

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT



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Colorado State University
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QUARTERLY REPORT OF
CONTRACT NUMBER GOB/AID 511-92
BETWEEN
THE MINISTRY OF RURAL AFFAIRS AND AGRICULTURE
OF BOLIVIA
AND
CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

Period Reported: July 1, 1976 thru
September 30, 1976

LA PAZ, BOLIVIA

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The following report of contract activities is submitted in accordance with Paragraph IV-A of Appendix B of said Contract.

ACCOMPLISHMENTS

Personnel and Administration

Dr. Morris Whitaker departed from Bolivia August 20th after completing his tour as Economist and Co-Director of the Office of Planning. His final report has been prepared and distributed. His replacement, Dr. Allen LeBaron, arrived August 21st and has assumed his position as Co-Director of the Office. Dr. James Walker arrived September 16th to fill the position of Agronomist in Cochabamba. This position is one of three new contract positions authorized for funding effective August 1st. Dr. Robert Frans, Professor of Weed Science at the University of Arkansas and recipient of a National Science Foundation Research Grant, was assigned to the CID program for approximately 10 months effective September 1st. He will be given administrative assistance from the CID office and receive travel and other in-country support from Contract GOB/AID-511-96.

The USAID team has completed its audit of local contract expenditures and activities.

A Supreme Decree # 13874 was approved during this quarter which deals with the tax exempt status of the Consortium.

A Contract Amendment was signed and approved which reflects a new housing and utility allowance. A second Amendment was executed which extends contract financing through December 31, 1976.

Technology Development

Research data obtained from this year's agronomic trials have been summarized, analyzed, and are being prepared for publication in the annual station research reports. CID technicians participated in annual report meetings held for station research personnel and extension agents in Cochabamba and Santa Cruz. In these meetings, increased emphasis was placed on research recommendations for use by extension agents instead of the formal reporting of research results. Several results were recommended such as early planting dates for soya, treatments for peanut diseases, selected cultural practices for rice, herbicide treatment for potato nematodes, and potato varieties resistant to potato nematode and cold temperatures. Some of the recommended practices are currently being prepared for publication as extension pamphlets. Greater use of extension agents for regional demonstrations, especially for potatoes, wheat, and rice is expected for this year.

Initial research planning for the upcoming agronomic season has been virtually completed. The oilseeds program was finalized and funds approved

by CIAT. The cereals program for Santa Cruz is also ready but awaiting final funding approval. Plans for Chinoli, San Benito, and Toralapa were completed but will be reviewed at the annual research meetings for potatoes and cereals scheduled for October. Greater research focus is planned based on the research report prepared last year (CID Working Paper 003/76). The number of varieties to be tested will be reduced and initiation of breeding programs are scheduled for soya, potatoes, barley and, possibly, rice. The wheat breeding program will also receive increased emphasis.

Implementation of the concept of co-directorship at the experimental stations continues to progress (except at the Saavedra Station). Close counterpart cooperation was used in planning the experimental work for this year. CID technicians were officially named co-directors in letters from the Ministry of Rural Affairs and Agriculture. CID technicians involved in national research and extension assistance were likewise formally designated.

Improved cooperation with international research centers was initiated during the quarter. Dr. Ellis and Dr. Fisher visited the International Potato Center (CIP) in Lima to discuss Bolivia's potato research program and to plan CIP assistance. Special attention was given to issues of potato breeding material for initiating the breeding program in Bolivia this year. CIP involvement with the Ministry and CID will be increased considerably during the coming year. Mr. Walker also visited CIP en-route to Bolivia to acquaint himself with the Center's program preparatory to assuming responsibilities as Co-Director at the potato research station at Toralapa. Two CIP technicians visited Bolivia to observe potato trials at Pairumani. Bolivia is one of seven countries cooperating in the first

international trials by CIP. Bolivian potato varieties have been sent to CIP to be cleansed of virus infections as the basis for producing improved seeds. CID technicians estimate that Bolivia's potato varieties are heavily infested with several virus types which threaten potato production throughout the country. For example, virus free test varieties imported three years ago for research at Pairumani are now 40 percent infested with potato leaf roll virus. Virus anti-serum has been requested from CIP to test the existence and types of virus in Bolivia.

