

# HARP

honduras agricultural research project

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Quarterly Report III

Honduras Agricultural Research Project  
CID/NMSU/AID Contract No. 522-0139-C-00-2059-00

for the period of  
1 July - 30 September 1983  
HARP PUBLICATION 83-19

**New Mexico State University**  
**Consortium for International Development**

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FOR SUBMISSION TO

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## ACRONYMS USED IN THE TEXT

ANOVA	Analysis of Variance Analisis de Varianza
CIAT	International Center of Tropical Agriculture Centro Internacional de Agricola Tropical
CID	Consortium for International Development (USA) Consortio de Desarrollo Internacional
CURLA	Centro Universitario Regional del Litoral Atlantico Central Regional University of the Atlantic Coast
DAR	Distrito Agricola Regional Regional Agricultural District
DIA	Department of Agricultural Research Departamento de Investigacion Agricola
ESF	Economic Support Fund (USA) Fundo de Apoyo Economico
FSR	Farming Systems Research Investigacion de Sistemas Agropecuarios
HARP	Honduras Agricultural Research Project Proyecto Hondureno de Investigaciones Agricolas
MNR	Ministry of Natural Resources Ministerio de Recursos Naturales
NMSU	New Mexico State University Universidad Estatal de Nuevo Mexico
OFR	On-Farm Research Investigacion En Finca
PNEA	National Agricultural Extension Program Programa Nacional de Extension Agricola
TDY	Temporary Duty Trabajo de Corto Plazo
USAID	United States Agency for International Development Agencia de Desarrollo Internacional de Los Estados Unidos de America

## I. INTRODUCTION

The Honduras Agricultural Research Project (HARP) was initiated in the first quarter of 1983. The overall purpose of HARP as defined in the project proposal is to develop a program of Farming Systems Research (FSR) which will contribute to the Ministry of Natural Resources (MNR) efforts to raise the productivity of small and medium size production units which are producing basic grains -- corn, rice, beans, and sorghum.

During the first and second quarters of HARP's activities in Honduras, information concerning agricultural practices and problems were reviewed, agricultural experiments were designed, and research and experimental trials were initiated on farmers' fields and on experiment stations. Therefore, the activities of this reporting period, July through September 1983, focused upon: (1) monitoring and supervising the agricultural experiments which had been established in Yoro, Cuyamel, La Masica, and Guaymas/Omonita; (2) conducting field days, courses, and training sessions; (3) continuing HARP activities at CURLA; (4) evaluation of HARP progress and orientation; and (5) implementation of various HARP TDY activities.

As indicated in Quarterly Report II (HARP Publication 83-13), HARP was requested to join the on-going MNR/DIA-PNEA<sup>1</sup> program of OFR. Efforts were undertaken during this quarter to arrive at a mutual understanding among the team members of HARP

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<sup>1</sup> Effective September 1, 1983 the name of the National Program of Agricultural Research (PNIA) was changed to the Department of Agricultural Research (DIA).

with respect to similarities between OFR and FSR, differences between OFR and FSR, and methods for arriving at a method for integrating a FSR approach into HARP's activities.

## II. SPECIFIC OBJECTIVES AND ACTIVITIES

### A. ACTIVITIES RELATED TO EXPECTED OUTPUTS AS PROPOSED IN THE TENTATIVE PLAN OF WORK.

1. Formulate and test in the Department of Yoro potentially acceptable improved production technologies which reflect a multidisciplinary approach.

Regular visits were made by HARP team members to the Yoro area to monitor experimental plots, to apply experimental treatments, to collect data, and to participate in field days.

In the soil fertility experiments there appear to be visible responses to N at all sites except at San Luis. In chemical weed control trials, most plots treated either with atrazine or atrazine + metolacholor combinations had an excellent control 80 days after planting. The most dramatic results were obtained from the wireworm control trial where 90% stand loss was observed in the check plots while most treated plots had less than 15% loss. Data are being collected in an inter-cropping trial involving four combinations--maize with a green manure crop (Mucuna sp.), common red bean, climbing bean, and yuca--in comparison to the

current practice of the farmers in the area, i.e. corn with ayote. Preliminary observations are that growth of Mucuna sp. is not as profuse as has been observed in areas in the Litoral Atlantico. Use of paraquat or glyphosate alone did not provide good control of weeds under minimum till. Use of paraquat prior to planting and pre-applications of residual herbicides showed significant improvement for all season weed control.

