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CROP CREDIT INSURANCE PROJECT

QUARTERLY REPORT FOR JANUARY 1, 1980 - MARCH 30, 1980

FOR GRANT No. AID/LAC/1GR - 1297



INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS - OEA

DIRECCION GENERAL
Sede Central
Apartado 55 - Coronado
Provincia de San José
COSTA RICA
Cable: IICASANJOSE
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SC/MZ-102
May 6, 1980

Mr. C. Blair Allen
Acting Chief LAC/DR/RD
USAID
Washington, D.C., 20523
U. S. A.

RE: USAID Grant AID/LAC/IGR-1297

Dear Mr. Blair:

I am happy to submit ten copies in English of the Quarterly Report for the first calendar quarter of 1980 for the above cited grant. I trust that the report will fulfill the requirements of Section C (1) of Attachment 1 of the Crop Credit Insurance Grant. This time you will also find enclosed the financial status of the project as of March 31st.

I would also appreciate your comments and suggestions on the Quarterly Report, so that we can develop a reporting format better suited to your needs. Should you wish further information or documentation, please let me know.

Sincerely yours,

José Alberto Torres
Director of Multizonal Projects

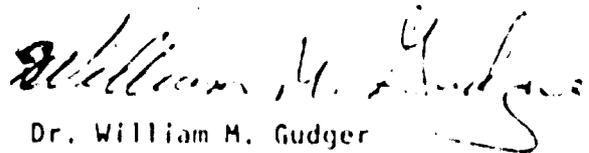
QUARTERLY REPORT FOR JANUARY 1, 1980 - MARCH 31, 1980

FOR GRANT No. AID/LAC/IGR-1297

Pursuant to Section C (1) of Attachment I of the above cited grant, I am happy to submit the following Quarterly Report summarizing the activities of all Project during the first calendar quarter of 1980.

We believe that substantial progress has been achieved in realizing the most important goal of the Grant. It is now highly likely that we will in fact be able to assist both Ecuador and Bolivia in establishing and operating agricultural insurers. Thus, we are especially happy to report to you that first quarter 1980 has been one of our most successful.

Should you wish any further information, please contact us.


Dr. William M. Gudger

Chief, Crop Credit Insurance Division

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EXECUTIVE SUMMARY

Project Activities in Panama

The Panamanian agricultural insurance program continues to be a model program for developing countries. The insurer, Instituto de Seguro Agropecuario (ISA) has quickly developed into an administratively and financially strong institution manned by a well trained and highly motivated staff. The insurer closed the first quarter in a very strong financial position, so strong in fact that consideration is being given to expanding the coverage offered by including free group life insurance and/or higher coverage for the same premium.

The program continues its strong emphasis on serving small farmers. During the first quarter, ISA expanded the insurance offered to small farmers by providing protection to about one hundred small industrial tomato producers. Data on farm sizes and net worth are not yet in, however on-site inspections indicate that most producers sow between 1/2 and 1 1/2 hectares. This new crop is important for several reasons: It is dry season irrigated and provides income diversification opportunity. The farmers have requested the insurance and their participation remains voluntary. The farmers have production contracts with guaranteed prices. As industrial tomato is produced in the dry season, ISA can write more annual coverage against the same reserve. Finally, the tomato producers provide an ideal research laboratory to allow our research team to top both economic and behavioral variables that affect the small farmers' perception and management of risk.

The IICA/ISA program negotiated its second contract for the forthcoming year. Under the terms of new "convenio" IICA will continue its programs of technical assistance, training and administrative support. The major difference between the new and the old agreement is that IICA will assist the entire Panamanian program instead of working with an IICA/ISA pilot project within the overall operations of ISA. This change was made necessary by the growing difficulty of separating operations for accounting purposes and by the realization that IICA must focus its efforts on the entire program if the project is to have maximum impact.

Specific activities that deserve mention were the contracting of David Guftason, a Washington based actuary, to review and revise the entire premium structure of ISA. Based on the report ISA expects to move from a level premium structure to one that varies by region, farmers experience, cycle and other variables. Reserving and reserve accounting practices were also considerably revised. Two Puerto Rican consultants also worked closely with ISA. Puro Camacho, formerly of Farm Insurance of Puerto Rico, worked intensively with the field staff on loss adjusting. Víctor Valcárcel prepared an excellent report together with the requisite forms to enable ISA to offer a group life policy to its insureds (at a cost of \$6.00

per year per \$1,000, but with no extra premium from the insured). This policy will cover both the balance of the farmers' loan and make a \$1,500 payment to his family to cover medical and burial expenses in case of his death. IICA and ISA, also completed the study of purchase and installation of a computer. A small Hewlett-Packard machine will be purchased and installed in the near future. We hope to have all major operations computerized during 1980, thus, eliminating a major bottleneck to further expansion by processing the lengthy paperwork by machine.

Finally, our research activities are well advanced in Panama. We now have on our IBM machine in San José, all the data for all of ISA's operations. The survey questionnaire has been field tested by a researcher on the ISA staff and IICA staff. The inclusion of contract tomato producers will considerably enrich our research in Panama. We are hopeful that the first research reports on crop credit insurance in Panama will be completed before the end of the current calendar year.

Project Activities in Ecuador

At the outset of the first quarter of 1980, it appeared that despite the intense promotional efforts of IICA, Ecuador would not be able to obligate the funds required to establish a reserve and that the project could not go ahead. In a final attempt, IICA/Ecuador held a series of meetings with both public and private sector institutions. As the result of these meetings, another interinstitutional group was formed to prepare an exposition and a set of statutes. Based upon this work, the government of Ecuador decided to undertake the project. On the first of May in Riobamba, the document constituting the insurer will probably be signed with the President of the Republic as a witness.

The new Ecuadorian insurer, la Compañía Nacional de Seguros Agropecuarios, CONASA, will be a mixed capital joint public and private sector venture. At present, the Banco Nacional de Fomento anticipates paying in 1.3 million Sucres in paid-up capital. The Ministry of Agriculture will pay in a smaller amount of about 1 million Sucres. Participation from the private sector will be composed of paid up capital of .1 million Sucres from:

Centro Ecuatoriano de Servicios Agropecuarios
Fondo Ecuatoriano Populorum Progressio
Caja de Crédito Agrícola

With the two state institutions and three private sector organizations, the legal requirement of a minimum of 5 stockholders is met. Final confirmation and the deposit of capital is expected very soon. As soon as that occurs, the Superintendencia de Seguros is expected to approve the operation of the insurer. In addition, the Banco Central del Ecuador has confirmed that it will participate by paying in capital of between 90 million and 200 million Sucres once the insurer has been established.

IICA anticipates that if present deadlines are met we can negotiate a technical assistance agreement with the new insurer, CONASA, in early June and launch our technical assistance program in mid-June. While the likelihood of successfully creating the insurer appears quite high, the Director General has informed Ecuador that IICA will request from AID/W a change of

countries should it appear that the present initiative will be frustrated or delayed.

Project Activities in Bolivia

The development of the Bolivian insurer has moved ahead rapidly in the first quarter of 1980. In early January, shortly after the establishment of the insurer, IICA's staff undertook several important projects. First, the new government wanted the statutes amended to permit private sector participation and second, negotiations were begun with P.L. 480 to develop an agreement between P.L. 480 and Aseguradora Boliviana Agropecuaria (ABA) under which P.L. 480 would provide a reserve adequate to permit ABA to begin insurance operations. By mid-March, negotiations had advanced to a final version on an agreement and it is expected that though P.L. 480 funds for the reserve will be deposited during the second quarter.

ABA has now completed the initial staff selection process. In addition to the new corporation's manager, ABA has contracted a chief field inspector and two assistant inspectors, an accountant, a chief of policy emissions and adjusting and a full time researcher to complete the initial full time professional staff.

IICA organized the initial training of this new staff in Bolivia during the week of 3-8 March with instructors from the IICA program, consultants and the Superintendent of Insurance of Bolivia. This initial training will be complemented and expanded upon by the planned late May training in Mexico, the United States and Puerto Rico. Under this accelerated program, we are hopeful that the ABA staff can begin to engage in very small scale insurance operations before the year's end. In addition, ABA has assigned a full time staff member to the research component. The initial baseline research work is under way in the Melga area.

Finally, IICA's program suffered a significant loss with the resignation of our advisor in Bolivia, Manuel Benítez. However, Manuel Benítez will remain with the program as a consultant to Bolivia, visiting La Paz for two weeks every two months while IICA recruits and trains another technician to replace him.

