

PD-AAS-415
42793

MONTHLY REPORT - SEPTEMBER, 1985

CHAPARE REGIONAL DEVELOPMENT PROJECT

EXPERIENCE, INCORPORATED

COCHABAMBA, BOLIVIA



USAID CONTRACT NUMBER 511-0543-C-00-4214
USAID PROJECT NUMBER 511-0543

Compiled by:
Merritt J. Taylor, PhD.
Assistant Coordinator

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Members of Experience, Incorporated Technical Assistance Team
contributing to this report:

Gerald P. Owens
Alfredo Alvarado
John L. Bieber
Joe D. Lopez
Jose R. Mondonedo
Merritt J. Taylor

I. ACTIVITIES

A. Administrative and Institutional

1. Dr. Taylor worked several days on debugging two APPLE IIc computers with printers, setting up the software programs, installing them in the E.I. office and began training IBTA and EI personnel.
2. The training program for promotores was postponed due to the national strike and the uncertainty of obtaining fuel.
3. Both Dr. Bieber and Dr. Alvarado have had their homes burglarized. The USAID/Bolivia regulations do not provide for guard services.
4. E.I personnel collected all available photos and negatives to loan to Ing. Conrado Comacho of the SDTB to develop a portfolio for the new ambassador's briefing of project activities.
5. All the E.I. staff compiled data on specifics of activities of IBTA/Chapare for USAID briefing of ambassador.
6. Dr. Taylor met with representatives of U.S. funded agencies to maintain dialog and cooperation between activities.
7. Patricia Violand, the E.I. administrative assistant, returned from vacation on 18 September.
8. Dr. Owens returned to Bolivia on 20 September from R&R leave.
9. Joe Lopez met with the IBTA technical staff to program the Paratechnicians Training Program to be conducted September 7-11.
10. Dr. Alvarado edited, translated and reviewed : June monthly report (Spanish version), August monthly report (English version), Thomas Gardiner final drafts (Spanish and English versions), Arturo Quispe thesis draft, and a paper on Fundamentals on Research and Extension by Dave Leonard

B. Technical

1. Meetings

- a. Dr. Taylor met with John Fasullo, Carlos Montano, Waldo Telleria, Willy Holster and Francisco Zannier at the Cochabamba Airport to discuss the needs for a more aggressive approach to development of the agroindustry and credit portions of the Chapare Regional Development Program.
- b. Steve Wiles and Merritt Taylor met with Tim Bertotti concerning project matters and to provide USAID an update on project activities during the communication stoppage and the national general strike. (20 September).
- c. Informal meetings were held between E.I. colleagues and counterparts to discuss on-going and proposed research projects, training programs and the establishment of a collection of tropical fruits at the La Jota and Chipiriri Experiment Stations.
- d. Dr. Taylor met with Chipiriri Experiment Station personnel to discuss qualifications for a long-term consultant in livestock management.

2. Field Trips

- a. Dr. Alvarado traveled to Santa Cruz during 22-26 September with Project Director Francisco Zannier and Project Manager John Fasullo. During this time they visited CIAT headquarters where they met Ing. Carlos Roca, the director of the Saavedra Experiment Station, the El Palmar Coconut Plantation, the Faculty of Agronomy at the University of Santa Cruz and purchased vehicle replacement parts and chemicals for the project.

At CIAT, a verbal agreement was made in regard to exchanging germplasm, sharing laboratory facilities and planning and maintaining contacts for training of IBTA personnel on seed production.

During the visit and tour around the Saavedra Experiment Station they met the personnel and discussed their research and extension programs. Their activities and methodology are very similar to those of IBTA and E.I.

With the assistance of the University of Santa Cruz professionals, in particular Dean Alfredo Perez, and profesors Antonio Gonzales and Jaime Magne, they where able to visit the largest Coconut plantation around Santa Cruz. After inspecting the plantation, an agreement was made with the owner, Mr. Mario Ortiz to purchase some plants.

- b. Joe Lopez traveled with Leon Vallejos and Gerardo Rodriguez of IBTA and Carlos Alarcon and Enrique Jaldin of SDTB to several of the Unit Production Demonstration Sites in micro regions 2, 3 and 5. The objectives of the trip were to evaluate the progress of activities being conducted at these sites and to plant three seedbeds of cardomon seeds in micro region two and one seedbed in microregion three. The following information was documented:

One Unit Production Demonstration Site included a small plot (150 square meters) of beans. It needed weeding and it was obvious that it had never been weeded. The extension agent expressed the opinion that the promoter/farmer had been in Cochabamba a great deal of the time and had not taken care of his farm. At this same site, a nursery was also planted. It was well constructed and had one seedbed (1x3 meters) of coffee and another seedbed planted to citrus (1x2 meters). Two thousand plastic bags filled with soil were present in the nursery to be used to plant cacao seed when they arrive from the Yungas. The nursery will benefit a group of eighteen farmers that have formed a farmers' growers association. Apparently the nursery was managed on a regular basis.