Professional contacts were also made with the INTSOY program in Puerto Rico. Dr. Hamel Paschal, a soya breeding specialist, spent two weeks assisting CID and Ministry technicians in the initial stages of the new soya breeding program. Initial F_1 crosses were made from potted seedlings. The crossing of 12 soya varieties will continue in the field during the Summer season. Arrangements were made with Dr. Paschal to continue cooperation with the INTSOY variety trials and to send literature, etc., from their Center. He is also securing a supply of needed equipment for crossing soya and cost estimates and plans for establishing a storage facility under tropical conditions at Saavedra.

Written contact was also made with CIAT, Colombia to arrange their cooperation in the rice program. We are awaiting their reply.

CID technicians collaborated with Ministry personnel in an initial evaluation of problems related to plant quarantine. Equipment needs, budgets, and a description of responsibilities were prepared. However, the importance of this work requires additional professional assistance to establish a

complete and effective program. A request for two short-term consultants has been sent to the CID Central Office.

Laboratory equipment ordered by the Ministry with OAS funds has arrived at Toralapa. The equipment includes a microscope, spectrophotometer, microkaldahl, ovens, a muffle furnace, and centrifuge.

New varieties of barley (2) and oats (2) were released from the San Benito station this year. These are the result of variety introductions tested by Ing. Salamanca. Four new peanut varieties show good potentials and their foundation seed will be produced this year, i.e., Spancross, Argentine, Spanish, and Tanash.

Several discussions were held with CIAT officials in Santa Cruz in order to clarify the role of CID technicians under the new Ministry organizational structure. CIAT has expressed its clear intention to maintain control of the Saavedra station thus eliminating CID personnel as co-directors. However, CID has been promised full budgetary and other logistic and personnel support in carrying out its training and research programs in cereals and oilseeds. Similar cooperation has been promised for the extension program.

The Plan of Work for weed investigations to be supervised and conducted by Dr. Robert Frans was completed. Within the CID project area, he will conduct weed trials at Toralapa, San Benito, and Chinoli. He has been assigned a Bolivian technician as counterpart at each station. He will also design the weed research trials for rice, corn, and soya at Saavedra.

The soil fertility survey and analysis was completed for Toralapa. A similar survey of San Benito has been previously completed.

Initial outlines were prepared by both the research and extension advisers for a handbook on research and extension policies and procedures. It is intended that these publications will serve as basic policy and operation manuals concerned with program personnel evaluations, program development, etc. Discussions are continuing with Ministry counterparts.

Consultations continued relative to the preparation of equipment and supply lists for the 053 loan. Progress has been especially slow on the construction phases. Initiation of the construction phases will likely be delayed until after the rainy season.

Extension Technology

In an attempt to improve the process of information dissemination and to encourage more professionalism among station researchers, the following system was proposed to IBTA and has received verbal approval.

1. A team of Ministry and CID technicians assisted by station personnel will evaluate the research program of each station annually and decide which data are ready for release as extension or other professional publications.
2. The technician involved will prepare a manuscript under a time deadline.
3. Deadlines will also be established at each stage in the review and publication process.
4. Each publication will bear an author's name.

Some alterations may be necessary with time, but the basic elements of this research and evaluation system have been agreed to.

Two activities were continued this quarter which will lead to full scale demonstration programs in the future. A survey of cereal seeds used by campesinos in the Cochabamba region was conducted (25 samples from 14 areas). An analysis of the samples revealed the following:

1. Campesinos planting cereals this Spring will seed an average of 37 weed seeds per square meter. While supporting research is not available, informed opinions by CID technicians are that such a level of weed seeds will reduce yields up to 40 percent due to plant competition.
2. Ninety-seven percent of the producers save their own grain for seed.

As a result of this survey, several small cleaning screens (30 cm x 30 cm) are being built. These will be introduced during next quarter and demonstration plots of clean and unclean seed will be planted on campesino farms under guidance of extension agents to compare production differences. Area demonstration days will be held. An extension publication will also be prepared with pictures and instructions based on results.

The distribution of range cages was delayed due to lack of transportation. This has been corrected and distribution is continuing with 50 percent of the cages already in place with campesino cooperators. Demonstrations will be conducted later this year showing the effects of nonuse of grazing lands. This is to be the initial stage of a study of alternatives for establishing a national land use policy.

Initial discussions began this quarter for two new areas of study. A questionnaire is in process to collect data on the role of women in the

rural communities of Bolivia. Also, issues of farm power are being investigated with particular emphasis to the possible demonstration of yoke vs. head harnessing of animals and the use of single metal moldboard plows. These will be further developed during the coming quarter.

A questionnaire was prepared in draft to survey the current status of extension in the CID project area. This will serve as the basis for a benchmark study of the region designed to improve program planning.