Research Activities

This quarterly has been fruitful in terms of progress achieved along the research program. The strategy of work and expected output for the calendar years 1980-1981 is described in the attached "Rural Credit Insurance Research Program 1980-1981". Your comments on this very important component would be appreciated.

Having agreed on a strategy of work, the time has been primarily devoted to organize the existing data base. For Panama, the three years of experience data of 1800 policies is now available on IICA's Computer Center in San José and readily available for statistical analysis. Also, a 15 year data set on yield and weather by province is being processed for later statistical analysis to characterize the nature of risks in agricultural production.

Regarding the generation of new data to 'characterize' beneficiaries of credit insurance programs, a questionnaire has been designed and it will be applied soon in four areas in Panama, one in Bolivia and one in Ecuador. The questionnaire will be applied on areas where the insurance programs are being implemented but it will provide information for all farmers in the area; and it will be repeated every year. Two areas are of particular interest in Panama, where farmers grow industrial tomatoes under a market agreement, thus eliminating the risk on prices; yet important decisions are made on the planting dates.

Progress is under way to design a farm-firm household behavior model to test possible effects of credit insurance under different conditions. First tests of the model have been performed using preliminary data for Guatemala, but real figures will be used from Panama. Also, a portfolio management model is being conceptualized to analyze costs and benefits of expanding rural credit and insured credit to particular groups of farmers, regions and crops. The model will be applied to the bank-insurance agency pairs in the three countries with their own data base.

The research program in Mexico has continued with an analysis of the existing information in ANAGSA and other institutions, which could make possible an appraisal of the effects of rural credit insurance. The socio-political nature of the Mexican program has particular points of interest, most of which have already been appreciated by our staff. Appropriate statistical data for further work is not available and the financial resources of the project assigned for research in Mexico are insufficient to engage in new data generation processes. The latter are in turn not easily obtainable without having the project's own insurance operations program. Serious considerations are being given to limit to Mexican component of the project to training activities.

The first research results of the rural credit insurance program will be available in the third quarter of this year.

Budgeting Activities

During this period, the activities were related to programming disbursements for ISA (Panama) and ABA (Bolivia); preparation of preliminary expense accounts procedures for ABA; follow up contracts and other payments for Consultants; final review of operative budget for 1980 and preliminary budget for 1981. Late in March the Financial Specialist attended a Seminar on Reinsurance Financial Strategies in New York. According to the new budget by objectives, now in preparation, a careful review of future activities necessary to complement the program should be done for a realistic assignment of financial resources.

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INFORME DE SUPERVISION, SEGUIMIENTO Y APOYO TECNICO - PROYECTO**

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DG/SDGA/DR/CENTRO	OFICINA NACIONAL Panama	UNIDAD DE EJECUCION	AMBITO DEL PROYECTO HEM. <u>X</u> REG. ___ PAIS ___	AÑO FISCAL 1980	TRIMESTRE First	CODIGO
RESPONSABLE John Campuzano		COSTO TOTAL USS				
		CUOTAS	FSB	CONVENIOS ISA/IICA	OTROS	TOTAL

1. Titulo Technical Assistance Program: Instituto de Seguro Agropecuario de Panama (ISA)

2. Actividades Realizadas

CODIGO	ACCIONES O EVENTOS DESARROLLADOS	PRODUCTOS OBTENIDOS
K.04.NP.11.1	<u>Support for Institutional Development.</u> Review of the Insurance Law; Review of Norms and Procedures and Personnel Obligations.	Report with recommendations
K.04.NP.11.2	<u>Training.</u> Technical support to ISA's personnel. Conferences by high level consultants (Camacho and Gustaffson)	Training of personnel
K.04.NP.11.3	<u>Follow up of IICA/ISA Agreement.</u> Review of Financial and Accounting procedures for ISA/IICA operations.	Adoption of new Methodology
K.04.NP.11.4	<u>Support to Research Activities.</u> Organization of Data for 1976/77 to 1979/80 on Computer. Processing of statistical Data for determination of premiums and coverages. Arrangements to obtain Minicomputer.	Computer files to be used in statistical analysis.

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3. Ambiente de trabajo, interés nacional y circunstancias externas al IICA que se consideran de importancia (positiva o negativa) para la marcha del proyecto.

Conditions are most favorable. Attitudes of IICA local office and ISA's personnel are providing excellent opportunity to develop a master rural credit insurance program.

4. Tiempo aproximado que los técnicos dedicaron al proyecto - Días/hombre IICA 100 Otros 40

5. Observaciones generales.

6. Consultas, solicitudes y recomendaciones para mejorar la ejecución del proyecto.

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PROPUESTA DE ACCION Y GASTOS PARA EL TRIMESTRE QUE SE INICIA

7. Actividades Programadas y no Programadas (*)

CODIGO ACTIVIDAD	DURAC. (**)	PRODUCTO ESPERADO	APOYO TECNICO REQUERIDO			
			NOMBRE TECNICO ó ESP.	FECHA INICIO	No. DIAS	NATURALEZA DEL APOYO
K.04.NP.11.1		Program for Implementation of Recommendations made on First quarter Report	HGuerrero, WGudger	May	10	Technical
K.04.NP.11.2		Training in Mexico, Puerto Rico and the U.S.	-	-	-	Technical
K.04.NP.11.3		Implementation of New Procedures	HGuerrero	May	10	Technical
K.04.NP.11.4		Statistical Analysis of 4 years of experience and design of field questionnaires	CPomareda	April	20	Technical

(*) Para las actividades que se inician y no aparecen en el Programa Operativo deberá adjuntarse el formulario (Modelo E) que utiliza Planeamiento para la descripción de la actividad y el detalle de costos.

(**) Esta columna se llenará con las letras A, B, C, D, para cada actividad de acuerdo con la interpretación que se indica en el instructivo.

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8. Apoyo Financiero Requerido

CODIGO ACTIVIDAD	MES				MES				MES			
	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL
TOTAL												

9. Indique aproximadamente que actividades se estarán desarrollando en el trimestre que sigue al que se inicia.

CODIGO ACTIVIDAD	APOYO TECNICO REQUERIDO		
	NOMBRE DEL TECNICO O ESPECIALIDAD	TIPO DE APOYO	MES

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DG/SDGA/DR/CENTRO	OFICINA NACIONAL Bolivia	UNIDAD DE EJECUCION	AMBITO DEL PROYECTO HEM. ___ REG. ___ PAIS ___X	AÑO FISCAL 1980	TRIMESTRE First	CODIGO
RESPONSABLE Manuel Benítez			COSTO TOTAL USS			
			CUOTAS	FSB	CONVENIOS IICA/ABA	OTROS
			TOTAL			

1. Titulo Implementation of Crop Credit Insurance Project - Bolivia

2. Actividades Realizadas

CODIGO	ACCIONES O EVENTOS DESARROLLADOS	PRODUCTOS OBTENIDOS
K.04.AB.11.1	<u>Institutional Support ABA.</u> Meetings with local institutions to create Aseguradora Boliviana Agropecuaria (ABA). Write up of Statutes; Signing of Agreement IICA/ABA; Rent office and equipment; Hiring of personnel for ABA; Inauguration of the ABA offices.	Creation of ABA and beginning of its operations.
K.04.AB.11.2	<u>Training.</u> Two weeks Seminar for ABA's personnel	Training of personnel
K.04.AB.11.3	<u>Follow-Up, Control and Evaluation.</u> Design of forms for insurance operations; field visits to area of the project (Helga); Support to Research Activities to characterize Beneficiaries of the Program	Organization of Research Plan and Field Surveys.

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3. Ambiente de trabajo, interés nacional y circunstancias externas al IICA que se consideran de importancia (positiva o negativa) para la marcha del proyecto.

Some problems in communication between instructions from IICA headquarters and local office need to be solved.

4. Tiempo aproximado que los técnicos dedicaron al proyecto - Días/hombre IICA 100 Otros 20

5. Observaciones generales.

Creating the insurance agency has been a major undertaking. ABA needs strong support from several components of the CCI project to follow its activities.

6. Consultas, solicitudes y recomendaciones para mejorar la ejecución del proyecto.

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PROPUESTA DE ACCION Y GASTOS PARA EL TRIMESTRE QUE SE INICIA

7. Actividades Programadas y no Programadas (*)

CODIGO ACTIVIDAD	DURAC. (**)	PRODUCTO ESPERADO	APOYO TECNICO REQUERIDO			
			NOMBRE TECNICO ó ESP.	FECHA INICIO	No. DIAS	NATURALEZA DEL APOYO
K.04.AB.11.1		Revision of Manuals and Procedures	MBenítez	May	10	Technical
K.04.AB.11.2		Training in Mexico, Puerto Rico and the U.S	-	May	20	Technical
K.04.AB.11.3		Field Surveys	Pomareda	May	20	Technical

(*) Para las actividades que se inician y no aparecen en el Programa Operativo deberá adjuntarse el formulario (Modelo E) que utiliza Planamiento para la descripción de la actividad y el detalle de costos.

