow its present organizational form within IICA.

The Evaluation points to the need for AID and IICA to cooperatively determine as soon as possible the best strategy, including organizational structure, for guaranteeing viability of the Insurance Division.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Introduction

Farm credit insurance is not a traditional field of inquiry and training in either the US or LA. Experienced personnel are scarce. Thus, recruitment and training of IICA staff during the first eighteen months was understandably time-consuming and caused a delay in meeting the original backstopping objectives. Data on risk due to crop failure and animal mortality are virtually unavailable in usable form. Unrealistic expectations as to data availability and unnecessary burdening of its role gave research an impossible task of providing data for rate making, institutionalization, and general policy. With this background, it is an unusual accomplishment for IICA to have brought together a highly competent central and field staff of dedicated professionals. That three national programs will be in operation by early 1981 is directly due to their efforts. Panamanian and Bolivian credit insurance experiences indicate that the Project is benefiting small farmers by reducing the risk of loss of investment and providing extension services. The following findings/recommendations reflect mid-project status and possible redirection:

Project Title

The country programs already in operation provide coverage for selected crops, animals, life insurance tied to

credit insurance, and may cover machinery at some future time. The definition or title of this Project, LAC Crop Credit Insurance Systems, does not adequately reflect these types of coverage, tends to confuse this Project with crop insurance, and does not fully refer to the institution-building purpose of the Project.

Recommendation #1: The Project title should be changed to Development of Rural Credit Insurance Programs in LA/C.

Small and Medium-size Farmers

While attention is and should continue to be given to the maximum coverage by insurance of small farmer investment and the movement of subsistence farmers into commercial farming through the use of credit, coverage of medium-size farmers will actually subsidize small farmer participation in the Program. The obligatory nature of existing farm credit insurance programs for those receiving public agricultural bank credit also suggests that medium-size farmers be included in coverage. Inclusion of medium-size farmers will reduce operation and administrative costs, will result in greater production increases, and will provide a political base for favorable government policy toward rural credit insurance and credit availability.

Recommendation #2: Initial credit insurance coverage should be extended to medium- as well as small-size farmers. (III-5)

Recommendation #3: IICA should encourage country program technicians and regional specialists to seek ways to reduce the cost of administration of isolated small farmers, including the

use of village leaders to promote acceptance and to trigger potential loss information. (IV-31)

Experience in Panama and Bolivia points to the desirability of giving technical assistance to small farmers as a condition of providing insurance. This is costly to the insuring agency while benefiting broader country objectives and agencies.

Recommendation #4: IICA should assist insuring agencies in obtaining reimbursement from their governments for the costs of providing technical assistance to small farmers. (IV-21)

Relocation of IICA Insurance Division

The IICA Insurance Division staff is composed of highly trained and dedicated professional specialists. Although morale is currently high, some strain under the surface can be seen because of the isolation from professional peers and the lack of fully satisfactory research facilities. The staff is temporary and families are isolated. IICA would be in a better position to obtain future financing for the Division if the multilateral agencies were aware of its activities. If the staff remains in San Jose, there is a good possibility that personnel will seek other employment during the pilot phase. Should changes occur in top management and in research personnel, it would be difficult and costly to replace them on short notice.

Recommendation #5: IICA should relocate the Insurance Division to its Washington office. (V-15)

Recommendation #6: IICA should recruit a Deputy Director to share the heavy travel and TR schedule of the Director. (VI-12)

Project Budget and Timetable

Original strategy and Project design include a timetable for performance of objectives which was overly optimistic, failing to take into account the time necessary to organize and recruit staff for IICA's Insurance Division. The Project was further hurt by the unavailability of Mexican data as a basis for speedy research results. Change of governments in Bolivia and Ecuador required extraordinary efforts to obtain authority to establish programs. High front-end subgrant support by IICA helped to obtain government acceptance and continuing financial support. With two years of a four-year program spent, it has become obvious that budgeted financing will not permit the Project to consolidate early gains and still permit country programs to pay going salaries or recruit essential specialists.

Recommendation #7: AID should give favorable consideration to a doubling of the pilot phase grant to permit IICA to continue to provide guidance to each of the three programs for a full four years and to complete related research plans. This should be coupled with greater local government burden sharing to 1984 and assurances of continued post-IICA government financial support. (See recommendation #8.) (V-11)

Subgrant Scheduling

IICA subgrants are being given in more or less equal amounts each year for a four-year period. While these subgrants

are directly responsible for employment of vital specialists and for other technical assistance, failure to schedule such funding on a phase-out schedule does not provide an incentive to country program governments to budget continuing funding assistance to insuring organizations.

Recommendation #8: IICA should schedule future subgrants in decreasing annual amounts with local governments agreeing to schedule corresponding larger amounts of assistance for operation support to insuring organizations. (III-3, V-12)

Role and Status of Research

Rural credit insurance is a powerful and desirable development tool and does not depend on research models to prove this. Original research objectives have been scrapped. Mexican data proved not to be available and the three pilot programs are providing data over a three to four-year period. The research is in its early collection phase, and it is too early to test whether the data are representative, valid, and reliable. Differences in country environment, socioeconomic level of farmers, and the short period of data may make the research results of the three countries of limited value. But research to date is beginning to prove helpful to existing programs. The broad scope of the research and the careful attention to variable insurance rates, reflecting risk of loss, will result in a memory bank of useful lessons far greater than in most development projects.

The over-emphasis on the research activity and expected immediate results tended to obscure the primary institution-building nature of the Project. Given the complementary role of credit insurance to supervised agricultural credit, an unquestionable prerequisite to growth in production and small farmer participation, research will provide the fine tuning to set optimum premiums, to determine portfolios, to reduce risk, and to suggest the way to organize national insurance agencies. Research objectives relating to cost/benefits of credit sources and of the sector may not be met due to the lack of data and the shortness of time during the pilot phase.

Recommendation #9: While IICA should continue to support current research for greater understanding, acceptance, effectiveness, efficiency, and viability of national programs, new country programs should be encouraged to initiate operations following the cautious approach of the existing programs, with or without prior research results. (VI-5)

Sources of Reinsurance

Suggested strategy shown in the Project Paper of gradually forming a COLAC-type confederation (ALARA) of reinsuring country programs does not appear feasible in the near future. The IICA Insurance Division would have been the logical core staff for such an organization, providing for its continuation as a technical institution and possible arbiter of reinsurance. Alternative sources of reinsurance are private companies of international stature and the

international organizations.

Recommendation #10: IICA should canvas the private reinsurance companies to promote interest in underwriting risks of LA country programs at reasonable cost. For the longer run, IICA should ascertain whether and in what way the multilateral agencies would be interested in financing country programs and providing capital for reinsurance of existing portfolios. (III-13, IV-11)

IICA Regional Salary Policy

The IICA insurance specialist in Bolivia is being paid at less than half the salary of the other IICA regional specialists. This is a result of IICA regulations which reimburse nationals in their own country at lower rates. The IICA specialist is unusually well prepared for his position and the infant program would suffer if he decided to resign. IICA regulations appear to be highly inflexible in this case, with the chief of the Division unable to obtain a waiver.

Recommendation #11: AID should discuss with IICA management the possibility of a waiver of salary level in Bolivia and, failing this, should seek some way to bring the reimbursement up to peer level. (IV-26)

Supply of Inputs

When certified seeds, insecticides, fertilizers, and other inputs which help to promote high yields and/or production are

not available for farmer purchase or are in short supply and exorbitantly priced, this increases the risk of loss and threatens the solvency of national credit insurance programs and the credibility of technology. In some countries, such as Bolivia, lack of foreign exchange may prevent governments from importing such inputs.

Recommendation #12: IICA should investigate possible in-country production of certified seed in Bolivia and other inputs in short supply in all programs to assure quality input availability. (III-7, IV-30)

Role of Consultants and Training

IICA's original plans were to finance specialized insurance and other consultants to provide in-country assistance, including training, to national programs. This would be relatively expensive, would involve use of non-Spanish-speaking consultants, and would be difficult under inflexible IICA salary or reimbursement regulations. More important, the results of such consultation tend to be lost as conditions change and as country personnel are shifted. More general consultation to IICA itself or of systems which can be generalized in a report suggesting useful actions have proved beneficial.

Recommendation #13: While using consultants for special problem solving or general modeling, insofar as country professionals are available, IICA should give first priority to training for additions to permanent staffs of country insuring

agencies, providing both on-the-job and out-of-country training. (III-10)

Recommendation #14: Recruiting criteria and legal and financial retention incentives should be built into training programs. (III-10)

ISA is well managed and promises to grow and provide services as the Program develops. No long-run analysis appears to have been undertaken of the potential countrywide ultimate product program, including physical limits to growth, costs and revenues schedules; and other factors which could hinder efficient management and training.

Recommendation #15: IICA should assist ISA to project long-run service and financial needs and resources, including efficiencies which may result from shared costs by credit agencies. (IV-12)

Recommendation #16: IICA should continue to recommend to ISA and the Government that Law No. 68 be amended or revised. (IV-19)

Recommendation #17: A joint IICA-ISA study should be undertaken of the costs of including premium and interest charges in coverage offered. (IV-20)

Third Country Training

ISA, the Panama Agricultural Credit Insurance Institute, is being increasingly used for observation of how rural credit insurance is organized and managed. As a third country

laboratory, its staff members have given generously of their time and hospitality, partially disrupting ISA work schedules. While some of the training materials can be found in speeches and financial and other reports of ISA, many of these materials are not fully coordinated and are not complete. Training at ISA provides an opportunity to bring technicians from several countries and agricultural bank and insurance specialists together to understand common objectives and need for cooperation.

Recommendation #13: IICA should assist ISA to update and complete general materials relating to its history and operations as a basis for scheduling a limited number of regional training seminars for other LA/C country credit and insurance specialists. IICA should consider reimbursing ISA for training services. (III-14, IV-16)

AID Insurance and Guarantees

ISA management sees the AID Productive Credit Guarantee Project (PCGP) as competitive to rural credit insurance for clients, human resources, and Government support. This misunderstanding of how PCGP works and what it entails suggests that AID project managers have not fully communicated with each other and with ISA. The PCGP proposal may not be completely clear as to differences in the programs, the non-agricultural aspects, and the burden its management could entail for ISA.

Recommendation #19: AID-PCGP and Crop Credit Insurance project managers should clarify the interrelation of their respective projects and take steps to assure ISA that PCGP does not jeopardize its program. (IV-14)

Financing ASBA

The government of Bolivia has made available \$1 million in PL-480 funds to cover reserves against loss of farmer investment. The insurer, ASBA, has invested this fund at 16% and is using these revenues to cover its initial operating expenses. Without additional capital to cover risk of loss and to pay for an expanded organization, ASBA will be limited in its rate of growth and coverage of new crops and areas. One possible source of capital is additional PL-480 funds. Some previously allocated PL-480 funds could be shifted to ASBA. Some of the funds yet to be received by the Government could be allocated to ASBA.

Recommendation #20: In negotiating the use of remaining PL-480 funds to be transferred to Bolivia, consideration should be given to the needs of ASBA of an independent source of capital to cover risk of loss of insured farmers. (IV-30)

AID Relations

The original Project design contemplated consultation by insuring organizations and the USAIDs prior to implementation of policy decisions. Staffs of the USAIDs are not specialized in rural insurance and would be put in the position of having

acquiesced in decisions which may later prove undesirable. Decision-making could be shifted to USAIDs, reducing the experience of country officials. Existing Program experience shows that country officials are capable of organizing and managing programs without US assistance. But this is no reason for not informing the USAIDs of the progress of the Program.

Recommendation #21: IICA should encourage country insurers to keep USAIDs informed of progress, problems, and status of their programs. (III-7)

III. PERFORMANCE 1978-1980

... This evaluation measured performance of the contractor (IICA) in accordance with conditions set forth as attachments to a letter to IICA from AID dated August 31, 1978.¹

A. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documents under this Grant for subgrant programs, the Grantee shall obtain from the subgrantee and shall furnish to A.I.D./W:

- (i) A time-phased implementation plan for carrying out the subgrant project including identification of all resources to be provided by the subgrantee. The plan shall include a definition of eligible small farmers satisfactory to the Grantee in consultation with the local A.I.D. Mission.

Implementation Plans

Time-phased country implementation plans were prepared and an attempt was made to project the growth in number of farms, type of crops and animal coverage, and other services to be provided to the rural sector by the individual programs. These were revised and included in the third Quarterly 1980 Report to AID. Corresponding personnel, physical facilities, and other requirements were generally projected for each

¹The specificity of objectives and tasks required of IICA prior to the Grant indicates that the project was well thought out.

program, keeping in mind that Panama was already in operation, that Bolivia does not have a long-term guaranteed source of funding for operations, and that Ecuador is in the planning stage. The greater specificity for Ecuador, however, is an indication that IICA is building up an experience base for use in developing future country programs.

Starting in August 1978, the project plan called for a 4-year pilot program in three countries. Timing of recruitment of IICA insurance personnel, of acceptance by governments and initial operations in two of the three countries, and of the availability of data on which to base research were overly optimistic. As of the end of 1980, Panama is well along, Bolivia is operational but has only issued fifty policies on one crop, and Ecuador expects to begin operations in April 1981. Research data will be collected as the Project evolves. The Project is from twelve to eighteen months behind original expectations. Looking back, however, the Project has actually progressed in a reasonable time frame. Faster recruitment could have resulted in the hiring of less competent personnel; acceptance by the two governments of a new program appears rapid when compared to other programs dependent on legislation or executive decree. Given the funding by the Government of Ecuador and the allocation of counterpart funds by the Government of Bolivia, totaling some four to five times the amount of subgrants, the Project is seen as a catalyst. The results to date are directly attributable to the efforts of the

Insurance Division personnel of IICA. The accomplishments as of December 1980 are noteworthy, considering the difficulties faced by the contractor with changing governments in both Bolivia and Ecuador.

Country Burden Sharing

The identification of all resources to be provided by the subgrantee may be too harsh a requirement for a new program with which governments have no experience and acceptance of which initially may have to be more heavily subsidized. In practice, the subgrants are intended to fund the key elements of the program, to assure trained personnel at various levels, and to obtain guarantees that the program will result in a self-sufficient apolitical institution. The contracts with governments to date are on an annual basis, with projected assistance for an initial 4-year period. The subgrant procedure is weak in that it does not provide for staggered burden sharing, with IICA funding gradually phasing out at the end of four years, leaving the country entities to carry on the entire program. There is no guarantee, furthermore, that the governments of the countries being assisted will provide continued financing for operations and continued funding or reserves to cover the liability of the insuring agency. This is practically assured in Panama and Ecuador but depends on available funding in Bolivia.

Recommendation: Remaining and new future annual subgrant agreements should attempt to schedule increasing host

government funding of insuring agencies to provide incentives to governments to gradually assume responsibility for funding in the post-pilot period.

Definition of Small Farmer¹

The requirement that implementation plans require a definition of and concentration on eligible small farmers has been difficult for IICA and the subgrantees. Little or no hard data exist on differential loss experience by size of farm enterprise. The cost of administering an insurance program, including inspection of small dispersed plots, is much higher than for medium or larger sized farms. Small farmers require more technical assistance in the use of modern technology. In Bolivia the USAID definition of a small farmer has been adopted: income primarily from agriculture, less than ten hectares, less than \$12,000 income. In Panama, where mechanization is common, a small farmer is one with income of \$40,000 or less per year; in practice, however, seventy percent of ISA-crop-insured clients have incomes of less than \$10,000.

This project is not designed for subsistence farmers, practically all of whom do not borrow from banks or other credit sources, and need not, therefore, insure against repayment. This project attempts to serve small commercial farmers, most of whom have multiple crop production patterns and depend for current income and purchase of future inputs on successful

¹For relevant discussion and bibliography, see AJAE, 12/79, pp. 933-952, and 12/80, pp. 879-888.

harvests of existing production. A successful insurance program against loss of production depends on diversification of risk which can be attained from a spreading of coverage over different sized farmers, representing greater experience and lower administrative costs. Combining of small and medium-sized farms actually provides a subsidy to smaller farmers insofar as these medium-size farmers pay the same premiums and are thought to incur lower losses,¹ and require less administrative costs for inspection. The semi-obligatory nature of insurance programs for those receiving public credit suggests that medium-sized farmers will be included in most, if not all, insurance programs in Latin America.

Recommendation: IICA continuing research efforts should attempt to define small and medium-sized farmers to permit insurers to measure differences in loss experience. Initial country program design and implementation should encourage a mixture of these farms to reduce the premiums of the smaller farmers and to minimize the cost of program administration.

(ii) Evidence of a commitment of the subgrantee:

(a) to consult with the Grantee and the local A.I.D.

Mission prior to the issuance of crop insurance in the process of selecting the crops to be insured;

(b) to make available, in the areas in which crop insurance is offered, the necessary complementary input services; and

¹See note on Losses by Size of Farm, annex 1.

(c) to pay all losses arising from the issuance of crop insurance pursuant to the Project without regard to whether such losses may exceed premiums collected from insured farmers.

Consultation with IICA and USAIDs

In-depth observation of the Panama program and interviews with personnel connected with the other two pilot programs confirm that these subgrantees constantly consult with the IICA Insurance staff, both before and after taking important decisions. Generally, IICA assistance to determine particular crops to be covered and a wide range of other decisions has proven helpful in moving the program along and in assuring viability.

ISA has not and does not regularly consult with the USAID in Panama prior to decisions on crop coverage. In part this reflects the ongoing nature of the Program, which was established before the project began. There seems to be little to be gained from prior consultation in Panama, the USAID not having particular expertise in this field. In view of the potential for natural catastrophe in any particular year, the dependence of the program on related government-wide data, and close cooperation between credit sources and the subgrantee, prior consultation could unnecessarily shift the responsibility for decision making from the insurer to the USAID.

There appears, furthermore, to be little disposition on the part of the insuring agencies to inform the USAID of the progress which is occurring in greater crop and location coverage, the nature and benefits of the program, and plans for the future. This reduces potential cooperation between the USAID and the insurer and lessens the independent communication to AID/W.

Recommendation: To the extent possible, IICA should promote regular communication between insuring agencies and country USAIDs to keep them informed of progress and problems.

Input Availability

Necessary inputs such as fertilizer and certified seed were available in Panama. Bolivia lacks certified potato seed and Ecuador is still in its planning stage. Given the difficulty of initiating and funding insurance programs, no purpose appears to be served by forcing the Government of Bolivia to import certified seed.

Recommendation: AID should request IICA to outline alternative plans for producing or otherwise making available certified seed in Bolivia.

Insurer Solvency

Country program governments are committed in one form or another to guarantee the solvency of the insurance programs. To date the Panamanian program has paid out about 60% of premiums collected and is building a contingency reserve.

The Government, in addition to specific guarantees against potential losses, has provided funding for reinsurance to increase coverage.

(iii) *Within six months from the date of the subgrant agreement evidence that legislation or appropriate authorization exists which enables the crop credit insurer to issue insurance policies and enter into contracts as a condition for further subgrant disbursement under this project.*

Legal Chartering of Insuring Agencies

The insurance program administered by ISA was established by the Government of Panama on December 15, 1975, under Law No. 68. The Ecuadorian Program is managed by CONASA, a mixed public-private corporation. It is chartered by the Government under the control of the Superintendent of Banking and Insurance, similar to a private company under the insurance laws of the country. The Bolivian Agency was chartered by decree and operates under a combination of decree and agreement with international agencies.

Specific Objectives

The specific objectives agreed upon between AID and IICA partially repeat the conditions precedent and provide more detail on the performance of IICA.

1. Assist and/or promote the establishment and/or development of three national crop credit insurance institutions which serve small farmers.

This is being accomplished.

2. *Provide technical assistance in the form of full-time country program advisors and short-term consultants for participating countries.*

IICA has direct-hire advisors in the three countries. The advisor in Panama is actively engaged in the overall research program in addition to direct assistance to ISA. The temporary advisor in Ecuador provides specific assistance and a new advisor is being recruited for longer-run assistance. Given the preliminary state of that program and the experience of its Director, a former employee of ISA, little would have been gained from other arrangements. The Bolivian national recruited by IICA has the necessary technical background and has long experience with the Government and AID programs. Though the recruitment process has been difficult because of the lack of experienced personnel with both insurance and agricultural backgrounds, the advisors are judged to be highly competent, well motivated, and are providing much needed assistance.

