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QUARTERLY REPORT APRIL - JUNE, 1987

**CHAPARE REGIONAL DEVELOPMENT
PROJECT**

EXPERIENCE, INCORPORATED

COCHABAMBA, BOLIVIA

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

USAID PROJECT NUMBER 511-0543

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QUARTERLY REPORT
APRIL - JUNE, 1987

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With Input From:

IBTA/Chapare
Alfredo Alvarado
Joe Lopez

QUARTERLY REPORT

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I. ACTIVITIES

A. Administrative and Institutional

IBTA/Chapare personnel numbered 81 at the end of the current quarter.

Director General	1
Station Directors	2
Technicians	33*
Administrator	1
Architect	1
Station Administrators	2
Accountant	2
Purchasing Agent	1
Farm Managers	2
Nurserymen	2
Warehousemen	1
Secretaries	3
Chauffers	4
Tractor Drivers	3
Mechanics	2
Mechanic Assistants	2
Cowboy	1
Cooks and Domestics	6
Guards	4
Laborers	8

81

* Three in training abroad

Experience, Incorporated turned over to IBTA/Chapare on 21 April all the household furniture, appliances and other items purchased with loan funds which had been issued to consultants Bieber, Mondoñedo and Taylor.

The house previously occupied by consultant Jose Mondoñedo was turned back to the landlord on 22 April.

IBTA/Chapare conducted an internal evaluation of personnel and activities in May. The evaluation was discussed at a general meeting on 27 May.

Experience, Incorporated Consultants and their families were recalled to La Paz the week of 8 - 13 June for security reasons.

Comments on the September, 1986 external evaluation by Tropical Research and Development were prepared in June at the request of the USAID project manager.

Experience, Incorporated and IBTA/Chapare prepared a budget and activities plan for providing seed and plants for a program to replace 10,000 hectares of coca.

Dr. Alvarado assisted Ing. Zannier with a presentation to MACA officials on the objectives, activities and accomplishments of the project.

Dr. Alvarado assisted in an evaluation of the construction needs of the project.

Dr. Alvarado spent three days at IBTA/Tarija evaluating the needs for a soils laboratory. Recommendations were made to Ing. Susana de Castellanos.

Dr. Alvarado translated instruction manuals and began the installation of a seed laboratory donated by the Government of Japan (JICA).

Ings. Joe Lopez and Gerardo Rodriguez reviewed subprojects of extension personnel and recommended adjustments.

Ing. Joe Lopez assisted IBTA/Chapare in clearing genetic material through customs in Cochabamba.

Dr. Alvarado prepared training material and delivered a lecture on soils to IBTA personnel at Yacuiba.

B. Technical

- Extension

Second quarter, 1987 was planting season in the project area. Extensionists and Researchers planted/transplanted large quantities of perennials on farms and in community nurseries.

Coffee	Bananas
Cacao	Plantain
Citrus	Papaya
Cardamon	Avocado
Macadamia	Tembe

Seeds for annual crops including rice, corn, beans, yuca, tomato and peanuts were also distributed.

Extensionists and Advisors followed up these plantings with insect and disease control and assistance with cultural practices such as contouring.

Ing. Joe Lopez accompanied USAID Communications Specialist Frank Dall and Ing. Oswaldo Antezana on an inspection trip of the Chapare where they observed the work of Extension Agents, Promoters and Cooperating Farmers.

Both Lopez and Alvarado assisted in the preparation of extension bulletins, research reports and training material.

The following Research Notes were prepared during the quarter.

- "Requerimientos de Suelos de Algunos Cultivos Tropicales", by Alfredo Alvarado.
- "Comparación de Rendimiento de Entradas de Malanga", by Juan Lennis, Jose Mondoñedo, Luis Guillen and Alfredo Alvarado.
- "Introducción de Cultivares de Camote en el Chapare", by Juan Lennis, Gumercindo Acosta, Luis Guillen, Alfredo Alvarado and John Bieber.
- "El Cultivo de la Yuca (Manihot esculenta) en Bolivia", by Juan Lennis and Alfredo Alvarado. This paper was presented by the first author in a Latin American Workshop on Cassava held at CIAT, Cali, Colombia in early June.