(**) Esta columna se llenará con las letras A, B, C, D, para cada actividad de acuerdo con la interpretación que se indica en el instructivo.

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8 Apoyo Financiero Requerido

CODIGO ACTIVIDAD	MES				MES				MES			
	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL
TOTAL												

9 Indique aproximadamente que actividades se estarán desarrollando en el trimestre que sigue al que se inicia.

CODIGO ACTIVIDAD	APOYO TECNICO REQUERIDO		
	NOMBRE DEL TECNICO O ESPECIALIDAD	TIPO DE APOYO	MES

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DG/SDGA/DR/CENTRO	OFICINA NACIONAL Main Office	UNIDAD DE EJECUCION Crop Credit Insurance Division	AMBITO DEL PROYECTO HEM. <u>X</u> REG. ___ PAIS ___	AÑO FISCAL 1980	TRIMESTRE First	CODIGO	
RESPONSABLE Carlos Pomareda, Research Specialist			COSTO TOTAL US\$				
			CUOTAS	FSB	CONVENIOS	OTROS	TOTAL

1. Titulo Research Activities

2. Actividades Realizadas Note: New coding of Activities began effective on January 1980 for Operative Plan

CODIGO	ACCIONES O EVENTOS DESARROLLADOS	PRODUCTOS OBTENIDOS
K.04.DM.11.3	<u>Organization and Coordination of Research:</u> Setting up the methodology; organization of research activities in the countries; Evaluation of Mexican Credit Insurance and data availability.	<u>Note:</u> This output is the joint result of the several activities <ul style="list-style-type: none"> Design of working materials such as questionnaires, insurance operation forms; statistical Programs Computer software.
K.10.DM.11.10	<u>Organization and Analysis of Existing Information:</u> Organization for computer based analysis of 3 years of experience data in Panama.	<ul style="list-style-type: none"> Design and testing of farm-firm household behavior model
K.10.DM.11.11	<u>Generation and Analysis of New Information:</u> Design of questionnaire to be used in pilot areas in Panama (Chiriquí and Cocle), Bolivia (Melga) and Ecuador (to be determined).	<ul style="list-style-type: none"> Organization of Data Bank
K.10.DM.11.12	<u>Difusion of the Results of the Research</u>	<ul style="list-style-type: none"> Presentation of the paper about "Credit Insurance and the Expansion of Rural Credit" ALIDE, San José February 1980

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3. Ambiente de trabajo, interés nacional y circunstancias externas al IICA que se consideran de importancia (positiva o negativa) para la marcha del proyecto.

Full support from country programs in Panama, Bolivia and Ecuador. The Mexican Component is being discussed because data available is of little use for further research work.

4. Tiempo aproximado que los técnicos dedicaron al proyecto - Dias/hombre IICA 70 Otros Consultants 3 man months

5. Observaciones generales.

Very pleased with achievements.

6. Consultas, solicitudes y recomendaciones para mejorar la ejecución del proyecto.

Suggested to consider less emphasis in Mexico research because of data quality and limited financial resources which could be better used for research activities in the other countries.

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PROPUESTA DE ACCION Y GASTOS PARA EL TRIMESTRE QUE SE INICIA

7. Actividades Programadas y no Programadas (*)

CODIGO ACTIVIDAD	DURAC. (**)	PRODUCTO ESPERADO	APOYO TECNICO REQUERIDO			
			NOMBRE TECNICO ó ESP.	FECHA INICIO	No. DIAS	NATURALEZA DEL APOYO
K.04.DM.11.3		Test Portfolio Management Model-Calculation of Premiums for Panama	CPomareda - AHogan PHazell	June 15	90	Technical
K.04.DM.11.10		Complete Organization of Existing Data in Panama	RCelis-CHernández TFuentes	May 1°	60	Technical
K.04.DM.11.11		Run Surveys in two areas in Panama and one in Bolivia	CPomareda-Laffitte TFuentes	May 20	90	Technical
K.04.DM.11.12		Produce a Paper in Spanish about the Research Program	CPomareda	June 1°	30	Technical

(*) Para las actividades que se inician y no aparecen en el Programa Operativo deberá adjuntarse el formulario (Modelo E) que utiliza Planeamiento para la descripción de la actividad y el detalle de costos.

(**) Esta columna se llenará con las letras A, B, C, D, para cada actividad de acuerdo con la interpretación que se indica en el instructivo.

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8. Apoyo Financiero Requerido

CODIGO ACTIVIDAD	MES April				MES May				MES June			
	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL
K.04.DM.11.3				2.000				2.000				3.000
K.10.DM.11.10				-				3.000				3.000
K.04.DM.11.11				-				2.000				4.000
K.04.DM.11.12				-				-				-
TOTAL				2.000				7.000				10.000

9. Indique aproximadamente que actividades se estarán desarrollando en el trimestre que sigue al que se inicia.

CODIGO ACTIVIDAD	APOYO TECNICO REQUERIDO		
	NOMBRE DEL TECNICO O ESPECIALIDAD	TIPO DE APOYO	MES
-	Continuation of all four research activities	-	

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DG/SDGA/DR/CENTRO	OFICINA NACIONAL Main Office	UNIDAD DE EJECUCION Crop Credit Insurance Division	AMBITO DEL PROYECTO HEM. <u>X</u> REG. ___ PAIS ___	AÑO FISCAL 1980	TRIMESTRE First	CODIGO
RESPONSABLE Héctor Guerrero Financial Specialist			COSTO TOTAL US\$			
			CUOTAS	FSB	CONVENIOS	OTROS
			TOTAL			

1. Titulo Promotion and analysis of Crop Credit Insurance for development

2. Actividades Realizadas

CODIGO	ACCIONES O EVENTOS DESARROLLADOS	PRODUCTOS OBTENIDOS
K 10 DMC 114	Audit of ISA's Reimbursement Applications for December 1979 and January 1980	Remittance to ISA.
	Review and consolidation of ISA Budget for 1980 (Annex to 2nd Agreement)	Expense control of ISA.
	Preparation of Preliminary Expense Accounting Procedures for ABA	Expense control and Reimbursement Applications.
	Follow-up of Consultant's contracts and payments	Consulting services.
K 10 DMC 115	Final Review of Operative Budget for 1980 and preliminary projection for 1981	Financial Planning.
	Preparation of a Comprehensive Preliminary Budget for the Program and presentation at AID Headquarter, Washington D.C.	Possibilities of Grant's increase according Program requirements.
K 10 DMC 119	Attendance to Seminar on Reinsurance Financial Strategies, New York.	Guidelines for the Crop-Credit Reinsurance System.

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3. Ambiente de trabajo, interés nacional y circunstancias externas al IICA que se consideran de importancia (positiva o negativa) para la marcha del proyecto.

Interest and cooperation from national authorities and official have been very satisfactory and have been a positive factor for Program Development in Bolivia and Ecuador.

4. Tiempo aproximado que los técnicos dedicaron al proyecto - Días/hombre IICA _____ Otros _____

5. Observaciones generales.

6. Consultas, solicitudes y recomendaciones para mejorar la ejecución del proyecto.

According to the Budget by Objectives, now in preparation, a careful review of future activities necessary to complement the Program Objectives should be done for a realistic assignment of financial resources consistent with program goals.

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PROPUESTA DE ACCION Y GASTOS PARA EL TRIMESTRE QUE SE INICIA

7. Actividades Programadas y no Programadas (*)

CODIGO ACTIVIDAD	DURAC. (**)	PRODUCTO ESPERADO	APOYO TECNICO REQUERIDO			
			NOMBRE TECNICO ó ESP.	FECHA INICIO	No. DIAS	NATURALEZA DEL APOYO
K 10 DMG 114	3 months	Audit of ISA and ABA Reimbursements. Audit of IICA-ISA Accounting. Financial and Accounting Procedures for ABA.				
K 10 DMC 115	1 month	Preparation of the Budget by Objectives for the Program and presentation to AID. Review of the Operative Budget (1980) for Bolivia and Ecuador				
K 10 DMC 117	1 month	Assistance in the coordination of the Training Program.				
K 10 DMC 119	2 months	Preliminary Design of a regional institution for technical assistance and reinsurance negotiation.				