The number and type of short-term consultants recruited by IICA for specific studies and training are shown in exhibit V-34. The expertise has been helpful in preparing legislation and decrees, organizing field and office operations, development of life insurance for farmers, studying the actuarial basis for program coverage and premiums, and providing advice on the research program and computerization.

The Panama program appears to be in need of assistance

and training in actuarial and other insurance areas for which consultants might be supplied. The high cost of consultants; the lack of specific expertise, language, and time required to initiate assistance; the inflexibility of IICA consulting payment schedules; and the lack of existing counterpart personnel all suggest the advantage to be gained from recruitment of local actuaries, statisticians, or related professionals who would receive special on-the-job training and remain with the insuring organization. Thus, in Panama, ISA would benefit from recruitment of a Panamanian mathematician with general experience in statistics who could be trained as an agricultural actuary and remain in ISA permanently. This would involve some training abroad, perhaps in Mexico, Puerto Rico, or the US. Of course, the insurers will take legal and other precautions to assure that these newly trained specialists will remain with the organization for minimum time periods.

Recommendation: While using outside consultants for overall research, training, and other general assistance, IICA should promote the recruitment and special training of local professionals to maximize long-term benefits to insuring agencies.

3. *Coordinate and/or direct research into the economic desirability and feasibility of crop credit insurance in at least four countries. Research activities should address as a minimum the following questions:*

A. *How is farmer's welfare affected?*

B. *Is it less expensive, in both economic and fiscal terms, for governments to provide financing for mixed credit and insurance programs than for just credit alone?*

C. *What is the full range of benefits (economic, social, political) received by the parties involved in this project (e.g., national government, banks, small farmers, consumers, rural labor)?*

The current research program specifically addresses the four levels of costs/benefits to the farmer, the insuring agency, the credit source, and the sector. Research results are not yet available. The three country programs will provide the data base for this research and, except for special financial data, it will be 1982 before results will begin to appear which can be generalized and compared. Some data are available from Guatemala and some financial data from Mexico, but these data are not fully comparable to the data on which the project will be judged. Before the project terminates, however, it may be possible to begin to include data from the Dominican Republic, Venezuela, and possibly Colombia.

4. *Train crop credit insurance personnel as necessary.*

Rural credit insurance is a mixture of agriculture, economics, and insurance specialties. Training at the IICA level has consisted of on-the-job training of highly specialized professionals. The most important training at the national level is being done by the resident advisors who are installing computerized systems for research and administration. (See 2, above.)

5. Enter into subgrant agreements with participating countries to channel funds for in-country expenses as specified in the budget and provide basic accounting and auditing services.

Subgrant agreements provide the basis for acceptance by the pilot countries and leverage for IICA to conduct research and utilize the programs as laboratories. Subgrants are audited closely by the IICA finance officer to assure that expenditures are within agreed guidelines. Subgrants have permitted the Panama insurer to extend coverage to new crops and areas by financing new personnel costs. Late starts, upward-revised estimates of costs, and new research objectives point to a shortfall in budget for subgrant purposes. (See recommendation on future subgrant negotiations.)

6. Determine the technical and economic feasibility of and design of a regional crop credit reinsurance institution.

It is too early for IICA to begin to implement inter-country or regional reinsurance. Project strategy calls for this in the post-pilot stage. Panama is seeking private reinsurance coverage, but initial response appears disappointingly costly and nonenthusiastic. IICA has yet to fully investigate the alternatives which would underlie the design of a regional reinsurance scheme. Among these alternatives would be a guarantee by one of the international/inter-American organizations, mixed private/public financing, or the formation of an independent agency similar to COLAC, which would seek the cheapest source of reinsurance. ALARA

(Agencia Latino Americano de Reaseguros Agrícolas), a confederation of the national insuring agencies, has been suggested as a logical extension of the development of national organizations once many of them are in operation. This will not occur during the pilot stage. Members would have little reason to have faith in ALARA if all national organizations are not fully independent of government policy and fund tampering. It appears desirable, therefore, to promote the use of existing and potential private reinsurance resources as a first resort during and after the pilot stage to test their availability, cost, and usefulness. If these private companies find the experience profitable, it is logical to expect the market to become competitive.

Recommendation: Initially, IICA should canvass the private reinsurers to determine their potential availability and costs to country insurers. International agencies should be approached informally to initiate interest and to provide an alternative source of reinsurance.

7. *Produce reports, case studies, analyses, and similar documents which can be used by other nations in planning and developing their own crop credit insurance institutions.*

The materials produced to date have, understandably, been those which relate directly to the needs of the three pilot country programs. These have been a series of documents similar to a turnkey operation: those needed at every step of the development of the insurer. Thus, IICA personnel

have developed legislative/regulatory models, insurance policies, and other documentation useful to the three insurers. Consultants hired by IICA have produced some helpful specialized reports. The research already underway will automatically result in general findings useful to new country programs. IICA has yet to produce an "ideal" packet of materials useful to any country considering the establishment of a program. Alternatively, IICA has promoted visits to ISA in Panama as a live laboratory for training and planning. It has been a positive and fruitful method of stimulating interest in and understanding of rural credit insurance. It has proven to be extremely popular, reflecting the cooperation and appreciation of ISA management. Even casual observation indicates that the demands on ISA personnel have become burdensome in terms of time and disruptive of its operation.

Recommendation: IICA should assist ISA to prepare written materials relating to the major elements of its history and operations, to be regularly updated and used as training materials in a limited number of regional seminars in Panama.

Recommendation: IICA should consider reimbursing ISA for services provided in training seminars.

Prior Research Results, Mexico

In Mexico, a financial benefit/cost analysis of agricultural credit policy with and without crop credit insurance and a study of the impact of

crop credit insurance on small farmer production will be carried out.

Although Mexico has provided training to country insurer personnel, underlying research could not be undertaken on costs, benefits, farmer motivation, portfolio, and other variables important in providing coverage and setting premiums because of lack of data and recent changes in Mexican program policy. Data are now being obtained from pilot programs and will require up to three years to become useful.

Quarterly and Special Reports

IICA has supplied AID/W with quarterly reports on progress and expenditures. Special reports on research and finance have been prepared.

Panama is characterized by a tropical climate, relatively good infrastructure, availability of modern inputs promoted by private industry, and mixed private and communal-type farming. With a total population of slightly less than two million, Panama depends heavily on agricultural employment and production. Agriculture has been plagued from time to time by severe drought, exerting pressure on the Government to adopt an insurance program.

The Instituto de Seguro Agropecuario (ISA), the Agricultural Credit Insurance Institute in Panama, was created by Law No. 68 and was authorized to begin operations in January 1976. It started under difficult circumstances: top Government officials considered it costly, Government finances were tight, no specific data or studies of risk were available, the Director had no insurance experience or budget, farmers and Agricultural Development Bank (BDA) officials were not convinced of the benefits of the program. Nevertheless, ISA was given \$150,000 and started with two technicians. ISA officials visited Mexico, Puerto Rico, and the ECIC to obtain background, collected weather data, and began a small

Introduction

PANAMA

but vigorous public relations campaign to gain acceptance from farm organizations and banks. Using BDA's offices, the small staff arbitrarily began a pilot plot program covering corn and sorghum, having been advised against insuring rice, which was considered risky by Ministry officials. In retrospect, ISA has been fortunate. No catastrophic disasters occurred during its early vulnerable period. Initially, ISA actually paid for some losses which were avoidable to give the program credibility and to promote acceptance. Initial premiums were set without a data base at a fixed 5% for all crops, zones, and sizes of farms. The Program expanded gradually, assisted by an appropriation of the Government, which varied from \$150,000 to \$200,000 per year plus a promised guarantee of \$1 million in reserves to be made available in case of catastrophic loss. Acceptance by Government officials, farmers, and private banks has been relatively rapid. Starting in 1977, the organization and administration of the Program took form, but lack of funds to hire specialized personnel necessary to cover additional products and to manage the Program prevented expansion. ISA and USAID officials are unanimous in crediting AID/IICA assistance, which began in March 1979, as the key to expansion and coverage--adding two new crops and expanding its original coverage of rice, corn, and sorghum.

Organization and Management

ISA is simply and functionally organized with all

offices reporting directly to the Director General (Exhibit IV-38). It is characterized by a very small staff operating to capacity. In 1980, ISA had a staff of 42, half of whom were in regional offices. In practice, the chiefs of Finance, Administration, Programming, Crop and Animal Insurance have wide latitude and delegation, meeting regularly as a Coordinating Committee, assuring full information and consistency of policy and program implementation. The zonal chiefs are generalists familiar with the politics and agriculture of their zones. Conflicts which regional specialists (e.g., veterinarians, agronomists) could have with zonal office heads have not occurred to date because technical policy and direction are set and overseen by the central organization technical specialists, leaving general administration to the field. These relationships--technical direction of regional specialists--should be made explicit in new country programs.

The small professional staff is unusually well qualified by training and experience and highly dedicated to the organization (Exhibits IV-39 and IV-40). Morale and job satisfaction are high. Team cooperation is evident. In the absence of the Director-General, three unit heads are rotated in charge to provide experience and to defuse potential competition among them. Sometime in the future, when funding from increased insurance coverage provides greater revenue, adding a Deputy Director-General in charge of day-to-day operations would free the Director-General to concentrate on policy and inter-Governmental

relations and provide for continuity during absences or changes in the Director-General.

The Executive Committee, equivalent to a board of directors, is composed of the Minister of Agriculture, the Superintendent of Insurance in the Ministry of Commerce and Industry, and the Director-General of ISA. It would be desirable to have a representative of the Agricultural Development Bank on the board to promote function and cost-sharing of the combined credit-insurance functions now borne by ISA. This is particularly relevant to efficiencies which can be gained in the application process and in extension.

Crop or Agricultural Insurance

The first regular insurance policies covering corn and sorghum were issued in 1977, following an experimental initial program in 1976 in areas in which the BDA credit was concentrated. This pattern, initiating coverage on a small number of farms to limit risk of loss pending data on risk and experience, characterizes the three pilot programs and IICA's approach in general. The growth of product coverage is seen as follows:

1976-77	-	corn, sorghum
1978	-	corn, sorghum, rice, cattle
1979	-	corn, sorghum, rice, cattle, industrial tomatoes, beans, other livestock
1980	-	corn, sorghum, rice, cattle, industrial tomatoes, beans, other livestock

Panama crop credit insurance is designed to cover up to 70% of the loss of investment of the farmer, including labor.

Losses covered are those resulting from drought, flood, excess humidity, wind, fire, plague, and uncontrollable disease. For the first five years, almost all of the crops insured were covering BDA credit, with private bank and co-op credit beginning to seek insurance in 1980-81. As of 1980, ISA is covering five crops in six regions (Exhibit IV-4). Hectares insured grew 35% in 1978 and 92% in 1979; coverage grew 67% and 142%, respectively, in the same years; and the number of farmers increased 50% and 145%. About 70% of the farmers producing crops have less than \$10,000 in fixed assets and most of the cattle producers have less than \$20,000 of fixed assets. Except for tomatoes, on which a 6-7% premium is charged, producers of other crops were charged 5% of coverage. Coverage and premiums are charged per hectare and losses are measured by hectare. Thus, even if production on most of the farmer's land is up to yield, providing for repayment of investment, the farmer could recover losses which may occur on particular sites. Farmers sold premiums on a per hectare basis would feel cheated if they were not indemnified on the same basis. During the promotional stage, ISA has had no choice but to uphold credibility of the Program. In following years, however, ISA does not insure particular sites or locations on which losses have occurred, gradually eliminating those likely to fail due to poor drainage, flooding, and similar causes. This method of payment results in some inequities and inconsistencies: a similar loss of production

spread over the entire acreage but resulting in only slightly less average yield equivalent to the proportion of the heavy loss on one site would not be indemnified; it provides for indemnification of particular losses even though the production loan for the year can be repaid by remaining production. On balance, ISA has been justified in giving greater weight to farmer acceptance during the promotional period.

In the first three years of the Program, ISA paid out 55 cents for every dollar collected in premiums for crop insurance. The loss was least in rice, only 21¢ for each dollar in premiums; 44¢ for corn, 43¢ for tomatoes. ISA paid out more than premiums for sorghum, \$1.28 per dollar of premium; and \$1.69 for beans. ISA is considering the need for variable premiums by crop and location to reflect known rates of loss to replace present fixed rates (Exhibit IV-42).

The unusually strong growth in 1979 reflects the support in technical assistance, funding, and general influence among Panamanian institutions given the program by the AID/IICA agreement. The subgrant in the 1979-80 year permitted ISA to purchase five vehicles, to add new professional staff to field offices, and to extend insurance of rice, the least-loss crop to date. IICA-paid consultants were particularly helpful in designing a life insurance program and developing a sliding premium schedule for livestock.

Major causes of loss in 1979 were drought and excess humidity. Broken down by individual crops, 70% of the loss

in rice resulted from crop diseases, drought, and strong winds; corn, sorghum, and beans were affected primarily by excess humidity. Twenty-nine percent (29%) of bean and 9.4% of sorghum acreage incurred loss (Exhibit IV-43).

ISA premiums vary by type of cultivation, i.e., irrigated, mechanized or hand technology (Exhibit IV-44). Coverage, which is based on farmer investment, ranges from 60-75% of the average value of the crop and between 85-90% of the production loan to the farmer. The premium covers all natural disasters. Almost 75% of all area covered was in two provinces, Chiriqui and Los Santos. Chiriqui accounted for a significant proportion of the losses in the Program (Exhibit IV-45).

Livestock/Animal Insurance

Livestock insurance was initiated in July 1978. Policies are written against the risks of death or the loss of function resulting from accidents or sickness. Policies cover farmer investment or bank-purchase credit. Policies are written for up to five years (Exhibit IV-46). Horses and pigs are also covered. To minimize loss from disease, ISA technicians inoculate the insured animal against prevalent diseases. This is reflected in major causes of loss, which are snake bites, falls, and fractures (Exhibit IV-47).¹

¹These data should be viewed with the knowledge that vaccines are only partially effective and that unknown causes of death are ascribed to snake bite.

Starting with an across-the-board 2-2.5% premium for any animal insured, the payout for death and loss of function of bulls was \$1.59 for each dollar of premiums, \$0.99 for cows, and \$0.57 for feeder livestock. Recent changeover to a variable risk policy is intended to charge according to risk. For the total program to date, ISA has paid out \$1.01 for each dollar of premiums. When combined with the crop insurance experience, ISA has paid approximately \$0.61 for each dollar of premium.¹

Acceptance by farmers and banks of the livestock program is shown by an increasing number of farmers requesting coverage for more animals and corresponding requests from private banks and cooperatives to ISA for entrance to the Program. This is particularly true of branch banks located in the rural areas. The 1980 Program provides a 15% discount in premium to farmers who renew policies with no prior claim. ISA's policies reduce the premium and payout for each year after the first of multi-year policies, reflecting actual risk of sickness or infection.

Financing of the Program Operations

For each year since 1977, the first full year of operations, total premium revenue has exceeded indemnities.

Table #1: NET PREMIUM REVENUE

1977	-	\$40,000
1978	-	\$11,300
1979	-	\$142,000
May-Oct. 1980	-	\$23,200 (animals only)

¹Velasquez, Virginia B. De, "Experiencia del Seguro Agrocrediticio en Panama," Nov. 1980, p. 8.

These surpluses are small relative to costs of operations, however, which in 1979 were running at slightly in excess of \$450,000 and rose to \$670,583 in 1980. Fixed salaries made up almost half the costs, with vehicles accounting for over 10%. To cover these 1980 operational costs, ISA received grants of \$200,000 from the Government, \$215,000 from IICA, and \$255,583 from net premium revenues. Of these latter funds, ISA has set aside 20% to build a contingency fund for future indemnification. Ideally the net revenues from premiums should eventually be at a level to cover operational costs as well as indemnification. Even though premium income is rising faster than operational costs (Exhibits IV-48 and IV-49), ISA does not expect this to happen soon, if at all. Rural credit insurance of small farmer investment deals with low income and low marginal production. Raising premium levels to cover costs of operations could be burdensome to farmer income. Normally, such premiums are subsidized by governments to assure agricultural economic stability. ISA personnel, though apolitical, are Government employees whose services could easily be equated with those of other Government employees being paid by appropriations. Although AID/IICA subgrants will be forthcoming through 1982, ISA expects the Government to make up for the IICA subsidy once the Agreement has been completed. Another reason why Government grants are justified is the pressure of inflation on costs over which ISA has little control. ISA still needs to employ an actuary and an insurance specialist, which will

raise its costs. New crops and provinces may result in temporary losses until experience is gained. But new crops permit a greater base and diversification and more efficient use of resources. Premium rates in Panama can be raised if need be and, as variable premiums are introduced for particular higher-risk products and provinces, greater revenues can be expected.

Reserves for Catastrophe

ISA relies on the "full faith" of the Government of Panama, which has promised to cover the risk of up to \$1 million in indemnities in case of a catastrophic loss. In addition, the Government will negotiate any amount over the million dollar automatic fund. Unfortunately, should such a fund have to be drawn down, it is a one-time payment and its use would leave ISA without the ability to write expanded coverage. In 1980, the Government, recognizing the growth of coverage and the risk to the fund, promised an additional \$50,000 to permit ISA to purchase reinsurance from private sources. Only one response was received by ISA to its request for reinsurance. The conditions and amount of coverage of this response were unsatisfactory.

As long as no catastrophic across-the-board losses occur, time is on ISA's side. Contingency reserves can be expected to accumulate (Exhibit IV-50) as increased numbers of farmers and greater coverage result from the obligatory insurance required to obtain credit. This will permit greater

diversification as two cycles of production are introduced, new locations and crops are added, and variable premiums are charged.

Mechanical ratios are not fully indicative of the risks covered or subsidies provided. Once coverage rose to several times the reserve fund, ISA could be said to be dangerously overextended. Yet the purposeful diversification, the preventive inoculation of animals, the limiting of payments to 70% of loss, and the attention to cost containment suggest that ISA may be less in danger in 1980 than in 1978-79.

The lack of response from the private reinsurance institutions is disturbing. If the poor response is indicative of the lack of confidence and unavailability of the private market for reinsurance--for whatever reason--it would be desirable for IICA to seek and promote other sources for country programs.

Recommendation: IICA should develop more sophisticated background data and promote private and multilateral agency participation in reinsurance of country programs.

Long-run Planning/Shared Expenses

ISA has not had to face up as yet to the limits of its administrative, financial, and management capacity, given the gradual growth of the program. No schedule of projected loans, coverage, products, and other elements of long-term insurance program mix has been developed. It is clear that field personnel are not a limiting factor and can be added as needed. The capacity and an understanding of the limits of the

accounting and general management staff at the central or national level are not known. Given the obligatory nature of the program, the availability of public and private bank credit, and the pressure to keep operational expenses limited, it would be desirable to study the limits to efficiency.

The introduction of rural credit insurance has resulted in formal technical assistance becoming available to small farmers as the insuring agency attempts to prevent or minimize loss by promoting use of modern inputs and immunizing livestock. But the BDA has a stake in repayment of its loan and should share in the cost of such extension services. While promoting insurance to farmers, BDA has partially assisted farmers to apply for insurance. More often it has directed farmers to nearby ISA regional offices. It appears that any information required by ISA will also be required by BDA as a basis for credit. Except that BDA technicians and office workers consider that their work will be increased, no reasons exist why BDA and ISA applications should not be combined to serve both organizations. It would reduce duplication and gradually extend insurance to most eligible farmers. It would save time and reduce costs of the Program. It would permit BDA to share the costs. This common interest does not spill over into inspections and indemnification processes, which are best reserved to ISA.

Recommendation: If requested by ISA, IICA should give favorable consideration to providing a consultant to assist

ISA in projecting potential growth and workload for the next five years, relating this to the full target population, to potential income, to available and new manpower requirements, and taking into account possible efficiencies which would result from shared functions with credit agencies, such as farmer application and providing extension services.