At this site, a 2000 square meter plot had been planned for planting of mixed annuals. It had not been implemented. The reasons given for not doing it was that the extension agent had not received the necessary equipment and materials, the farmer was not present and the general strike had delayed the work.

In summary, the community nursery was progressing according to plan but the Unit Production Demonstration Module of mixed annuals did not get off the ground. It is still possible to continue the mixed annual plantings but we have to deviate somewhat from the original design. The plan for planting one forth hectare of cacao/guandule depends on whether the cacao seeds from the yungas arrive in October. It was obvious from what was observed on this farm that the extension team needs logistical support to continually

make their presence felt and that the cooperating farmer needs to be on his farm to successfully execute the implementation of what is programmed.

At a second demonstration site, about 2000 square meters were planted in maiz associated with beans and about 1000 square meters of yuca associated with beans. The plots looked very acceptable and data will be taken on production. Again the planting of mixed annuals (2000 square meters) was not planted according to plan but was changed to another design. As before, the extension agent replied that he had no equipment or materials needed to implement according to plan.

The decision was made not to visit two more Unit Production Demonstration Sites, in the same area (Puerto San Francisco) because the owners were not present. A visit was planned for a later date.

The team visited another Unit Production Demonstration Site at Gilberto Villaroel where the same extension team works. This community is in micro region three. The following Unit Demonstration Modules were at this site:

- 1) Maiz associated with beans planted at the same time (2500 square meters)
- 2) Maiz associated with beans planted at different times (1000 square meters)
- 3) Potatoes monocropped (2000 square meters)
- 4) Maiz associated with soybeans (500 square meters)
- 5) Yuca associated with maiz (1000 square meters)
- 6) A citrus seedbed

Forty farmers were involved in the planting of these modules. All the plots were in excellent condition and the potatoes were being harvested. Land preparation was mechanized (small tractor). The plots were free of weeds and insect damage. The yields looked very promising and all the yields were to be recorded.

The group also visited another Unit Production Demonstration site at Villa General Roman, where Brachiaria pasture grass had been planted. The plot measured about 1000 square meters and was growing vigorously. The plot needed weeding and the cooperating farmers said that they would weed manually instead of with chemicals. Also planted were two plots of beans planted monocrop. They needed weeding but were in generally good condition. The cooperating

farmers are two women that run an orphanage with nine children. They have chickens, rabbits, ducks and geese for sale. The small animal operation was quite impressive since nothing like it had been seen in the Chapare previous to this visit. They stressed the need for technical assistance and the extension team is planning a program with them for the rest of the year.

The two extensionists took the group to Tocopillo (Rio 24). At this location was a nursery with three square meters of coffee and three square meters of citrus planted. It was in excellent condition. Also planted was a plot of beans (500 square meters) and a plot of tomatoes (500 square meters). They needed weeding but other than that they were in good shape.

The group visited a Unit Demonstration site where maiz was associated with beans (1000 square meters) and where tomatoes were associated with beans (500 square meters). In addition, they saw several other sites where beans were planted with maiz or with yuca; In this community, fifteen kilos of black bean seed had been distributed for planting at different sites.

The two Secretariat personnel were also conducting a follow-up evaluation of activities being implemented at these sites.

The extension team was asked what they thought was their biggest accomplishment up to this date in their work area. They answered that being accepted by the communities was their number one accomplishment. They expressed the opinion that it had been difficult to change community attitudes. Most communities thought that IBTA was an institution that had ulterior motives for being in the community just like other institutions in the past. The extension team was also asked what were the main limiting factors in implementing their extension programs. They gave the following response in order of importance.

- 1) Lack of transportation and fuel
- 2) Lack of equipment and materials
- 3) Lack of inputs - (chemicals, fertilizers and seeds)
- 4) Limited per diem per month
- 5) Rejection of some communities of the opportunity to participate in the technical assistance program

Comments on the field trip.

- Congratulations are in order to the extension teams on their fine work up to date considering the limited resources that they've had work with.

- The community nurseries were impressive and will have an impact on future production for these areas.
- The introduction of legumes (beans) into the area have been well received by the farming communities and will be an important protein crop for the Chapare farmers.
- It's obvious that a 100% effort is needed from all project personnal in assisting the extension teams in their logistic needs and in supporting them in implementing their field extension activities.
- The group visited the extension team that works in the Chimore area. Here, they had 14 different Unit Production Demonstration Sites. Plantings included :
 - Maiz associated with yuca.
 - Beans with water melon, and beans with maiz.

All the sites visited were in good shape.

