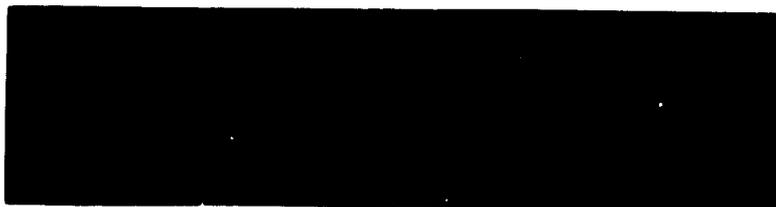


Farming Systems Support Project

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EVALUATION OF
HONDURAS AGRICULTURAL RESEARCH PROJECT
CID/NMSU CONTRACT 522-0139-C-00-2059

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EXECUTIVE SUMMARY

The stated purpose of the Agricultural Research Project (No. 522-0139) is to assist the Government of Honduras (GOH) to expand its agricultural research service within the Ministry of Natural Resources (MRN), making it more responsive to the technological needs of small and medium size independent and agrarian reform farmers. The Project began in October 1978 as a host country contract with direct funding to the GOH National Program for Agricultural Research (PNIA, now DIA). Momentum for the Project faltered by the end of 1980 because of political and economic conditions in Honduras.

In October 1982 another phase of the Project began with the signing of a technical assistance (TA) Contract with the Consortium for International Development and its lead institution, New Mexico State University (CID/NMSU). The 18 month Contract (522-0139-C-00-2059) was funded by unused Project funds and provided four TA people for 18 months each and additional short term TA support.

This evaluation is the first for the HARP (Honduras Agricultural Research Project) but the third of four scheduled for the overarching Project. The other two evaluations were in February 1980 and April 1981, while this one occurs almost three years later in January 1984.

Briefly, the objectives of this evaluation are to:

- 1) Assess the achievements and weaknesses of the present Contract;
- 2) Place these achievements and weaknesses in the context of the Project and the current host country situation;
- 3) Determine if the Contract should be extended for six months; and
- 4) Recommend any corrective measures for the remainder of the Contract.

The six Contract-specific problems which have arisen during 1983-1984, and the evaluation team recommendations for resolving them, are listed below.

Problem 1: Commitment and Coordination

Original flaws in Contract design and understanding of how expatriate technical assistance personnel could fit into the present DIA, including the flaw of designing a farming systems research (FSR) support project to last only 18 or 24 months, have caused on-going problems. Corresponding confusion about the organizational placement of HARP in relation to DIA, USAID, and NMSU has contributed to a feeling among Hondurans that HARP is not part of the Ministry. This has been a concern from the beginning of the

Contract.

Recommendation 1. Agreement be reached among DIA, the MRN Regional Director, USAID, and HARP personnel on (a) the scope of work for the remainder of the HARP contract (to July, 1984); (b) salaries for Honduran HARP personnel; (c) relationships among, and lines of authority between, DIA, HARP and the MRN regional director; and (d) a possible Contract extension of six months.

Problem 2: Confusion over scope of work.

At least three changes in the project's scope of work have occurred, all initiated either by USAID or DIA. HARP has had little choice but to accept such changes or leave.

Recommendation 2. During the final six months of the Contract, HARP should (a) drastically cut back on direct field research; (b) concentrate on analysis of existing data; (c) stress technical support for Honduran researchers; and (d) emphasize training.

Problem 3: Financial security and planning.

Uncertainty about the salaries of Honduran HARP personnel has consistently been an important financial issue. Other financial uncertainties have adversely affected HARP training efforts and the discussed six-month Contract extension.

Recommendation 3. If agreements have not been reached, and sufficient USAID funding for training and for the extension assured in writing before the end of February 1984, HARP should terminate at the end of its scheduled 18 months.

Problem 4: Research methodology.

There has been a recurrent and consistent problem of methodological arguments about divergent definitions of "farming systems research" and "on farm research". Another problem has been disagreements over the extent of leadership HARP expatriates should provide. These problems have contributed to the organizational confusion and to a structural opposition between the Honduran and the NMSU staffs of HARP.

Recommendation 4. The HARP team should schedule regular weekly meetings in which the only topic of discussion is research methodology. As a team HARP should examine its 1983 experiences, as well as other relevant Honduras information, to identify methodological problems. The Honduran HARP personnel should act as discussion leaders, with expatriate counterparts listening to learn what the Hondurans consider the most important methodological constraints in the Honduran context. Six specific discussion topics are outlined in the body of the evaluation report (section V, Issues and Recommendations).

Problem 5: USAID involvement in agricultural research.
USAID is involved in a number of existing and proposed projects in the general area of agricultural research and development. There is no obvious program unifying these projects nor clarifying their relationship with FSR.

Recommendation 5: USAID should commission an evaluation of its agricultural research and development efforts. The evaluation team believes that a major component of these efforts should be continued support for FSR. Thus it is important to have FSSP participation in this broad evaluation. GOH commitment, Honduran professional leadership, and relationships between any proposed institute and FSR are all issues which must be considered.

Problem 6: Report writing, intended audience, and Project visitors.

Quarterly reports from HARP have been delayed, fragmented and a source of dissatisfaction for MRN because they seem to identify HARP as solely a CID/NMSU endeavor. The flow of TDY consultants and other visitors to and from HARP, San Pedro Sula and CURLA puzzles and irritates many Hondurans. They wonder about the source of funding for such activities and the amount of time such visits take away from research priorities.

Recommendation 6. (a) Harp should refocus its attention on the quarterly and annual reports which are required by the Contract to be in Spanish. These reports need to be more rapidly distributed to both USAID and DIA. (b) All project sponsors, including DIA, USAID, CID/NMSU and all HARP personnel, need to all be properly identified on all reports and all cover pages. All sponsors need to approve changes in scopes of work. (c) The HARP quarterly reports should include the quarterly reports of all HARP personnel. (d) All short term (TDY) personnel should leave behind draft reports in Spanish before leaving Honduras. They should also have a personal meeting with the HARP COP and the DIA Director (at his discretion). Final reports should also be in Spanish and should arrive in Honduras within one month of departure. (e) DIA and MRN Regional Director should be informed in advance of all CID or NMSU administrative or technical people who will be visiting Honduras and HARP. This will minimize misunderstanding as well as emphasize that HARP time and vehicles are accountable to both USAID and DIA/MRN.

Additional specific evaluation team recommendations are listed in the body of the report, especially in the Outputs section (IV) and the Issues and Recommendations section (V).

I. INTRODUCTION

The purpose of the Agricultural Research Project (number 522-0139, hereafter called the Project) is to assist the Government of Honduras to expand its agricultural research service within the Ministry of Natural Resources (Ministerio de Recursos Naturales or MRN) and make it more responsive to the technological needs of small and medium size independent and agrarian reform farmers. Grant funds for a total of \$1,900,000 were made available starting in 1978 to provide technical assistance and supplemental logistical support. The National Agricultural Research Program (Programa Nacional de Investigaciones Agricolas or PNIA) had been largely oriented toward on-station and single commodity research before 1977. At that time it began a modest experiment in multidisciplinary farm-based research in order to seek a more effective approach to understanding farmer problems and to utilizing their on-station research capabilities to help solve those problems. The USAID Project was developed to strengthen and extend this new PNIA approach. The Project was signed in October 1978.

In October 1982 USAID and the Consortium for International Development (CID) signed an Agricultural Research Contract (number 522-0139-C-00-2059-00, hereafter called the Contract) for the purpose of continuing the work of the original Project. New Mexico State University (NMSU) is the lead institution for CID in the Contract. A total of \$1,085,099 of grant funds remained from the original Project budget, and this was the basis for the USAID financial support for the Contract. Although envisioned in the Request for Technical Proposals as a two year involvement, the final Contract was for eighteen months (January 1983 July 1984). The work funded by this Contract is entitled the Honduras Agricultural Research Project (HARP). The term Project will be used in this evaluation only to refer to the overarching Project that began in 1978, while HARP will be used to refer to the present more limited work covered by the Contract.