Relation to Other AID Programs: PCGP

The management of ISA has expressed concern over possible competition of the AID Productive Credit Guaranty Project (PCGP) under consideration in Panama by the Banco Nacional de Panama and by the Government. The Director of ISA suggests that, at the very least, the PCGP be administered by ISA to assure that the two programs work in harmony, do not dilute Government support for ISA, do not siphon off scarce human resources, and do not provide an alternate market for small farmers seeking to minimize risks of production.

PCGP differs from rural credit insurance administered by ISA in some fundamental ways:

- 1) It promotes loans to non-agricultural and non-producer entities, though in practice about 50% of the loans are expected to be to small farmers.
- 2) Loans are for fixed investments as well as current costs; loans are to finance an enterprise, not a particular year's crop.
- 3) Guarantees are for private bank loans only.

4) Guaranteed loans may be made only to farmers without collateral.

In practice, little advantage would be gained by naming ISA as the PCGP administrator. It does not appear to be competitive; the AID-PCGP project manager notes that banks would require farmers to purchase insurance to protect working capital. Dealing with fixed investments and non-agricultural loans, it could divert ISA from its main function. Since the PCGP Fund does not obtain AID capital and staff support, operational expenses could become burdensome for ISA. Some cooperative measures may prove possible with regard to technical assistance since both programs provide extension services. By law, the AID Guarantee may not reinsure ISA coverage.

Recommendation: AID/W project managers of both projects should discuss possible cooperative activity prior to (1) reassuring the Director of ISA that PCGP is supportive of ISA; and (2) writing into the Panamanian PCGP Agreement necessary language to clarify the complementary nature of the two projects.

Obligatory Insurance and Farmer Decisions

Obligatory insurance tied to the availability of credit from BDA, including inspection and pressure to utilize modern inputs are seen by some as forcing farmers to increase costs, utilize methods which may be contrary to their experience, and generally to substitute Government for farmer decision-making.

In part, such criticism is based on faulty data of relative credit costs and in part on failure to understand the requirements of an insurance system. The weight of logic and fact suggests that mandatory insurance is both desirable and necessary. If it were not obligatory, the preponderance of clients would be high-risk farmers, without the compensating low-risk farmer to provide an offset and to reduce the average premium. Obligatory insurance eliminates adverse selection. Agricultural credit is subsidized low cost credit. BDA charges 10% for crop loans and ISA charges 5% for insurance, a total of 15%. This compares with 22% being charged for non-agricultural loans. If the rate is subsidized and the level is low even with the insurance, the benefits are great: it protects BDA from decapitalization from default by farmers, it permits the agricultural sector to level out losses among farmers, and it substitutes for a welfare subsidy to cooperative resettled farms (asentamientos). There are 290 asentamientos to which the Ministry is devoting some 80% of its efforts. During bad crop years, BDA has been rolling over these cooperative farmers' debts. With insurance, the farmer does not increase his debt, eliminating the need for rollover. As such, the insurance program transfers the burden of loss to insured farmers and relieves the BDA from carrying losses. Finally, the technical assistance in Panama for the first time makes extension available to small farmers. In practice, most commercial farmers in Panama use machinery, fertilizer,

selected or certified seed, and chemicals to eliminate pests. Assistance tends to assure time of planting, and diffusion of other lessons from experimental plots.

Training: Third Country

Partially funded by IICA overhead funds, representatives from several countries have visited ISA for observation and training in rural credit insurance. ISA's operations and personnel make an ideal laboratory, given their dedication, experience, and expertise. It is obvious that ISA's personnel are being exploited and ISA's work schedule disrupted by a large number of visits, arbitrarily timed to third country whim. Some training materials are already available to visitors--annual reports, law, regulations, life insurance program design, Director's speech in Chile, financial data, consultants' reports, among others. But these materials are not fully integrated, data are for different time periods, and coverage is not complete. Revised materials would reduce the time of personal contact and would standardize the training. References to other country programs can be indicated. Materials can be made available before the visits, permitting more intensive interchange while in Panama.

Recommendation: IICA should cooperate with ISA to develop a formal training program for third countries, with such training scheduled to reduce disruption of ISA's activities to a minimum. If such training proves desirable in promoting

credit insurance, IICA should consider whether observers should help to cover the cost of the training program.

Training: Internal

One of the most impressive gains from IICA's assistance to ISA is the training provided by the IICA specialist to the personnel of ISA. A computer has been installed and programmed, and a new statistical specialist is being trained in its use. Consultants' reports (Exhibit V-34) provide specific guidelines to the financial staff and the technical program chiefs. IICA and ISA have wisely decided to invest in on-the-job training of a Panamanian actuary who will become a permanent staff member.

USAID Relations

ISA was in operation for three years prior to accepting IICA's assistance. The Program was well underway. While the USAID is generally aware of ISA's activities, no formal communication or interchange has been started. Benefits to both ISA and the USAID from such contact are obvious: the USAID is a conduit to AID/W to report progress, to suggest needs, and to promote IICA assistance. OPG funding after the pilot stage is potentially helpful.

Public Relations: Farmer Acceptance

Although immediate indemnification of farmers with losses has the greatest impact on acceptance of the Program by other farmers, ISA has completed posters, booklets, and

a short movie which explains the Program. ISA's audio-visual materials are low-key and specific. The Communications Director is a recent university graduate who is apolitical and innovative. ISA's experience in obtaining farmer acceptance points to the importance of public relations at the beginning of the Program even though it is a high-cost element of the Program.

Summary

ISA personnel are dedicated professionals. The organization has been fortunate that no serious catastrophe has occurred during its promotional period. ISA has two major programs--crops and animals. It has taken five years for ISA to become reasonably operational. IICA's support resulted in an immediate expansion of personnel and coverage. ISA is about to introduce variable premiums to reflect risks. Some experts are not available in Panama and will have to be trained. The Government subsidizes both operations and reserves. The latter have been augmented by appropriations to buy reinsurance. Private company reinsurance has not been immediately forthcoming. ISA does not have control of the reserve, losing the interest from it as an asset and for income. Government guarantee is a one-time capital stock. ISA will require long-term subsidization to cover costs of operation from the Government even though premium revenues exceed indemnification by \$0.40 for each dollar of premium.

Expected IICA Performance

The June 1978 Project Papers (p. 14) set forth seven specific ways in which AID assistance would expect to assist ISA. As of December 1980, ISA officials reported performance as follows:

1. *Review and recommend a new law for ISA.*

As of December 1980, the law has not been reviewed with a view to recommendations for modifying it. The law does not appear to limit the activities of ISA. ISA does not reflect the need for a change in the law. Despite this, the Law No. 68 continues to limit the activity of ISA. The structure of the Board of Directors could be strengthened. Rural life insurance, currently discouraged, could be permitted along with other types of farm insurance. Panamanian Government guarantee of risk coverage could be overt and available to ISA as an interest-bearing asset.

Recommendation: IICA should continue to recommend to ISA and with the Government of Panama that the Law be amended or revised.

2. *Review and recommend a new financial structure for ISA.*

ISA sees no need for change in its accounting and budgeting structure. An IICA consultant's report has been prepared to assist ISA in understanding its capital reserve structure and its writings-to-reserve ratio. (See prior recommendation.)

3. *Provide broader coverage including the insuring of interest and premium charges, providing group life insurance and voluntary coverage of amounts in excess of the minimum.*

IICA has contracted for a study of life insurance.

...To date ISA does not include interest and premium charges in coverage insured. Inclusion of such charges would appear to benefit farmers and improve acceptance of the Program.

Recommendation: IICA and ISA should jointly undertake a study of the costs of including interest and premium charges in coverage offered.

Recommendation: Increasing coverage in excess of the minimum required to repay the farmer's (current cost) investment is not recommended.

4. *Improve formal and working links with credit institutions.*

This is an internal political problem which is outside the influence of external organizations. Since the Minister of Agriculture is the President of the Board of ISA, it seems unnecessary for IICA to take specific action, especially since the Director of ISA is well connected with other Government agencies.

5. *Improve working links with agricultural research and planning agencies.*

IICA personnel have been particularly active in cementing relations and utilizing data and facilities of IDIAP and the Contraloria (Planning) of Panama.

6. *Improve outreach to small farmers.*

Recommendations have been made by IICA which have had significant effects on the acceptance of the program by small farmers and on the timing of planting of sorghum.

Recommendation: ISA should continue to provide technical assistance to smaller farmers while exploring specific ways to obtain reimbursement from Government agencies to cover such costs.

7. *Support the integrated area development project at Tonosi.*

The Tonosi project has been abandoned for reasons outside the control of ISA. ISA is insuring asentamientos in Soná instead, primarily in rice production.

THE DOMINICAN REPUBLIC

To test the applicability of ISA and Panama as a demonstration laboratory, officials of the Government of the Dominican Republic were interviewed while they were visiting Panama.

The law and related decrees under which credit insurance is administered in Panama were seen as obligatory but not fully enforced initially. ISA officials recognize that insurance cannot be extended initially to all farmers covered by the law without sufficient capital to cover risk of loss and that some farmers with unusually high risk may never be covered. ISA expects to extend coverage gradually, concentrating on small and medium-sized farmers. The lack of enforcement of an obligatory requirement is seen by DR officials as unnecessary and confusing to farmers. Alternatively, the law could have specified a gradual coverage or could have been written with a proviso to specify actual coverage year by year by amendment.

The small number of ISA staff and the relatively modest salaries paid to professional personnel suggest that budgets for a comparable insurance organization in the DR will be at much higher levels. DR officials believe it desirable to initiate operations with actuarial and other departments in place. It is not clear whether human resources are available

within the DR. An initial staff of fifty is foreseen and training will be critical.

The observation of ISA operations has already provided the Agricultural Bank officials with an understanding of the complementary or parallel role of the rural credit and insuring agencies and of the related functions which the Bank can undertake. They are aware, furthermore, of the benefits which could accrue to the insurer initially if office space is provided by the Bank or the Ministry in their 31 field offices, covering 25 provinces. In this connection, if representatives of the Ministry and the Bank are on the Board of Directors of the insuring organization, regardless of its legal form, cooperation with the Bank will be furthered.

Extension services are developing in the DR, but are not fully available to small farmers. Supervised credit is available, though not the only type provided by the Bank. The requirement of obligatory technology will have to be studied. Certified seed is apparently not available, though domestically produced fertilizer is in good supply.

DR officials believe there is a market for insuring farm machinery with very low risk and possibility of charging relatively high premiums to subsidize other risks. (In some countries, by law, machinery insurance is reserved to private insurers.)

ISA provided the DR officials with an understanding of the problems they will face and indicated ways in which to

organize and implement a rural credit insurance program. It is evident that the ISA visit will promote an acceptance of a program and facilitate an understanding of required legal and financial underpinnings. The DR would benefit from IICA assistance in organizing, but more especially in developing and training for a data information and research system. Panama's "muddling through" philosophy to get started appears particularly helpful in protecting new program officials from disillusionment with slow progress at the beginning.

The DR has many crops under cultivation, insurance of which leads to risk diffusion as different crops are not subject to similar losses.

Other Countries

Venezuela has shown an interest in developing a credit insurance program and is reported by IICA to have set aside \$8 million pending Presidential approval.

IICA has come to agreement in principle to supply technical assistance to the Government of Costa Rica to redirect a program already underway. This activity will be funded by non-AID IICA funds.

BOLIVIA

Bolivia, of the three pilot countries, is characterized by constantly changing governments; underdeveloped infrastructure; potato monoculture cash crop on small farms; and a high level of illiteracy, especially farmers over 30 years of age. Depending on the altitude, the country is divided into mountain (altiplano), valley, and tropical regions. Except for recently developed tropical agriculture in the Santa Cruz area, farms are small.

Reflecting historical exploitation and illiteracy, small farmers do not easily accept technical advice, relying on crop and animal diversification and custom to defend themselves against risk of loss from natural causes. Semi-monopolistic commercial truckers, taking advantage of difficult farmer transport over poor and limited roads, pay low prices to farmers. Farmers sell their products piecemeal over the year to take advantage of significant rates of inflation. Ceiling prices for consumer goods dampen food prices at the farm. The cost of production of cash crops is relatively high because of the high cost and scarcity of fertilizer and other inputs. There is no domestic certified potato seed. For small farmers, the main source of institutional credit is the Banco Agropecuario Boliviana (BAB).

The Aseguradora Boliviana Agropecuario (ASBA), the

Bolivian Agricultural Insurance Agency, was established in August 1979 and became operational in the Spring of 1980 with the appointment of its present IICA advisor. A previous advisor transferred to Ecuador, leaving IICA.

IICA intervention with the Government of Bolivia was directly responsible for the establishment of the Program and the creation of ASBA. ASBA is authorized by decree and its function and funding result from separate agreements signed by the Ministry (MACA), Bank (BAB), USAID (PL-480), IICA, and ASBA. The BAB has agreed to promote the Program and collect the premium.

ASBA is simply and effectively organized into three line operations (Exhibit IV-51). It currently has an eleven-person staff, including four subprofessional employees and two inspectors. The personnel are quasi-Government employees, partially protected from arbitrary hiring/firing. This tends to provide more permanence to ASBA. On the other hand, ASBA employees do not get bonuses of up to 70% which are given to industrial workers. The IICA specialist provides technical assistance and oversees the research activity. He is a Bolivian national with close ties to the Agricultural Bank and long experience with AID and PL-480. Because of IICA's regulations, he is paid at a local rate, less than one-half that paid the other IICA insurance specialists. This is threatening his retention and the progress of the Program.

Recommendation: AID/IICA should seek possible ways of

reimbursing the Bolivian IICA specialist at a comparable level to the other IICA insurance personnel.

During March-July 1980, ASBA conducted surveys of potential areas for initial coverage, deciding on the Melga-Colomi zones close to Cochabamba. The Pilot area has 800 families, of which 50 were insured for potato production out of a total of 220 interviewed. The others will provide a control group for research objectives. The original target of 100 insured farmers was halved when the change of Government caused the USAID to stop funding and prevented the issuance of a free entry permit for IICA mobile equipment for ASBA inspectors.

Recommendation: AID should, insofar as possible, facilitate the release of mobile equipment from customs.

Recommendation: Where it applies, reflecting country requirements and service availability, AID should exempt the Program from sole purchase of US equipment.

The initial insurance program required farmers, as a condition of obtaining credit, to agree to one of two levels of modern input use. Of the fifty farmers insured, forty-four agreed to use recommended levels of fertilizer, disease and pest chemicals, and available seed; six agreed to lesser use of fertilizer and chemicals. ASBA coverage of particular farm production begins only after germination is assured. The potato coverage was on 33 hectares or an average of 0.7 hectares per farm. On \$43,000 covered, farmers paid

a 5.0% premium, although the calculated risk was for a 15% loss.¹ Initially, therefore, farmers received a risk subsidy of almost 10%. The fifty farmers received 45% additional credits without insurance from the Bank for barley, broad beans, and onions. Average premiums paid by farmers to cover potato production ranged from a low of \$33 to a high of \$65, depending on coverage and the zone of production (Exhibits IV-52 and IV-53). The projected loss for 1980 is \$5,600, which will be easily covered by reserves.

In 1981, with a target of 250 insured farmers obtaining almost \$300,000 in credit, the risk of loss is estimated at \$65,000 and premium revenues of about \$11,000. Allocating 80% to indemnification, or almost \$9,000, a subsidy of \$56,000 to cover reserves will be required. If loss is projected at 15% instead of 30%, the subsidy is reduced to \$23,000. In any case, with \$1 million in reserves, ASBA projects \$b 4,466,682 or \$178,667 from interest income, putting it into a strong financial position through June of 1983.

ASBA is expecting to increase coverage from 50 farmers in 1980 to 250 in 1981 and to about 1650 by 1983, the end of the pilot period. By then, ASBA estimates each farmer will receive an average of \$3,000 in credit, of which one-half will be insured, or a total of almost \$2.5 million in coverage resulting in premiums of \$125,000. Each farmer will be averaging \$75 per year of premiums by 1983.

¹Preproject surveys indicated a 30% loss.

ASBA has received \$1 million (\$b 25 million) of Title III PL-480 counterpart funds and has deposited them at 16%, earning \$39,000 (\$b 975,040) in 1980 and is projecting earnings through June of 1983 of between \$583,462 (\$b 14.6 million) and \$602,914 (\$b 15.1 million), depending on the maturities of its investment.

The IICA specialist estimated that the potential full program, nationwide, could in time cover 16 crops and two classes of animals plus life insurance. The latter at a 1% premium each for the farmer and his wife would actually subsidize the program. To cover the cost of operations and reserves for indemnification at full program, additional PL-480 counterpart invested to provide income would appear to be the most likely source of capital for growth. As of 1980, Bolivia was slated to earn \$75 million in PL-480 counterpart funds. To date, \$37 million has been delivered, of which \$20 million has been capitalized by the Central Bank, leaving \$17 million for deposit to US account, presumably by July 1981. Of this, \$240,000 is expected to be allocated to ASBA. Of the PL-480 funds, the BAB expected to receive \$5 million from the \$17 million and \$10 million from the remaining \$38 million still to be delivered. ASBA believes that \$3.2 million held by the BAB for co-ops could be transferred to ASBA if the US agreed. The failure of co-ops in Bolivia, financing from which is considered as grants by farmers, suggests that such a transfer may have merit.

Recommendation: AID should consider transferring existing PL-480 funds held by BAB, and allocating up to \$10 million to ASBA from the \$38 million still to be delivered.

.. The initial Bolivian experience suggests that the first area chosen for insurance may be one with farmers who are custom-bound and less dynamic than other area farmers. Limiting coverage to potatoes reduces diversification and increases the risk to ASBA. This has limited the number of farmers covered in the area and has reduced the amount of BAB credit which could have been insured, delaying somewhat the force of the Program. Fertilizer not fully absorbed during one crop season for potatoes could have been utilized for another product the following season. Data collected on a limited number of farms covering many crops would have been more extensive at little or no cost. Potato yield depends on availability of selected seed for growth and resistance to insects and fungus; little or no selected seed was available. These lessons are being taken into consideration by ASBA during the 1981 insurance season and by IICA for diffusion to other programs.

Even with the advantages noted from a more diversified program, it probably was wise in early 1980 to decide to limit the initial insurance to one area and one crop. Bolivia has potato experts, the time required to prepare for a multi-crop program is much longer, and other areas were found to

be insect-infested. Starting as it did, ASBA was able to begin an initial program in 1980 and can now branch out. To have waited to begin field operations may have caused the Program to be interrupted.

In addition to limited levels of credit which BAB may have to extend in the next few years, some problems exist for IICA and ASBA if they are not compensated by the Government for inflation and the need to compute subgrants at the official rate of exchange.

Initially, the two inspectors on ASBA's staff can handle the small number of insured farmers. But as coverage multiplies, it may prove desirable to develop a system of low-cost para-inspectors, village leaders who would provide an early warning system of loss and who would be a conduit for information and acceptance of the program. It is likely that such a system of trained villagers, combined with systematic sampling by professional inspectors, could cover up to four times as many farms and reduce cost of administration.

Recommendation: IICA should begin to develop low-cost inspection and warning systems.

Life insurance is not available in rural Bolivia. Production in any particular season depends on the labor and management of the farmer and/or his wife. Risk from mortality in urban Bolivia is estimated at 0.3% or less,¹ and it is assumed to be less than that for rural dwellers

¹This appears low when compared with other countries.

of the 20-70 age group. ASBA plans to offer life insurance to insured farmers and their wives at a 1% premium each, leaving approximately 1.5% to reduce the subsidy being given for crop insurance.

... The research data are being collected prior to issuance of policies, at seeding time, and at harvest time. The research will be extended to the other three potato zones in the next two years, fully covering potato production. In 1981, ASBA will begin to cover farmers who produce broad beans, peanuts, and barley. In 1982, coverage will extend to maize, soybeans, and quinoa. Data will be collected, where applicable, on cattle, oxen, and sheep. The main risks for crops are drought and hail.