The newsletter for agents has been prepared but its printing has been delayed for about two months due to lack of operating budget. Hopefully, publication can commence next quarter. The system for preparing extension work plans proposed by the CID technician has now been accepted and is being implemented at all levels of the Extension Service. Weekly staff meetings of the La Paz Extension staff have been initiated.

Sector Management

Agricultural Planning. Emphasis was given to furthering the evaluation of projects proposed in the five-year plan. Bruce Brown, a consultant in project evaluation, assisted in the analytical phases. The 270 agricultural projects identified earlier by the Office of Planning were reduced to 56 considered of highest priority. These were, in turn, reduced to 31 which were categorized into five major groups. The projects contained in each category were qualitatively analyzed relative to their stage of development and recommendations made with respect to future steps in analysis. Cost estimates for continuation of studies were made where applicable. Except as noted below, no formal quantitative analysis was undertaken for these studies due to the magnitude of the work and the

absence of necessary data. Staff in the Planning Office worked directly with Mr. Brown and were instructed in analytical procedures, particularly benefit/cost analysis.

The only projects to receive quantitative analysis were a proposed program for corn, one for slaughterhouse improvement, and the Villamontes irrigation project. Initial estimates of annual net benefits were made. These analyses were developed as instructional illustrations. There is a considerable absence of data required to make the complete analysis of these projects as well as the others identified as having priority.

Reorganization of the Office of Planning has not been completed although construction of the necessary physical plant was continuing during this quarter.

Economic Studies and Policy Analysis. The study of common property rangeland problems in Bolivia was completed and published under the title, "Common-Property Rangeland and Induced Neighborhood Effects: Resource Misallocations in Bolivian Agriculture," (CID Technical Report 001/76). Publication is in Spanish and English and the report will be given wide distribution among interested Bolivian agencies and foreign donors.

The study of Yungas agriculture was completed and an initial draft report prepared. Analysis of data from the Chapare was not included in the report. These latter data are being prepared by a student from UMSS who has not completed his work. A final draft of the Yungas study is expected during the next quarter.

Initial planning for two policy studies for the coming year was initiated. These two studies will be concerned with: (1) the potential for substituting other products for wheat in flour production, and (2) a strategy for controlled use of grazing lands in Bolivia. This later study is a follow-up to the previous study of common property rangeland problems.

Agricultural Marketing. Collection of market prices in La Paz continued. No publication has been accomplished due to the moratorium discussed in previous reports and the delay in publishing the extension newsletter. The CID economist assisted personnel of the Office of Commercialization in preparing an initial estimate of producer price indices for major crops and animal groups. He also initiated work for preparing urban agricultural price indices for selected provincial cities. This work includes calculating a set of Lorenz curves to show the distribution of rural incomes, based on sample data.

Meetings were held with the Director of IESE to discuss the use and publication of the urban and rural survey data now available from the joint Utah State/MACA/USAID study. Discussions were also held with the Director of the National Statistics Center to acquaint him with the content of the data available from this study.

Training

A formal credit course entitled, "Farm Management," was conducted at San Simon University. Sixty-five students passed the course and received certificates of completion. Twenty of these students registered for and

received 3 quarter hours credit for the course. Attempts to schedule similar courses at Gabriel René Moreno University in Santa Cruz have still not been successful.

The formal agreement of cooperation between San Simon University and the Ministry of Agriculture was signed by both parties. Discussions were held with the new Dean of the Agronomy Faculty at UMSS. Agreement was reached on the nature of CID technical assistance. Details will be developed and programs initiated during the coming year. Both agronomic work and extension training will be included in the scope of cooperation.

Two students at Gabriel Rene Moreno completed their theses with assistance of CID and Bolivian technicians at Saavedra. Two additional students initiated thesis studies related to agricultural economics and potato quality with CID technical supervision. At present, approximately 10 students are developing thesis studies with CID technical supervisory assistance. Staff members of the Office of Planning were trained in the computation of price indices and the development of Lorenz curves which reflect income distribution. Training was also given in project evaluation during the consultation assignment of Mr. Brown with that office.

A training workshop was held for extension agents in the Santa Cruz area. The subject matter of the workshop included: (1) program planning and evaluation, (2) extension methods, (3) rural youth programs, and (4) technology related to rice and soya production.

Three oilseeds technicians received training in soya breeding with the assistance of Dr. Hamel Paschal of INTSOY and Dr. Fisher of CID. Initial

crosses were made from potted seedings. These technicians are now trained for carrying on this work during the Summer season.