In September 1983 PNIA was renamed the Department of Agricultural Research (Departamento de Investigaciones Agricolas or DIA). This report will use only DIA (not PNIA) in references.

Objective of the Evaluation

This evaluation is the first for the Contract but the third of four scheduled for the Project. The first evaluation was in February 1980, nineteen months after the Project began and approximately midway through the

anticipated life of the Project. The second evaluation occurred fourteen months later in April 1981. This evaluation takes place in January 1984, almost three years after the preceding evaluation and only one year after the Contract technical assistance team arrived in Honduras.

The objective of this evaluation is to assess the achievements and weaknesses of HARP and the present Contract, place them in perspective of the Project and the current situation in Honduras, recommend whether the Contract should be extended for another six months to complete the originally scheduled two years, and recommend corrective measures in order to more effectively utilize the remaining time and funding.

Evaluation Team Methodology

A four person team was assembled by the USAID-funded Farming Systems Support Project (FSSP) to conduct this evaluation. The team spent one day at the University of Florida, the lead institution for FSSP, being briefed on the Project before leaving for Honduras, and the team spent approximately one week in Honduras. An itinerary for the team is included as Appendix A. In Tegucigalpa the team was briefed by USAID/Honduras and officials from DIA and in San Pedro Sula by HARP. The team also met with research and extension staff, farmers and administrators in Region 2 (Comayagua), Region 3 (San Pedro, Guaymas and Yoro), and Region 4 (La Ceiba and La Masica). A list of individuals and agencies contacted appears as Appendix B. Background documents were acquired at all these briefings, and a list of these appears as Appendix C.

A preliminary report was presented twice in San Pedro Sula to representatives of MRR (including the leadership of DIA), USAID/Honduras, the entire HARP team, and other interested agencies (see Appendix D). Their suggestions and comments have been incorporated into the final report wherever appropriate.

Key Issues to be Addressed

Some of the problems encountered in 1983-1984 by HARP are not new and were listed in the earlier evaluations. (Refer to those documents for details.) These problems include:

- 1) coordination difficulties when a national research program is administered through decentralized regional directorates, which control most of the research budget;
- 2) personnel crises and rapid turnover of personnel

because research personnel receive low salaries and often encounter delays in reimbursement for travel expenses;

- 3) frictions between Honduran and foreign technicians; and
- 4) planning deficiencies caused by personnel turnover and fiscal uncertainty.

Other problems have been generated as a result of the present Contract. These received more attention in this evaluation and are the bases for our recommendations. They include:

- 1) original flaws in Contract design and understanding of how expatriate technical assistance personnel would/could fit into the present DIA, including the flaw of designing a farming systems research (FSR) support project for only 18 or 24 months;
- 2) confusion concerning the organizational placement of HARP in relation to DIA, USAID, and NMSU, which has contributed to a feeling among the Hondurans inside and outside HARP that it is not part of the Ministry;
- 3) confusion concerning the mandate and goals for HARP, which was complicated by the inclusion of responsibilities for the University Center (Centro Universitario Regional para el Litoral Atlantico or CURLA) near La Ceiba;
- 4) divergent definitions of "farming systems research" and "on farm research" and methodological arguments which have contributed to the organizational confusion and contributed to a structural opposition between Honduran professionals and the NMSU staff of HARP;
- 5) planning difficulties due to the ambiguous availability of other USAID funds for counterpart salaries, to support increased in-service training, and to extend HARP for six more months through December 1984; and
- 6) divergent opinions on the focus of HARP (technical support, research and training activities) during the few (5 or 11 depending on the extension) remaining months of the Contract.

II. BACKGROUND OF PROJECT AND HARP

Pre-Project Activities

On-farm, systems-oriented, multidisciplinary research began in Honduras in 1977, almost two years before this Project was initiated. A Honduran plant pathologist returned from postgraduate training to work in PNIA (now DIA) and attracted to Honduras several colleagues in other disciplines who had graduated with him. They had conducted coordinated dissertation research in Mexico with CIMMYT as an experiment in multidisciplinary agricultural education, and in Honduras they established a new approach to agricultural research. Together with other highly qualified technicians they formed a multidisciplinary team and the foundation of the Project.

There were difficulties at the beginning, some of which continue until the present day. The creation and staffing of a Central Unit for Technical Support (Unidad Nacional de Apoyo Tecnico or UNAT) was one issue. Another was opposition to the new approach by research staff who were familiar with and identified with the earlier mode of research. These researchers utilized another mode of on-farm trials which were single commodity oriented, utilized complex designs similar to those used on research stations, and were intended to test ecological adaptability only (usually focusing on varietal selection). This reflected an earlier mode of research at CIMMYT and showed how conflicts among national researchers may reflect changes in what they were taught by outsiders. It also expresses the continuing strong influence in Honduras of CIMMYT and other regional or international research centers.

Beginning of the Project

A report entitled Agricultural Research in Honduras was prepared in January 1978 by DIA staff with collaboration from IADS. This report identified four basic factors or elements of strategy that needed attention in order to strengthen DIA and increase DIA's impact on farmers' yields and national production. The four were:

- 1) farmer-focused, integrated multidisciplinary approach to research and technology transfer;
- 2) a strong national experiment station network;
- 3) manpower development; and
- 4) closer linkages with domestic and external institutions.

This report was the foundation for designing the Project which was approved in August 1978. The Project

focused on institutionalizing the approach noted in the above paragraph and developing a long-term national research strategy, while other donors were to focus on strengthening the agricultural research stations, including infrastructure and long-term training. The specific objective of the Project was to establish multidisciplinary, on-farm, systems-oriented research teams in all seven regions of Honduras, with some assistance also being provided to a small farmer technologies program. USAID funds were primarily for long and short-term technical assistance with smaller funding being provided for participant and in-service training, vehicles and equipment, etc. The Honduran government funds supported counterpart personnel, etc.

During 1979 and 1980 the Project was quite successful, and the DIA developed in many ways. Several important documents describe organizational and functional changes in DIA and directions in which the research establishment was heading: Documento Basico (1979), Guia Metodologica para Conduccion de Ensayos de Finca (1979), and Funcionamiento del Programa Nacional de Investigacion Agropecuaria y su Integracion en un Sistema Tecnologico (1980). This last report continues to be used as a fundamental statement of where agricultural research should be heading in Honduras. The first evaluation of the Project was also conducted in early 1980 (February) when the Project was seen to be continuing quite successfully.

The 1981 Project Evaluation

This picture had changed by the end of 1980. The Honduran and expatriate professionals who had been key personnel in the introduction of the new mode of research had left or were leaving, and they were not being replaced by people with the same commitment. Political and economic developments in Honduras made it difficult to continue; there were drastic cuts in DIA's budget for operating expenses; and there was little indication that the national government supported the research program.

The April 1981 evaluation addressed these issues while recognizing the significant progress that had been made in several areas by the DIA with its Project (and other) support. Five major recommendations were made by the evaluation team.

The five recommendations were based on the assumption that the Government of Honduras (GOH) was committed to allocate enough resources to MRN to enable it to conduct effective agricultural research. Sufficient resources would allow DIA to increase the number of direct hire contracted professional positions to at least 70. GOH commitment would

also be demonstrated by developing and approving a longer term plan of action for DIA and by signing personnel contracts. The evaluation team pointed out that decisions on their recommendations had to be made then (1981) in order to maintain the momentum of the research in progress. The five recommendations were as follows:

1) Project funds should be used to provide logistical support to on-farm researchers. These Project funds would complement, not replace, DIA commitments. Therefore, the upper limit of logistical support would be the amount committed by DIA.

2) Project funds should also be used to contract long-term technical assistance personnel for UNAT. UNAT needed to be reorganized. At least six disciplines should be represented, including plant pathology, entomology, agricultural economics, biometrics, soil management and weed control. Honduran technicians should receive preference in filling these positions, but expatriates should be hired if Hondurans were not available. The salaries for Honduran and non-Honduran personnel should be comparable, based of course on training and experience. This technical assistance needed to be supported so Project funds should complement (not exceed) GOH contributions for logistical support, and vehicles and equipment needed to be procured. These UNAT technicians should prepare an in-service training program, and Project funds should be used to cover the entire cost of the training program.