See Annex I for a complete list of IBTA/Chapare publications since inception of the project.

- **Research**

Research on perennial crops was continued. This includes varietal observation and adaptation trials of coffee, cacao, banana, citrus, macadamia, coconut, tropical fruits, forestry, and ornamental species, vanilla, ginger and other spices. Systems trials were initiated by introducing annual crops into perennial plantations, and by using perennials such as avocado and forestry crops as shade for coffee and cacao.

Experiments on malanga, yuca and sweet potato were harvested in the second quarter and results analyzed. Numerous other experiments on annual crops were initiated, including regional trials on the results of lime and rock phosphate in Chapare soils.

Experiments on minimum tillage using herbicides, studies of economic insects and control of cacao disease were also initiated or continued.

Dr. Alvarado assisted in the design and establishment of experiments, and in taking observations on germination, growth rate, effects of insects and disease, etc.

Ing. Joe Lopez assisted in the establishment of on-farm research at a number of PDU's.

- **Training**

Farmer training courses on establishment and management of coffee and cacao nurseries were held in the communities of Estrella, San Gabriel, Puerto San Francisco, Chocolatal, Sesarzama and 2 de Agosto. Ing. Joe Lopez worked with IBTA/Chapare extensionists in planning these programs, and as facilitator and trainer.

See Annex II for a complete list of training programs held during the second quarter, 1987

- Introduction and Production of Genetic Material

The following genetic material was received from Costa Rica.

Macadamia seed	100 kg
Coconut (4 varieties)	1600 nuts
Coffee seed (cataui Red)	250 kg
Ginger	25 kg
Tembe	100 kg
Vanilla	307 shoots
Papaya	5 kg

Ings. Joe Lopez, Leandro Chirinos and Angel Cartagena traveled to San Ignacio de Velasco in Santa Cruz by private vehicle to obtain 470 kg of coffee seed, 250 kg of bean seed and 40 kg of soybean seed.

Most of the coffee seed from Costa Rica and San Ignacio de Velasco was immediately planted in community nurseries, as was the bean seed. Macadamia, coconut, ginger and vanilla were planted in IBTA/Chapare experiment stations and nurseries.

Production plots for both grass and legume pasture seeds were planted at Chipiriri.

One thousand plants each of cardamon and black pepper were seeded in plastic bags for subsequent sale to Chapare farmers.

Additional citrus and coffee plants were established in IBTA/Chapare nurseries.

IBTA/Chapare continues to produce citrus seed from selected trees on the experiment stations.

Two hectares of rice were harvested for seed.

Dr. Alvarado made a trip to Santa Cruz to harvest the cowpea, CATIE ROSADO variety, planted the previous quarter at Saavedra Experimental Station.

Dr. Alvarado collected seven common bean (Phaseolus vulgaris L.) varieties at El Vallecito Experimental Station at Santa Cruz to conduct an on farm variety trial in the Chapare.

Dr. Alvarado collected five common bean (Phaseolus vulgaris L.) varieties at Pairumani Experimental Station at Cochabamba to conduct an on-farm variety trial in the Chapare.

II. ISSUES AND SOLUTIONS

Although considerable demand for plants and technical assistance was evident in the current quarter, a number of instances were noted where interest or demand diminished due to the increased price of coca leaf. In Senda D, for example, extensionists were forced to cancel the planned transplanting of eight hectares of coffee for lack of interest on the part of the farmers who had grown the plants in a community nursery. Additional extension meetings are scheduled with Senda D to try to convince them to transplant or to sell plants to other communities.

These instances further illustrate that the demand for plants and technology is inversely related to the price of coca leaf, or to price expectations.

Blockades impeded progress in research, extension and production to some extent. Although some experiments were lost or damaged, the blockades did not last long and damage to the project was minimal.