(*) Para las actividades que se inician y no aparecen en el Programa Operativo deberá adjuntarse el formulario (Modelo E) que utiliza Planeamiento para la descripción de la actividad y el detalle de costos.

(**) Esta columna se llenará con las letras A, B, C, D, para cada actividad de acuerdo con la interpretación que se indica en el instructivo.

INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS
INFORME DE SUPERVISION, SEGUIMIENTO Y APOYO TECNICO - PROYECTO

FORMULARIO
OP1
 HOJA 4 DE 4

8. Apoyo Financiero Requerido

CODIGO ACTIVIDAD	MES April				MES May				MES June			
	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL	CUOTAS	FSB	Conv. y otros	TOTAL
114	-		-	-			1.500	1.500			500	500
115			-	-			-	-			700	700
119			-	-			-	-			300	300
TOTAL							1.500	1.500			1.500	1.500

9. Indique aproximadamente que actividades se estarán desarrollando en el trimestre que sigue al que se inicia.

CODIGO ACTIVIDAD	APOYO TECNICO REQUERIDO			MES
	NOMBRE DEL TECNICO O ESPECIALIDAD	TIPO DE APOYO		

PROYECTO DE SEGURO AGROREDITICIO

RESUMEN DEL ESTADO DE PRESUPUESTO, MARZO 1980

	<u>GASTADO EN EL TRIMESTRE</u>	<u>GASTADO A LA FECHA</u>	<u>PROGRAMA OPERATIVO</u>	<u>DISPONIBLE</u>	
SEDE CENTRAL	49,303.30	49,303.30	307,610.00	258,306.70	5.2
PANAMA	7,672.48	7,672.48	75,574.00	67,901.52	8.9
ECUADOR	7,619.50	7,619.50	34,959.00	27,339.50	3.5
BOLIVIA	7,792.79	7,792.79	47,107.00	39,314.21	5.0
T O T A L	72,388.07	72,388.07	465,250.00	392,861.23	5.4

Nota

Algunos gastos comprometidos en el primer trimestre (como Consultores y otros servicios) aparecerán en el segundo trimestre y en los posteriores. Por otro lado algunos gastos hechos en los últimos días de marzo aún no aparecen en la Contabilidad. Esto es un primer reporte computarizado preparado por el IICA.

INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS DE LA D.C.A.

DEPENDENCIA PANAMA-CROR CREDITADO

ESTADO DEL PRESUPUESTO EXTRA - CUOTAS

31 DE MARZO DE 1960

CUENTA	GASTADO EN EL MES	GASTADO A LA FECHA	PROGRAMA OPERATIVO	DISPONIBLE	% GASTOS A PROG. CREA.
PERSONAL					
11 COSTO PERM. PROF. INTERIAC.					
111 SALARIOS	3,085.75	3,085.75	21,327.00	16,271.25	24
112 GASTOS DE VIAJES Y OTROS COSTOS	1,697.97	1,697.97	6,717.00	4,619.43	24
12 COSTO MANTENIM. PROF. CAL. AUX.					
121 SALARIOS	.00	.00	10,778.00	10,178.00	
122 OTROS COSTOS	.00	.00	1,722.00	1,222.00	
SUBTOTAL	4,783.72	4,783.72	39,844.00	32,490.68	17
COMISIÓN DE OPERACION					
21 COMISIÓN OPERACIONES	.00	.00	4,500.00	4,500.00	
22 COMISIÓN OPERACIONES TÉCNICAS	.00	.00	200.00	200.00	
23 COMISIÓN OPERACIONES DE PUBLICACIONES	.00	.00	400.00	400.00	
24 COMISIÓN OPERACIONES Y COLABORACIONES	20.00	20.00	3,000.00	2,750.00	9
25 COMISIÓN OPERACIONES Y COLABORACIONES	.00	.00	10,000.00	10,000.00	
26 COMISIÓN OPERACIONES Y COLABORACIONES	.00	.00	1,000.00	1,000.00	
27 COMISIÓN OPERACIONES Y COLABORACIONES	30.00	30.00	1,000.00	1,000.00	14
28 COMISIÓN OPERACIONES Y COLABORACIONES	30.00	30.00	7,000.00	6,675.00	5
SUBTOTAL	80.00	80.00	30,000.00	29,165.00	3
MATERIALES					
31 MATERIAL VIVO	.00	.00	4,500.00	4,500.00	
SERVICIOS GENERALES					
40 SERVICIOS GENERALES	.00	.00	1,000.00	1,000.00	
41 SERVICIOS GENERALES	71.96	71.96	300.00	228.04	14
42 SERVICIOS GENERALES	61.32	61.32	1,000.00	1,438.68	4
43 SERVICIOS GENERALES	.00	.00	500.00	500.00	
44 SERVICIOS GENERALES	121.28	121.28	500.00	378.72	24
SUBTOTAL	254.56	254.56	4,000.00	3,745.44	6
GRAN TOTAL	7,072.46	7,072.46	75,674.00	67,901.92	10

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INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS DE LA O.E.A.

D. PENDENCIA ECUADOR-CROP CREDIT

ESTADO DEL PRESUPUESTO EXTRA - CUOTAS

31 DE MARZO DE 1980

CUENTA	GASTADO EN EL MES TRIMESTRE	GASTADO A LA FECHA	PROGRAMA OPERATIVO	DISPONIBLE	O/O GASTOS A PROG. OPER.
PERSONAL					
11 COST. PERS. PROF. INTERNAC.					
11A SUELDOS	4,902.75	4,902.75	21,397.00	19,454.25	23
11B SUBSIDIOS Y OTROS COSTOS	1,107.63	1,107.63	4,668.00	3,960.37	24
12 COST. SER. PROF. NAL. AUX.					
12A SUELDOS	274.46	274.46	1,956.00	1,681.54	14
12B OTROS COSTOS	.00	.00	978.00	978.00	
SUBTOTAL	6,284.84	6,284.84	28,999.00	22,674.16	22
COSTOS DE OPERACION					
20 VIAJES OFICIALES	776.44	776.44	4,000.00	3,223.56	19
25 MATERIALES Y UTILES	7.35	7.35	700.00	192.65	4
26 VINDS SERVICIOS	266.55	266.55	600.00	333.45	33
SUBTOTAL	1,050.34	1,050.34	5,000.00	3,949.66	21
SERVICIOS GENERALES					
50 MATERIALES	192.03	192.03	500.00	347.97	30
52 COMUNICACIONES	192.29	192.29	500.00	367.71	26
SUBTOTAL	384.32	384.32	1,000.00	715.68	28
GRAN TOTAL	7,719.50	7,719.50	34,999.00	27,339.50	22

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INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS DE LA O.E.A.
 DEPENDENCIA BOLIVIA-COPEL CREDIT

ESTADO DEL PRESUPUESTO EXTRA - CUENTAS

31 DE MARZO DE 1960

CUENTA	GASTADO EN ML. MTS 7/10/1959	GASTADO A LA FECHA	PROGRAMA OPERATIVO	DISPONIBLE	C/O GASTOS A PROG. OPER.
PERSONAL					
21 COST. PERS. PROF. INTERIAC.					
21A SUELDOS	4,283.62	4,283.62	4,283.00	55.38	99
21B SUBSIDIOS Y OTROS COSTOS	2,355.50	2,355.00	2,355.00	6.61-50	26
22 COST. PERS. PROF. CAL. AJU.					
22A SUELDOS	571.88	571.00	14,743.00	14,171.32	4
22B OTROS COSTOS	.00	.00	5,153.00	5,153.00	
TOTAL	7,211.00	7,211.00	39,107.00	29,999.20	21
COSTOS DE OPERACION					
23 VIAJES OFICIALES					
23A LITOGRAFIA TECNICA	326.40	326.40	7,000.00	6,673.60	5
23B FOTOCOPIAS Y UTILS	.00	.00	300.00	300.00	
23C OTROS SERVICIOS	73.48	73.48	700.00	626.52	10
TOTAL	680.99	680.99	7,000.00	6,719.89	14
SERVICIOS ESPECIALIZADOS					
24 SERVICIOS					
24A SERVICIOS	.00	.00	1,000.00	1,000.00	
24B COMISIONES	.00	.00	1,000.00	1,000.00	
24C FOTOCOPIADO	.00	.00	1,000.00	1,000.00	
24D ATENCIONES ESPECIALES	.00	.00	500.00	500.00	
24E SERVICIOS	.00	.00	500.00	500.00	
TOTAL	.00	.00	4,000.00	4,000.00	
GRAN TOTAL	7,792.79	7,792.79	47,107.00	39,714.21	17

IICA



INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS - OEA

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RURAL CREDIT INSURANCE RESEARCH PROGRAM 1980-1981

San Jose, April 1980

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ANNEXES

RURAL CREDIT INSURANCE RESEARCH PROGRAM 1980-1981

1. INTRODUCTION

The main purpose of this report is to highlight major points of interest in order to stimulate discussion about what is becoming the most significant component of IICA/AID Latin American Rural Credit Insurance Project. This document is an outline of the methodological basis and field activities programmed to implement the research program. Such a program must, throughout the years of the project, address at several questions of particular value for evaluating existing programs, expanding crop credit insurance throughout Latin America, and other developing areas.