3) Some laboratory equipment should be purchased for plant breeders. The rice and maize breeders at Guaymas Research Station were noted as an example since their lack of equipment impeded their work. Short-term technical assistance would be needed to identify the equipment needed.

4) Short-term technical assistance personnel should be hired to assist DIA in developing new computer programs and in acquiring appropriate computer equipment. The plant breeders at San Pedro Sula were already using a microcomputer but needed some technical assistance. In addition, computer facilities should be established in Region 2 (Comayagua), and this also required technical assistance.

5) DIA should be required by MRN to prepare better plans by the end of August 1981, and long-term technical assistance personnel should be brought in to design a planning system and help prepare long-, medium- and short-term plans. It was noted that the easiest way to get that technical assistance might be through subcontracting an international center such as CATIE, CIMMYT or CIAT.

The second recommendation was emphasized above because

it was the basis for the present HARP Contract. Long-term technical assistance was needed for a strengthened and reorganized UNAT. Those technical advisors needed Project funding for their salaries, logistical support, equipment and vehicles as well as for an intensive in-service training program.

It is significant that the recommendation specifically noted the preference that well-qualified Hondurans be hired as the technical assistance personnel. If there was to be a mix of Hondurans and expatriates then salaries should be comparable, based on training and experience. These guidelines were included because there was a documented history of DIA reluctance to contract expatriate advisors.

The documented problem in dealing with expatriate advisors helps explain some of HARP's difficulties during 1983. The evaluation noted that the reluctance stemmed from administrative problems which make planning for and supervising technical assistance difficult and from a sense of jealousy over the disparity in salaries between expatriates and national employees. Two advisors, noted the evaluation, left the Project prior to completion of their contracts and cited administrative problems, poor management of their work, and personal conflicts with Honduran counterparts as the reasons for early termination. A third advisor's work was delayed in starting for months because the DIA administration was unable to coordinate his field work.

The evaluation noted that Honduran government employees and contractors were paid little and sporadically, and that this accounted for their jealousy. Until conditions were such that a reasonable number of well-qualified Honduran research professionals felt secure in their own long-term commitments to the research program, the evaluation team thought that research planning and results would be largely ineffective.

Fundamentally, the evaluation pointed to the degree of commitment by COH to the MNR and DIA. Commitment translates into adequate and stable funding. That funding improves professional salaries, permits long-term planning, lowers the turnover of personnel and facilitates the interaction of Honduran and expatriate advisors. The evaluation team did not find the commitment.

III. ESTABLISHMENT OF HARP CONTRACT

HARP was designed and implemented in a series of ill-coordinated stages. The first stage was the 1981 evaluation described above. The second stage was the USAID Request for Technical Assistance (RFTP) and the CID/NMSU response. The third stage was a change in scope initiated by DIA. The fourth stage was the Contract itself. The fifth stage was a USAID-initiated change in scope after the CID/NMSU team arrived in Honduras, and the sixth stage was a subsequent series of DIA-initiated changes in scope of work.

RFTP

The RFTP was issued by USAID in March 1982, a year after the 1981 evaluation. The RFTP clearly saw this Contract as a continuation of the Project and a response to needs pointed out in the 1981 evaluation. Four long term (two years each) and four short-term (two months each) technical assistance advisors were needed. The long term advisors were being contracted as part of the UNAT, which was to be reorganized. Individual members of UNAT, including Hondurans, would be placed in specific regions where their skills were most needed, but all members would meet regularly as a unit (UNAT) to deal with problems on a national level, plan for the training needs of DIA personnel, and advise the DIA director on program requirements.

Long Term Advisors

1. Weed Control Specialist
2. Agricultural Economist
3. Entomologist
4. Soil Fertility Specialist

Short Term Areas

1. Research Station Management
2. Statistics
3. Communications
4. Germplasm Conservation

These long-term advisors were not specifically identified as the core of UNAT since the RFTP noted that Hondurans (of whatever professional level) would also be part of UNAT, but a significant change had occurred between the 1981 evaluation and the 1982 RFTP. The evaluation expressed a preference that Hondurans be hired for UNAT using Project funds. This was expressed clearly in the evaluation summary which condensed the second recommendation to read as follows:

" to reorganize the Technical Support Unit of the Project, utilizing A.I.D. grant funds to contract highly-qualified Honduran personnel."

The RFTP was not requesting Honduran professionals and was, due to the usual RFTP distribution and response channels, essentially stating that these four key professionals were to be expatriates. Four expatriate professionals as a Contract team with its Chief of Party, supporting funds and short term

advisors, will, in most cases, form an independent unit. That unit negotiates with other units but is not easily incorporated or digested unless the other unit is well-organized and very dynamic. UNAT itself was no longer a functioning unit and needed organization and staffing, so UNAT was not going to digest the Contract team. The most probable structural outcome would be that the Contract team would be the core and effective leadership of UNAT, and Honduran professionals in UNAT would come to be counterparts or secondary.

This probable outcome is not clearly recognized in the RFTP which implies that Contract advisors were to form part of a larger (Honduran and expatriate) multidisciplinary UNAT. Leadership of UNAT, whether Honduran or expatriate, was never mentioned. DIA itself suffers from a lack of funding, planning and staffing continuity, as noted in the 1981 evaluation, so another question is whether DIA itself could easily digest the Contract team. In any event the RFTP set up a large, independent, expatriate unit within DIA. DIA leadership apparently objected to the change from Honduran to expatriate technical advisors so the change was obviously initiated by USAID. It is not clear in 1984 whether it was appreciated in 1981-1982 that the personnel change meant a change in UNAT leadership (Honduran to expatriate) and continuing structural conflicts.

Another shortcoming in the RFTP is its short life (two years). The Project was seen as a longer-term response. The 1981 evaluation again reiterated needs for long-term planning and long-term stability and training for Honduran personnel. Instead of addressing these fundamental long-term issues, the RFTP utilized unused Project funds in a short-term response to a need specified in the evaluation for technical assistance. USAID perceived this two-year contract as part of a longer-term effort (the Project) beginning in 1978. Although this is formally true, the RFTP called for a new administrative institution which needed to hire new people as advisors, who then needed to acquaint themselves with the Honduran environment and their co-workers before starting serious work. As individuals, and as a multidisciplinary team, the new expatriates and the Hondurans who welcome them must take some time learning about and adjusting to each other and formulating work plans.

Two years is too short for effective technical assistance work of this kind, especially when the combined UNAT is supposed to be planning and advising about farming systems research, an evolving approach to smallholder research and extension. When technical advisors have clear, discrete, technically-specific tasks to perform, they may be able to accomplish this in a short time. More time is needed when these advisors are involved in institution-building and multidisciplinary team activities which involve group planning and leadership.

CID/NMSU was one of the U.S.A. institutions which responded to the RFTP, and in mid-1982 they were selected by USAID and the

Honduran government to administer the Contract. This part of the process operated smoothly.

Restriction to Yoro Valley

Another important shift occurred even before the Contract was signed. DIA requested that the expatriate team focus or restrict their activities to the Yoro Valley in Region 3 (San Pedro). Instead of operating at a national level as advisors and trainers, the CID/NMSU team and their Honduran counterparts were to be a regional (or valley) multidisciplinary team. The reasons for this change are not clear. The perceived importance of developing the Yoro Valley may have been primary; dissatisfaction with the expatriate nature of the team may have been important. In any event, this was only the first of several DIA-initiated changes, which reflects the practical impact of the absence of good, long-term planning. This change was not reflected in the Contract.

At some time in 1982 another change occurred, although this is also not recorded in the Contract. The usual dynamics of technical assistance projects operated in changing the residential locations of the expatriate advisors so that they all lived in San Pedro Sula. Contract advisors were expected in the RFTP to work part or most of the time as individual specialists supporting designated DIA technical programs, and only part of the time (on a regular basis) as members of an integrated UNAT team. One of the advisors was to live in San Pedro Sula, two in either San Pedro or La Ceiba, and one in either San Pedro or Danli. Expatriates who are contracted together from a single sponsoring organization usually prefer to live together, if it is at all possible. In this way they provide each other mutual support, both professionally and personally, and increase their ease of access to contracted resources. The formation of a team as a unit (whether Honduran or expatriate) is much easier with common residence, as is the administration of the Contract.