Work has been initiated to collate and summarize the information which has been collected in prior sondeos of the Yoro area. After the completion of this work, a formal encuesta will be conducted to correct existing information deficiencies and to provide a more complete representation of the relevant agricultural production systems of the Yoro area.

A meeting was held with DIA and PNEA personnel in Yoro, Ing. Silvo Hugo Orozco, CIAT Bean Specialist, and Ing. Fredrico Rodriguez, National Bean Research Coordinator, to review existing information with respect to bean research and to plan bean research for the 1983 postrera planting season in Yoro.

2. Conduct appropriate FSR training sessions for MNR research-extension personnel working in the Department of Yoro.
  - a. The following courses were given in this quarter:

(1) General Weed Control, July 5-7

The course was held in San Pedro Sula and 38 extension and research workers of DAR # 3 attended the course.

(2) Soil Conservation, September 19-20

The course was held in Yoro. It was attended by 33 participants.

Field training of personnel continued during the second application of herbicide and fertilizer treatments, foliar sampling for nutrients, installation of pheromone traps, and monitoring insect populations.

CIAT audio-tutorial aids were used to introduce several weed control concepts to four egresados of CURLA who recently joined HARP. Also, an informal training session was given with special emphasis on weed control in beans.

3. Conduct appropriate FSR training sessions for MNR personnel at the Guaymas research experiment station.

As indicated in Quarterly Reports I and II, HARP involvement at the Guaymas Research Experiment Station has been limited to weed science. Informal training was provided during experimental data collection, weed collection, and identificacion. Several technicians

also participated in the courses organized and given by HARP staff.

4. Conduct, upon request, appropriate FSR training sessions for MNR personnel in designated areas outside the Department of Yoro.

a. Cuyamel

Field days and workshops were held at which factors limiting production were discussed and on-farm trial demonstrations were given. Since only one researcher and one extension agent is assigned to this area, HARP team members devoted considerable time to activities in this area. This provided for extensive in-service training opportunities in all aspects of the four specialties involved.

b. Guaymas

Field days and workshops were held at which factors limiting production were discussed and on-farm trial demonstrations were given.

c. Masica

A field day was held on the 9th of September for research and extension staff. Philosophy of on-farm research was discussed and the emphasis was placed on close cooperation between extension and research workers (Enlace). Prior to harvest, another field day is planned for farmers. The on-

farm trials will be visited and demonstrations of new technologies in fertilizers and weed control will be given.

Team members have made several visits to assist in appropriate supervision of on-farm trials, treatment evaluations, and data collection.

An informal audiotutorial training session on weed control is planned for research and extension staff on the 27th of September.

d. Integrated Pest Management, September 5-9

The course was held in Comayagua and 19 research and extension workers from several regions of Honduras attended the course. Ing. Patricio Santa Cruz, CURLA Entomologist assisted in the presentation of the course.

e. Soil Fertility Workshop, September 26-29

The workshop was held in Comayagua and 18 participants from several regions of Honduras attended the course. Ing. Luis Alvarez Welchez, CURLA Soils Professor, assisted in the presentations.

5. Assist researchers at the Guaymas Experiment Station to design, conduct, and analyze research which will meet the needs of FSR programs.

As indicated in Quarterly Report II (HARP Publication 83-13), HARP activities at the Guaymas Experiment Station were limited to weed control during the 1983 planting season. The activities at the station during the third quarter consisted of the supervision and monitoring of experiments initiated during the second quarter. Meetings held with Guaymas and Regional MNR personnel have established that there will be increased emphasis placed upon FSR work by the Guaymas personnel. This will begin with a sondeo which will be conducted as soon as possible.

6. Assist MNR research personnel in designated areas to plan relevant agricultural research.

Courses and workshops were given in pest management, soil conservation, and soil fertility. These programs were attended by participants from all regions of Honduras.

7. Assist MNR research personnel in designated areas to evaluate agricultural research results.

Data from the sondeo conducted in Cuyamel have been summarized. Analysis and summarization of data from three earlier sondeos in Yoro have been started.