IBTA/Chapare will have to review and perhaps redefine its objectives and methodology in 1987 as a result of the changing political scene. Anticipated changes from the new drug law may require additional security measures. The shift in emphasis to provision of genetic material may be even more pronounced than anticipated. This review and redefinition can be accomplished normally in the third quarter with development of the Plan Operativo for 1988.

III. WORK PLANNED FOR NEXT QUARTER

Dr. Alfredo Alvarado

- Participate in training programs.
- Collaborate in research programs.
- Assist in analysis of research findings and report writing.
- Advise technicians, promoters and farmers, as required.
- Participate in meetings, seminars and workshops.
- Coordinate the use and maintenance of the Automobile Club facilities in Villa Tunari.
- Translation and editing of reports.

Ing. Joe Lopez

- Vacation - 30 days in July and August. Make arrangements for training program in Costa Rica for five IBTA/Chapare technicians.
- Refine cost of production estimates and cultural practices descriptions for Macadamia, Cardamon and Black Pepper.
- Assist in planning, preparation of didactic material and training of farmers, promoters and IBTA/Chapare technicians.
- Coordinate planting of genetic material due from Costa Rica in July.

Dr. Gerald Owens

- Continue administrative activities.
- Assist IBTA/Chapare with economic studies, budgeting and reporting.
- Assist IBTA/Chapare with photography and their visual aids.
- Maintain contact with USAID.
- Assist in planning and budgeting for expanded IBTA/Chapare activities.

ANNEX I

LISTA DE PUBLICACIONES DEL PROYECTO

IBTA/CHAPARE EN COLABORACION CON

EXPERIENCE, INCORPORATED

1. MATERIAL DE ENSEÑANZA

- Alvarado, A. "Aspectos importantes en la elaboración de subproyectos de investigación". 1986
- Alvarado, A. "Como hacer curvas de nivel usando el marco tipo A". 1985
- Alvarado, A. "Como hacer curvas de nivel usando el método del caballete". 1985
- Alvarado, A. "Como medir la pendiente". 1985
- Alvarado, A. "El suelo como medio de cultivo". 1985
- Alvarado, A. "Factores edafoclimáticos que afectan la producción de cultivos en los trópicos." 1986
- Bieber, J. "Dosis letal media." 1986
- Bieber, J. "Prácticas culturales para frijol y caupi." 1986
- Mondoñedo, J. "La pimienta negra." 1986
- Mondoñedo, J. "El cardamomo." 1986
- Mondoñedo, J. "Cocotero." 1986
- Mondoñedo, J. "Combate de malezas en el Chapare." 1986
- Mondoñedo, J. "El nivel bambu/manguera para siembra en contorno." 1985
- Mondoñedo, J. "Horticulture crops in the humid tropics." 1985
- Mondoñedo, J. "La multiplicación de cultivos por enraizamiento." 1986

- Mondoñedo, J. "Viveros para los cultivos en el Chapare." 1986
- Mondoñedo, J. "Propagación de plantas por injerto." 1986
- Mondoñedo, J. "Poda de frutales." 1985
- Mondoñedo, J. "Semilleros para cultivos en el Chapare." 1986

2. BOLETIN TECNICO

- Alvarado, A. "Factores importantes relacionados con la fertilización de cultivos". 1986
- Alvarado, A. "Manejo de suelos en la región del Chapare." 1986
- Alvarado, A. "Requerimiento de suelos de algunos cultivos tropicales." 1987
- Guevara, J. "Guía práctica para el cultivo del tomate." 1986
- Rodriguez, G. "Curso Taller Sobre Normas de Redacción Técnica y Planificación Agropecuaria." 1986
- Sanchez D. y Taylor, M. "Costos de producción de cultivos tradicionales de las provincias Chapare/Carasco." 1986.