HARP Contract

The major change in the Contract, which was signed in October 1982, was a reduction in time to 18 months due to insufficient USAID funding. Although there was apparently a strong indication at that time that more funds would become available later to extend the Contract to the original 24 months, this was an early indication of the continuing funding difficulties encountered by HARP. If two years is too short, 18 months is a ridiculously short time for such assistance.

Inclusion of CURLA Responsibilities

Upon arrival in Honduras in January 1983 the CID/NMSU staff was confronted with another USAID-instituted change. They were to devote ten percent of their time to technical support and teaching at the Centro Universitario Regional del Litoral

Atlantico (CURLA) in La Ceiba (Region 4). There is no indication that this change was discussed with or agreed to by DIA.

This change was significant in two ways. One, the hierarchical position of HARP was totally confused. If HARP was a joint USAID-MRN endeavor, then how could HARP be assigned by USAID to work outside of MRN? CURLA falls under another Ministry. How could USAID unilaterally change the mandate of UNAT (or a major component of it)? What power or authority does DIA have here? The second point concerns time and energy. A too-short contract was intentionally cut even more by assigning 10 per cent of staff time to other responsibilities. It commonly occurs that available technical personnel are asked to add on other tasks. These requests need to be balanced against the priorities assigned to existing program responsibilities and the availability of surplus time. Who was safeguarding DIA and HARP priorities?

Subsequent Changes in Leadership and Scope

During the first months of 1983 the CID/NMSU staff were orienting themselves. The Honduran staff, now defined as one-on-one counterparts to the CID/NMSU staff, were being hired and were moving to San Pedro. The DIA director resigned to take the counterpart position of agricultural economist, and after a few weeks of interim leadership a new director took office in April. (He continued in office during the evaluation). The former DIA director became the Assistant Chief of Party for HARP and head of the Honduran team.

Several changes in the HARP scope-of-work also occurred during these early months. First, the scope was changed back to the original national level in which HARP personnel would provide technical support to existing multidisciplinary teams in Olancho, Danli, Choluteca and La Ceiba, as well as working directly in the Yoro Valley and CURLA. Then the scope was restricted once again to a focus on several sites in two northern regions (3 and 4). The sites were: Yoro Valley, Cuyamel, La Masica, the Guaymas Agricultural Research Station and CURLA. This has been amended subsequently to include some responsibility for a national training program.

Hierarchical Ambiguity

This Contract has suffered through too many changes of direction. The reasons for these changes are not clear but many of the consequences are. One major consequence is that many Hondurans remain confused about the goals and status of HARP. The evaluation team was asked by DIA and MRN officials at national, regional and local levels to explain to them how HARP related to DIA. Any clear mandate and status were lost in the shuffling of HARP from part of UNAT, national level, to regional and CURLA responsibilities, and back and forth again.

The 1981 evaluation was congruent with the original Project. Those five recommendations in 1981 grew from the understanding that Hondurans were evolving a better method of smallholder-oriented agricultural research, and it made sense for USAID to support and encourage that evolution. Major technical, economic and sociopolitical problem areas were also identified, and it was recognized that long term institution-building solutions were needed, and that critical commitments from GOH were needed for any significant progress.

That recognition was lost by the time the RFTP was written. The stress on GOH commitment was absent, as was the stress on Honduran professional leadership. Subsequent changes recognize this. The real thrust of the Project was to institutionalize better methods of agricultural research. To institutionalize methods means to make them part of the normal, ongoing routine. Part of that process was institutionalizing UNAT, making that specialized technical support and training unit part of the regular DIA bureaucracy so that it continued as part of MRN after Project assistance ended. Honduran technical leadership and GOH funding commitments are essential for institutionalization to succeed.

The HARP Contract deviates from that primary Project direction. The Contract provides short term (18 months) expatriate technical assistance with Honduran counterparts to expatriate technical leadership. Other USAID contracts or possible projects, such as the autonomous research institute, may continue part of the Project emphases, but this Contract does not. The clear connection between UNAT and the HARP Contract team of seven or eight professionals has been lost. None of the HARP professionals occupy regular DIA line positions. There are no institutionalized positions so no one is really counterparting anyone. Counterparting refers to the situation where one person has a regular position and is advised by someone. In HARP no one has a regular position: all are paid, directly or indirectly, by USAID, and none have established DIA jobs.

UNAT does not really exist except on paper, so there is no obvious bureaucratic home for HARP. Although HARP works and is housed in region 3 (San Pedro Sula) it does not answer to the authority of the MRN Regional Director. Although HARP is apparently an MRN group it works semi-autonomously, publishes reports that do not credit MRN or DIA as a sponsor, deals with non-MRN institutions such as CURLA, and even has a strong international connection through NRSU's multiple relationships with Honduras.

Closely related to the issue of hierarchical position is the issue of coordination. As far as the MRN Regional Director for San Pedro Sula is concerned, HARP was sent to the region with no advance notice and no additional budgetary provisions for counterparts and office space. Moreover, in terms of coordination, the Director feels that despite the good personal relations that he has with HARP staff, and in particular with the

Chief of Party, a great deal of HARP activities have been coordinated at the national level without prior consultation with the Regional Office. This is considered a problem since the Regional Office is, after all, in charge of implementing activities in the area. Again, the answer to this problem lies in the proper definition of where HARP fits and to whom it is responsible.

This is complicated even more by NMSU's control over the HARP Contract. NMSU has established a strong long term interest in Honduras and expects a great deal of local assistance from CID/NMSU HARP personnel (especially the Chief of Party) in facilitating that interest, particularly by hosting and transporting delegations from NMSU when they visit Honduras. Administrative directions from NMSU also delayed the proper transmission of quarterly reports in Spanish to DIA. The reports had to be written first in English and cleared by the NMSU Project Director before they could be translated and released in Honduras.

This absence of clear lines of command, jurisdiction and mandate almost always results in dissatisfaction and frustration. Bureaucratic superiors at national and regional levels are frustrated since they cannot direct resources they supposedly control. Observers at all levels attribute responsibilities and resources to such a Contract team (whether or not they actually are true) and criticize the team if these expectations are not met. The net result of this undefined activity has been an expressed dissatisfaction on the part of MRN, the primary client of HARP, with the work done by HARP thus far. It is clear that, even in the short run, the issue of HARP's position within DIA and relative to the regions must be resolved.

Impact on Work Plans

The series of design changes has had a detrimental impact on the HARP team's work in Honduras. First of all, the changes delayed and consequently fragmented the drafting of work plans. Second, the formation of an integrated team of Hondurans and expatriates was delayed and impeded. Third, the question of research methodology and assignment of leadership responsibility for modifying the accepted methods was never settled. Fourth, the work of administering the Contract was made more frustrating and time-consuming with a consequent diversion of the scarce time of technical assistance personnel away from technical duties towards administrative duties.

One of the first responsibilities of any technical assistance person is to draft and receive approval of work plans. These plans set out the purpose of assistance and a schedule of events. Approval of these by all of the sponsors and superiors clarifies what duties are expected and serves as a guideline for all involved. HARP team members originally tried to prepare a work plan for the life of the Contract (18 or 24 months), but the

plan was not accepted. Pressed by time because the team wanted to get trials in the ground, the team decided to submit more limited work plans that only covered the first (primera) cropping season of 1983. The primera plan was accepted, and work began. The next work plan only covered the second (postrera) cropping season, and now the team is finishing the preparation of a work plan to carry them through the expected end of Contract in 1984.

The HARP team's desire to get to work is understandable and commendable. All of the team members are energetic and concerned about working in the field. They were pressed by time since the Contract was too short, the comprehensive work plan had been rejected, and the time to plant for primera was approaching, so they compromised by preparing a work plan limited to the primera season. That was a mistake.