ECUADOR

The Program in Ecuador is in its organization stage. It is expected to begin insurance operations in April-May 1981.

Ecuador, as a pilot country, falls between Panama and Bolivia in its institutional infrastructure, mechanization and technology of farming, land characteristics, and Government intervention and stability. It has two major zones: a less developed mountainous area producing corn and potatoes and a coastal region with rice, corn, and sorghum, some of which depends on irrigation.

The Ecuador Program results directly from the efforts of IICA over the last eighteen months. Much valuable time was lost because IICA dealt with the Ministry of Agriculture which proved to have no authority over financing or creating the insuring agency, a financial institution. But not all the time was wasted: IICA conducted area and crop surveys, arranged for Government funding, prepared the legal and regulatory statutes, and designed its preliminary research program. Once it became clear that authority and funding rested with the Banco Central and the Junta Monetaria, IICA's efforts soon led to the creation of a mixed capital, private corporation-type insuring agency, CONASA (Compania Nacional de Seguros Agropecuarios).

CONASA was established on July 4, 1980, with a total paid-up capital of \$68,000 (S 1.7 million) from both public and private sources:

<u>Institution</u>	<u>No. of Shares</u>	<u>Value</u>	
		<u>Sucres</u>	<u>Dollars</u>
Banco Nacional de Fomento	26	1.3 million	52,000
Ministerio de Agricultura	2	100,000	4,000
Central Ecuatoriana de Servicios Agrícolas	2	100,000	4,000
Fondo Ec. Populorum Progressio	2	100,000	4,000
Caja de Crédito Agrícola	2	100,000	4,000

This capital will be augmented by 90 million sucres (\$3,600,000) from the Central Bank over the next four years. Of this amount, 80 million sucres will provide a contingent reserve against loss by small farmer policy-holders, and 10 million sucres will be added to other funds to cover cost of administering CONASA. It is expected that additional capital will be obtained from other organizations in the future. Given the proportionate shares held by Government organizations, the control and policy of CONASA will, correspondingly, be set by Government institutions which will have four of the five members of the Board of Directors.

A trained Ecuadorian insurance specialist, formerly an IICA technician assigned to ISA, Panama, has been named the first manager of CONASA. Similar to ISA, CONASA is organized to operate in two major lines, crops and livestock, with central office specialized units in planning and research;

public relations and promotion; and internal administration (Exhibit IV-54). A total of 20 employees, of whom 7 are secretarial/maintenance workers, will comprise the original staff. Projected costs for major classes of expenditures are shown in Exhibits IV-55 and IV-56. Although the Central Bank and other shareholders provide 86% of total capital for reserves and operations, IICA/AID contributions cover 36% of the cost of operations 1980-1983, the greatest single donor over the period. Nevertheless, by the third year the MAG contribution is much higher than that of IICA (Exhibit IV-57). Originally, IICA/AID funding was intended to be seed capital to cover all administrative costs as an incentive to the Government to cover liability against loss. As Government interest grew and as the planned costs multiplied, taking into account inflation, various Government agencies assumed the additional costs of administration.

In 1981, with offices established in Quito and Guayaquil, CONASA expects to issue 100 policies in the Guayaquil area and 50 in the highland area. Another 25 policies covering livestock are planned. In 1982, 200 rice farmers and 100 corn farmers will be covered, with livestock producers doubling to 50. Corresponding coverage for January-June 1983 is 350, 100, and 100. The pilot phase will terminate in August 1983.

The Ecuadorian Program appears to be well designed and unusually well financed. With flexible capital and

straightforward organization, experienced management which appears to be adopting a cautious growth plan, and IICA technical and financial assistance and training, only a catastrophic natural disaster during the first year or a political upheaval affecting delivery of promised funding would stand in the way of successful development.

GENERAL FINDINGS

Some lessons learned from country experiences which have resulted in loss of time or reduced effectiveness are the following:

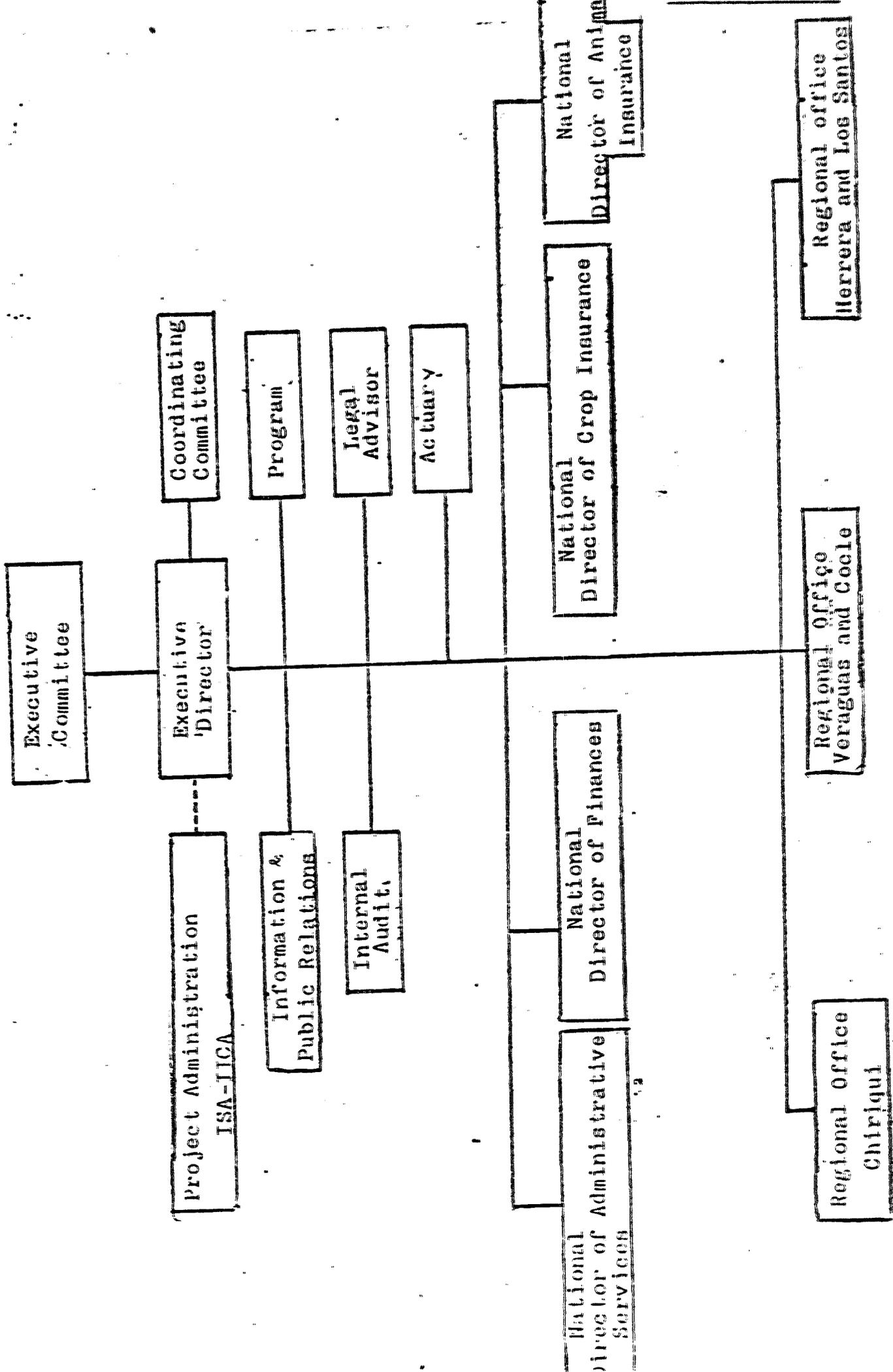
(1) To avoid wasteful initial effort with the wrong organization, IICA would attain the objective of educating and directing a coordinated government approach to creating and running an insurance agency if it dealt with a consortium of organizations, including the central bank or treasury, the agricultural bank, the ministry of agriculture, and any specialized authorities in new country programs. (Ecuador)

(2) Assuring the availability of mobile equipment for inspectors is a critical element in some countries. (Bolivia)

(3) The subjective experience of ministry or government officials as a basis for choosing products for insurance may prove to be false. Rice, which Ministry officials felt would be very risky, has had little loss. (Panama)

(4) The small staff-type organization designed by IICA, following ISA's experience, may not apply to many other countries where governments are prepared to provide services and to make insurance a full-fledged program. (Dominican Republic)

Organization and Structure of ISA



Personnel of ISA (Panamanian Insurer)

LIC. VIRGINIA B. DE VELASQUEZ

Director-General

National Directors

ING. JUAN B. CARRION

National Director
of Crop Insurance

ING. SERGIO MELAIS

National Director
of Program

DR. CEFERINO BALLESTERO

National Director of Animal Insurance

LIC. IRMA E. DE ZAMBRANO

National Director
of Finances

LIC. SANDRA J. BRIGIATTE

National Director of
Administrative Services

Regional Chiefs

ING. CESAR CASTREJON
Chiriquí

ING. ALFREDO AREAVIA
Veraguas-Coolé

ING. DICMEDES CERRUD
Herrera y Los Santos

AGRICULTURAL INSURANCE INSTITUTE

<u>ISA Position Title</u>	<u>Profession</u>
<u>General Administrative Office</u>	
General Director	Degree in Economic Sciences
Public Relations	Degree in Social Communications
Economic Research	Degree in Economics
Secretary	Business (School)
Driver	
<u>Program Director (Central Office)</u>	
National Program Director	Degree in Economics Agriculture Engineer
<u>National Crop Insurance Director (Central Office)</u>	
Director of Crop Insurance	Agriculture Engineer
Secretary	Business (School)
<u>National Animal Insurance Director (Central Office)</u>	
Director of Animal Insurance	Degree in Veterinary Medicine
Secretary	Business (School)
<u>National Director of Finances (Central Office)</u>	
Director of Finances	Degree in Economic Sciences Certified Public Accountant
Accountant	Accountant
Secretary	Business (School)
<u>National Director of Administrative Services (Central Office)</u>	
Director of Administrative Services	Degree in Public Administration
Secretary	Business (School)
2 Drivers	-----
Manual laborer	-----

Regional Office: Panama and Colon (Central Office)

Veterinarian	Degree in Veterinary Medicine
Insurance Inspector	Agriculture School

Regional Office: Veraguas and Cocle

Regional Chief	Agriculture Engineer
Veterinarian	Degree in Veterinary Medicine
Agriculture Engineer(Cocle)	Agriculture Engineer
Insurance Inspector	Agriculture (School)
Insurance Inspector (Animal)	Agriculture (School)

Regional Office: Herrera and Los Santos

Regional Chief	Agriculture Engineer
Veterinarian	Degree in Veterinary Medicine
Insurance Inspectors (6)	Agriculture (School)
Agriculture Engineer	Agriculture Engineer
Secretary	Business (School)

Regional Office: Chiriqui

Regional Chief	Agriculture Engineer
Veterinarian	Degree in Veterinary Medicine
Insurance Inspectors (3)	Agriculture (School)
Insurance Inspector (Animal)	Agriculture (School)
Secretary	Business (School)

REPÚBLICA DE PANAMÁ
 MINISTERIO DE SERVICIOS ADUANEROS
 COMISIÓN NACIONAL DE TRIBUTOS

REPLAZO DE OPERACIONES DE
 ADELANTEDO 1977-1978
 SERIO ACUADA
 DE MAYO Y ABRIL

C. U.	1977 - 1978					1978 - 1979					1979 - 1980					TOTAL						
	ADELANTOS		DIFERENCIA			ADELANTOS		DIFERENCIA			ADELANTOS		DIFERENCIA			ADELANTOS		DIFERENCIA				
	Pol.	Nos.	Comercio Exterior	Primas	Mas / Menos	Pol.	Nos.	Comercio Exterior	Primas	Mas / Menos	Pol.	Nos.	Comercio Exterior	Primas	Mas / Menos	Pol.	Nos.	Comercio Exterior	Primas	Mas / Menos		
155	5,000	1,000,000	50,000	250	12,500	105	2,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
156	1,000	500,000	25,000	125	6,250	106	2,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
157	2,000	1,000,000	50,000	250	12,500	107	2,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
158	3,000	1,500,000	75,000	375	18,750	108	3,000	1,500,000	300,000	1,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
159	4,000	2,000,000	100,000	500	25,000	109	4,000	2,000,000	400,000	1,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
160	5,000	2,500,000	125,000	625	31,250	110	5,000	2,500,000	500,000	2,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
161	6,000	3,000,000	150,000	750	37,500	111	6,000	3,000,000	600,000	2,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
162	7,000	3,500,000	175,000	875	43,750	112	7,000	3,500,000	700,000	2,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
163	8,000	4,000,000	200,000	1,000	50,000	113	8,000	4,000,000	800,000	3,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
164	9,000	4,500,000	225,000	1,125	56,250	114	9,000	4,500,000	900,000	3,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
165	10,000	5,000,000	250,000	1,250	62,500	115	10,000	5,000,000	1,000,000	4,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
166	11,000	5,500,000	275,000	1,375	68,750	116	11,000	5,500,000	1,100,000	4,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
167	12,000	6,000,000	300,000	1,500	75,000	117	12,000	6,000,000	1,200,000	4,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
168	13,000	6,500,000	325,000	1,625	81,250	118	13,000	6,500,000	1,300,000	5,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
169	14,000	7,000,000	350,000	1,750	87,500	119	14,000	7,000,000	1,400,000	5,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
170	15,000	7,500,000	375,000	1,875	93,750	120	15,000	7,500,000	1,500,000	6,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
171	16,000	8,000,000	400,000	2,000	100,000	121	16,000	8,000,000	1,600,000	6,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
172	17,000	8,500,000	425,000	2,125	106,250	122	17,000	8,500,000	1,700,000	6,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
173	18,000	9,000,000	450,000	2,250	112,500	123	18,000	9,000,000	1,800,000	7,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
174	19,000	9,500,000	475,000	2,375	118,750	124	19,000	9,500,000	1,900,000	7,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
175	20,000	10,000,000	500,000	2,500	125,000	125	20,000	10,000,000	2,000,000	8,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
176	21,000	10,500,000	525,000	2,625	131,250	126	21,000	10,500,000	2,100,000	8,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
177	22,000	11,000,000	550,000	2,750	137,500	127	22,000	11,000,000	2,200,000	8,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
178	23,000	11,500,000	575,000	2,875	143,750	128	23,000	11,500,000	2,300,000	9,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
179	24,000	12,000,000	600,000	3,000	150,000	129	24,000	12,000,000	2,400,000	9,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
180	25,000	12,500,000	625,000	3,125	156,250	130	25,000	12,500,000	2,500,000	10,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
181	26,000	13,000,000	650,000	3,250	162,500	131	26,000	13,000,000	2,600,000	10,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
182	27,000	13,500,000	675,000	3,375	168,750	132	27,000	13,500,000	2,700,000	10,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
183	28,000	14,000,000	700,000	3,500	175,000	133	28,000	14,000,000	2,800,000	11,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
184	29,000	14,500,000	725,000	3,625	181,250	134	29,000	14,500,000	2,900,000	11,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
185	30,000	15,000,000	750,000	3,750	187,500	135	30,000	15,000,000	3,000,000	12,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
186	31,000	15,500,000	775,000	3,875	193,750	136	31,000	15,500,000	3,100,000	12,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
187	32,000	16,000,000	800,000	4,000	200,000	137	32,000	16,000,000	3,200,000	12,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
188	33,000	16,500,000	825,000	4,125	206,250	138	33,000	16,500,000	3,300,000	13,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
189	34,000	17,000,000	850,000	4,250	212,500	139	34,000	17,000,000	3,400,000	13,600,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
190	35,000	17,500,000	875,000	4,375	218,750	140	35,000	17,500,000	3,500,000	14,000,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
191	36,000	18,000,000	900,000	4,500	225,000	141	36,000	18,000,000	3,600,000	14,400,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
192	37,000	18,500,000	925,000	4,625	231,250	142	37,000	18,500,000	3,700,000	14,800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
193	38,000	19,000,000	950,000	4,750	237,500	143	38,000	19,000,000	3,800,000	15,200,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000	1,000,000	200,000	800,000	1,000	10,000
194	39,000	19,500,000	975,000	4,875	243,750	144	39,000	19,500,000	3,900,000	15,600,000	1,000	10,000	1,000,000	200,000	800,000	1,						

ISA

Specified Loss by Type of Damage

1977 - 1979

Damages	1977		1978		1979	
	Has.	%	Has.	%	Has.	%
Flood	5.00	0.1	---	---	57.50	0.4
Excess humidity	29.36	0.1	65	0.09	365.34	2.61
Drought	88.25	1.63	779	10.66	160.16	1.14
Strong winds	18.70	0.34	7	0.09	79.48	0.57
Boring worm	5.89	0.11	---	---	11.90	0.09
Tobacco worm	6.52	0.12	10	0.14	33.63	0.24
Nematodes	---	---	---	---	0.95	0.01
Rice worm	---	---	---	---	15.00	0.11
Birds	---	---	---	---	4.61	0.03
Parrots	11.29	0.20	14	0.10	1.53	0.01
Mosquitos	51.45	0.95	---	---	1.67	0.01
Low yield	---	---	---	---	17.94	0.13
Bacterial wilt	---	---	---	---	28.06	0.20
Epiphytic disease	2.73	0.05	---	---	125.23	0.9
Total Loss: Hectares	218.83	4.04	875	11.97	903.00	6.45
Total Insurance: Hect.	5,410.00	100	7,307.00	100	1398.00	100

Dirección Nacional de Seguro Agrícola
Septiembre, 1980

Specified Loss by Type of Damage

1979

Damages	TOTAL		Rice (Has.)	Corn (Has.)	Sorghum (Has.)	Beans (Has.)	Tomatoes (Has.)
	Has.	%					
Flood	57.50	0.4	57.50	---	---	---	---
Excess Humidity	365.34	2.61	---	121.88	187.03	56.00	---
Drought	160.16	1.14	61.00	2.00	97.16	---	---
Strong Winds	79.48	0.57	76.36	3.12	---	---	---
Boring Winds	11.90	0.09	11.50	---	---	---	0.40
Tobacco Worm	33.63	0.24	21.40	---	---	11.00	0.65
Nematodes	0.95	0.01	---	---	---	---	0.95
Rice Worms	15.00	0.11	15.00	---	---	---	---
Birds	4.61	0.03	---	3.00	1.61	---	---
Parrots	1.53	0.01	---	---	1.53	---	---
Mosquitos	1.67	0.01	---	---	1.67	---	---
Low Yield	17.94	0.13	---	14.00	---	---	3.94
Bacterial Wilt	28.06	0.20	---	---	---	---	28.06
Epiphytic Disease	125.23	0.9	104.50	---	---	20.00	---
Total Loss: Hectares	903.00	6.45	347.26 (58)	144.00 (4.68)	289.00 (9.48)	89.00 (29%)	34.00 (6.4)
Total Insurance: Hect.	13,988.00	100	6,956.00	3,130.00	3,058.00	304.00	540.00

Insurance Program 1980

Summary of Coverage and premiums by
crop by province

Crop	Coverage For Ha.	Premia. For Ha.	Province & District
Mechanized rice	430.00 *	21.50 *	Chiriquí (David, Gualaca, San Lorenzo, Alanje, Bugaba, Remedios, San Félix, Tole). Veraguas (Scrá) Los Santos (Tonosí), Panamá.
Irrigated rice	500.00	25.00	Coclé (Aguadulce, Antón, Natá, Penonome).
Mechanized corn	274.00	13.70	Chiriquí, Veraguas, Panamá (Chorrera, Capira, Chame, San Carlos) Coclé (Aguadulce, Antón, Natá, Penonome) Herrera y Los Santos.
	228.00	11.40	Chiriquí (Caizán)
Mechanized sorghum	258.50	13.40	Chiriquí, Veraguas, Panamá (Chorrera, Capira, Chopo) Los Santos (Tonosí)
	300.00	15.00	Coclé (Aguadulce, Antón, Natá, Penonome) Herrera y Los Santos. Panamá (Chame, San Carlos).
Tomatoes	1,330.00	80.00	Coclé (Natá) Herrera (Chitré, Ocu, Parita, Pesé, Sta. María). Los Santos (Guararé, Las Tablas, Macaracas, Pocrí, Pedasí)
Beans	339.00	17.00	Chiriquí (Caizán).