Cooperative use of the new computer facilities established at CURLA was encouraged and preliminary agreements were made between CURLA researchers and MNR researchers in DAR # 4.

8. Publish reports on methodology, research results, and recommendations developed by the HARP team for use by MNR research and extension personnel.

The following documents have been prepared during this quarter:

- a. Quarterly Report II. Honduras Agricultural Research Project (HARP). CID/NMSU-AID Contract No. 522-0139-C-00-2059-00 for the period 1 April 1983 - 30 June 1983.
- b. Prevention of spread of itchgrass to other areas in Honduras.

As soon as required figures are ready, it will be submitted to Ing. Adan Bonilla for publication as an extension pamphlet.

- c. Agricultural Policy Paper No. 1: Policy for Agricultural Research, completed and presented to AID for review.

9. Assist in the publication of research reports delivered from existing, but unpublished data from the North Atlantic Coastal Region.

Data were obtained from a corn-itchgrass competition experiment conducted during 1982 at Frisco,

Litoral Atlantico. A literature search was conducted and the data were analyzed on the HARP computer facility. The results have been returned to the researcher.

10. Participate in the upgrading of CURLA's new soils laboratory.

The soils laboratory equipment which has been ordered has not arrived to date. Assistance, was given, however, with a new order for more equipment for the laboratory.

11. Provide technical assistance for the establishment of a computer facility for CURLA.

a. Delivered a copy of the ANOVA computer programs which had been placed on diskette by HARP personnel. The programs on this diskette provide the staff at CURLA with the analytic software necessary to carry out most ANOVA analyses.

b. Classes were conducted in the following: (1) general use of the IBM PC microcomputer; (2) data set preparation -- instruction was given with respect to the use of the ANOVA programs which have been placed on diskette by HARP, creation of data sets for placement on diskette, maintenance of data sets, and merging of data sets from diskette with ANOVA programs stored on diskette;

and (3) use of the wordstar word processor package.

12. Assist the Entomology, Weed Science, Soil Fertility, and Agricultural Economics programs at CURLA to strengthen their respective research programs.

Activities initiated in the first and the second quarter were continued. Progress made in each of the programs is discussed in the following.

a. Entomology:

A study of the parasite complex of the fall armyworm and corn earworm was initiated. Pheromone traps have been provided for an associated trapping study and almost daily records are being maintained. Assistance was provided in literature search and acquisition of supplies for the student doing his thesis work on this project. Assistance was also provided to Dr. James Zimmerman, a NMSU TDY Taxonomist working on the Museum and entomology curriculum at CURLA. This included several collecting trips.

Efforts were continued to assist CURLA to obtain the approval and funding to purchase the insect and book collection of the late Dr. Mankins. It was recommended that the type and paratype insect specimens in the collection be placed on a 10-20 year loan to the

Smithsonian Institute to assure that they will not be lost.

Approval was obtained from USAID to supplement the equipment list with an order of a quality microscope, camera attachment fittings, camera lucida, high power oculars, objective doubler, and an ocular micrometer. HARP-NMSU staff obtained and provided the specifications and catalog prices for this equipment.

b. Weed Science

In cooperation with Ing. Rene Rodriguez Quispe, Head of the Department of Plant Science, technical guidance is being given to a student doing his thesis work on pre-emergence weed control in corn. Assistance was given in selection of treatments, acquisition of herbicides, design of the experiment, and treatment evaluation. The experiment appears to be very good and further assistance will be provided in a literature search for preparation of the thesis.

Due to interest shown by Ing. Quispe, another experiment is being conducted on the control of nutsedge in corn using preplant incorporated products as well as post-emergence applications of 2,4-D.

In visits made to the herbaria at Escuela Agricola Pan Americana (EAP) and the University of Honduras at Tegucigalpa it was found that these have approximately 100,000 and 13,000 well maintained specimens,

respectively. Therefore, activities at CURLA will be limited to the collection of principal weeds of grain crops in Honduras. Weeds collected in experimental areas in Yoro, Guaymas, and Masica have been brought to CURLA for identification, mounting, and storage for a herbarium. Discussions were held regarding acquisition of a room and cabinets for the suitable storage of the identified specimens. Similiar collections are being made in Cuyamel for eventual storage at CURLA.