Without faulting the team members' energy and desire to get working, that was the time to wait until all of the sponsors and team members agreed on a comprehensive plan. The sponsors (USAID, DIA and CID/NMSU) should have insisted that they reach some agreement about what the HARP team was supposed to do in Honduras during the 18 months of the Contract. Accepting piecemeal plans (season by season) postponed indefinitely the need for sponsors and team to reach some agreement on the purpose and utility of this Contract.

The Project is an institution-building one. The 1981 evaluation recognized one of the major faults of DIA was in planning. Planning problems are apparent in the several DIA-initiated shifts of direction for the Contract and in the failure to coordinate better with the MRN Regional Director before the HARP team arrived in San Pedro. The Contract cooperated in a planning failure when short-term work plans were prepared and used as the basis for beginning field work. Questions of purpose, leadership and lines of authority should have been settled then. The issue of whether or not HARP was UNAT needed to be determined since this affected allocation of time to research, technical support, training and planning.

Team Formation

NMSU is to be commended for rapidly fielding a technically well-qualified team, three of whom were noted in the original CID/NMSU response to RFTP. The Contract was signed in October 1982, and the CID/NMSU team arrived in January 1983. Honduran team members were then hired in early 1983 so that the complement of eight professionals (two in each of four technical specialties) was filled in reasonably good time.

Team formation, the melding of these eight individuals into a coordinated team, has not gone as smoothly as team hiring. In general, team members express mutual respect for each other's technical competence, and there is easy interaction among members. The problems appear to stem from the general ambiguity

about HARP's purpose and function, financial difficulties encountered by Honduran team members, and disagreements about research methodology.

Some disagreement and discord are to be expected in any team of eight professionals, but they are more easily managed (sometimes more successfully than others) if the team has an understood and agreed purpose and work plan. The ill-coordinated design and implementation of this Contract, including the failure to reach an agreement on an 18-month work plan, hampered team formation and left too much room for individual interpretations and disagreements, particularly concerning HARP's role in modifying customary patterns of research.

Money for salaries and travel reimbursements for all HARP personnel comes from USAID. The CID/NMSU personnel receive their monies directly from NMSU which receives it from USAID. The Honduran personnel receive their monies directly from DIA which receives it from MRN which receives it from the Finance Ministry which receives it from USAID. CID/NMSU personnel have had no problems in getting paid, whereas Honduran personnel have faced consistent delays of several months in receiving their salaries, have never received any reimbursement for travel expenses, and were informed in late January 1984 there was no more money for their salaries. The USAID Honduras Mission assured the evaluation team that sufficient funds had been transferred to GOH and that any problems were internal to GOH.

These financial concerns preoccupy the Hondurans in HARP, require a lot of administrative attention by the Hondurans and by the Chief of Party, and inhibit or preclude the Hondurans' willingness to incur travel costs. Not only does this differential willingness to travel separate the team but the differential treatment given to Hondurans and non-Hondurans creates and accentuates a division along nationalistic lines. This is an old problem noted in the 1981 evaluation, and it reflects a continuing lack of commitment to DIA by GOH. The Contract cannot support a team that is separated between expatriates who receive salaries and Hondurans who do not. This is diametrically opposed to the major purpose and thrust of the Project that gave rise to this Contract.

Research Methodology

Honduras and Hondurans have been pioneers in establishing and developing a research methodology that is now being called farming systems research (FSR). The basic purpose of this new approach is to make research more productive in actually changing farmers' production practices. Its basic idea is that research that remains on stations, because it does not work for farmers, is an expensive luxury that many countries cannot afford.

The original Project was to support Honduras' pioneering efforts in developing this more effective research methodology,

and anyone who worked in DIA (then PNIA) before 1977 may attest to the changes that have occurred since then. This Contract was to continue the evolution of a more effective set of methods by providing technical support to existing regional teams, by upgrading the technical levels of DIA staff through in-service training, and by participating in planning.

Although there is now a growing literature about FSR and a growing consensus about how to define it, the pioneers (scientists and programs) were working before that. Their work emphasized moving trials away from research stations and onto farmers' fields because stations were special environments, and treatments and varieties that worked best on stations may not have been the best on farmers' fields. The pioneering work also emphasized basic food crops because cultivation of these crops was the primary concern of most farmers; this meant a change from the earlier stress on export crops. Pioneers in FSR were concerned that farmers adopt research recommendations. For adoption to occur the recommended technologies had to be appropriate and profitable in some sense. In order to improve their understanding of what was appropriate, these pioneers emphasized multidisciplinary cooperation among technical and social scientists and increased communication among researchers, extensionists and farmers.

These general concerns and emphases in pioneering FSR situations were constrained by practical institutional issues. How could changes be made in existing national (and international) research units? As in any institutional process, theoretical and practical proposals for changes were adapted to the particular country, locality and/or agency. This evolutionary process of changing research methodology proceeded further and faster in some countries than in others, and the emerging research institutions varied from one country to another.

Honduras was one of the pioneering countries in the 1970s in evolving its indigenous form of FSR, and the DIA focus reflects that pioneering work: on-farm (not just on-station), multidisciplinary research on basic grains using farmer surveys (sondeos) as guidelines. As in any field of research, scientists are always searching for better methods. For example, the Enlace Tecnológico (Technological Coordination) program from Olancho has been recommended for adoption throughout the country because IIRN thinks this will improve its work. In Honduras as in all other countries, agricultural and social scientists are aware that their established methods may need improving, but everyone working in Honduras must recognize the major changes that have already occurred in the last decade.

Honduran citizens have taken some of the leadership positions in initiating and directing these changes in research methodology. In Honduras as in all countries, however, there are great practical advantages to admixing expatriate and national scientific talents. In the U.S.A., a country noted for its

agricultural sciences and universities, there are also many expatriate scientists at work, and their talents and contributions are appreciated.

The questions and disagreements concerning HARP and FSR appear to center on the degree of leadership that CID/NMSU staff are supposed to exercise and on whether and how much the existing DIA methodology needs to be revised. The existing Honduran methodology will be called Pioneering FSR (or PFSR) in this report to distinguish it from the FSR methodology described in current literature.

The CID/NMSU team obviously believes that it was contracted by USAID and DIA to provide technical leadership as well as support, and the CID/NMSU agricultural economist (rather than the team as a whole) was primarily responsible for providing that leadership. At the same time that team believes that there are serious weaknesses in PFSR (which HARP reports refer to as on-farm research or OFR), and it should be replaced by FSR. These beliefs are well documented in work plans and quarterly reports.

Any DIA position on this issue is not documented in reports but only in actions. Obviously there is a strong resistance on the part of Hondurans in DIA, including at least the majority of those employed by HARP, to CID/NMSU assuming the leadership in implementing FSR and modifying PFSR. There appears to be a similarly strong resistance to any modification of PFSR but this is not as clear (note the Enlace modification) and is muddled by the leadership controversy.

Once again the planning failure by USAID, DIA and CID/NMSU to clarify the design and mandate of HARP in the beginning continues to confuse the operation of this Contract. The Contract does not specify any leadership in defining or instituting FSR; it requests support and guidance from CID/NMSU professionals as part of a larger UNAT. Although in fact HARP is UNAT, and CID/NMSU leads HARP, another fact is that DIA has consistently attempted to maintain and assert Honduran leadership. It is quite possible that DIA-initiated changes in the scope of work for HARP were designed to thwart what DIA leadership saw as undesirable CID/NMSU leadership.

These professional disagreements over methodology have been personified by the agricultural economists since the CID/NMSU economist was the one responsible for initiating FSR and the Honduran economist headed the Honduran team (and was previously the National Director of DIA). These disagreements over PFSR-FSR were primarily responsible for the USAID decision not to renew the Honduran economists' work contract when it expired at the end of December 1983, and the dissatisfaction over this PFSR-FSR issue apparently led to the departure from Honduras of the CID/NMSU economist at approximately the same time.

The disagreements are more fundamental than simply

personality conflicts (though they may have been a factor) as demonstrated by the fact that the disagreement and opposition of Honduran and CID/NMSU team members continues even though the two original economists have departed.

Administration

Even in the best of circumstances the Chief of Party (COP) has to devote a lot of time to administrative duties. These responsibilities bleed time and energy away from the technical assignments that provide the terms of reference under which the COP is recruited and hired. In this case additional complications, confusions and distance from the capital city greatly expanded the administrative tasks.