The rural credit insurance project is now in full operation in Panama, where the activities began in early 1979. An insurance agency began its operations in Bolivia in early March of this year and field activities are programmed to begin in July. The law to create the insurance agency has been issued in Ecuador and it is hoped that the program will begin late in May. Research and training programs are being negotiated in Mexico, yet actual field work and data processing will begin only in May and June.

Research activities began in October of 1979 when the research coordinator was hired. The past six months have been spent in setting up the methodological basis, organizing the working team, designing the field data generation process and creating the computer programs for research data management. Each one of these aspects is fully discussed later in regard to its current status in each country and the perspectives for 1980 and 1981.

THEORETICAL AND METHODOLOGICAL BASIS

There is no doubt that the job to be done is challenging and most interesting. Continuous thinking about the issues to be analyzed together with group discussions of alternative methodological approaches and strategy for work have lead us to develop a conceptual framework for analysis at four levels: 1) the farm; 2) the insurance agency; 3) the banking system and 4) the rural sector as a whole.

2.1. Implications at the Farm Level

At the farm level, decisions are made in an environment of uncertainty; yet farmers chose among alternatives and produce to satisfy basic needs and to generate income. The riskiness involved in a set of choices of investment alternatives is handled by farmers in several ways which include complete avoidance of the risky enterprises, diversification of alternatives with negative or low positive correlation in their returns and, if the danger of disaster is considerable, some will opt for crop insurance or alternatively credit insurance.

Of particular relevance is the fact that the adoption of modern, high/input-yield technologies is limited by two major elements: Firstly, the expected output is known with less certainty than that of traditional technologies and it is usually asserted that the variability in yields under non-optimal conditions is greater. Given the degree of farmers' risk aversion, these elements restrict a rapid adoption and use of modern technologies, particularly hybrid seeds, fertilizers and chemicals. Secondly, the use of these

inputs, demands capital that small farmers can not provide on their own and that banks are not willing to lend because of numerous reasons; mainly because the target farmers may not be 'sujetos de crédito' because they cannot offer adequate guarantees, the cost of operating the credit program may be too high and the recuperation rate too low.

If a farmer who borrows money for cropping activities suffers a disaster and loses the harvest, he usually can not pay back the loan unless he is able to sell off some productive resources. Besides the immediate catastrophic effect of not having enough food and income, a more dramatic effect is that not having paid the loan, the farmer will not be able to obtain credit from the bank for the next year, thus being forced to recur to alternative, more expensive resources of credit, or else diminish the intensity of use of inputs, and regress to less modern technology. Another equally counterproductive option is to return to production with a reduced area under cultivation.

On similar grounds, the improvement of livestock demands capital which is borrowed on favorable terms, yet involves a high risk of loss if the animal dies or loses its functions. This long term investment is necessary to increase the productivity of animals, yet farmers are reluctant to bear the risks and banks are unwilling to finance the investment.

Production Credit insurance has been created as a device that protects the farmer by insuring the money he has borrowed from the bank. Many would say that it actually protects the bank and in a way this is true; but it protects the bank so it can loan again to the farmer.

The establishment of the program could have numerous effects at the farm level and the research activities are designed to explore the magnitude of

those effects and under what circumstances they take place. If the program is not compulsory, some farmers would choose to purchase credit insurance as one of the alternatives open to them. But also they could develop their own protection mechanism against risk, which may include crop and technology diversification. In this later case however, the farmers will absorb the cost of the wrong decision. Given that insurance has a cost (the premium) to the farmer; it is hypothesized that farmers would pay that cost if the expected benefits are greater. Clearly it all depends on the farmer's own perception of risks and his past experience. A program that is not compulsory would provide the most suitable environment for analyzing the costs and benefits of credit insurance and the effects on the farmers' attitudes, mix of crops and technologies, use of inputs and the resulting income stream over time.

However, the credit insurance program is now being promoted as an obligatory device for obtaining public credit. The reasons are two fold: First, if the program is not compulsory many farmers will not purchase the insurance because they "feel" that they do not need it. Secondly, if some farmers would not have insurance, the bank will not lend to them, because it also "feels" that it is taking a risk that is too high. This way of operating the programs leads to some complications in analyzing the effects of credit insurance in changing the farmers' attitudes. However, there is still room to analyze the overall effect on the composition of the portfolio of the farm; the use of inputs; the allocation of time and the level of income, and the evolution of these variables over time.

Clearly, since the program is a means for redistributing benefits between good and bad years; the research should look at the 'evolution of farmers', in

terms of their attitudes, capitalization, income, improvement of quality of life, etc. To appraise the benefits of the program it is necessary to compare farmers within the program against a control group of those not included, whether they have credit or not. The methodology to generate information to make possible the analysis of these issues is fully discussed below. In summary it implies continuously generating and analyzing information among farmers within and outside the project in specific areas.

The analytical methods of researching these issues are:

- a) models of the farm-firm household unit, based on actual information, to measure and predict the effects of insurance in conjunction with other programs. A linear programming model has already been designed and tested with 'figured' data. Field data will be "plugged in" in the near future.
- b) Without insured credit, including also those that do not use credit at all. Besides making annual comparisons, it is more important to examine the evolution of farmers from year to year, particularly under the occurrence of natural disasters.

2.2. Implications for the Insurance Agency and the Banking System

The reasons for limited expansion of credit to small farmers are widely documented. The strongest arguments, from the banks' point of view, are too high administration costs, too low productivity and management, high exposure to risks and low capacity to repayment. Under these arguments, there are specific actions that could be taken to expand credit to small farmers in order to move them out of their marginality.

It is hypothesized that credit insurance could be an efficient mechanism to assist in the expansion of credit to small farmers. Insuring the credit allows the banks to solve at least part of their problem; that of recovering their investment in the event that because of natural risk, farmers lose their harvest and are unable to pay back the loan. On the other hand, farmers will receive from the insurance agency, complementary technical assistance, which would in turn help to increase the marginal returns on credit.

It is clear that insured credit brings benefits for the bank and under some conditions, benefits the farmer. The question is, to what extent the costs of running an insurance program (including the costs paid by farmers) are smaller than the benefits. Certainly the insurance agency must develop its own capacity to manage the program to minimize the probability of default; i.e., it must take a portfolio management approach to its investments (insurance operations) so as maximize the economic and social benefits of extending the program to larger numbers of small farmers within the parameters of actuarially expected outcomes which will keep the program financially solvent. Here again, if this program is compulsory at a national level the insurance agency has limited power to discriminate, but it does have the capacity to establish premiums and coverage levels according to actuarial principles.

One year or one cropping season with a positive or negative balance for the insurance agency is not enough to conclude whether the program has produced net benefits or not. As it was mentioned before, the program tries to establish a redistribution mechanism for good and bad years, hence any cost-benefit analysis must be made on a long term basis.

The basic elements of judgement for the agency to administer its portfolio are the degree of variability that characterizes each of its investment alternatives and the correlation between the expected outcomes of all alternatives open. On this basis the agency can "integrate" its portfolio in a way that it fulfills national social and economic goals, subject to behavioral and managerial constraints. Government intervention of price support and price stabilization programs, etc, would affect the composition of the insurance portfolio and the outcome of the management strategy.

Given these basic issues, it can be asserted that the insurance agency must possess the analytical tools for determining premiums and coverages and for managing its portfolio. It must also develop statistical information on the historical behavior of yields as well as on the probability of occurrence of the disasters against which it is insuring. The data needs and procedures for generating it, are discussed in the following section.

In terms of the analytical tools the two elements must be developed:

- A statistical-actuarial methodology to calculate the premiums and coverages on the basis of historical data, when available; and
- A portfolio management model for the insurance agency and for the bank, which allows both institutions to appraise the costs and benefits of extending insurance to particular regions, groups of producers, crops, technologies and livestock species. Progress is underway to structure this model, which could in general terms, be applied to any bank-insurance agency pair; but with specific data and behavioral constraints for each particular country.