Participation in classroom training was not possible as the optional weed science course failed to fill the past semester. The possibility of making a basic weed control course compulsory for graduation has been discussed. The basic research outlined in the agreement presented in HARP Quarterly Report II could not be initiated due to the lack of greenhouse facilities.

#### c. Soil Fertility

Discussions were held with department personnel and ideas exchanged regarding the soils laboratory and in preparation of a new course in methods of soil and plant analysis. Assistance is also being given to students at CURLA with conducting calibration trials for methods of phosphorus and potassium extraction, in pots; and helping Professor Alvarez with the DRIS method for evaluating fertility of soils.

d. Agricultural Economics

Staff of the Department of Agricultural Economics were given instruction in the use of the IBM microcomputers which have been placed at CURLA and plans were started to develop a program of courses or seminars to cover the research applications of microcomputers in agricultural economics.

The final draft of the evaluation report of the Agricultural Economics curriculum was completed and returned to NMSU for editing and reproduction.

13. Hold regular evaluation meetings with MNR and USAID personnel to facilitate project evaluation.

Several meetings with MNR and USAID personnel have been held for the purpose of discussing HARP progress. A regular bi-weekly meeting schedule has not been established, but meetings have averaged two per month.

14. Prepare monthly reports, six quarterly program reports, an annual report, and a final report describing progress toward project goals and objectives.

Monthly reports for July, August and September were prepared and submitted by each member of the team. Preparation of the second quarterly report was begun in the latter part of June and completed in this quarter.

15. Participate in a CID/Mid-Project evaluation.  
Not applicable for the reporting period.

16. Provide information and records necessary for USAID project evaluations.

A general plan of work and two Quarterly Reports have been submitted. In addition to the general plan of work, a plan of work for the 1983 primera planting season was prepared.

Copies of HARP publications and technical reports have been made available to USAID (c.f. II. A. 8).

17. Project needs for future possible activities in the regions and experiment stations.

These activities were covered in discussions and meetings during the visits of Dr. John Clemmons and Dr. Austin Haws (See II.B.4, II.B.5, and II.B.3.c).

B. OTHER ACTIVITIES

1. In Country Staff Selection

a. Four students from CURLA were employed to work for HARP (See IV.B.2.b). The hiring procedure involved a competitive examination, an interview, and evaluation of academic credentials.

b. Due to illness and deaths in the immediate family of the two regular HARP secretaries, three temporary secretaries were hired for varying lengths of time.

2. Preparation of Plan of Work

The English version of a short-term plan of work for the 1983 primera planting season was completed and will be submitted in early October. The Spanish version is being completed. The two documents will be submitted together and distributed in early October.

Discussions and meetings are being held to finalize a plan of work for the 1983 postrera season.

3. Project TDY and other short term personnel

a. Dr. Melchor Ortiz, HARP TDY in experimental statistics, completed his assignment which had begun during the second quarter (June 22- July 9). Dr. Ortiz assisted in classes in microcomputer use and taught seminars in statistical analysis for staff at CURLA. Dr. Ortiz worked with HARP personnel on the development of statistical analysis software for HARP (See HARP Publication No. 83-12).

b. At the request of CURLA, Dr. James Zimmerman visited during July 2-28, 1983 to help with insect identification and methodology for the entomology museum to be established at CURLA. He also assisted CURLA staff in the area of curriculum development.

c. Dr. Austin Haws, HARP TDY specialist in experiment station management, visited Honduras from August 27-September 15. During his stay, he worked with personnel of the Guaymas experiment station, CURLA, La

Masica, Danli, and the experiment station in Catacamas, Olancho. A final draft of his report and recommendations is in preparation.

4. Other visitors

Dr. Ellis W. Huddleston, HARP's Director, Dr. Jack Booth, NMSU Plant Pathologist, and Dr. Steve Thomas, NMSU Nematologist, visited the project during July 18-31. Drs. Booth and Thomas, both on BIFAD funding, spent about a week observing diseases and nematode problems and HARP on-farm trials in Yoro, Cuyamel and La Masica. Dr. Huddleston accompanied them on most of these trips and held several meetings with USAID, MNR personnel, and HARP team.