* * If it is necessary to apply fungicide the contract will be endorsed correspondingly.

Premium rate: Corn and Sorghum-5%, Rice-5%, Beans-5%, Tomatoes-6%

LOSS: Percent of area by province by crop 1978-79 and 1979-80

PERCENT OF TOTAL

CROP	PERCENT OF TOTAL					TOTAL 78-79 79-80
	CHIRIQUI 78-79 79-80	LOS SANTOS 78-79 79-80	VERAGUAS 78-79 79-80	HERRERA 78-79 79-80	COCLE 78-79 79-80	
Rice . . .	63	62	14	19	-	3,742 6,956
Corn . . .	8	7	76	*	9	2,787 3,130
Sorghum	33	21	17	*	25	1,776 3,058
Total Hectares	2,520	5,512	2,620	4,535	1,041	1,364
Percent	34	40	36	32	14	10
					683	1,335
					443	1,043
					7	100
					6	7
					100	100
					7,3072/	13,998.2/

2/- Tomatoes and beans not reported separate from total.

1/- Panama not separated from total.

* - Less than 1 %

ISA
Animal Insurance Program
1980

Specie & Type of Animal	Maximum Coverage	Annual Premium					Percentage of Loss During Year of Damage					Term Exposed	Age of Animal
		I	II	III	IV	V	I	II	III	IV	V		
CATTLE													
Barn breeding bulls	2,001 - 3,000 3,001 - 4,000 4,001 - 5,000	6 8 10	-- -- --	-- -- --	-- -- --	-- -- --	60% 60% 60%	-- -- --	-- -- --	-- -- --	-- -- --	1 yr 1 yr 1 yr	2 yrs - 3 yrs 3 yrs - 4 yrs 4 yrs - 5 yrs
Breeding bulls	2,000	4	3	2	2	1	60%	50%	50%	30%	30%	5 yr	10 mths - 1 yr
Breeding cows	1,200	4	3	2	2	1	60%	50%	50%	30%	30%	5 yr	10 mths - 1 yr
Feeder cattle	300	3	3	--	--	--	100% - 1 yr	--	--	--	--	1 yr	1 yr - 2 yrs
Bullocks	300	3	--	--	--	--	95% - 10 m	--	--	--	--	1 yr	6 mths - 10 mths
Young heifers	200	3	--	--	--	--	90% - 10 m	--	--	--	--	1 yr	6 mths - 10 mths
PIGS													
Bears	400	3	--	--	--	--	70%	--	--	--	--	1 yr	6 mths - 1 yr
Sows and breeding	300	3	--	--	--	--	70%	--	--	--	--	1 yr	6 mths - 1 yr
Feeder pigs	30	172.00 per head	--	--	--	--	1 mth 875.00 2 mths 35.00 3 mths 50.00 4 mths 60.00 5 mths 75.00	--	--	--	--	1 yr 6 mths	6 mths - 1 yr
HORSES													
Work and stud horses	2,000	4	--	--	--	--	60%	--	--	--	--	1 yr	6 mths - 1 yr
Riding horses	5,000	10	--	--	--	--	70%	--	--	--	--	1 yr	2 yrs - 10 yrs

Animal Losses by Type of Damage
1978 and 1979

Type of Loss	1978			1979			Total 1978-1979
	Feeders	Breeding bulls	Breeding cows	Feeders	Breeding bulls	Breeding cows	
	Total 1978					Total 1979	
TOTAL	<u>30</u>	<u>3</u>	<u>4</u>	<u>120</u>	<u>25</u>	<u>66</u>	<u>248</u>
Anthrax	6			11		1	17
Septicemia hemorrhage	2			9		1	12
Bronco pneumonia	1			3			5
Tetanus	2			3			5
Brucellosis					1		1
Toxic birth					4		4
Miscarriage						1	1
Mastitis	2	1	2	2			7
Other infections	5			25		13	43
Snake bite	1			10		10	21
Poisoning					3		3
Incapacity to breed							1
Urinary obstruction				1			1
Deficiencies				3		5	8
Parasites			1				2
Falls	2			20		10	32
Fractures	1	2		4		5	17
Electrocution				5	3	3	11
Trauma				1	3	3	7
Other accidents	7			20	4	6	37
Unknown causes	1		1	3		1	6

ISA
Financial History
1977-79
Years: May 1 to Apr 30

ITEMS	1977-78		1978-79		1979-90		TOTAL	
	\$1,000	% Tot.	\$1,000	% Tot.	\$1,000	% Tot.	\$1,000	% Tot.
Income from:								
Premiums....	59	22	114	26	333	44	506	35
G.O.P. Subsidy	150	56	175	39	200	27	525	36
IICA	59	22	156	35	215	29	430	29
ISA Income	268	100	445	100	748	100	1,461	100
Expenses:								
Operating costs	165	90	228	69	471	71	864	74
Losses paid ...	18	10	102	31	189	29	309	26
ISA Costs	183	100	330	100	660	100	1,173	100
Net Cash Position:								
Inc. less Costs..	35	...	115	...	88	...	288	...
Balance without G.O.P. subsidy..	-65	...	-60	...	-112	...	-237	...
Balance without IICA subsidy	-124	...	-216	-327	-667	...
(Operating deficit)								
Operating deficit as percent of premiums	210%		190%		98%		132%	
Total costs as Percent of premiums	307%		290%		198%		232%	

PREMIUMS AND OPERATING COST SUBSIDY
AS PERCENT OF TOTAL COSTS
1977-80

PERCENT

100

90

80

70

60

50

40

30

20

10

0

SUBSIDY AS PERCENT
TOTAL COST

PREMIUMS AS
PERCENT OF TOTAL COST

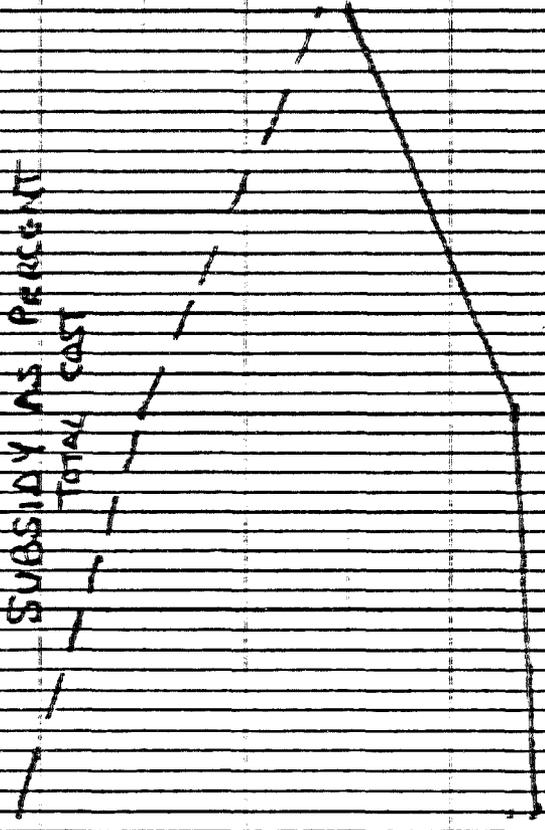
'77-78

78-79

79-80

80-81

Source: USA ANNUAL REPORTS



ISA
Financial Summary
General Balance Sheet, April 30
1980
Dollars

EXHIBIT 17-99

ASSETS

Current Assets

Cash

128,952.01

Prepaid Premiums

Crops

42,538.40

Animals

39,347.99

Total premiums paid

142,488.39

Interest on premiums

2,056.00

Total Current assets

263,504.40

Fixed Assets

247,059.73

Equipment & vehicles

Less: Reserve dep.

(48,255.18)

Total fixed assets

98,894.55

3/ 362,398.95

TOTAL ASSETS

LIABILITIES

Reserve for loss (premiums not paid out)

Pending liability (loss to be paid)

135,146.72

5,000.00

Total reserve liability

3/ 140,146.72

Other liabilities

Accounts payable

5,719.65

Social Security reserve

1,861.27

7,580.93

Total current liabilities

147,747.65

Capital

Reserve accumulated

127,794.59

Net assets: over liabilities and capital

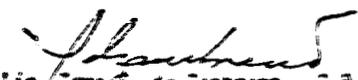
85,356.41

TOTAL LIABILITIES

3/ 362,398.95

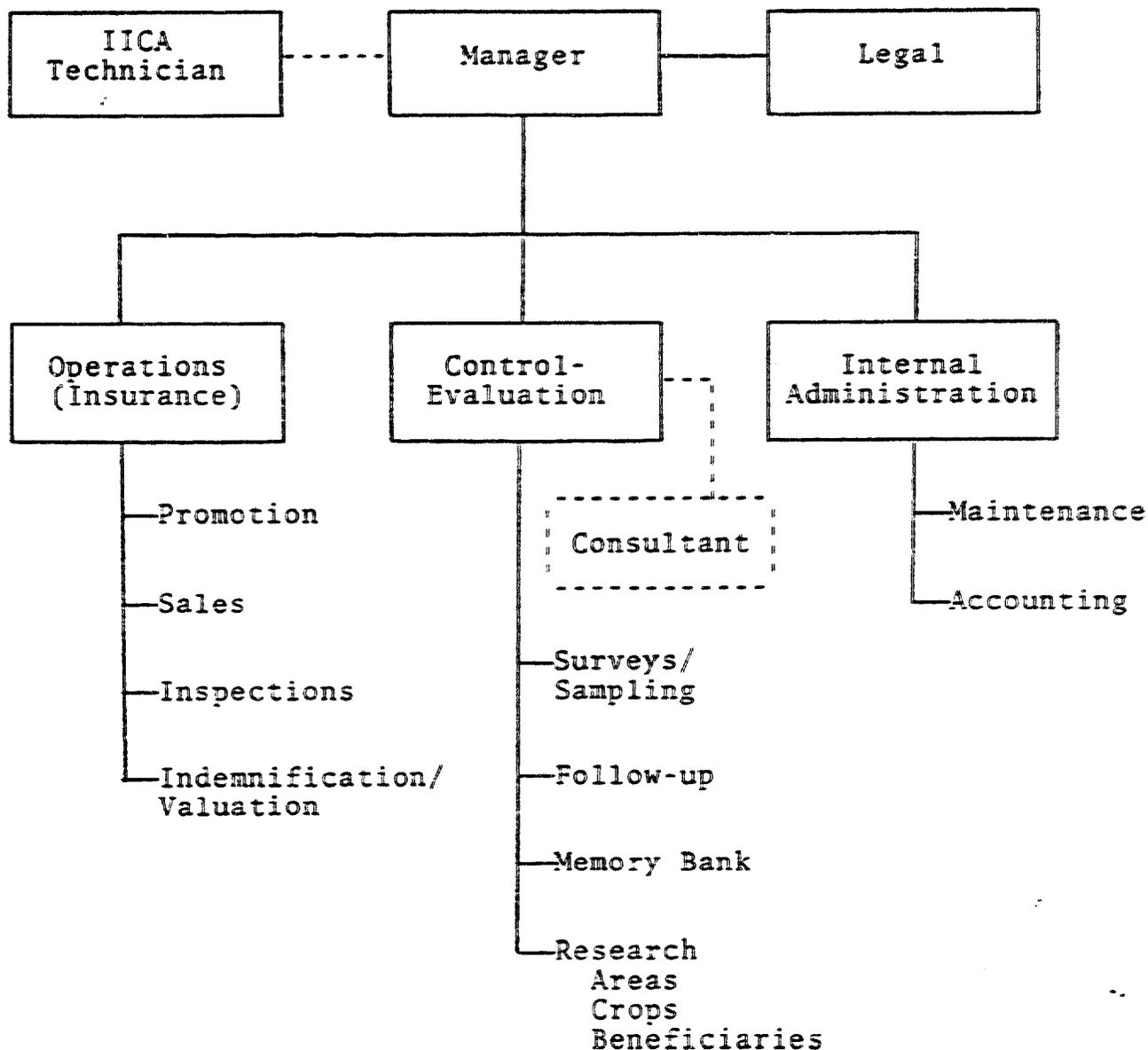
Law no. 68 set the initial capital of ISA at \$1,000,000 to be contributed by the Government.

Lic. Virginia B. de Velisquez
 Directora General


 Lic. Irma E. de Barroero - C.P.A.
 Directora Nacional de Finanzas

Organization Chart

Aseguradora Boliviana Agropecuario (ASBA)



The Central Office is located in La Paz, with seven employees including the IICA specialist; a field office is in Cochabamba, with a staff of 35; and another field office is being set up in Volvoalte between Potosi and Sucre, with a 2-man staff.

Distribution of Credit and Insurance by Zone-1980

Number of families	Zone	Type of Technology Used	Farm Area		Financial Value of Farms		Farm Coverage		Premium
			Total	With Potatoes	Without Insurance	With Insurance	Total	Farm Coverage	
22	Nelga	R = 20 I = 2	92.64	14.50	271.894	356.468	628.362	477.683	23.860
4	Colomb	R = 2 I = 2	15.60	3.50	57.199	80.801	138.000	105.790	5.364
10	Sta. Rita	R = 9 I = 1	23.60	5.00	117.966	125.034	243.000	163.901	8.199
2	Aranj	R = 1 I = 1	11.50	2.00	40.334	50.606	91.000	64.613	3.230
2	Ttraque	R = 2	5.97	1.00	38.642	26.358	65.000	33.583	1.679
7	Quevfnal	R = 7	10.50	5.75	119.332	127.668	257.000	182.216	9.111
2	Rodeo	R = 2	8.00	1.00	644	25.856	26.500	33.345	1.667
1	Ucucht	R = 1	4.50	0.50	410	13.090	13.500	16.684	834
50	Total	R = 14 I = 6	195.31	33.25	646.401	816.001	1,462.362	1,077.815	53.964

\$b 25 = \$1.00

Coverage of a typical farmer is derived as follows:

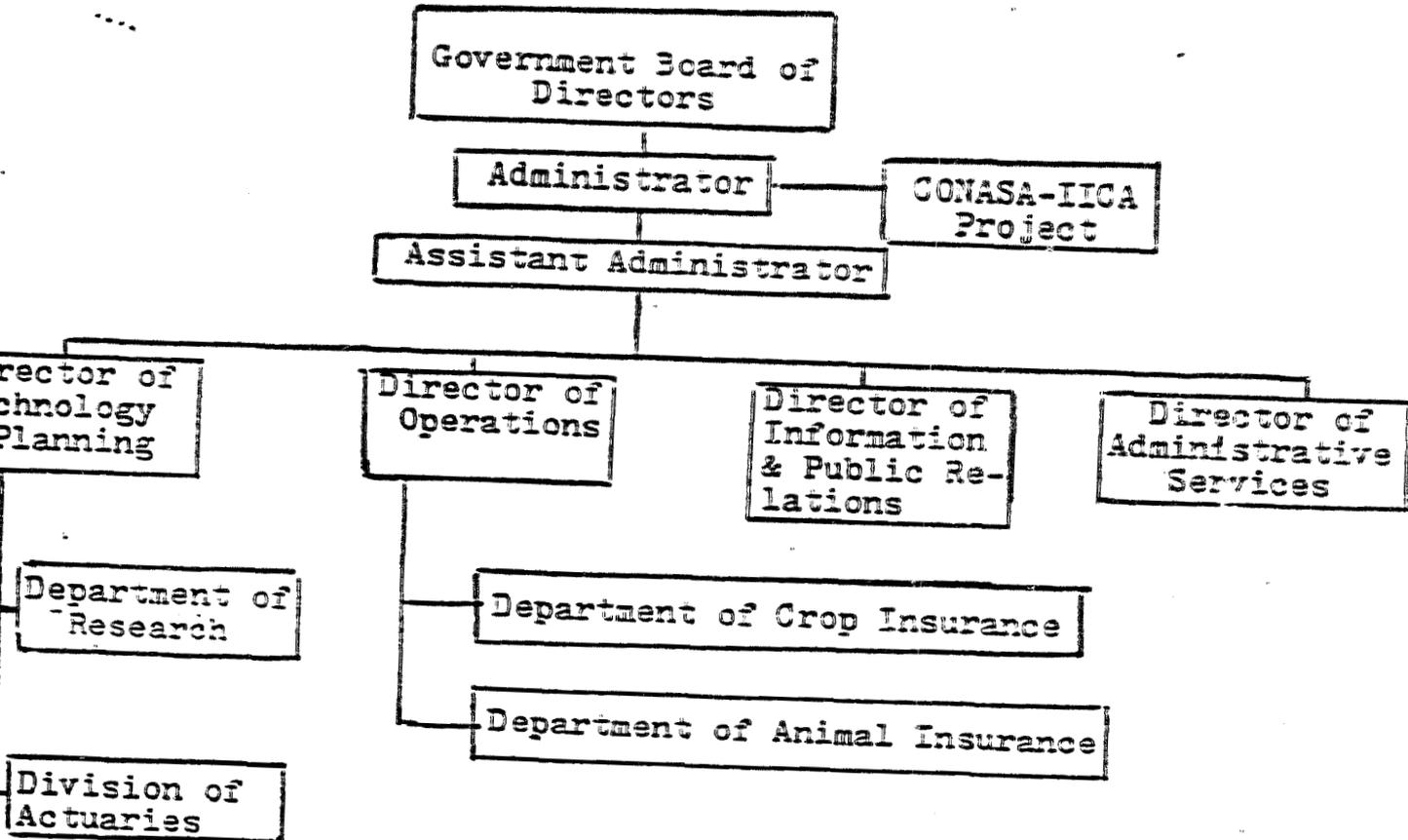
a. Cost of Production	\$b 24,000	Insured credit	\$b 19,200
b. Insured Credit 80%	\$b 19,200	Premium	1,245
c. 10% for producer labor	1,920	Interest on loan	1,664
10% of a. & b.	2,112	Interest on premium	108
d. Interest on \$b 19,200	1,664	Farmer debt covered	\$b 22,217
Amount of coverage	\$b 24,896		
Premium at 5%	\$b 1,245		

Premiums by Zone Relative to Insurance - 1980

Zone	Farms		Financing Production			Coverage	Premium
	Total	In Potatoes	Without Insurance	With Insurance	Total Value		
Melina	4,21	0,65	12,359	16,203	28,562	21,713	1,005
Colomi	3,90	0,87	14,300	20,200	34,500	26,447	1,341
Sta. Rita	2,66	0,50	11,797	12,503	24,300	16,390	820
Araní	5,75	1,00	20,197	25,303	45,500	32,306	1,615
Tiraque	2,98	0,50	19,321	13,179	32,500	16,791	839
Quewilíal	4,07	0,02	17,047	19,667	36,714	26,031	1,302
Podco	4,00	0,50	322	12,923	13,250	16,572	833
Ucuchi	4,50	0,50	410	13,090	13,500	16,604	834
Average	3,91	0,66	12,930	16,318	29,247	21,556	1,079

\$b 25 = \$1.00

National Agriculture Insurance
CONASA
Structure



CONASA
Summary of Operating Costs

(US\$)

Year	Personnel	Operating Costs	Equipment Costs	Total Cost
1980.	89.424	46.100	130.000	265.524
1981	215.545	104.332	10.000	329.877
1982	398.389	123.278	89.000	610.667
1983	446.209	144.648	110.000	700.857
	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL:	1.149.567	418.358	339.000	1.906.925
	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>

COMPANIA NACIONAL DE SEGUROS AGROPECUARIOS. COMASACOST OF OPERATIONS (US\$)

A. Personnel

Job Title	Monthly	1980	1981
1 Manager	1.500	10.500	20.160
1 Deputy-Secretary	1.200	—	14.400
1 Accountant	650	3.900	8.736
1 Director of Operations	800	4.800	10.752
1 Information & P.R. Specialist	700	4.200	9.408
1 Research Specialist	100	4.200	9.408
1 Animal Insurance Professional	800	4.800	10.752
2 Field Inspectors	1.300	7.800	17.472
4 Field Agents	2.000	12.000	26.880
3 Secretaries	1.000	6.000	13.440
1 Clerk	500	3.000	6.720
1 Chauffeur	250	1.500	3.360
1 Watchman	200	1.200	2.688
1 Janitor	150	900	2.016
		64.800	156.192
Fringe Benefits	38%	24.624	59.353
TOTAL:		89.424	215.545

ECUADOR: Project costs and source of funds 1980-83

U.S. Dollars

Year	Costs \$	Sources of Funds			Total Funds
		IICA	Gov. of Ecu.	Private	
1980	265,524 . . .	200,000 ^{1/}	156,000	12,000	368,000
1981	329,877 . . .	173,000	250,360	4,000	427,368
1982	610,667 . . .	176,480	300,640	10,000	487,120
1983	700,857 . . .	146,521	476,280	20,000	642,800
Total cost and funding .	1,906,925 .	696,000 ^{2/}	1,183,280	46,000	1,925,280 ^{3/}

1/ Rate of Exchange US\$=25 sucres

2/ Direct donation without including costs of technical assistance and other financing sources.