3. MATERIAL DE EXTENSION

- Bieber, J. "El cultivo de caupi." 1986
- Claure, J. "Preparación de locales para polli-
tos bebés." 1986
- Claure, J. "Control de parasitos externos en el ganado vacuno." 1985

- Chirinos, L. "El cultivo de frijol en el Chapare." 1986
- Guillen, L. "Construcción de almacigueras para cítricos." 1986
- Quispe, A. "El cultivo de la Goma. Trasplante." 1987
- Quispe, A. y Inturias, G. "El cultivo del café." 1987
- Torrigo, S. "La rabia en el ganado vacuno." 1986
- Torrigo, S. "Control de parásitos internos en ganado vacuno." 1987

4. AVANCE DE INVESTIGACION

- Altamirano, J., Bieber, J., Ayala E, y Lennis, J. "Ensayo de variedades de caupi." 1986
- Altamirano, J., Lennis, J., Ayala, E. y Bieber, J. "Inoculación de caupi y frijol en el Chapare." 1986
- Alvarado, A., Lennis, J. "Efecto de la fertilización con zinc y NPK sobre rendimientos de frijol y yuca asociada". 1986
- Ayala, E. "Comparación de rendimiento de variedades de maíz." 1987
- Ayala, E. y Alvarado, A. "Fertilización y encalado del maíz en diferentes localidades del Chapare." 1987
- Ayala, E. y Alvarado, A. "Estudio de encalado y niveles de N, P, K en maíz en La Jota." 1987
- Ayala, E., Lennis, J. y Bieber, J. "Ensayo de variedades de leguminosas". 1986

- Ayala, E. y
Bieber, J. "Lote de observación de variedad
de caupi". 1986
- Bieber, J. "Niveles de fertilización inicial
en maíz." 1987
- Bieber, J. "Investigación en producción de
granos en el Chapare durante
1985-1986." 1986
- Bieber, J. "Selección de variedades de
leguminosas y uso de herbicidas en
el Chapare durante 1985-1986."
1986
- Bieber, J.
Ayala, E. y
Alvarado, A. "Selección de variedades de caupi
en el Chapare durante 1985." 1985
- Bieber, J.
Ayala, E. y
Delgadillo, R.
Lennis, J. y
Alvarado, A. "Herbicidas en maíz y su efecto
residual sobre caupi y frijol en el
Chapare." 1986
- Lennis, J.
Acosta, G.
Guillen, L.
Alvarado, A. y
Bieber, J. "Introducción de variedades de
camote en el Chapare." 1987
- Lennis, J.
Bieber J. y
Ayala, E. "Cultivos en asocio con yuca."
1986
- Lennis, J.
Mondoneño, J.
Guillen, L. y
Alvarado, A. "Comparación de rendimiento de
entradas de malanga." 1987
- Lennis, J.
Alvarado, A. "El cultivo de la yuca (Manihot
esculenta Crantz) en Bolivia."
1987
- Lennis, J.
Alvarado, A. "Adaptación de variedades de yuca
en la región de Puerto San
Francisco." 1987

- Lennis, J.
Alvarado, A. "Cultivo de raíces y tubérculos en el Chapare." 1987
- Lennis, J.
Mondoñedo, J.
Alvarado, A. "Introducción de variedades de Ñame en el Chapare." 1987
- Lennis, J.
Mondoñedo, J.
Guillen, L.
Alvarado, A. "Comparación de rendimiento de entradas de malanga". 1987
- Lennis, J.
Acosta, G.
Guillen, L.
Alvarado, A.
Bieber, J. "Introducción de cultivares de camote en el Chapare." 1987

5. OTROS

- Aldunate, J.
Lopez, J. "Representative demonstration farms in the IBTA/Chapare." 1985
- Alvarado, A. (Traductor), "Principios de investigación y extensión agrícola". 1985
- Gardiner, T. "Evaluación y confección de los planes y las necesidades de material para la implementación del proyecto de entrenamiento del IBTA/Chapare." 1985
- Lopez, J. "Guidelines for planning an extension program". 1985