During August 7-18, Dr. John Clemmons, President of NMSU Board of Regents, Dr. Harold Matteson and Dr. John Owens visited Honduras. They held meetings with USAID and MNR personnel in Tegucigalpa, visited HARP on-farm research trials in Yoro, Cuyamel, and La Masica, and visited CURLA to develop an agreement for long term NMSU-CURLA cooperation in various activities.

Mr. Gordon Dean a graduate student from NMSU who worked in Honduras (Yoro Vally area) from July 2 - August 6, 1983 collecting information concerning the agricultural practices of indigenous groups in the Yoro Valley, was assisted. The information collected

will provide the basis for a Ph. D. dissertation proposal for more extensive research in the Yoro Vally. When completed, this study will provide HARP with more insight into the farming systems of the Yoro Valley.

5. Other Meetings

a. Dr. John Clemmons and Dr. Harold Matteson

(1) August 10 - Ing. Miguel Bonilla, Minister of Natural Resources, Ing. Roberto Larios, Director DAR #3, and Ing. Gerardo Reyes, Assistant Chief DIA, to discuss the implementation of HARP.

(2) August 15 - Ing. Adan Bonilla, Director DIA, Ing. Gerado Reyes, and Honduran team members of HARP.

(3) August 15 - USAID Director, Antonio Cuaterucci, USAID personnel associated with HARP, and the U.S. Charge d'affaires.

(4) August 16 - Ing. Miguel Bonilla

(5) August 16 - Dr. Soto, Rector of the National University of Honduras.

b. USAID Washington, Research Fact-Finding Team

HARP expatriate team members met with a fact-finding team from USAID Washington to discuss problems encountered by HARP, research needs, and priorities for agricultural research in Honduras, and the institutionalization of agricultural research in Honduras.

c. At the request of DIA, Ing. Mario Bustamonte participated in the VI Annual Meeting of Plant Protection held in Cancun, Mexico.

d. Two HARP Honduran team members attended various sessions of the Fourth Course on OFR held by CIMMYT in La Ceiba.

### III. ACTIVITIES PLANNED FOR THE FOLLOWING QUARTER

- A. CONTINUE TO IMPROVE COMMUNICATIONS WITH THE USAID AND MNR.
- B. COMPLETE THE POSTRERA PLANTING SEASON PLAN OF WORK AND MONITOR ITS IMPLEMENTATION IN DIFFERENT AREAS COVERED BY HARP.
- C. HARVESTING FIELD PLOTS IN YORO, GUAYMAS, OMONITA, CUYAMEL, AND LA MASICA.
- D. DATA SUMMARIZATION, ANALYSIS, AND PREPARATION OF ANNUAL REPORT AND RECOMMENDATIONS.
- E. USAID PROJECT EVALUATION.
- F. CONTINUE MEETINGS WITH CURLA STAFF IN THE DEVELOPMENT OF TEACHING AND RESEARCH PROGRAMS IN THE HARP SPECIALITY AREAS.
- G. MONITOR SPECIFIC NEEDS AND PROBLEMS RELATED TO HARP ACTIVITIES IN DIFFERENT AREAS COVERED BY HARP.
- H. CONTINUE TO COORDINATE ACTIVITIES OF HARP TDY AND NMSU/BIFAD INVOLVEMENT IN DIFFERENT SPECIALITIES.

IV. PROGRESS AND CONSTRAINTS TO PROGRESS TOWARD ACCOMPLISHMENT OF GOALS AND OBJECTIVES.

A. PROGRESS

The CID/NMSU/HARP has established the following goals: (1) to assist MNR in the development of FSR and technical methodologies that may be used to improve the economic welfare of farmers who operate small and medium sized farming operations through increased productivity of rice, corn, and beans in the target areas of the project, and (2) to assist MNR in the strengthening of institutional and personnel capabilities to conceptualize and carry out research activities to support FSR programs in Honduras. To accomplish these goals, HARP established the following objectives and has made progress to date as follows.

1. Assist the multi-disciplinary on-farm research teams in the Department of Yoro to expand their on-farm research programs.
  - a. Continued the program to collect and assimilate information concerning the farming systems of the Yoro area.
  - b. Continued to monitor experiments which were initiated during Quarter II.
  - c. Planned corn drying experiment for corn harvest during Quarter IV.