3/ Interest from reserve fund in Central Bank not included in total.

x Note: Unexpected costs can be covered by the interest received from investments and the reserve fund.

V. PROJECT RATIONALE, STRATEGY, AND DESIGN

Rationale

Agricultural credit is essential to small and intermediate farmer production. Natural disasters--flood, drought, hail, wind, insect infestation, among others--threaten particular year production and corresponding repayment of credit. The complementary role of rural credit insurance to assure repayment of agricultural loans and to prevent decapitalization of public agricultural credit institutions and, to a lesser extent, private financial institutions is obvious. Tying rural insurance to extension assistance to small farmers reinforces AID objectives while reducing potential loss of production. Applying systematic inspection reduces losses from fraud and unwillingness to repay loans. Assuring, insofar as possible, supply of inputs such as certified seed and fertilizer to maximize production places greater responsibility on government agencies. Bringing credit, research, and other national agencies together and sharing the aforementioned functions apportions costs to particular agencies and increases efficiency. These are spelled out in the Project Paper. No other public program or mechanism deals as directly as credit insurance to assure particular farmer credit stability or promotes continued agricultural credit

liquidity.¹ The alternative has been government welfare programs which cause small farmers to consider agricultural credit a grant. This requires governments to excuse repayment, rollover of debt, and appropriate new infusions of capital to credit institutions with corresponding loss to national budgets. Credit insurance, while depending on government subsidy for covering catastrophic loss, spreads the risk of ordinary loss to the agricultural sector and permits farmers to spread the risks among themselves. For small farmers, governments may also subsidize the operational cost of the program to reduce premiums, just as extension, research, and similar programs have been subsidized in the past. A case could be made that such subsidies are offset by increased production, with benefits to the economy, and with reduced welfare expenditures. Insurance makes many non-credit-worthy farmers eligible for credit. Insurers with initial surpluses can use reserves to cover losses in later years.

Rural credit insurance can be too expensive for the aforementioned gains. It can promote inefficient production (e.g., rice in Costa Rica). It can be political and unstable if governments choose to make it so. It may be undercapitalized and not sufficiently diversified. As an obligatory program, it may reduce farmer decision-making. These and other problems

¹See risk management articles in the AJAE, Vol. 58, No. 2, May 1976, pp. 280-304.

are being researched by IICA and the country insuring organizations to maximize effectiveness, efficiency, and viability. An IICA-led four-year research program financed by this project will provide initial experience and will attempt to pinpoint understanding of optimum portfolio mix, variable rates and premiums, institutional bottlenecks, and farmer acceptance under varying country conditions. The research was planned at the farmer, bank, insuring organization, and sector levels. Lack of time and insufficient data are likely to delay or prevent research results relating to costs/benefits at the bank and sector levels.

Thus, this project, while depending for fine tuning on a research effort to ease the creation of new country programs, is essentially an institution-building project, the success of which is the development of three pilot demonstration programs and, in later periods, the establishment of new country programs, possibly six to fourteen in a seventeen-year period.

Strategy

The original strategy and design of this project are set forth in the Project Paper, pp. 15-20, p. 26, and Annex E. The strategy and expected development of country operations are highly perceptive and generally predict the nature of the country programs which are evolving. The lack of Mexican data which did not become available could not have been foreseen. This has caused a major delay in research modeling and an

understanding of the costs; portfolio mix, differences in risk associated with crop, farm size, and location; among others. It has forced the Project managers to mount a research program involving transfer of Project funds and an increase of personnel at pilot program locations. The country programs will, over a four-year period, provide data for future programs instead of benefiting from available data.

The original project design foresaw a three-stage, 14-year program, in which three pilot countries would become operational in the first 4-year period. By that time, it was hoped that a COLAC-type regional reinsurance organization, ALARA, would be in the process of formation. In the second 5-year period, the original pilot countries would become self-sufficient and five new country programs would be promoted. ALARA would be funded. The third 5-year period would provide final phase-out funding for ALARA and the remaining country programs. The objectives and related underlying assumptions are spelled out in greater detail for the first 4-year pilot stage in the Project logframe (Exhibit V-23).

The original design failed to fully specify or to provide time for the development of a viable intermediate promotion and assistance organization. Experience has shown that it took about eighteen months for IICA to organize partially, recruit, and become operational. Original indicators of successful performance by the pilot countries (value of insurance, number of products) will be met or exceeded by 1982. Other

indicators may not be reached (number of new country applications, support for ALARA). As of December 1980, the project managers had already recognized that ALARA required country memberships which would be financially self-sufficient and apolitical. Weakly financed programs subject to arbitrary political manipulation as governments change are hardly capable of providing reinsurance to each other. ALARA could actually be destabilizing of otherwise viable national programs. Long-run policy could benefit from gradual independence from governments to private organization insurance.

Country programs can benefit significantly from the availability of independent reinsurance. Thus, the suggestion in the original design of promoting and assisting country programs to obtain reinsurance from international private and international or inter-American multilateral agencies deserves greater promotion.

Country programs depend heavily on promotion and assistance of a technical intermediary institution such as the Insurance Division of IICA. Without it, it is unlikely that the programs in Bolivia or Ecuador would have been initiated. It has had a significant effect on the growth, effectiveness, and efficiency of the existing Panama Program. It provides a basis for regional training, for interchange of country experience, and for promotion internationally. The role of such a supporting organization is not fully spelled out in the original design. A modified illustrative strategy could be as follows:

STRATEGY FOR DEVELOPING NATIONAL
RURAL CREDIT PROGRAMS IN LATIN
AMERICA AND THE CARIBBEAN

The establishment of agricultural insurers in Latin America will benefit from a three-phase effort. These can be labeled:

- (1) IICA Institutionalization and pilot country demonstration;
- (2) Promotion and consolidation;
- (3) Self-sufficiency.

I. Institutionalization and Pilot Country Demonstration

A. Time Period: 1978-1984

B. Major Objectives:

- Establish a viable regional insurance promotion and technical assistance agency
- Subfund and develop three pilot demonstration insurers
- Develop, refine, test alternative insurance systems to serve the needs of small and medium-size commercial farmers

C. Related Activities:

- Develop methodology for determining optimum portfolio, rate making, loss adjustment, and underwriting systems
- Develop ideal institutional/organizational models applicable to different countries and situations
- Promote interest in rural credit insurance among LA/C governments, the international community, and academia
- Complete original research objectives relating to farmer and insurer

- Provide training and technical assistance to initial country insurers, including systematic joint training to credit and insurance personnel
- Promote new programs in three to seven additional countries
- Promote reinsurance coverage by private insurance organizations

D. Institutional Roles:

- LAC/DR -- Fund and monitor IICA activities and fund administrative expenses of the three pilot insurers
- USAIDs -- Encourage existing country program institutions and promote additional country interest
- Host Governments -- Establish the insurer legally; guarantee coverage of catastrophic losses; and promote cooperative burden sharing among credit, extension, and insuring agencies
- IICA -- Implement the Project

II. Promotion and Consolidation

A. Time Period: 1985-1989

B. Major Objectives:

- Assist development of three to seven non-pilot countries
- Complete development of three pilot insurers
- Obtain sources of financing for new country participation

C. Related Activities:

- Provide regional training and technical assistance to foster cooperation
- Continue original research and extend to bank and sector levels
- Develop ready reinsurance sources, including international agencies, if necessary

- Develop capital assistance sources for new country insurers, including IDB
- Gradually reduce dependency on government support for loss coverage and operations
- Promote additional three to seven new country programs

D. Institutional Roles:

- LAC/DR -- Fund and monitor IICA (or equivalent) regional intermediary organization
- USAIDs, IDB, etc. -- Financing of new country programs and related grant support for technical assistance
- Host Governments -- Charter and support mixed public/private or private insurers
- IICA -- Establish Insurance Division as semi-autonomous Center for Rural Insurance for Project implementation

III. Phase-out

A. Time Period: 1990-1995

B. Major Objectives:

- Graduate to self-sufficiency existing insurers
- Promote insurers in relevant remaining LA/C countries
- Assure viability and permanence of regional institution

C. Related Activities:

- Obtain financing for and assure development of final-phase countries
- Assure autonomy and self-sufficiency of regional Center for Rural Insurance (CRILA) to provide training and technical assistance
- Promote full-line rural insurance
- Institutionalize reinsurance

- Complete original research objectives and systematic memory bank and feedback systems

D. Institutional Roles:

- LAC/DR -- Phase out support
- USAIDs, IDB, etc. -- Financing and support of remaining countries
- Host Governments -- Gradual phase-out of graduate countries and support of remaining ones
- IICA -- Spin off Center or relate as desirable
- CRILA -- Become self-sufficient autonomous technical assistance, training, and reinsurance facilitating agency

Revised Logframe

Ideally this project would fund and support the institutionalization of a viable regional technical intermediary institution which would promote and assist new country programs. At the end of two years of the pilot stage, project results are encouraging, though long-run stability is not assured. A revised illustrative logframe sets forth how the project has developed and suggests indicators for measuring its performance in the future (Exhibits V-24, 25, 26, 27, and 28).

Financing (Inputs)

This Project provides slightly more than \$4 million for IICA to fund its Insurance Division, for subgrants to the three pilot programs, and for overhead. Greater detail is supplied by IICA (Exhibit V-29). Roughly 25% of the AID grant will fund the Insurance Division, 5% for IICA overhead,

and 50% for IICA subgrants to the three pilot country programs for operations. These subgrants are included in annual agreements between IICA and the country insurers and may not be used for risk capital. As of December 1980, IICA estimates that \$1.4 million of the \$4 million will be expended and that the remainder will suffice to finance the Project until December 1982. Reflecting delays in start-up time in IICA itself and the establishment of Bolivia and Ecuador programs, IICA is requesting extended financing for a full 4-year program in each of the national programs. This would be December 1983 in Panama, 1984 in Bolivia, and mid-1985 in Ecuador. This would more than double the original grant to IICA, including \$1.8 million for research previously not budgeted. Experience in Panama indicates that five years are needed to become stable and operational. A four-year support period for new programs appears reasonable and would be minimum for obtaining research results and methodology. The additional financing suggested by IICA takes into account adjustment for inflation and exchange rate loss, and covers essential personnel and training costs (Exhibit V-30). Whether some of these costs could be borne by governments could not be ascertained.

It should be kept in mind that credit insurance programs are a new concept to developing countries. Experienced personnel are not available and must be trained. International agency support has not as yet emerged. Some country credit and other agricultural agency personnel see it as a danger to

established power, influence, and modes of work.¹ Mere inertia in obtaining new legislation or decree to establish a new organization is a powerful negative force. The subgrants are the leverage which IICA has used to obtain government cooperation to creation and support of an insurance organization. Thus, in Ecuador, as personnel and other operational requirements outstripped available budget, Government agencies assumed responsibility for additional resources. In Panama, ISA training and use of Controlaria data facilities partially offset IICA contributions. No specific operational Government funding is available to ASBA, but the subgrant could be reconsidered if PL-480 funding becomes available for reserves from which interest revenues could be earned. IICA subgrants assure that trained personnel will be put in place within a four-year period, and permit coverage of more crops and locations within the initial period.

While the proposed budget increase deserves favorable consideration, it should be discussed in detail along with alternative options. If cost overruns were to occur at the same rate from 1982-85 as in the first two years, even this doubling could prove to be conservative.

Recommendation: AID should give favorable consideration to increased financing during the first phase to permit IICA

¹Once common credit/insurance forms are adopted by lending and insurance agencies, the line personnel of credit agencies will no longer be able to cite this excuse. Joint training of bank and insurance personnel can eliminate or reduce potential conflict.

to provide technical and financial assistance to pilot country programs for a full four-year period.

Recommendation: IICA should provide subgrant funding to countries on a phase-out schedule to permit national Government phase-in support.

Recommendation: IICA should investigate common data requirements for bank and insurance applications to promote bank personnel writing of insurance and to eliminate costly application duplication.

Additional funding for operations will or has become available for Project financing from country sources, some of which are known. Bolivia has its \$1 million capital reserve at 16½ interest in the bank. IICA is making \$50,000 of its overhead available for TA in other countries. The Government of Ecuador is providing operational funding as well as a reserve for liability.

The Government of Panama has promised to supply up to \$1 million as a reserve against catastrophic loss. It has raised some doubt as to its immediate availability and has not provided a fund, the interest from which would provide operational funding. IICA policy for future country programs is to insist on a fund under the control of the insuring agency.

IICA Services (Outputs)

Although somewhat behind its schedule--at the end of 1980 recruitment of a regional specialist for Ecuador was

not completed--IICA has an effective credit insurance staff working to promote national credit insurance programs.

Organization of IICA

The Insurance Division is under the Office of Multi-zonal Projects (Exhibit V-31). In practice it operates autonomously, with regional (those stationed at country program locations) specialists directed from San Jose. The three-man professional staff of the Division at San Jose gives direction to the program as a whole, the research effort, and the financial/administrative budgeting and control of the grant. A recently recruited econometrician stationed in Panama doubles as Associate Research Specialist and general consultant to ISA. The small staff reports directly to the Director of the Division, an insurance generalist with specialized LA development experience (Exhibit V-32). The staff consists of specialized and dedicated professionals who are learning on the job, reflecting the lack of an agricultural insurance field of training in universities. The range of their education and experience is detailed in Exhibit V-33.

The small number of specialized professionals have met the pilot objectives at the cost of burdensome travel and personal time sacrifices of the Director. The organization of the Division does not provide for a Deputy to the Director, leaving it extremely vulnerable to a void in his absence. IICA does not have a permanent staff relationship

to the professional insurance staff. A fundamental weakness of the IICA operation is that IICA depends on outside financial support for grants to continue insurance support activities. As presently organized, there is no guarantee that the Insurance Division will become a permanent long-term staff available to support new LA/C country programs. The Division does not depend on other IICA offices or specialists for technical backstopping, though some cooperation was sought at an early stage.

Physical and Geographical Restraints

Another area in which the Insurance Division activities appear to be limited is the lack of high-speed computer facilities available at convenient times and compatible with computer runs from regional centers. It appears that the IICA computer is causing about a 20% loss of time and the grant budget is being charged a rate which is more than might be anticipated at most modern facilities.

Although centrally located in the hemisphere, San Jose is somewhat isolated professionally. Travel from San Jose is, furthermore, not flexible, reflecting limited airline schedules and time loss because of transit via Panama or Miami.

The young Insurance Division staff, academically oriented, reflect isolation from collegial contacts and cultural environment. Essentially, they have no one to talk to in San Jose.

They depend heavily for stimulation on consultants located in other countries, especially the US.

Recommendation: If possible, IICA should consider relocating the Central Insurance Division staff to Washington, D.C.

Washington, D.C., also provides an opportunity for the Insurance staff to promote credit insurance with the multi-lateral agencies located there. Joint seminars, daily interchange on methodology, continuous contact with staffs responsible for decisions on financing can all be better and more efficiently accomplished in Washington. Modern Census Bureau and private company computers are available. Relocating to Washington would help to keep the staff together. It would lead to greater likelihood of future financing for IICA and possible reinsurance of country programs.

Promotion of Credit Insurance

Promotion of rural credit insurance during the pilot stage would benefit from scientific discussion and articles in the Agricultural Economic Association Journal and similar publications to stimulate professional work in the field. It may prove to be strategic when new financing is being considered. A public relations program aimed at farmer organizations and the Governments of LA has not been formally initiated. This could be done when additional personnel and research results become available.

Summary of Findings

In summary, IICA's Insurance Division is effective and has initiated its major objective of assisting in the establishment of two new programs and the strengthening of an existing national program. As a permanent institution, it appears fragile unless steps are taken to add a Deputy and to relocate the central staff to Washington. This would provide advantages to getting the international agencies involved in the financing of IICA and in reinsurance.

If Panama is typical of what a program can do by itself, it appears that once a four to five-year period of successful insurance is underway, national programs can continue, though at a slow rate. During the early stage, however, IICA's experience and assistance are essential to creation and growth.

Pilot National Programs (Purpose)

Working under difficult political and financial constraints, IICA has been instrumental in promoting the establishment of the Bolivian and Ecuadorian Programs. IICA subgrants were directly responsible for the rapid spurt in the Panama Program. This is the primary purpose of the Project. (The history and status of these programs are detailed in Chapter IV.) IICA specialists located in these countries are overseeing or will oversee collection of initial research data while supplying assistance to country program development. Specialized consultants have been funded to break bottlenecks or to recommend systems of operation (Exhibit V-34). The

institutionalization of these Programs is straightforward. Difficulties in legislation and/or decree as a basis for authority and establishment are now past. Lessons learned include that of working with the central banking and financial authorities rather than only with the Ministries of Agriculture, which are essentially implementation organizations. This promotes greater financial support by governments and results in a broader representation on the Board of Directors of the insurer. The three Programs are semi-autonomous and, initially at least, apolitical.

Indicators of performance of this Project which will directly bear on its success or failure relate to the viability of these Programs and the services provided to farmers. Some illustrative indicators of effectiveness and efficiency are shown in the logframe and include the diversification in type, size, location, seasonality of products; the spreading of risk equitably by charging variable rates; the growth, by year, of farmers and areas covered; assurance of input supply; the introduction of special low-cost services to small isolated farmers; and the phase-out of IICA subgrants compatible with the phase-in of domestic financial support, either by government, premium revenue, fee for service, or a combination of these. The sharing of costs and functions of extension, application, preventive health, production of inputs, among other general services, help to reduce budgetary requirements of the insurer. The specific targets--numbers of staff, jeeps,

pamphlets; amount of capital reserves; number and type of farms covered--are left for negotiation between AID/IICA/insurer. Some basic proposed operations are simple yes/no actions.

Serving as data sources for the overall research objective of this Project, pilot country operations need to assure data comparability timewise and inter-country; the compatability of IICA computer programming and facilities continues to occupy the time and efforts of IICA and national program technicians. It is unfortunate that related projects are not already at work in potential new countries to promote the collection of specific farm and environmental data which would underlie an understanding of the variable risks in those countries.

Initial Benefits from Program (Subgoal)

With insurance programs underway and the risk of loss reduced for farmers; if small farmers become credit-worthy; if premiums are not burdensome; and if extension services and obligatory use of modern technology are a condition of the credit/insurance; farmers can be expected to begin to borrow or to borrow more to cover their investment in production. The Panama experience shows that technology need not change. Even when technology is of an intermediate type (Bolivia), farmer production can be expected to increase. The increase will differ by country, size of farm, and product.

If public credit banks are protected from decapitalization, it can be expected that international agency financing will be promoted as a source of capital. Funding from national budgets will also be under pressure to assure a level of credit to permit insurance to function. Private bank and cooperative credit will seek insurance, as is happening in Panama and Ecuador. These will be indicators that insurance has government support. It may be necessary to adjust ceiling interest rates on agricultural loans or to increase the absolute amounts banks must loan to farmers before the full force of private banking can be felt. For the pilot period and long afterwards, public banks are the primary sources of credit to small farmers.