2.3. Sectorial Effects of Insured Credit

Although the program is beginning on a small scale in each country; it is anticipated that it may grow rapidly, particularly in Panama. If such is the case, it is most desirable to model or simulate the possible effects the insurance program have, when applied at a national scale either for a particular crop or for several crops. Later, the simulated effects can be compared to actual outcomes. This "feedback" can be used both to refine the model and to modify the strategy of work and create the most appropriate conditions.

Credit insurance may grow at a national level either because the banking system demands compulsory credit insurance or because farmers find it attractive and economically desirable and voluntarily take credit insurance. The effects of a national program are worth examining in light of the following rationale: Because farmers are now using credit (more than otherwise) for the acquisition of inputs they will require greater amounts of inputs and, since they will increase per hectare yields and areas planted, this will cause increases in production.

It has been repeatedly pointed out that credit is not the sole problem for rural development; the opportune supply of inputs is perhaps as important. If under the existing conditions, the supply of inputs is already deficient and their prices are already too high, it is expected that unless proper policies and programs are implemented, additional credit availability which results in a higher demand for inputs, would imply significant disequilibrium in the input market, thus rising prices. The situation may turn even more serious and would leave some farmers unable to obtain the basic inputs as fertilizers, fuel, chemicals, sacks and even labor or transportation.

From the product market point of view, the increase in prices in areas planted may result in excess production, thus a decrease in prices at harvest time. The implications are that unless the guaranteed prices are enforced with the governments absorbing any excess production, farmers would receive returns that are below the ones originally anticipated. The net effect may be positive for consumers (and certainly for intermediaries), yet farmers may lose.

Other effects to be considered in large scale programs are, for example the increased demand for foreign exchange to purchase inputs (fertilizers, chemicals, tractors, etc.) in the international markets. Likewise, the increased availability of foreign exchange due to exports of agricultural products. It may also occur that profitability of crops changes with the use of credit insurance, thus moving larger numbers of farmers towards the more profitable crops at the expense of areas of other crops, thus creating sectorial disbalance in their markets. The scarcer crops may have to be imported at even higher costs.

Again in this case; as at the farm level or the insurance agency level; there is need for an analytical framework of analysis. Given the multiple relations in the agricultural sector, it may be necessary to build a sector model. This will be justified only if the program is expected to grow at a significant rate.

3. DATA GENERATION AND MANAGEMENT

Without real data, the analytical framework developed is of limited use. Thus, a significant effort is underway to compile existing historical information and to generate as much data as needed. The latter comes from ad-hoc surveys and from the ongoing insurance operations.

3.1. Historical Data

Historical yield data is the key element to calculate basic premiums on coverage levels. This data should be available at the greatest level of disaggregation to make possible the specification of premiums for each crop, by regions, technologies and groups of farmers. This data is usually not published in such form, however, it can be found in the offices of Statistics and organized and processed for computer based statistical analysis. Complementary historical information is required from weather data to calculate the probability of occurrence of the disasters against which the insurance is issued.

One of the first activities undertaken in each country where the program begins is identification, organization and processing of this type of information. The activities have already begun in Panama where we are organizing data for the period 1962-1978 about yields of the main crops now being insured by ISA, disaggregated by crop cycle; farm size; farmers strata and province. Similar efforts will be undertaken in the other countries. It may be however that the data just does not exist, as it seems to be the case in Bolivia. As soon as the program officially begins in Ecuador a similar approach will be undertaken.

3.2. Cross Section Surveys

There is need to characterize an area before it is incorporated in the program. Also, there is need to continuously analyze the evolution of the area during the years of the program. Such type of work means knowing enough about farmers that are receiving credit with insurance, those receiving credit but not insurance and finally those that do not receive either. This would allow comparisons between farmers over time to see how each group evolves in their attitudes, cropping patterns, resource use and ultimately income and well-being. This would in turn make possible the appraisal of benefits and costs of the program. This data will also be the basic input for the models of farm behavior.

For such purposes, once an area has been chosen, a survey will be run to characterize it. The format of the survey is made as general as possible to apply it in each of the countries where the program is to be implemented. The format will be tested in May in Panama and in July in Bolivia. As other areas are incorporated they will also be surveyed and characterized. Similar 'follow up' surveys over the same group of farmers will be run every year; thus creating in this way a Data Bank of cross section data over time.

The questionnaires emphasize socio-economic and agronomic information. Data is collected on characteristics of the farm unit; characteristics of the household head and its family; income by source and expenses by destination; ways of producing each of all crops and cattle raising activities; sources, amounts and conditions of credit and technical assistance; and other relevant data that make possible modeling a farm-household unit, and allow for comparisons among groups.

A questionnaire contains approximately 200 variables and the number of questionnaires needed to obtain a representative sample, varies depending on the size of the area; generally ranging between 50 and 200 respondents.

3.3. Insurance Operations Data

As part of the insurance operations, a massive amount of data is generated for each individual in the program. In other crop insurance programs as Mexico, the data generated was quite complete only in terms of the information for the crop insured by those farmers that reported a disaster (siniestro). This information however is of little use because it tells nothing about those farmers that were insured but not affected by a disaster, thus it does not make possible an appraisal of the evolution of farmers. On the other hand it says nothing about the farm i.e. what else was being grown and how. (To complement these data some surveys will be run when the research program is implemented there).

To computerize the data generated as part of the insurance operations, a coding and a format have been designed; hopefully to be used in all countries. This is presented in Annex A, for those that read Spanish. Handling and analysis of this data and other generated along the research activities is discussed in the following section.

3.4. Research Data Management

Data management for a project of the dimensions of this one, can not be made without access to proper computer facilities and without the aid of the

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adequate software. Even if the project covers only three countries (Panama, Ecuador and Bolivia) plus research activities in Mexico, the amount of data to be generated and processed each year is large enough to demand processing by electronic means.

It is convenient at this point to identify two levels of management: a) in the countries, where the main concern is data processing for routine insurance management and; b) in the headquarters of the research program where alternative methodologies are to be tried; different tests to be performed and where the use of sophisticated statistical and optimization programs is indispensable.

Given the dimensions of the program in Ecuador and Bolivia in its earlier stages, there is no need for a local computerized management of the data. However it should be produced and organized in a way that it is transferable to the headquarters of the research program to facilitate the research activities. In the case of Panama, where the program is entering its fourth year (the second with IICA's support) and where ISA is now issuing about one thousand policies per crop cycle (two thousands per year) there is need for their own computerized system of data management. With this consideration, a small computer (Hewlett Packard 45B) has been ordered by ISA.

Management of the data for the research activities is handled at IICA's computer center in San Jose. The center has an IBM-360/40 machine with 240 K bites of memory, a group of well trained technicians and the appropriate software for advanced statistical and optimization work.

Among the later, the center makes intensive use of the SAS program (Statistical Analysis System) for all data processing, sorting, grouping, analysis of variance, multiple regression, etc.; recently the center also rented the MPSX program (Mathematical Programming System Extended) which is the basic tool for optimization procedures needed in the implementation of farm and sector behavioral models. All the data is being organized in a Disc Unit File for direct access with SAS and MPSX.

4. WORK STRATEGY FOR 1980-1981

For the countries included (Mexico, Panama, Ecuador, and Bolivia) and given the existing budget for research activities; the later are planned according to what is discussed below. If other countries are incorporated in the project of IICA with their corresponding research budget; the strategy can be developed to design their research program and its linkages with the existing multinational scheme.

4.1. Working Team

To implement the program, the research team is integrated by:

- a. A full time Research Specialist, based in San José and responsible for the coordination of all research activities;
- b. Three technical level Research Associates, with the equivalent degree of a BS or Licenciado en Economía. These technicians have already been hired in Panama and Bolivia. Their responsibility is basically data gathering, primary processing and cooperation with the operational activities of the program. As time goes and their skills develop, they will participate more actively in the analytical work. To assist in data processing, management and analysis, a technician has also been hired on a half time basis in IICA's headquarters.

c. Consultants to orient the analytical work and to do specific jobs. Annually they all add to approximately 200 expert-days. One of the consultants, now helping to organize the research program in Mexico, will be hired on a full time basis (as Research Specialist) as soon as the Mexican program is put in full operation; hopefully towards September of this year.

d. Field Personnel, to assist on specific surveys and data processing, who are national technicians hired on a "job specific" appointment.

e. The project relies heavily on the insurance agencies field specialists for data gathering and on IICA's computer center staff for data processing.