Although the COP was supposed to function as an entomologist, he estimates that 75 percent of his time has been spent on administration, and approximately 50 percent of the CID/NMSU economist's time was similarly occupied. The evaluation team did not estimate the amount of time spent by the Assistant COP (the Honduran agricultural economist) or other team members on HARP administrative matters.

The administration of this Contract has been made more difficult and time-consuming by the series of changes in Contract design and scope of work, by the continuing disagreements over research methodology, and by the other continuing problems of Honduran salaries and reimbursements, etc., referred to earlier in this report. Additional administrative burdens have been placed upon the COP in this Contract because of an extensive flow of visitors from NMSU to Honduras. This is a complex issue because NMSU's large scale involvement in Honduras, particularly with HARP and with CURLA, works to the benefit of Honduras in many ways. Focusing specifically upon administrative responsibilities of CID/NMSU HARP personnel, however, the extensive flow of visitors means there is a diversion of scarce time away from their specific HARP technical responsibilities.

This final comment is general and not meant to apply specifically to this Contract. Any evaluation has to take into account the necessary preoccupation with administration. It is surprising that USAID contracts do not recognize the essential importance of administration and automatically provide for administrative assistance or specifically set out terms of reference for the COP. This Contract, like many others, only requests technical people for technical work as if COP responsibilities were inconsequential. In many instances this results in a COP assuming that the technical work is what counts and trying to minimize administrative tasks. In other instances this results in a technically qualified COP who does not really have the necessary administrative skills or experience.

IV. OUTPUTS

Outputs are reported here first by individual discipline, (through p.38) then for CURLA (p.39) and under a general category called "Dissemination" (pp. 40-41). The Contract states individual responsibilities but none for the team as a unit or for FSR. This is covered to some extent by requesting that the final report of the Contract delineate accomplishments in terms of the objectives of the Project.

Entomology

1. HARP personnel who are involved with this activity are:

Dr. Charles Ward, Ph.D. (CID Entomologist) and
Ing. Norberto Urbina, M.S. (Honduran Entomologist).

2. Specific responsibilities are stated in the USAID/CID Contract as:

- (a) Evaluate with DIA personnel on a national basis the pests that reduce crop production and establish methods for their control.
- (b) Plan, program, and carry out with DIA research activities designed to provide pest control recommendations.
- (c) Analyze and publish research results.
- (d) Train DIA personnel in entomological research.
- (e) Participate in meetings, workshops, and seminars that benefit the program.

3. CURLA activities were added to those specific responsibilities mandated in the Contract. The following additional activities in entomology were added by USAID request:

- (a) Assist with the formation of an insect reference collection with the participation of one or two taxonomists.
- (b) Cooperate in the design of research on the identification of the principal parasites of *Spodoptera frugiperda* (FAW) and *Heliothis zea* (CEW) and the effect of weed control on parasite populations.
- (c) Help plan cooperative research projects between MRN and CURLA.
- (d) Help establish a cooperative agreement between the Ministry Department of Plant Protection and the entomology section of CURLA.
- (e) Assist with the revision and amplification of the entomology equipment list being ordered through USAID.

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4. Locations of research, teaching, and extension:

- (a) Guaymas Experiment Station
- (b) Yoro Valley
- (c) Cuyamel
- (d) La Masica
- (e) La Ceiba
- (f) CURLA

5. Scope of activities carried out:

(a) Guaymas Experiment Station

Initial work was begun with monitoring for Fall Army Worm (FAW) and Corn Ear Worm (CEW) with pheromone traps and developing monitoring techniques for the major pests on corn and rice. Helped in developing a reference collection of identified pests and beneficial arthropods. Began to develop economic threshold data and control measures on major pests where these data were not available. Cooperated in evaluation of entomological aspects of FSR. Entomological research reported as being started at this experiment station included three rice experiments. Pheromone traps were installed to collect population data on FAW and CEW.

(b) Yoro Valley

On-farm tests in the primera season in Yoro only involved three soil insect control experiments in corn, one bean slug insect control experiment, two bean unreplicated trials, and surveys to determine insects present on corn and beans and to design experiments to test control measures. Pheromone traps were set up for FAW and CEW.

Corn plantings continued to be monitored during the second planting period to determine pests in the field and post harvest losses to determine the need for research on corn drying and metal bin storage. Major pests of beans were determined to be slugs, leaf hoppers, white flies, and bean weevils.

(c) Cuyamel

In Cuyamel problems of stored grain pests in seed rice caused plant stand problems in the field. Soil pests were also reported. A survey was initiated to determine pests involved. Pheromone traps for FAW and CEW were set up. Late season pests were stem borers, either the white rice stem borer or the sugar cane borer.

(d) La Masica

This area produces mostly rice and corn. Pest problems appear to be the same as in Cuyamel, so no experiments were conducted there during the early season. Pheromone traps for FAW and CEW were placed.

(e) CURLA

Several activities were initiated with CURLA entomologists during the first quarter to identify their needs. These activities included the items listed in the

work plan.

(1) Assisted in developing a new equipment list of materials needed for an entomological museum. Arranged for an Insect Taxonomist to come for one month to help organize the initial stages of the museum.

(2) A field study and plots were planted to study principal parasites on FAW and CEW and to study effects of weeds in corn on parasite populations.

(3) Planned cooperative studies with MRN on-farm research and Sanidad, including preliminary surveys for other parasites of FAW and CEW as well as pheromone trapping studies of regional levels of these pests.

(4) Set up and conducted a graduate student study to determine the efficiency of pheromone traps to predict larval populations of FAW and CEW which included a literature search and acquisition of supplies.

(5) Assisted in the purchase of the insect and book collection of the late Dr. Mankins for a 10-20 year loan to the Smithsonian Institution for safe keeping.

(f) Training

An Integrated Pest Management Short Course was held in September 5-9, 1983 in Comayagua, organized jointly by DIA and DEA (extension) for MRN research and extension workers: 19 people attended.

6. Summary and Evaluation:

HARP has taken on a very ambitious program in entomological research and extension and has begun work on several lines of research in several areas of the country. This was attempted in spite of the limited duration of this contract. The NMSU/HARP Chief of Party was also the only Ph.D. entomologist and was chiefly responsible for the entomological research. His best estimate is that 75 percent of his time has been utilized in administration and an additional 10 percent in CURLA activities, which leaves only 15 percent of his time to devote to HARP research. The Honduran counterpart is a well-trained, experienced research worker with a M.S. degree who is capable of doing good research with proper support.

The plan was to have ten field experiments and four pheromone trap monitoring locations. Because of demands on the Chief of Party's time for other activities during the period and a lack of materials and adequate help, fewer experiments should have been started. Only four of the ten planned experiments were actually conducted. Of the four pheromone trap sites only three were successfully conducted. Soil insect control experiments on corn were successful with 90 percent stand increase in test treatments. This information should be extended to farmers.

7. Recommendations:

(a) More time should be devoted to field research by both entomologists.

(b) Experiments should be simpler, easier to

manage, executed to give quick and applicable results with focus on the most serious pest problems.

- (c) More time must be spent on training Honduran workers to leave a competent staff in MRN and to minimize mistakes and failures at the farm level.
- (d) Survey and identification of other pests and their importance and control, i.e., viruses, fungal and bacterial diseases, nematodes, rodents and birds.

Agricultural Economics

1. HARP personnel who are involved with this activity are:

Dr. Wilmer Harper, Ph.D. (CID Agricultural Economist)
Ing. Antonio Silva, M.S. (Honduran Agricultural Economist)
Dr. Michael Bertelsen, Ph.D. (CID Agricultural Economist)

Both Dr. Harper and Ing. Silva left HARP at the end of December 1983, and only Dr. Bertelsen was in this section during the time of the evaluation. Rapid personnel turnover has been a continuing constraint to DIA effectiveness and is regrettable in any technical assistance contract.