Progress was made toward initiating an agricultural journal. The list of associate editors was completed and letters sent to each. Response has been rather slow. The initial draft of an announcement of the journal was prepared.

Publications

Publication of several extension type materials has been in process for sometime and has been delayed for assorted reasons. Efforts are continuing.

Publications completed:

1. Common-Property Rangeland and Induced Neighborhood Effects: Resource Misallocation in Bolivian Agriculture by Morris D. Whitaker and E. Boyd Wennergren. CID Technical Report 001/76. Spanish and English.
2. Economic Prospects for Substitution of Citrus and Coffee for Coca in the Chulumani Area of Bolivia's Yungas by Morris D. Whitaker and Clovis Villegas. CID Working Paper 007/76. Spanish and English.
3. End-of-Tour Report by Morris D. Whitaker. CID Administrative Report 004/76. Spanish and English.
4. End-of-Tour Report by Max G. Long. CID Administrative Report 002/76. Spanish.

5. An Assessment of Temperate Fruit Research Program at San Benito Station by Anthony H. Hatch. CID Working Paper 006/76. (Final in Spanish and English.)
6. Evaluation of Entomology Problems in Bolivia by Charles Ward. CID Working Paper 002/76. (Final in Spanish and English.)
7. Informe sobre Indices de Precios al Producto; para la Comisión de Precios y Salarios. MACA, OPS, División de Comercialización, Sept., 1976 por F. Arteaga, J. Mantilla y A. LeBaron.

In Process:

1. Small Farm Rice Management and Production by Emilio Salaues and Max G. Long (approved for publication next quarter).
2. Principle Potato Diseases in Bolivia by Kenneth C. Ellis, Gerardo Caero and Segundo Alandia (awaiting final Spanish translation).
3. Soya Production in Bolivia by Herbert Zurita and Warner D. Fisher (in review by Ministry Publications Committee).
4. Partial Budgeting: A Decision Making Tool by Larry K. Bond (in review by Ministry Publications Committee).
5. Seed Germination Test: Key to Better Yields by Larry K. Bond (in printing as extension publication).

Other Activities

Dr. Bruce Anderson, Executive Director of CID, and Dr. Keith Allred, Campus Coordinator of the Bolivian program visited Bolivia in August. They reviewed the overall program and examined the individual programs of the CID technical staff. Discussions were also held with Ministry officials.

Problems areas were considered especially those related to recruitment and assignment of professional staff.

The CID Extension Advisor has written an article on partial budgeting analysis at the request of "El Surco," a Bolivian agricultural trade journal.

PROBLEMS ENCOUNTERED

Administrative

1. The problem tax exempt status for the Consortium still persists. The requested Supreme Decree was finally approved but has not met the needs nor guaranteed the tax exempt status provided by the contract. To illustrate the problem, the Ministry of Finance has asked that the Consortium pay certain taxes on the official vehicles imported for the program. This despite the contract and Supreme Decree both of which have been signed by the Ministry.
2. The ability of the Consortium to utilize counterpart funds is being limited by the requirement of the Interventor that payment for all goods and services using such funds be accompanied by a Renta receipt. With this requirement, often we cannot purchase goods and services for the lowest prices and in some instances the necessary goods or services are provided only by one individual. Even where the Renta receipt is obtained, the price is often increased by the amount of the Renta charge which in fact represents a sales tax. Under provisions of the Contract, the Consortium is free of all taxation and should be given special exemption from requiring a Renta receipt. If not, use of counterpart funds in future contracting will have to be considered very carefully.

Program

1. No decision has yet been received on the counterpart funding for additional personnel in the Planning Office. This matter has been in process for more than six months and is in need of immediate resolution.
2. Ministry budget deficiencies persist which impede areas of program progress. For example, publication of extension materials has been delayed due to lack of paper and printing ink. Also, distribution of the range cages were delayed for lack of adequate transportation to handle the cages.
3. Reorganization of the Office of Planning has not yet been formalized by the Ministry. Construction of the physical facilities are not yet completed.
4. Office of Planning personnel need to spend more time in the field in data collection and verification activities. This will require increased budgetary support from the Ministry. Budgets currently being prepared for the coming year should reflect this need.
5. Construction of an electrical line from Tiraque to Toralapa is possible in late 1977. This would provide a permanent electrical supply to the station in place of the generator system currently budgeted. A final decision and USAID concurrence is needed so that final planning can proceed. Construction of buildings has still not commenced.