4.2. Program of Activities

The program officially begins in each country when the insurance agency is created and the government signs an agreement with IICA. By this time one or more areas have been tentatively selected for the implementation of the insurance program. It is at this point that as part of the research-operation activities, the area must be 'characterized'. Thereafter the procedures imply gathering existing historical data (yield and weather); and processing that material and establishing premiums and coverages. In a parallel way the researcher in the insurance agency contributes to the design of the various documents issued along the insurance operations (see Annex A) and organization of the data files. At the end of each crop cycle a new survey must be run to evaluate the effects of the program and to make the comparative analysis.

Simultaneously, the development of analytical procedures and methodologies and processing of the data collected in the countries, goes on in the

headquarters. As a result of this work there are specific products that have implications for the operational program in each country. Also, since this work implies the development of new methodologies, analytical procedures and experiences these must be shared with the international community working in related issues. With this later objective in mind, there will be a continuous production of 'research papers' and the program intends to sponsor an International Conference on Rural Credit Insurance, late in 1981.

4.3. International Cooperation

The originality of the issue has stimulated interest among professionals working on related problems within IICA, and also in other international groups. It is most desirable to benefit from ongoing projects that analyze the problems of the rural poor, particularly those related to the administration of rural credit; the transfer of technology to farmers; the establishment of price support and price stabilization programs.

Within IICA the research program promotes continuous communication with the PROTAAL project (Cooperative Research About Agricultural Technology in Latin America); about methodological issues. It also communicates with PIADIC (Central American Program of Agricultural Information) and it is expected that the survey to be undertaken in Panama will be a cooperative effort. In the countries the program maintains close liasson with current activities on research and institutional support.

At the international level the research program has began negotiations to establish cooperation with USAID, FAO, IFPRI (The International Food Policy Research Institute) and some American universities. From this cooperation the program will derive expertise and hopefully joint research endeavors of mutual interest.

4.4. Program of Activities for 1980-1981

It is anticipated that in general terms the following sequence will be completed during 1980-1981:

A. Developing the Conceptual Framework

- A.1** Formulator of the Basic Conceptual Framework and Work Strategy;
- A.2** Design of a Basic Rural Household Behavior Model, applicable in several countries
- A.3** Design of a Basic Bank-Insurance Portfolio Management Model applicable in the small country cases;
- A.4** Developing the Basic Methodology for Determination of Differential Premiums and Coverages with aggregated Data;
- A.5** Design a Methodology to Appraise Costs and Benefits of Credit Insurance at Different Levels.

B. Generation and Organization of Statistical Data Headquarters

- B.1** Design of a Computer-Based System for Management of the Insurance Data in the countries (for immediate application in Panama);
- B.2** Design and Organization of the Research Data Management System at IICA's Computer Center;
- B.3** Design and Test of the Field Questionnaire to characterize and evaluate farmers in areas where the project is to be (or being) implemented.

Panamá

- B.4 Organize and Analyze existing three year data (1977-79) of insurance operations for three crops and livestock in ISA;
- B.5 Organize and Analyze Existing Historical Yield and Weather Data (1960-1978) at the Dirección de Estadística;
- B.6 Determination of Differentiated Premiums and Coverages for Maize, Sorghum, Rice and Beans;
- B.7 Run the First Surveys to Characterize of grain producers in the Province of Chiriquí (June 1980) and for tomato producers in the provinces of Coclé and Los Santos (July 1980).
- B.8 Run the Second Survey of Evolution of Farmers in the Provinces of Chiriquí, Coclé and Los Santos (June 1981)

Bolivia

- B.9 Organize and Analyze Existing Historical Yield and Weather data available in the Dirección de Estadística;
- B.10 Determination of Differential Premiums and Coverages for main crops (subject to the availability of information from B.9);
- B.11 Run the First Survey of Characterization of farmers in the Area of Melga (July 1980);
- B.12 Run the Second Survey of Evolution of Farmers in the Area of Melga (July 1981);

Ecuador

- B.13 Organize and Analyze Existing Historical Yield and Weather Data, in the Dirección de Estadística;
- B.14 Determination of Differential Premiums and Coverages for Main crops (subject to the availability of information from B.13);

- B.15 Run the First Survey of Characterization of Farmers in the Area chosen for the project, August 1980;
- B.16 Run the Second Survey of Evolution of Farmers in the Area chosen for the project, August 1981.

Mexico

- ~~B.17 Organize and Analyze Cross Section-Time Series Information Available at Chapingo's CEICADAR, to analyze joint effects of Credit Insurance and other components of the Rural Development Strategy;~~
- ~~B.18 Design Strategy of Surveys in two or three areas where CEICADAR actually supports rural development programs and where insurance is an important component.~~
- ~~B.19 Run First Characterization Surveys in the two or three areas chosen (October 1980);~~
- ~~B.20 Run Second Evolution Surveys in the two or three areas chosen.~~

C. Implementation and Use of Models and Analytical Procedures

- C.1 Implement and Use a Farm Household Model for representative farm in the Province of Chiriquí, Panama;
- C.2 Implement and Use of a Portfolio Management Model for ISA;
- C.3 Implement and Use of a Farm Household Model for a Representative Farm in the Area of Belga, Cochabamba, Bolivia;
- C.4 Implementation and Use of Farm Household Models for Representative Farms in the Areas of CEICADAR, Mexico;
- C.5 Continuous Analysis.

D. Disemination of Results

- D.1 Continuous Support to Operational Activities;
- D.2 Production of Research Articles and papers for International Conferences;
- D.3 Sponsor a Conference on Risk and Rural Credit Insurance.

5. Expected Output of the Research Program

Credit insurance is being promoted under the assumption that it has significant positive effects for rural development especially the expansion of rural credit. The assumption appears valid on theoretical grounds as well as tentative empirical ones. The ongoing crop insurance and credit insurance programs in developing countries, with as many as 20 years of experience, are producing relatively successful results. There is not as yet enough evidence as to what are the static and dynamic effects of insured credit and what are the socio-economic costs and benefits. Hence, before expanding credit insurance programs around the world, there is need to know on the basis of empirical evidence the benefits of such programs.

It is with this objective in mind that the research program of IICA's rural credit insurance project, carried on as a pilot project, expects to produce the following outputs:

- 0. Extensive discussion of the theoretical basis for credit insurance; the factors that limit or condition its effectiveness; the possible effects at the farm level, the banks and the rural sector as a whole.

b. Organization of rural credit insurance programs, that can be administered following the basic principles of actuarial work and portfolio management, but with a capacity to anticipate and respond to political decisions.

c. Demonstration of the costs and benefits of insured rural credit for the promotion of rural wellbeing, particularly for those groups that would have otherwise remained in a status quo position.

d. Comparisons of the effectiveness of credit insurance under varying circumstances found in the several areas of the countries included; for different groups of farmers; in regions with alternative degrees of exposure to natural risk; under the existence or lack of complementary programs as price supports, input subsidies, extension, etc.

These results will be used for two purposes:

- a. To orient the ongoing insurance operations in the countries, improve their effectiveness and;
- b. To create knowledge about rural credit insurance itself, which would avoid mistakes in the establishment and administration of similar programs in other Latin/American countries.

A few last comments are worth mentioning:

- The research program in its current structure will not address issues related to reinsurance; this could however be addressed at a later point in time.
- Although a program of activities is presented only for 1980 and 1981; it is expected that the last year of the project; 1982, would follow a similar orientation.
- Greater availability of financial resources may allow expansion of the research program.

ANEXO A

Organización del Archivo de Datos en Base al

Proceso de Aseguramiento

1. La necesidad de Información

Para determinar la eficiencia del programa de seguro agrocrediticio; para calcular primas y coberturas usando métodos actuariales; para determinar los efectos del proceso de adopción de tecnología cuando se dispone de crédito y seguro sobre las inversiones; y para muchos otros objetivos, es necesario disponer de información veraz consistente, oportuna y de fácil manejo.

Habiendo determinado que la información histórica y de corte transversal de la que se dispone es de calidad dudosa y en todo caso incompleta, no se puede depender mucho de ella para el propósito de las investigaciones, ni para fundamentar los cálculos actuariales. Es preciso enonces generar y organizar información para satisfacer los propósitos antes referidos.

La información necesaria a nivel de las unidades productivas puede resumirse en cuatro grandes grupos: a) características de los agricultores y los miembros de su familia; b) características de la finca en cuanto a recursos, inventarios (incluyendo animales), ubicación y acceso, etc.; c) características de las técnicas usadas para la producción, cosecha, comercialización y disponibilidad de cada uno de los cultivos y animales producidos en la finca y d) acceso al crédito, a los medios de asistencia técnica y extensión, las limitaciones de carácter institucional, la participación en grupos asociativos, etc.