- d. Participated in two two-day meetings with MNR personnel to plan OFR activities for the 1983 postrera bean production season in Yoro.
  - e. Discussed a formal encuesta which was approved. HARP and MNR personnel will develop a survey document and conduct the data collection.
  - f. Began work to collate and summarize information collected in earlier sondeos conducted in Yoro.
2. Identify training needs and implement training programs that meet the needs of the FSR teams in Yoro.
- a. General Weed Control Workshop - July 5-7.
  - b. Integrated Pest Management Course - September 5-9.
  - c. Soil Conservation Workshop in Yoro - September 19-20.
  - d. Soil Fertility Workshop - September 26-29
  - e. Scheduled workshop to explain the DIA and PNEA agreement of technical cooperation and the philosophy and methodology of FSR.
3. Strengthen, where appropriate, Guaymas Agricultural Experiment Station efforts to support on-farm FSR.

Dr. Austin Haws, HARP TDY specialist in experiment station management, conducted an extensive study of experiment station programs, activities, management, administration, and needs. His findings and recommendations will be published in a HARP publication and distributed to MNR.

4. Offer technical assistance to MNR research and extension groups in other areas of Honduras.

a. As part of his visit Dr. Austin Haws, HARP TDY specialist in experiment station management, visited the experiment stations at Comayagua, Danli, and Catacamas.

b. Conducted the following courses which were attended by MNR personnel from all regions of Honduras:

(1) General Weed Control Course - July 5-7.

(2) Integrated Pest Management Course - September 5-9.

(3) Soil Fertility Workshop - September 26-29.

5. Deliver program results to the extension service.

Conducted field day to familiarize extension personnel with the OFR program being conducted in La Masica area.

The participation of extension personnel in the on-going programs of HARP in the various research areas insures that program results are immediately available to the extension personnel of those areas.

6. Increase MNR capabilities in the Northern and Atlantic Costal Regions to analyze and synthesize existing unpublished data.

Data from an agronomic experiment conducted at the JFK School of Agriculture were analyzed on the HARP

computer facilities and the results returned to the researcher. Cooperative use of the new computer facilities which have been established at CURLA was encouraged and preliminary agreements made.

7. Assist CURLA to establish their soils laboratory, establish computer facilities, and strengthen research and teaching procedures in entomology, weed science, soil fertility, and agricultural economics.

a. Dr. John Clemmons, President of the NMSU Board of Regents, and Dr. Harold Matteson, Director of the Center for International Programs at NMSU, visited CURLA to discuss cooperative programs. A draft copy of a memorandum of agreement for cooperation was presented to Dr. Clemmons by Ing. Soto, Director of CURLA. The memorandum was taken to NMSU for study and discussion. If approved, this agreement could be used to amplify and improve programs between CURLA and NMSU.

b. Completed revisions of evaluation of the agricultural economics curriculum at CURLA. A draft document has been returned to NMSU for editing and reproduction. A Spanish edition will be prepared upon completion of the English version.

c. Additional computer equipment for CURLA was received by HARP. Due to difficulties in clearing part of the equipment through customs, the equipment was not delivered to CURLA during this quarter. However, the

required forms have been obtained and clearance and delivery should take place in early October.

8. Assist MNR in developing long-range plans for FSR programs.

a. An Agricultural policy paper, Agricultural Policy Paper No. 1: Policy for Agricultural Research, was completed and submitted to USAID Tegucigalpa and NMSU for review and approval prior to publication and distribution.

9. Evaluate program progress

a. The visit of Dr. John Clemmons and Dr. Harold Matteson, resulted in several meetings with MNR, DIA, PNEA, and USAID personnel at the regional and national level. These meetings resulted in the identification of problems in the following areas:

(1) lack of historical documentation in MNR concerning HARP, (2) differences in philosophies with respect to the implementation of FSR and OFR, and (3) general communication. Appropriate documents--RFTP, Technical Proposal, reports, etc--were exchanged, meetings scheduled, and procedures established to correct the existing problems and to minimize the potential for future occurrences.

b. The integration of HARP into the on-going MNR/DIA/PNEA program of OFR continues to impede the

efforts of HARP to implement a program of FSR as defined in the technical proposal.