2. Specific responsibilities are stated in the USAID/CID Contract as:

- (a) Identify research priorities through the economic analysis of selected regions.
- (b) Cooperate with and train DIA researchers in relevant economic methods.
- (c) Develop, in cooperation with DIA personnel, a methodology for the testing of new technologies.
- (d) Evaluate and publish the potential economic impact of promising technologies.
- (e) Develop training programs for DIA personnel.
- (f) Participate in meetings, workshops, and seminars which may benefit the program.

3. The CID/NMSU economist anticipated other activities as noted in the Technical Proposal that CID/NMSU sent in response to the RFTP and in 1983 work plans:

- (a) Develop and administer one or more surveys which would provide the basis for HARP ESP activities.
- (b) Collect detailed farm records.

4. The following CURIA activities were added to those

Contract responsibilities for the CID/NMSU economist:

- (a) Assist in establishing computer facilities, organizing a computer and statistics center, and training staff to operate computers.
- (b) Assist in analyzing and revising agricultural economics curriculum.
- (c) Participate in economic analysis of faculty and student research results.
- (d) Present lectures and seminars to students.

5. Other general backstopping or support activities for HARP (considered by the evaluation team to be administrative duties) were noted in 1983 work plans:

- (a) Install, maintain and service HARP microcomputer and word processing facilities.
- (b) Prepare data analysis programs for use on the HARP microcomputer.
- (c) Train research staff, the administrative assistant and office secretaries in using appropriate computer programs.

6. Scope of Activities carried out in 1983:

- (a) First quarter
 - (1) Get to know Honduran personnel.
 - (2) Initiate design of computer facilities at CURLA.
 - (3) Initiate collection of secondary data.
- (b) Second quarter
 - (1) Select computer hardware and software for CURLA.
 - (2) Set up some of the computer equipment at CURLA and HARP.
 - (3) Evaluate CURLA's curriculum for agricultural economics.
 - (4) Assist team members in definition of work plan.
- (c) Third quarter
 - (1) Examine previous sondeos (farming systems rapid surveys).
 - (2) Write paper on Agricultural Systems Policy.
 - (3) Provide technical assistance to CURLA.
- (d) Fourth quarter
 - (1) Assist in the development and use of surveys for Guaymas, Progreso and La Masica.
 - (2) Continue activities in CURLA.
 - (3) Initiate record keeping operations in 12 farms.
 - (4) Initiate computer analysis of field data.

7. Summary and Evaluation:

As envisioned by the DIA Director, the Contract scope was feasible even for the short life of the Contract if all efforts were focused on a small group of people, namely the regional

research directors in the area covered by the Contract and the HARP Honduran professional counterparts. Consistent with the assessment of previous evaluations of this Project, the above tasks proved to be too ambitious given the relative scarcity of counterpart funds and the difficulties in integrating and administering a team of expatriate and Honduran professionals. These difficulties seemed most apparent in the field of economics. In addition, there has been a dilution of effort because of administrative and CURLA duties that were unforeseen in the original Contract.

USAID requested that HARP help CURLA establish its data management system, revise the agricultural economics curriculum and give short courses in agricultural economics. All these activities, USAID estimated, would only take 10 percent of the economist's time. Work at CURLA is very attractive to HARP CID/NMSU staff for a number of reasons, among which is the direct long-term involvement of NMSU. Since MRN had substantial difficulties in assembling a counterpart team, communications and hierarchies were not well-established between HARP and MRN, and the FSR effort was curtailed. The CID/NMSU economist became more involved in administrative matters and in CURLA related work, substantially reducing the time allocated to field work. It is unfortunate that the disagreements over FSR led to that time going into CURLA and HARP administration rather than into identification and evaluation of promising technologies.

The HARP team did an excellent job of setting up the microcomputer facilities at CURLA. Setting up a data processing system is a time consuming operation which requires dedication and constant supervision. This task undoubtedly took much more than the 10 percent of time allocated by HARP to this activity. As a consequence, activities related to MRN research were significantly curtailed, creating a feeling among some DIA personnel and the Regional Director that the MRN budget for HARP support funding was being utilized to support CURLA'S activities. This feeling was aggravated by the fact that the Regional Director in San Pedro Sula did not participate at all in the conception of the project nor in the selection of the expatriate team. In essence, CURLA-related activities were interpreted by some as a "free ride" for another institution on MRN money.

Agricultural economics is considered to be one of the most important components of technology design. As part of the technical assistance package, DIA requested specific assistance in this field in order to train field technicians in the economic assessment of their on-farm results. The scope of work outlined in the RFTP, however, did not specify very clearly as to the complexity of the methods to be taught, leaving the decision to the HARP team. The results obtained during the past year, as reported in HARP quarterly reports, indicate that most of the efforts in agricultural economics went to the generation of a farm registry sheet, the implementation of a microcomputer system

and microcomputer training at CURLA, and in administrative duties.

The economics of small farms is very complex since it deals with the proper identification of the required incentives for technology adoption by the small farmer. This identification process includes the proper assessment of institutional constraints, such as credit markets and price controls, as well as the costs and benefits of suggested alternative technologies, and the socioeconomic forces influencing the decision process of the farmer.

Assessment is time consuming, even though it may be shortened by the utilization of information which may be provided by local research and development teams (Agencias de Desarrollo) or by a few cooperating farmers, but this process is essential. Only after the set of incentives and constraints is identified can one make assumptions about the types of technology which will be of interest to farmers.

Judging from HARP reports it is evident that some effort has been made to identify the above set of incentives. This effort, however, has been concentrated in the design and implementation of farm records as related to production, with little or no information being gathered with respect to the set of constraints.

In the long run, agricultural economics research should be redirected toward a systematic collection of data aimed to create a typical farm for each recommendation domain. This may serve as a model for the ex-ante evaluation and testing of new technologies, the ex-ante assessment of different farm policies, and the analysis of different farming alternatives. This typical farm should include a financial portrait of the farm, why and how, as well as the sources of potential failure, such as price or yield variation, credit requirements, and managerial ability of the farmer.

The Contract ends in a few months. In the short time remaining, the economist should concentrate on the economic analysis of existing data, partial budgeting of alternative technologies to identify the best potential recommendations, and training DIA staff in the collection and analysis of economic data from agronomic trials.

Presently, most of the items listed in the Contract scope of work have not been properly addressed. Unless the economic analysis of field trials is used for training and is integrated with Sondeo data for comprehensive analysis, the scope of work will remain unfulfilled.

Weed Control

1. HARP personnel who are involved with this activity are:
Dr. Dinesh Sharma, Ph.D. (CID Weed Scientist)
Ing. Mario Bustamante, M.S. (Honduran Weed Scientist).
2. Specific responsibilities are stated in the USAID/CID Contract as:
 - (a) Collaborate with DIA in carrying out practical field agricultural research.
 - (b) In cooperation with DIA technical personnel, review, analyze and orient DIA's weed control research program.
 - (c) Provide support to on-farm research teams on weed control.
 - (d) Help identify program equipment and personnel requirements.
 - (e) Carry out with DIA technical personnel an evaluation of the most severe weed species and their area of distribution, and establish appropriate control measures.
 - (f) Analyze and publish research results.
 - (g) Train DIA personnel in weed control.
 - (h) Participate in meetings, seminars, and workshops that benefit the program.
3. Specific responsibilities added in the 1983 plan of work (primera) are:

Activities at CURLA will be limited to providing technical guidance to a student doing his thesis on weed control in corn, helping establish a herbarium, and teaching (when and if needed) specific topics in weed control.
4. Specific responsibilities added in the 1983 plan of work (postrera) are:

Work initiated on the collection of weeds in different areas in Honduras will be continued with the specimens identified and stored at CURLA. Efforts will be made to persuade the Phytotechnica Department to acquire or build cabinets for proper storage of the specimens.
5. Location of research, extension, and teaching:
 - (a) Yoro area - Three different experiments were conducted with a total of nine locations during the primera season, and four different experiments at two locations each during the postrera season.
 - (b) Cuyamel area - Six different experiments were conducted with a total of 10 different locations during the primera season, and three experiments at one location each during the postrera season.
 - (c) La Masica area - Four experiments at two locations each during the primera season, and six experiments were conducted with a total of 14 locations during

the postrera season.