Para hacer posibles las investigaciones en una forma comparativa es preciso disponer de esta información para todos los individuos que participan en el programa, es decir los que reciben crédito y están asegurados. Además, a manera de control y referencia, se necesita información sobre grupos representativos (muestras) de agricultores que reciben crédito pero no están asegurados y finalmente para los que no reciben crédito (ni están asegurados). Dado el modus operandi del programa, se descarta la posibilidad de considerar agricultores sin crédito pero con seguro.

Para los individuos o grupos de individuos en el programa, toda la información se debe generar como parte del proceso rutinario de otorgamiento del seguro (con algunas modificaciones que se discutirá mas adelante) pero para los otros grupos de control será necesario realizar una o mas encuestas sobre una muestra representativa.

2. Información sobre los Individuos no incluidos en el Programa de Seguros

El proceso de seguir para la obtención de esta información puede ser dentro de las siguientes líneas:

- a. Identificar el área donde se realizará el proyecto (sería conveniente usar aerofotografías o un mosaico a escala apropiada, quizás 1:10,000).
- b. Localizar en el mosaico, a todos y cada uno de los agricultores que han presentado solicitud de aseguramiento.
- c. Determinar el número total de agricultores en el área del proyecto.
- d. Elaborar una estrategia para la recopilación, organización y procesamiento de la información previa a su análisis estadístico-económico.
- e. Diseñar la muestra de acuerdo al grado de concentración; variabilidad en las características de las unidades productivas; utilización o no del crédito público; etc.
- f. Probar el cuestionario entre un grupo reducido de agricultores y entrenamiento de los encuestadores.
- g. Diseñar el cuestionario en una forma tal que en una sola encuesta se recopile toda la información necesaria, la cual debe ser compatible con la que se obtenga para los agricultores que participan en el programa de aseguramientos.
- h. Realización de la encuesta.
- i. Depuración y Análisis Primario de la información.
- j. Análisis estadístico-económicos varios.

Esta secuencia de actividades se realizará en Bolivia antes de poner en marcha el proceso de aseguramiento en la zona seleccionada.

3. Organización de la Información Generada como parte del Programa de Seguros

Como parte del programa de aseguramiento se han establecido las normas y diseñado los cuestionarios en lo que se vierte la información que proporciona el agricultor, como la que produce la aseguradora. Esta información se produce en forma permanente en diferentes etapas que se presentan en la Figura 1. Es necesario codificar esta información de modo que cada dato que aparezca en los formularios y documentos de las operaciones del seguro, quede registrado en un archivo matriz, permitiendo así su uso ya sea para propósitos de la investigación o de control de las operaciones.

En la Figura 1 se presenta un esquema el cual puede ser adaptado a las condiciones especiales en cada país. Lo más deseable sería que el programa de aseguramiento siga el mismo esquema en todos los países para así facilitar el manejo de la información y su utilización en forma comparativa.

El esquema presentado en la Figura 1 ha sido elaborado para el caso particular de Bolivia teniendo a mano las notas elaboradas en la ABA sobre: a) Fechas, Plazos y Formas para Pagar el Seguro. Dar y Contestar avisos de Sinistros e Inspecciones; b) Los formularios a ser usados por la ABA para cumplir toda la secuencia de operaciones como parte del seguro y c) La lista de datos de los registros.

VARIABLE	SECCION	NOMBRE DE LA VARIABLE
	1	SOLICITUD DE ASEGURAMIENTO
1		Nombre del Agricultor
2		No. de Cédula (o documento de identificación)
3		No. de solicitud
4		Fecha de presentación de la solicitud
5		Sabe leer y escribir (si=1; no=2)
6		No. de miembros de la fam.
7		Edad del agricultor
8		Idioma (español=1; quechua=2 quechua y español=3)
9		'Otro dato'
10		Tamaño de la finca
11		Valor de los activos
12		Localización: Departamento
13		Localización: Provincia
14		Localización: Distrito
15		Localización: Caserío o Cantón ó Comunidad
16		Nombre del cultivo que se desea asegurar
17		Variedad de cultivo
18		Area a ser sembrada
19		Con riego o sin riego
20		Rendimiento esperado (en base a experiencia)
21		Precio esperado a la venta
22		Epoca esperada de siembra
23		Gastos en: maquinaria, preparación y cultivo de tierras.
24		Gastos en: mano de obra p/Labores
25		Gastos en : fertilizantes
26		Gastos en: semillas
27		Gastos en: insecticidas y fungicidas
28		Gastos en: materiales varios
29		Gastos en: mercadeo productos agríc.
30		Monto-del crédito solicitado
31		Institución que proveerá el crédito (código)
32	2	<u>ANALISIS DE LA SOLICITUD (ASEGURADORA)</u>
33		Fecha de recepción de la solicitud
34		Aceptación (si=1 ; no=2)
35		Fecha de Aviso de Aceptación
36		Rechazo Condicionado (si=1; no=2)
37		Razón del rechazo (varias opciones codificadas)
38		Fecha de Aviso de Rechazo
39		Rechazo definitivo (si=1; no=2)
40		Razon del rechazo (varias opciones codificadas)
	3	<u>PRESENTACION DE SEGUNDA SOLICITUD</u>
		(o emienda - la primera en respuesta a un rechazo condicionado)

[reemplazar entre las variables la 31 aquellas que han sido modificadas y crear la correspondiente 1A a 31A]

<u>VARIABLE</u>	<u>SECCION</u>	<u>NOMBRE DE LA VARIABLE</u>
81		Areas sembrada de quinua
82		Areas sembrada de verduras
83		Areas sembrada de otros
84		Areas aseguradas de maiz
85		Areas aseguradas de trigo
86		Areas aseguradas de cebada
87		Areas aseguradas de quinua
88		Areas aseguradas de verduras
89		Areas aseguradas de otros
90		No. de árboles de durazno
91		No. de árboles de higueras
92		No. de árboles de manzanas
93		No. de vacas
94		No. de terneros
95		No. de toros
96		No. de ovejas
97		No. de llamas
98		No. de gallinas y otras aves
	7	<u>REPORTE DE SINIESTRO</u> (este formulario debe tenerlo el agricultor y presentarlo a mas tardar 5 días despues del siniestro)
1-4		(Repetir variables 1-4)
99		Fecha de ocurrencia del siniestro
100		Tipo de siniestro (parcial o total)
101		Causa de siniestro (según código)
	8	<u>INSPECCION DE SINIESTRO Y EMISION DE ACTA</u> (La inspección debe realizarse a mas tardar 5 días después de recibido el aviso y el acta a mas tardar 10 días después de la inspección)
1-4		
102		Fecha de inicio del siniestro
103		Fecha de terminación del siniestro
104		Area totalmente siniestrada
105		Area parcialmente siniestrada
106		Causa principal del siniestro (según código)
107		Causa agravante del siniestro (según código)
108		Estimación del volúmen perdido
109		Si es pérdida total, valor de la indemnización
	7A	<u>REPORTE DE SEGUNDO SINIESTRO</u> (Repetir variables 99-101 como 99A-101A)
	8A	<u>INSPECCION DE SEGUNDO SINIESTRO</u> (Repetir variables 102-108 como 102A-108A)
	9	<u>AVISO DE RECOLECCION DE COSECHA</u> (Lo da el agricultor unos 15 días antes de iniciar la cosecha - usa un formulario que se le otorgó cuando se le extendió la póliza)
1-4		(Repetir variables 1-4)
110		Fecha de inicio de la cosecha
111		Fecha de terminación de la cosecha
	10	<u>INSPECCION DE COSECHA Y ACTA DE INSPECCION DE COSECHA</u> (Repetir variables 1-4)
1-4		
112		Area total cosechada
113		Area siniestrada
114		Producción del área siniestrada

ANNEX B

RURAL CREDIT INSURANCE RESEARCH TEAM

Research Coordinator:

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* financed by the sub-grant and not by the research program.

ANNEX C

RURAL CREDIT INSURANCE

CURRENT BUDGET FOR 1980 AND 1981

	<u>1980</u>	<u>1981</u>
<u>Personnel</u>		
Research Coordinator	33,959	38,000
Research Specialist	--	32,674
Research Associates *	21,000	23,000
Consultants	19,600	21,400
<u>Operation Costs **</u>		
San José	21,800	23,800
Costa Rica	1,500	14,300
Bolivia	6,300	17,000
Panama	13,100	14,300
Mexico	16,300	17,800
<u>TOTAL</u>	133,659	203,074

* contributed by the sub-grant to the countries.

** Includes travel and per diem; computer time, occasional field personnel and general services. Secretarial services are provided by the umbrella project.

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