As coverage increases, limited capital reserves covering risk will require reinsurance to be credible. During the time period of this Project, private reinsurance and, ultimately, international agencies appear to offer the best alternative reinsurance sources. It is unlikely that the countries with financially limited programs can reinsure each other.

By the end of 1982, some hard data on portfolio mix, on farmer production, and on institutional/management costs should become available for use in existing and new programs. By then, furthermore, the methodology used in the research should be sufficiently testable to determine its applicability to new country programs.

By 1982, at least one and possibly more new countries

should be applying for assistance. The Dominican Republic and Venezuela are two of the countries which have shown an interest.

Project managers vacillate between a position of ..waiting until the four-year research is completed to promote credit insurance and taking actions which promote it during the pilot stage. Thus, developing Panama as a training laboratory and encouraging countries to develop programs is going hand in hand with verbal caution and a budget/staff which is already fairly overburdened. Given availability of additional financing of particular country programs, including financing of related additional staff of IICA and essential conditions of in-country support, promotion of new country programs would appear to be desirable. It may take positive action on the part of IICA to bring about more new country programs. The pilot country programs provide a demonstration of what can be done, but responsible officials in other countries may not be aware of the benefits.

With Panama showing an accumulation of reserves of about 40 cents for each dollar of premium, while charging low fixed rates, it is possible that additional diversification and slightly higher variable rates can result in even higher reserves without burden to the farmer. This will offset, in part, the expected higher costs of operation, but will still require a Government subsidy for operations. (See recommendation, p. IV-12.

Long-run Benefits (Goal)

It follows that increased production of particular insured crops and animals will increase the domestic supply over and above what it would have been without insurance. Whether such supply is used directly in domestic markets or in exports, it will be beneficial to the country's balance of payments.

Increased production will not automatically result in increased income. It may have the opposite result depending on market structure, price elasticity, transport and storage facilities, population trends, and government price policy. It is understandable that little attention is being paid to these factors during the initial pilot phase. In the long run, these may prove to be as important as the factors which directly affect program performance. They will be included in the sector analysis scheduled for the later years of the pilot phase. Given the small number of farmers covered during the first four-year period of any program, there is little likelihood of a substantial effect by the Project on market structure or forces.

This Project is so specialized as complementary to rural credit that attribution to insurance is easier than in other types of development assistance. Nevertheless, other public programs attempt to attain the same goals. These are shown in the logframe.

Midway during the Project, it is suggested that rural

credit insurance enhances the benefits to farmers, the agricultural sector, and the economy which accrue from the availability of agricultural credit. As such, this Project is providing financing and assistance to three demonstration programs to promote and assist other countries to establish effective, efficient, and viable programs.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project from FY 74 to FY 81
Total US Funding \$109,000
Date Prepared 4/78

Project Title & Number CROP - CREDIT INSURANCE SYSTEMS

NARRATIVE SUMMARY

Program of Sector Goal: The broader objective to which this project contributes

Increase total food production and small farmer welfare.

OBJECTIVELY VERIFIABLE INDICATORS

Nature of Goal Achievement:

- Increased production and consumption of food products by small farmers.
- Increased wealth of small farmers.

MEANS OF VERIFICATION

- Project research component
- USDA, FAO and OAS reports.

IMPORTANT ASSUMPTIONS

Assumptions for achieving goal to pin

- Small Farmer food production continues to be an important host country priority in Latin America.
- International donors and host governments will continue to support other programs designed to improve the performance of the small farmer sector.

OBJECTIVELY VERIFIABLE INDICATORS

Nature of Goal Achievement:

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MEANS OF VERIFICATION

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IMPORTANT ASSUMPTIONS

Assumptions for achieving goal to pin

- Small Farmer food production continues to be an important host country priority in Latin America.
- International donors and host governments will continue to support other programs designed to improve the performance of the small farmer sector.

Project Purpose

To develop viable national level crop insurance organizations which service small farmers.

OBJECTIVELY VERIFIABLE INDICATORS

- National crop insurance organizations established in three countries with host government commitment to finance them.
- Two years of experience insuring clients of a private sector lender.
- Applications from 5 countries for assistance to start new programs.
- Involved countries decide to create and support ALARA.

MEANS OF VERIFICATION

- Quarterly project reports to AID.
- Project research component.
- Scheduled AID evaluation reports.

IMPORTANT ASSUMPTIONS

Assumptions for achieving goal to pin

- General political and economic stability maintains in the three countries.
- Target farmers will be willing to participate in the pilot project.

Objectives

- Feasibility and desirability of crop credit insurance demonstrated and projects ready to expand to national coverage.
- Personnel trained and "how-to-insure" technology developed.
- Research into risk and credit systems and farmer behavior completed.
- Regional reinsurance agency (ALARA) developed.

MEANS OF VERIFICATION

- Quarterly reports to AID.
- Project Research component
- ALARA designed and funding proposed.

IMPORTANT ASSUMPTIONS

Assumptions for achieving goal to pin

- Suitable personnel can be located and recruited in each country.

Inputs

Three pilot projects administrative costs

Inputs	FY78	FY79	FY80	Total
Three pilot projects administrative costs	519.0	512.5	561.0	1592.5
Technical assistance and research	397.0	365.0	398.0	1160.0
AID/US supervision and support	66.0	72.5	62.5	201.0
Complete computer research project	7.5			7.5
TOTAL AID	969.5	947.0	1023.5	2939.5
Private subsidies	161.0	196.0	260.0	617.0
Contingent reserves for catastrophic losses	3707.0	2816.0	3378.0	9901.0
Total other governments	9410.0	9100.0	10308.0	28818.0
Grand TOTAL	15757.5	14059.0	15690.5	45507.0

IMPORTANT ASSUMPTIONS

Assumptions for providing input

- Quarterly project reports to AID
- AID financial records.

**ILLUSTRATIVE
PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK**

Use of Credit
From FY 1978 to FY 1985
Total US Funding
Dollars Per Annum AZH1

Project Title & Number: LA/C Rural Credit Insurance Program

Program or Sector Goal, The broader objective to which this project contributes. Nation and Sector Benefit	NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS Measure of Goal Attainment				TIME TARGETS (Percent)				IMPORTANT ASSIATIONS Assumptions for achieving performance
		1978/79	1980	1981 (20)	1990	1990	1990	1990	1990	
Farmer Income Increase	Domestic Food Supply and/or Exports Increased Regional TA and Training Centre Operational Farmer Utilizing Modern Technology Farmers Produce More, Borrow More Revenues Accumulated from Private Cos. See Exhibit V-20	25	50	75	100	5	10	10	10	Substantiated increases and projects Cooperate Market prices firm No serious catastrophe Int'l Agency capital available
		10	15	30	25	25	25	25	25	Assumptions for achieving objective
Establish or Strengthen Effective, Efficient, and Viable National Rural Credit Insurance Programs in LA/C	Conditions that will indicate progress have been achieved: End of project status. Three Pilot County Programs Developed Research Capability Established Low Cost Systems Developed Variable Premiums Charged No. of Farmers Covered Full-line Coverage How County Applications Received (file)	20	3-7	3-7	3-7	3-7	3-7	3-7	3-7	Political climate compatible Agricultural credit available Professional personnel available Inputs available locally Private banks participate
										Assumptions for achieving objective
RICA Development and Services	Insurance Division Staffed and Operational = Headquarters Staff = Field Personnel Training Centers Systematized in Panama Standard Turnkey Packages Developed Research Results Useful = Pilot Programs = New Programs See Exhibit V-26	100	100	100	100	100	100	100	100	Division moved to Washington, D.C. Consultants available at RICA table
										Assumptions for achieving objective
AID RICA Committee/RICA Total	Implementation Team (Type and Quantity) (\$000)	1978/79	1980	1981	1982	1983	1984	Total		Government provided, promised funding Future AID funding contingent on RICA viability
		496	1,041	1,403	1,435	N/A	N/A	4,375		
		1,335	2,190	1,590	2,100	310	N/A	7,505		
		1,071	3,221	2,991	2,535	310	N/A	11,940		

See Exhibit V-25

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RURAL CREDIT INSURANCE DELIVERY SYSTEM (1)

NARRATIVE SUMMARY Project Inputs: (D-1)	OBJECTIVELY VERIFIABLE INDICATORS Implementation Target (Type and Quantity)(D-2) (000)						TIME TARGETS (D-3)	IMPORTANT ASSUMPTIONS Assumptions for providing inputs:(D-4)
	1978/79	1980	1981	1982	1983	1984 1985 total		
AID (Grant No. AID/IAC/IGR-1297)								
Total Scheduled	459	963	1298	1,327		4,046		Costs of Inflation and unforeseen personnel to be covered by AID and/or Government.
AID Supervision/support	37	78	106	108		329		
Total, AID	496	1,041	1,403	1,435		4,375		Governments will supply funds as promised.
BOLIVIA		1,160	160	160		1,640		
ECUADOR		730	1,130	1,640	100	3,600		
ELICA		50	50	50	50	200		
PANAMA		1,375	250	250*	250*	2,125		
TOTAL, Other	1,375	2,190	1,590	2,100	310	7,565		
GRAND TOTAL	1,871	3,231	2,993	3,535	310 N/A	11,940 N/A		

*projected

RURAL CREDIT INSURANCE DELIVERY SYSTEM (2)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	TIME TARGETS	IMPORTANT ASSUMPTIONS
Project Outputs: (C-1)	Magnitude of Outputs: (C-2) <u>IICA SERVICES</u>	(C-3) 1978/79 1980 1981 1982 1985	Assumptions for achieving outputs: (C-4)
Human Resources	1) <u>Personnel on Board</u> Headquarters Staff (No.) Adm./Mgt. Research Support Field Staff in Place Panama Bolivia Ecuador Other		1a. Retention and permanence incentives adequate 1b. IICA management and technical staff supportive
Physical Facilities	2) <u>Physical Facilities</u> Offices Library Computer Communications		2 . Computer upgraded or function relocated. 2 . Management easily available to field staff and to donors
Information/Acceptance	3) <u>Public Relations</u> Journal Articles—Academic/Dev. Community Media—General Public Farmer Organizations Governments and Donor Agencies		3a. Professional in-country personnel available
Technical Assistance	4) <u>Service to National Programs</u> a) Training (seminars, technicians) b) Standard Package Covering: Administrative (Org.) Financial Insurance Leg. and Regulations Documentation/Forms Technical (agr.)		4b. Standard laws, decrees, regulations, adaptable to different countries 4b. Forms tested and revised
Memory Bank/FEEDBACK	5) <u>Research Operational T</u> a) Insurance Agencies b) Credit Agencies c) Farmers d) Sector/Economy	70 100	5. Preliminary results permit redirection of existing programs. 5. Anthropological/Socio/Pol. through consultants 5. Feedback of data and info. continuous to national programs.

RURAL CREDIT INSURANCE DELIVERY SYSTEM (4)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	TIME TARGETS	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: (A-1)</p>	<p>Measures of Goal Achievement: (A-2)</p>	<p>(A-3)</p>	<p>Assumptions for achieving goal targets: (A-4)</p>
<p>-Farmer Income Increased and Stabilized</p> <p>-Domestic Prod. Supply and/or amount for export increased by x%</p> <p>LA/C Rural Insurance Center fully Viable</p>	<p>1979/80 1981 1982 1983 1985/90</p>		<p>Price inelastic or support price available</p> <p>Other Contributing Programs</p> <ol style="list-style-type: none"> 1 Credit 2 Credit Union 3 Integrative Agr. Programs 4 Marketing/trade 5 Price Stabilization 6 Research Programs <p>Funds available from: Govt. for service, brokerage</p>
<p>For Each Country and Aggregate:</p> <p>FARMER PRODUCTION INCREASE %</p> <p>a) same technology</p> <p>b) new technology</p> <p>Reinsurance obtained from private companies or multilateral agencies</p> <p>Research results useful for national programs</p> <p>-New National Programs Started</p>	<p>1982 1983 1984 1987</p>		<p>Int'l agency capital available</p> <p>Credit liquidity and amount increased for small farmers</p> <p>Insurance Reserves increase</p> <p>No catastrophic losses occur</p> <p>Reasonable rates set for agr. loans</p> <p>Subsidies continued by Govt.</p>

SUBGOAL

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. PERSONNEL COSTS						
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
TOTAL PERSONNEL COSTS	189,133	197,989	237,636	230,742	203,898	1,059,394
						24.2
2. ADMINISTRATIVE COSTS ^{1/}	46,716	48,903	58,696	56,993	20,692	232,000
						5.3
3. SUB GRANT TO THE PROJECT INSURERS						
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
TOTAL SUB GRANTS	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. OPERATION COSTS	155,102	132,000	132,000	122,000	51,500	592,602
						13.5
TOTAL IICA GRANT	630,951	973,592	940,532	948,535	552,390	4,045,000
						92.5
AID SUPERVISION AND SUPPORT	51,300	79,200	76,500	77,100	44,900	329,000
						7.5
GRAND TOTAL	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.

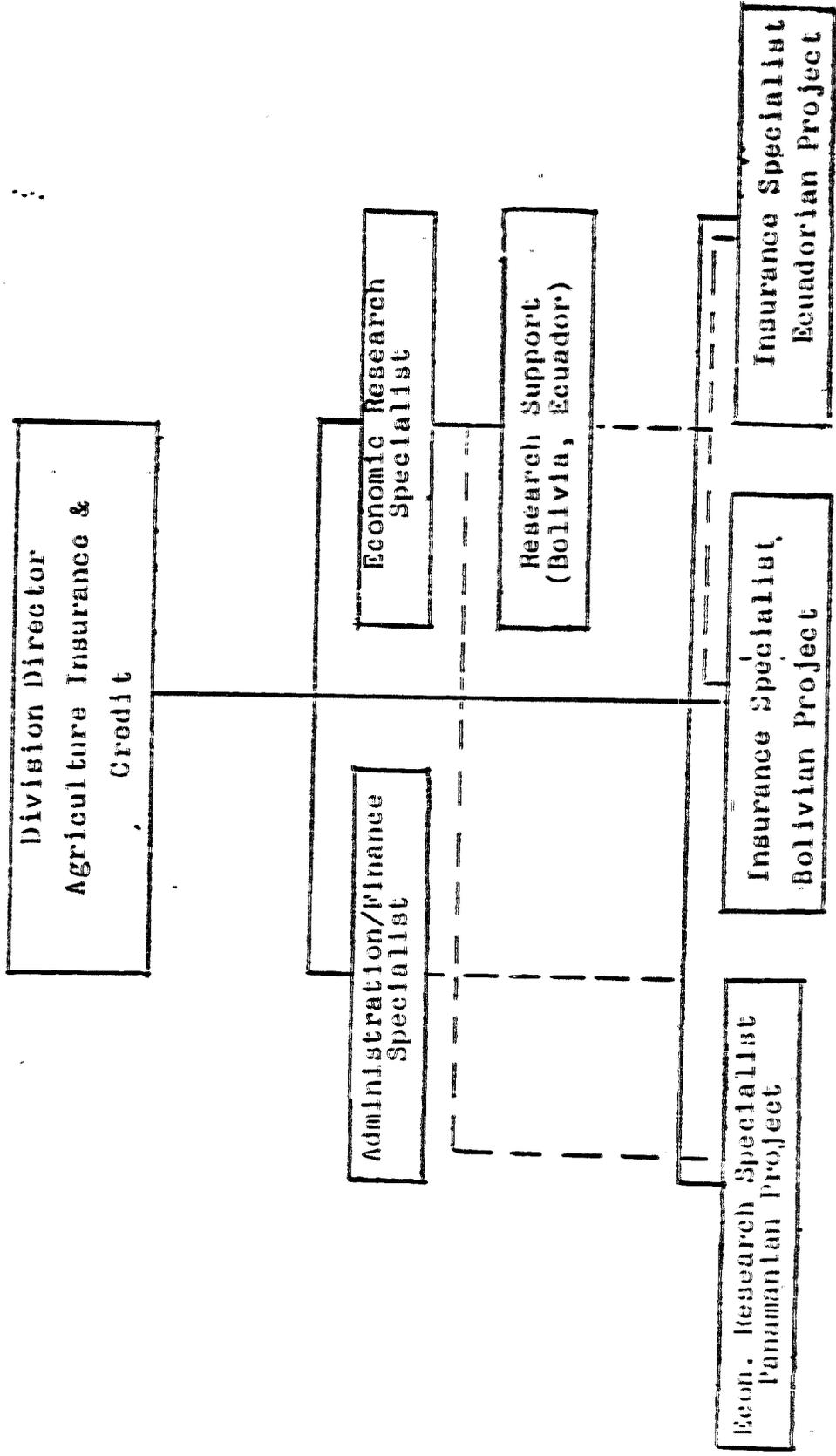
Source: Crop Credit Insurance Project in Latin America - Financial Planning Report.

(current US Dollars)

	CURRENT RESOURCES				SUB-TOTAL	ADDITIONAL RESOURCES				TOTAL	%
	1978/79	1980	1981	1982		1982	1983	1984	1985		
1. PERSONNEL COSTS											
INTERNATIONAL TECHNICAL STAFF	173,410	186,374	240,278	290,800	890,870	--	327,159	302,066	305,013	1,625,108	--
NATIONAL TECHNICAL AND ADMINISTRATIVE STAFF	7,287	34,029	52,286	59,606	153,208	--	67,952	74,404	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	189,500	655,400	28,000	246,600	--	--	930,000	
BOEING	--	223,580	217,320	240,800	681,700	57,820	293,300	367,100	--	1,400,000	
CHADORE	--	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	3,050,000	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	--
CONSUMABLES	11,250	23,000	28,000	26,000	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 OPERATOR COSTS	--	23,000	35,700	38,500	97,200	--	40,400	36,000	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	626,000	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	
CONSUMABLES	14,778	30,000	28,000	20,000	92,778	10,000	25,000	15,000	5,000	147,778	
OPERATOR OPERATIONS	--	--	--	--	--	--	--	70,920	--	70,920	
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	158,000	226,900	54,453	1,021,125	11.7
TOTAL IICA GRANT AND SUPERVISOR AND SUPPORT											
	458,640	962,623	1,297,547	1,327,140	4,046,000	197,440	1,637,883	1,558,648	710,029	8,150,000	91.2
	37,300	78,300	105,500	107,900	329,000	--	114,600	109,100	67,300	688,000	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

Agricredit-Insurance Project

TICA/AID



----- Support
 _____ Direct hire

PROJECT PERSONNEL

Name and citizenship:	Position:	Profession:	Degrees:	Experience:
William M. Gudger, U. S. A.	Head, Division of Crop Credit Insurance, IICA	Political Scientist	Ph. D. University of Wisconsin, 1975 M. A. University of Wisconsin, 1971 B. A. University of North Carolina, 1969	Study of Crop Insurance systems in Mexico and Costa Rica. Proposal for other countries, AID 1977-78 Insurance Systems Planning Analyst at the Office of the Commissioner of Insurance, Wisconsin
Gustavo J. Arcia, Nicaragua	Research Specialist (Associate), since September 1980	Economist	Ph. D., University of Missouri, 1980 M.S., University of Florida, 1975 B. S., University of Florida, 1974 Agronomo, Escuela Agrícola Panamericana, Honduras, 1971	Associate Researcher, CIAT, Cali, Colombia, 1978-8
Luis E. Avalos, Colombia	Crop Credit Insurance Specialist, since March 1975	Agricultural Economist	Ph. D. Candidate, Iowa State University, 1974 M. S., University of Missouri, 1979 Agricultural Engineer, Universidad Nacional, Colombia, 1966	Agricultural Programming, Departamento Nacional de Planeación, Colombia

Name and citizenship: Héctor Guerrero, Chile

Position: Financial Management Specialist,
since January 1979

Profession: Commercial Engineer

Degrees: Diploma ICAME Program in Financial Management
(1 year), Stanford University, 1967
Commercial Engineer, Universidad de Chile, 1954
Licenciado Ciencias Económicas, Universidad
de Chile, 1954

Experience: Interamerican Development Bank, Financial
Consultant, Nicaragua
Corporación de Fomento de la Producción, CORFO,
Chile (credit and development institution),
Operative Planning and Budgeting Department.