B. CONSTRAINTS

1. Administration

a. USAID

In general the administrative problems encountered in the first and second quarters of 1983 have been rectified. However, it has not been possible to establish a system of regularly scheduled meetings between HARP/CID administrative personnel in Honduras and HARP/USAID administrative personnel.

b. MNR

The advisory committee which was planned for implementation in San Pedro Sula, DAR #3, has not been organized. This has hampered the coordination of HARP and MNR activities within DAR #3. However, some progress was made when Ing. Francisca de Escoto was named as regional enlace coordinator on September 26, 1983.

c. CID/NMSU

No significant problems were encountered during this quarter.

2. Personnel

Two personnel problems were encountered during this quarter:

a. The Honduran team members and staff of HARP which are paid by MNR continued to encounter salary payment difficulties. However, by mid-September, this problem appeared to be resolved as the individuals involved began to receive their backpay.

b. The need for additional staff to assist in HARP activities continued to be a problem during this quarter. However, on August 29, four students from CURLA were hired as field staff for HARP. They were located as follows:

(1) Ing. Roxsana Cristina Alvarex - Cuyamel  
and Guaymas/Omonita.

(2) Sta. Mary Ann Herrera Dean - Yoro.

(3) Sr. Jose Manuel Figueroa - Yoro.

(4) Sr. Orlando Benjamin Alvarado- Cuyamel.

c. The volume of reports and correspondence required by all agencies to which HARP must report has resulted in severe delays in the completion of written materials. HARP secretaries are currently working at 100 percent capacity. Additional secretarial help is required to meet the current needs of HARP and will be addressed during HARP budget amendment negotiations.

3. Physical Facilities

a. HARP continues to be without photocopy facilities. This results in significant expenditures which are not provided for in the HARP budget.

b. Approval has been secured for a telephone line for HARP, but the line has not been installed.

c. The microcomputer facility of HARP has been used heavily for word processing needs. This creates use conflicts with the development of data analysis materials and the training of the HARP team members for data analysis. This conflict will become more acute as the harvest season arrives and data become available for analysis. Request has been made for USAID approval to purchase a second unit which would have word processing as its primary function and data analysis backup capability as a secondary function. The need for this backup capability was illustrated during the six week period in which the microcomputer required service which necessitated its return to the U.S.

d. Office furniture is still needed but has been requested from the MNR for purchase with ESF funds.

e. Research supplies continue to be limited, but these needs will be met if the request for purchase from ESF funds is honored.

4. Transportation

a. Since mid-July, at least one of the four vehicles belonging to HARP has been restricted to local use only. This has resulted from a need for repairs and the lack of replacement parts in Honduras for 1983 model Chevrolets. Although the current procedure of ordering parts through NMSU results in delays, a satisfactory alternative has not been found. Based upon needs to date, it would have been difficult to anticipate replacement part needs, and to maintain a stock of parts would be prohibitively expensive.

b. Repair and service of the vehicles assigned to HARP by MNR continue to be a problem.

V. RECOMMENDATIONS

A. TRAINING

HARP needs to evaluate and reconsider the training activities in which it participates. There seems to be an overabundance of training programs scheduled throughout the MNR and DIA systems. These courses range from one to five days in length. During this quarter, HARP has been directly responsible for three such courses and has participated in others. These

courses have, for the most part, had little or no direct connection with the HARP contract. Given that the large number of HARP research plots limits the time available for other activities, HARP should only participate in training activities pertaining to FSR and HARP activities.

B. ADDITIONAL TECHNICAL ASSISTANCE

It is recommended that HARP take a more critical approach to the requests for and approval of BIFAD activities conducted as a result of HARP's activities in Honduras. Indiscriminate use of the BIFAD funds may result in the inefficient use of limited resources.

C. IMPROVED MANAGEMENT PROCEDURES

1. An agenda(s) for regular meetings among HARP, USAID, and MNR needs to be established. The current system of meeting only when there is a problem or crisis creates a negative atmosphere for conducting HARP business. HARP appears to have only problems and to raise only negative issues.

2. Care must be exercised to insure the continued flow of information from HARP to MNR and USAID and vice versa. The information and communication problems which were discussed and addressed in IV.A.9.a.(1) must be totally corrected and future occurrences must be prevented.