3. Research

- a. EI team and IBTA personnel harvested the bean portion of the systems trials at the La Jota Experiment Station.
- b. Nodule counts were made on beans and cowpeas to evaluate the efficiency of inoculants from the U.S. and also soil from Pairumani Experiment Station as a source of inoculum.
- c. Drs. Taylor, Mondonedo and Bieher worked with Ing. Max Rojas in evaluating the flow pattern of expenses in the establishment of a four year citrus nursery.
- d. Dr. Alvarado gave advice to several IBTA technicians on how to fertilize different tropical crops. Experiments are to be planted during the month of October.
- e. Technical assistance to counterparts was provided by Dr. Modonedo on the following research projects:

- 1). Methods of multiplying banana planting materials and preliminary observations on the four methods of multiplication.
 - 2). Methods of budding citrus at both La Jota and Chipiriri Experiment Stations. Three distances from the bud and three periods after the operation, of topping the stocks' crown were observed.
 - 3). Vegetable adaptation trial plantings at La Jota Experiment Station - Several varieties of tomatoes and Brassicas.
 - 4). Herbicide trials on pineapples.
- f. E.I. technicians and counterparts collaborated on fertilization experiments in cassava and citrus, and in cropping systems trials with annual crops
 - g. Dr. Mondonedo prepared a research proposal on the sun-scald problem of pineapples in Chapare.
 - h. Dr. Mondonedo received rooting hormones (Hormodin and Rootone) and growth inhibitor (Cycocel) from E.I. Washington for research purposes.

4. Training and Extension Activities

- a. Lopez and Taylor worked with Ings. German Inturias, Arturo Quispe and Angel Cartagena in building and establishing a seedbed for cardomon and developing a working relationship at the military farm in Tuti Pampa.
- b. Lopez assisted in programming the next Paratechnicians Training Program
- c. Lopez designed a monthly report form for extension activities. The objective of this form is to document the extension activities more accurately and to reduce "paper work" for the extensionists. The form was well received by the extension personnel.
- d. Informal meetings were held with IBTA and E.I. personnel to make plans for the next promoters' training session.

- e. Dr. Bieber prepared a paper concerning lethal dosages (LD 50s) for commonly used pesticides for the paratechnician training program.

5. Introduction of New Materials

- a. Three cardamon seed beds were planted according to schedule in micro regions two and three.
- b. Dr. Mondonedo assisted in the preparation of a project proposal on the establishment at La Jota and Chipiriri Experiment Stations of a collection of tropical fruit crops with potential in the Chapare microregions.
- c. Drs. Mondonedo and Taylor weeded the seedbed for cardamon and black pepper at the La Jota Experiment Station and provided technical assistance in the establishment and care of seedbeds of recently received planting materials of macadamia, cardamon and black pepper.
- d. Dr. Mondonedo started looking for tropical crops in the Chapare for the tropical fruit collection. He found two seedling survivors of cashew and two carambold trees at the Chipiriri Station. The cashew seedlings were transplanted in plastic bags and marcots will be prepared from the carambold trees.
- e. Some avocado trees were found just outside of the Chipiriri Station and at the nursery in Villa Tunari from which seeds could be obtained for stock and buds for grafting for the collection.
- f. While in Santa Cruz, Dr. Alvarado and Francisco Zannier collected coconut seeds for analysis of pathogens at Cochabamba.

II. ISSUES AND SOLUTIONS

The month of September contained considerable political activities and natural events that effected the activities of the IBTA portion of the Chapare Regional Development Project.

- A. A general strike by the national labor union (COB) started September 2, and continued through the end of the month:
 - 1. Telecommunications between Bolivian cities and overseas were cut off for more than ten days.

2. Gasoline and diesel fuel sales were stopped for most of the month with the exception of emergency sales of twenty liters at two service stations in Cochabamba.
 3. A state of siege was declared by the government which limited activities, particularly of group meetings and also of movement of personnel at night.
- B. A heavy rain caused the Espiritu Santo River to wash out two sections of the road into the Chapare. Passage into and out of the Chapare by vehicles was stopped for several days. During the rest of the month vehicular traffic was restricted to limited controlled hours. Other sections of the road appear to be desintegrating or sliding down the mountain side which increases travel danger and may effect future travel into and out of the Chapare.
 - C. Training - Training for paratechnicians was rescheduled for October because of strikes.
 - D. Communications equipment is badly needed for communication experts, training, and extension teams.
 - E. Transportation, equipment and materials, fuel, and perdiem for extension should be improved.

III. WORK PLANNED FOR THE NEXT REPORTING PERIOD

1. All Experience, Incorporated personnel will participate in training programs for paratechnicians and farmers as backstops for IBTA technicians and/or as direct participants.
2. Assist extension teams with collecting data from the Unit Production Demonstration Modules
3. Assist extension teams in implementing their activities for October.
4. Harvesting and recording of observations on ongoing experiments.
5. Continue monitoring ongoing research projects and exploring for research problems/projects on horticultural crops.
6. Follow-up on the establishment of the tropical fruit crops collection at the experiment stations. Travel in the Chapare and other tropical areas of Bolivia to collect planting materials of tropical crops with potential in the Chapare.
7. Establishment of new experiments at La Jota and Chipiriri.