Name and citizenship: Gerardo Mendoza, Bolivia

Position: Crop Credit Insurance Specialist, since May 1980

Profession: Agricultural Engineer

Degrees: B.S., General Agriculture, University of Florida
1957
Agricultural Engineer, Universidad Rural, Brasil
1954

Experience: Secretaría Ejecutiva PL-480, Agricultural pro-
jects analysis and evaluation
Credit Division, Banco Agrícola de Bolivia

Name and citizenship: Carlos Pomareda, Perú

Position: Research Specialist, since October 1979

Profession: Agricultural Economist

Degrees: Ph.D. Candidate, Economics, North Carolina State
University, 1975
M. S. Agricultural Economics, North Carolina
State University, 1973
B. S. Agricultural Engineering, Universidad
Agraria La Molina, Perú, 1974

Experience: Secretaria de Integración Económica de C. A.
(SIECA) Study of Agricultural Development
World Bank, Consultant in Agric. Planning.

CONSULTANTS

<u>Name of Consultant</u>	<u>Institution and Country</u>	<u>Field of Work</u>
1. Robert Aubey	Aubey Enterprises, USA.	Insurance portfolio management, Research programming
2. Manuel Benítez	Superintendencia de Seguros, Ecuador	Insurance, Policy making, legal aspects
3. Puro A. Camacho	Puerto Rico	Field operations
4. Rafael Celis	Universidad de Costa Rica	Research analysis
5. David Gustafson	J. Ross Hanson INC., USA,	Actuarial methods
6. Gregory Hanson	U.S.A	Research analysis
7. Peter Hazell	IFPRI, USA	Research analysis
8. Andrew Hogan	U. S.A.	Research programming and analysis
9. Antonio Queipó	Puerto Rico	Actuarial methods
10. Franklin Ureña	Universidad de Costa Rica	Data processing
11. Victor M. Valcárcel	Puerto Rico	Farmer's life insurance

VI. GENERAL FINDINGS AND CONCLUSIONS

Most commercial farmers, small, medium, or large, depend on credit to purchase or rent inputs such as fertilizer, seed, machinery, insecticides, labor, and, in some cases, land. The primary organized source of such credit for small farmers in Latin America is a government-run agricultural bank. Private banks, cooperatives, and other sources may give greater priority to agricultural loans with insurance, but they are not likely to displace existing public sources. Indeed, as public credit and insurance become even more complementary over time, the amount of credit provided through public agricultural banks could be increased in absolute and relative amounts.

Rural credit insurance, now covering farmer life and animals as well as selected crops, protects the lender against loss from natural disasters. The premium charged the farmer permits the shifting of risk from individual farmers and from governments to farmers as a whole. When fully operational, credit insurance will help to pinpoint farmers who do not repay loans (so-called moral hazard), gradually eliminating them from credit eligibility. By repaying farmer losses as they occur, it will safeguard farmer credit eligibility. Programs of credit insurance in the pilot countries, as a condition to offering credit to farmers, are providing technical assistance

(extension) to insured farmers to promote the use of modern technology.

The findings and general conclusions of this Evaluation relate to the design and implementation of the insurance programs in the pilot countries, the research strategy, and overall project management and support.

1. Are the insurance models which are being implemented technically sound and able to function in the target countries?

Panama

Panama's Instituto de Seguro Agropecuario (ISA) is the only program fully in operation, having started in 1976. After two years of independent initial organization, it was given a much needed boost by IICA's subgrant and technical assistance. As of the end of 1980, it is well directed by a dedicated staff. It is covering the most important Panamanian food and feed crops and some special animal production and transport risks. A change in the Insurance Law will be necessary if it decides to issue credit life insurance policies. From 1977 to June of 1980, the coverage, in value terms, has increased about eight times. For this period, ISA has paid out almost 60 cents for every dollar in premiums collected. The program is technically solvent, backed by a Government promise to automatically cover up to \$1 million in losses not covered by premiums or reserves and unspecified additional amounts by agreement. Recently the Government provided \$50,000 for purchase of reinsurance

against potential loss, further assuring coverage and permitting continued growth.

There has been continuity of top and middle management of ISA. The single person director leaves the organization vulnerable. The Board of Directors does not have direct representation of the Agricultural Bank nor of the Central Bank, both of which might strengthen future cooperation and funding. Despite the 40% surplus of premiums over payout, low initial coverage at the outset has required a Government subsidy in 1980 of \$200,000 and \$215,000 from IICA to cover costs of administration. As diversification of new crops, localities and seasons permit increased coverage, and corresponding revenue, combined with variable premiums reflecting risk experience, the greater net income should gradually begin to cover total expenses. Government subsidy will still be required to cover reserves for catastrophic loss. Sharing of administration by the Agricultural Bank would reduce costs. Recent applications from private banks and from other producers point to growing awareness and acceptance nationwide of the program.

Bolivia

Bolivia organized and initiated operations in 1980, benefiting from initial training of staff in March. A program covering 50 potato farmers in one selected area has been completed. A control group of 220 farmers provides basic research comparisons to test acceptance and promotion. Good relations

exist between ASBA, the insurer, and the Agricultural Bank (BAB). PL-480 counterpart of \$1 million held by ASBA provides adequate reserve guarantee during the pilot stage; interest from these funds is covering partial cost of administration. The Bolivian Program suffers from lack of a guaranteed continued source of farm credit and independent funding of reserves. For the pilot phase, the Program appears to be well designed. Cautious, though energetic actions to date suggest an understanding of the difficulties and opportunities available to the organization. Life credit insurance is expected to be introduced for the first time in rural Bolivia, and use of one of two levels of technology is required as a condition of credit insurance coverage. Extension services are being provided to the insured farmers. That this was accomplished in a short period during upheaval in the Government is a reflection of IICA's perseverance and assistance and of the competence of the ASBA staff. The Program is internally sound.

Ecuador

Ecuador is in the process of organization, with an experienced agricultural insurance director appointed, mixed public/private sources of capital, and full support of the Government. It is currently attempting to complete key staffing and is meeting its timetable to begin operations in April 1981. It is adequately capitalized, including substantial capital from the Central Bank. It is administratively

and financially strong and appears to have promoted initial acceptance of farmers, bank, and the Government.

2. Is the research strategy likely to produce credible results? Are the right kinds of questions being asked, and is the administration adequate?

Undue expectations from the research, methodology and data collection of which are still in the initial and testing stage, could unnecessarily burden the Project. The Project is primarily an institution-building Project, success of which is measured directly by the establishment of effective, efficient, and viable pilot programs, overall determination of which does not require unique econometric models. The major indicators of performance in this Project revolve directly around questions of the complementary role insurance plays to farm credit, an accepted prerequisite to agricultural production. Does insurance help to safeguard against decapitalization and/or lead to greater availability of agricultural credit? Does insurance maintain the producer's credit eligibility after loss? Does it promote extension services and technical assistance to small farmers? Are the insuring institutions well organized, capitalized, and politically viable? Will the pilot programs provide a demonstration to the other countries of the hemisphere to initiate programs of their own, utilizing pilot country experience? These are the major questions underlying this Project.

In the Project Paper and in various memoranda, the Project is seen to succeed or fail if the research effort proves affirmatively that availability of rural credit insurance provides an incentive to small farmers to voluntarily adopt modern technology and thereby increase production. The research program, as currently designed, is not likely to provide a reliable answer to this question because of the small sample, the lack of time during the pilot stage, and the lack of comparability among farmers. The question is academic because the pilot programs require farmers who receive insurance to adopt one or another level of modern technology, thereby maximizing production. Small farmers do not voluntarily adapt to new opportunities immediately, taking up to three years to change. The question assumes that the producer has the information and experience to utilize new inputs. This is less true of small farmers. The inputs are not available in some cases. Contrariwise, for countries like Panama, small farmers, including communal farms, are already utilizing high technology and mechanization. A more relevant question is whether insurance promotes the use of additional land by insured farmers using the same technology. The premise that small farmers without insurance have and hold back significant reserves which can be utilized for increased investment in production is questionable. Farmers' attitudes are often area-specific depending on culture and experience. Attitude and motivation are extremely important variables in determining

acceptance and understanding of the program. Research which utilizes socio-economic, anthropological in-depth analysis will prove desirable.

The research program, greatly expanded from that contemplated in the original project design, will play a strategic service function in providing optimum portfolio risk and premium rate analysis to set minimum variable costs to producers consistent with self-sufficiency of the insurer. The research will be most helpful to the pilot countries as feedback occurs and training of counterparts provides new professional expertise. The introduction and programming of computerized research and administration requirements by IICA field staff alone justify the Project. The overall computerized formats available to new country programs, given their specific data, appear well planned at this early stage. Thus, with the foregoing warning, the research strategy is seen to be credible and flexible. Benefits from training and technical assistance of research and statistical personnel located in the pilot countries are exceptionally useful.

The Project was originally designed to utilize Mexican portfolio risk data to assist the pilot programs to diversify and to set premiums. Mexican data were found to be inappropriate and unavailable and the research strategy was completely revamped. Instead of initially assisting the pilot programs, these programs are now being used as a data base, experience from which is expected to feed back to them and be useful for new programs.

To obtain valid and reliable data, it appears necessary to collect data covering a minimum of three and probably four years of experience. Data collected will attempt to isolate the effects on yields of such variables as type and amounts of inputs, farmer size and specialization, timing of seeding and harvesting, location and climate, cause of loss, among others. Four years is seen as a minimum to allow sufficient data to be collected from insured farmers and from control groups who use different technology and differ in credit and insurance use. The insistence on utmost rigor, including heavy costs of computerization, is an attempt by the IICA Insurance Division to maximize the use of small samples and to maintain objectivity when faced with a large number of variables.

The research as presently planned at the farm level will reveal technical data and relationships between inputs, costs, outputs, and revenues as they relate to particular crops, locations, and farmers. Future analysis should emphasize whether small and medium-sized insured farmers are prepared to borrow more from the banking system; whether such borrowing is actually being used for agricultural production; and whether previously non-credit-worthy farmers are now eligible because of insurance.

At the insuring institution level, management and administration financial data will bear on the profitability of the organization, optimum product mix, variable rates to reflect

risks, dependence on external funding and subsidies at various levels of coverage. Emphasis should be given to sharing of costs and functions with credit sources, extension service, and other related institutions. Research at the banking and sectoral levels is not as yet being fully implemented. The overall cost/benefit research on the agricultural sector is still in the planning stage and is complicated by the unavailability and cost of inputs, market capacity, price supports and elasticity, and national and international grades and standards.

Institutional research includes funding, availability of services, staffing, and organization. This is being covered.

Funding in the original Project design proposed a one-man research staff. An expanded research staff, combining it with technical assistance to pilot country organizations, has greatly expanded the function and cost. IICA has done an outstanding job of recruiting competent staff and has shifted funds from other line items to fund them. In its revised budget, additional funding is being requested. Linking of research and technical assistance is advantageous to data collection supervision and to direct training of counterparts.

In 1981, IICA plans to set up an advisory committee of experienced research specialists to provide a sounding board and to assure that the research will provide useful data. This, combined with cooperative interchange with country research agencies, e.g., IDIAP and the Planning Office in

Panama, to work out the sectoral and economy models which are intended to provide cost/benefit data, will help to train and to obtain reactions of existing experienced country research personnel.

The administration within the Insurance Division is flexible and more than adequate. The heavy reliance of the research on a relatively slow IICA computer in San Jose, with high down-time and excessive imputed costs to the Project, is causing the analysis to be delayed. Lack of compatible computer facilities between San Jose and Bolivia has forced the transfer of discs to Panama and may require recoding; Panama data awaiting print-out in San Jose are behind schedule. The sole reliance on overall IICA facilities is a tripling or more of computer costs and is three months behind schedule. Because of this, greater use is being made of Panamanian computer facilities, which are being made available for Panamanian data runs at no cost.

The research design has not as yet been concerned with reinsurance, although IICA is assisting ISA to seek private reinsurance coverage.

In general, though costly and more limited than planned, the research effort provides the fine tuning which underlies the development of a memory bank which will provide a scientific and meaningful foundation for IICA's Insurance Division to provide intelligent technical assistance to the countries of LA/C. It deserves support from AID during the first phase.

3. Is overall project management and support adequate?
Are there technical difficulties which AID and IICA should
shore up? Is the project design as presented in the logframe
adequate?

The Insurance Division of IICA has accomplished its major objectives in the last year, attesting to energetic and innovative management of the project. Expenditures by staff and by country personnel under subgrants are being systematically monitored. The staff of the Division is a minimum one, highly vulnerable to loss of particular individuals. There is only minimum interaction with other IICA offices and divisions. As non quota personnel within IICA, the staff is temporary and without tenure. It has, therefore, assumed an independent role and autonomy, laboring under overall IICA regulations and administration in particular field situations: In Panama, the IICA specialist officially reports to the Director of IICA in Panama, but his entire activity depends on direction from and feedback to the Insurance Division in San Jose. In Bolivia, the IICA specialist, a Bolivian, is paid at one-third the salary he would receive if he were not a Bolivian citizen and equally less than the salaries of the other IICA insurance personnel. The dual lines of authority in Panama are not, in practice, seriously interfering with performance. In Bolivia, however, the inequitable salary is cause of lower morale and could result in loss of a highly trained, difficult-to-replace specialist.

Overall, somewhat inflexible IICA levels of reimbursement to and classification of consultants are too low or rigid to attract highly specialized insurance consultants. As the Project moves from promotion to operation, the need for insurance specialists becomes critical. Failure to recruit such consultants may result in lack of adequate technical assistance to the country programs. Concentration on training of local specialized counterparts on the job or abroad may partially substitute for consultants and have long-term benefits. IICA may be able to work out arrangements to have specialists detailed to programs.

Management has succeeded in good part to date because of burdensome travel and personal problem-solving by the Director of the Division. As the pilot programs become operational, greater delegation will have to be given to IICA associates in the field. A Deputy to share the management and assure continuity appears a wise investment.

The location of the Division in San Jose, in addition to causing delays in computerization, isolates the Insurance personnel from day-to-day contact with experienced development research personnel, such as those found in the IBRD, the IDB, and the US Census Bureau. Correspondingly, promotion of credit insurance, discussing progress of the Project, and opportunities to cooperate with the Project by multilateral agencies are reduced. Retention of staff of the Division and its long-run operation would be enhanced if IICA would move the Division

to its Washington office. This is especially important if the post-pilot stage requires funding from non-AID sources for new country programs and/or for reinsurance funding or guarantees.

In the promotion stage, IICA as a supporting institution has lent its prestige to the Project and to the work of the Insurance Division. This has made acceptance of the Project easier. To its credit, IICA has reinvested \$50,000 per year of Project funding in necessary Project expenses. Unfortunately, in the long run, IICA is not an original source of funding but depends on other organization appropriations for its participation in the project. Unless the Insurance Division finds a particular independent continuing function to give it long-run purpose, turnover in the post-pilot period or earlier can be expected to be high even in the best of circumstances.

The Project is relatively well designed, with a workable strategy for the pilot stage. The expectations that the three countries would become operational before 1980, that research data would be available for country use, and that IICA's staffing would be complete in 1979 have delayed performance and caused a shift in budget to a four-year research program and a doubling of research staff. Training of (non-pilot) new country personnel in Panama is becoming formalized. The permanence of the Insurance Division is not assured, nor is its budget adequate to assist additional countries before 1983. Yet several countries, particularly the Dominican Republic,

Chile, Costa Rica, and Colombia, are likely to seek assistance. USAID/OPG or international agency assistance to supplement funding was not contemplated in the original Project design. Setting time targets for the delivery system detailed in the revised illustrative logframe (see Chapter V) is left to the joint efforts of AID/IICA and the three country program organizations.

AID and IICA would be well advised to cooperatively reexamine the strategy and organization which would facilitate and assure long-run viability of the Insurance Division, with particular attention to retention of trained professional staff and potential financing in the post-pilot phase.

Losses by Size of Farm

As noted on p. III-4, no analysis of losses by size of farm is known to have been published. Raw data for such analysis may be available in FCIC files, but US experience may not apply to Latin America. There is some experience with loan programs in LA which points to more purposeful loss-taking by larger farmers who may be less averse to non-repayment threat of penalties or who are not involved in group loans which require other village farmers to repay a disproportionately larger amount of a loan. This type of loss is an example of moral hazard and does not reflect losses from natural causes.

Indirect and intuitive evidence of potential loss is conflicting: Vogel, "Delinquency Rates and Developing Country Financial Markets" (AJAE, Vol. 63, No. 1, Feb. 1981), reports low delinquency rates in Costa Rica and some evidence that "lower delinquency rates appear to be associated with smaller loans and with lending for agricultural purposes." Delinquency rates in Costa Rica tend to be lowest on loans to small farmers. But this reflects a very low relative interest rate (8%) and no commissions which result in excess demand and rationing of available credit to those least likely to default. In addition, further credit is withheld from delinquent farmers. Continuing access to low-cost credit and selective credit risks explain the differential in a country where inflation is running almost

double the rate of interest.

But what of the losses from natural causes which can be expected from different size farms? It can be assumed that medium-sized farmers would have less losses. Medium-sized farmers are in a position to recognize disease and to take immediate measures to offset damage from insects, excess humidity, or drought--up to a point. They know what to do; they have access to mechanical equipment and other resources, including credit. They would utilize necessary inputs and apply them at strategic time periods. They would be more likely to use certified seed and to plant at the right time. Though not true in India, where small farmers have access to water, in Latin America medium and larger farmers would generally own land of higher quality in terms of access to water, soil type, and terrain.

Medium-size farmers obtain higher yields and have lower costs than small farmers. In the US, small farms have the highest unit costs, reflecting high fixed labor costs. Yields per acre of corn and soybeans trend upward as size increases. In part, this is a function of the relative specialization, with smaller farms being more mixed than specialized medium-size grain farms: Mueller, A. G., and Hinton, R. A., "Farmers' Production Costs for Corn and Soybeans by Unit Size" (AJAE, Vol. 57, No. 5, Dec. 1975, pp. 934-939). These higher yields are an important element when considering indemnity for losses which are based on average yields for particular provinces or states.

Medium-size-farm yields would have to be proportionately lower to be eligible for indemnity.

The lower costs of writing insurance, of inspection, and of technical assistance are obvious as less manpower and manhours would be utilized. If these larger farmers are looked up to by smaller farmers for demonstration, acceptance by the latter could be facilitated if medium-size farmers are included in the Program. Medium- and larger-size farmers in Latin America have greater political clout. Included in an emerging program, they could be the basis for pressure on the government to fund credit, insurance, and reinsurance.

If the intuitive approach, which concludes that medium-size farmers are likely to have less losses, is not correct, then making available mandatory extension (technical) services to small farmers, as is now being done, is brought into question.

PEOPLE INTERVIEWEDIICA:

Mr. Jose Torres, Director, Multizonal Projects
 Dr. W. Michael Gudger, Head, Division of Crop Credit Insurance
 Mr. Heraclio A. Lombardo, Director of Evaluation
 Mr. Carlos Pomareda, Research Specialist
 Dr. Gustavo J. Arcia, Assoc. Research Specialist (Panama)
 Mr. Hector Guerrero, Financial Management Specialist
 Mr. Gerardo Mendoza, Crop Credit Insurance Specialist (Bolivia)

ISA (Panama):

Lic. Virginia B. de Velasquez, Directora General
 Ing. Sergio Melais, Director Nacional de Programacion
 Dr. Ceferino Ballestero, Director Nacional de Seguro Ganadero
 Lic. Irma E. de Zambrano, Directora Nacional de Finanzas
 Lic. Sandra J. Brugiatti, Directora Nacional de Servicios
 Administrativos
 Lic. Manual Nazas, Director de Promocion/Divulgacion

Other:

Mr. Harlan Davis, RDO, USAID/Panama
 Mr. John Campusano, Director General, Agricultural Insurance
 Program, Ecuador
 Mr. Ramon Torres, Agricultural Bank, Dominican Republic
 Lic. Nereida Jimenez, Attorney, Agricultural Bank, Dominican
 Republic
 Mr. Antonio Velasquez, AID/W
 Mr. Nelson Maurice, Project Manager, FCIC/AID/W



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