- (d) Guaymas/Omomita experiment station - Three experiments and a total of four locations during the primera season, and two experiments and a total of three locations during the postrera season.
- (e) CURLA - One experiment was conducted plus consultation with faculty and students about weed control experiments and weed species collection.

6. Scope of activities carried out:

(a) Experiment station tests

The weed control team was the only component of the HARP team conducting field trials at the Guaymas and Omonita stations. This was by mutual agreement with the MRN staff at the station. The tests involved studies on rice and corn and comparing chemicals, rates of chemicals or volumes of chemicals or water.

(b) On-farm research tests

The majority of the more than 68 experiments focused on chemical methods of weed control. However, several experiments examined combinations of chemicals plus minimum tillage, rotations, or cultural methods using a green manure crop (Musa sp). These experiments did not appear to be any different than the experiments that were being conducted on the experiment stations.

(c) Extension/research training of MRN staff

Five formal training activities occurred including:

- (1) Trip to three regions (Danli, Choluteca and Olancho).
- (2) A weed control course conducted in San Pedro Sula with 38 extension and research staff from the third region on July 5-7.
- (3) An ESR philosophy discussion with extension and research staff of MRN on September 9.
- (4) A training session on weed control on September 27.
- (5) The aspects of weed control in a general session on bean production was covered during November 21-25.

(d) Publications useful to the MRN staff

One extension publication was prepared by Dr. Sharma entitled "Como prevenir la diseminacion de caminadora Rottboellia exaltata (L.) a otras areas en Honduras."

(e) CURLA

The weed science staff worked with the head of the plant science department in providing assistance to a student working on weed control in corn for his thesis. Assisted the plant science head in design and conduct of an experiment. Visited Escuela Agricola Pan Americana (EAP) and the University of Honduras at Tegucigalpa where large plant collections

are maintained. Weed collections planned for CURLA will be restricted to principal weeds of grain crops. Sharma estimated he devoted 10 percent of his time to CURLA.

7. Summary and evaluation of fulfillment of specific responsibilities:

There is ample evidence of a high level of respect for the HARP weed scientists and the recognition of weed control as a major constraint in crop production. The major desire of the Honduran MRN and CURLA staff visited was for even more contact and assistance from the HARP team.

Due to the very large number of experiments established and the lack of adequate supervision or understanding by some of the farmers upon whose land the plots were established, many of the tests were lost. The MRN staff at Yoro and La Masica were larger and better able to handle the number of experiments than was the case at Cuyamel where only one researcher and one extension person were located for most of the year.

- (a) There appears to be a close working relationship with DIA in carrying out practical field research.
- (b) The cooperative review, analysis, and orientation of DIA research can only begin as results of research data become available. Very little DIA-conducted weed control research exists because of the limited number of staff trained in weed science, especially in chemical control.
- (c) There is evidence of technical as well as logistical support by the HARP team of on-farm weed research conducted by MRN staff.
- (d) Some work has been done to identify appropriate equipment for field application of herbicides but there is no visible evidence of identifying program personnel needs.
- (e) There have been excellent efforts made toward identifying the most serious weed species. One publication has been prepared for publication as a Honduran extension bulletin. There are at least two or three other weeds requiring similar treatment.
- (f) The availability of field research results seems to be limited at this point.
- (g) Training of DIA personnel has occurred but, given the complexity of chemical weed control and the limited background of many of the DIA staff, greater emphasis should be placed on this component of the HARP team.
- (h) Good evidence exists that the HARP weed control team members have been active participants and have made major contributions to the on-farm research program of DIA.
- (i) The interaction at CURLA with faculty and students has been good. Failure to conduct classroom training is not the fault of the HARP weed control team.

8. Recommendations:

- (a) Based on the HARP team's field experience in yield losses due to weeds, a calculation should be made to further justify to the MRN the need for more staffing in the weed science area. Efforts should be made by the HARP team to identify personnel needs in the weed science area.
- (b) Commitments to CURLA should be kept to a minimum except as an effort to enhance the capacity of the CURLA staff to conduct weed research and to prepare students with an understanding of FSR or on-farm research.
- (c) HARP weed research team members should consider planning simple "planned demonstrations" that will be useful to the extension personnel for farmer field days and farmer experience with new treatments. These planned demonstrations should utilize only one or two treatments on the farmer's field and should involve eight to ten farmers. The HARP team has ample evidence available to select an herbicide treatment to apply to corn, rice, or beans, or a treatment for the control of Musa sp which will represent minimal risk to the farmer. Plots should be large enough so that bordered areas can be harvested for yield.

Soil Fertility

1. HARP personnel who are involved with this activity are:
Mr. James G. Walker, M.S. (CID Soil scientist)
Ing. Lidia de Ramos, M.S. (Honduran Soil Scientist).

2. Specific responsibilities are stated in the USAID/CID Contract as:

- (a) With cooperation of DIA personnel, identify, design or adapt a system for the evaluation of soil fertility.
- (b) Coordinate laboratory, greenhouse, and field soil fertility research and correlation of the results.
- (c) Design, plan, and carry out a soil fertility program that permits a constant flow of information from the laboratory and research station to the farmer.
- (d) Focus soil fertility research on maximizing economic returns rather than maximizing agronomic output.

3. Specific responsibilities added in the 1983 plan of work (primera) are:

- (a) All locations of soil fertility trials have the common objectives of calibrating the field responses of the crop with the nutrient level found in the soil, as determined by laboratory analyses of soil samples taken from each location.

- (b) Meetings with CURLA administracion and soils department staff determined that they should receive assistance in the following areas from the soil fertility specialists on the HARP team:
 - (1) Collaboration in soil calibration analysis using pot experiments.
 - (2) Assistance with the purchase of new equipment for the laboratory.
 - (3) Cooperation in field experiments with soil department staff.
 - (4) Contribution to new methods of analysis for soils according to the equipment that will be received.
 - (5) Assistance with special studies: forage legumes, soil acidity problems, and other soil chemistry problems.

4. Specific responsibilities added in the 1983 plan of work (postrera) are:

Sondeos conducted by DIA (including HARP) and DEA staff have shown the need for fertility studies on beans following corn in the Yoro area and on the ratoon crop of rice in the Cuyamel and La Masica regions. Information is needed regarding:

- (a) The effect of residual fertilizers in the soil on the postrera bean crop.
- (b) The effect of N, P, K, and plant densities on the postrera bean crop.
- (c) The effect on yield of the ratoon rice crop of various rates of applied nitrogen fertilizer.

5. Location of research, extension, and teaching:

- (a) Yoro area - three different tests at a total of ten test locations during the primera season, and two tests at four locations during the postrera.
- (b) Cuyamel area - two tests involving seven different locations during the primera season, and two tests at two locations during the postrera season.
- (c) La Masica area - two tests involving four locations during the primera, and four tests involving six locations during the postrera.
- (d) La Ceiba - CURLA. No field tests but consulted on greenhouse and laboratory work and involved in laboratory teaching.

6. Scope of activities carried out:

- (a) Experiment station tests:

No tests were conducted on experiment station sites.
- (b) On-farm research tests:

The majority of the fertility trials were simple factorial (2x3 or 2x4) experiments designed to explore N x P x K; variety x N x plant density; or N x variety x weed control interactions. A secondary set of trials was designed to evaluate fertilizer residual value for the postrera cropping season.
- (c) Extension/research training of MRR staff:

Formal training or workshops included the following

three in September:

- (1) September 9 - FSR philosophy and 'Enlace' relation.
- (2) September 19-20 - soil conservation at Yoro; 18 people attended.
- (3) September 26-29 - soil fertility at Comayagua; 18 NRN research and extension staff attended from throughout Honduras.
- (4) Various quarterly reports and staff comment refer to frequent informal training sessions as a part of daily activities occurring in conjunction with project work.

(d) CURLA activities

- (1) Assistance has been given in the revision of the soil laboratory equipment list being ordered by another USAID project for CURLA.
- (2) Consulted with three soil department staff members on proposed soil research projects.
- (3) Assisted students in conducting calibration trials for P and K extraction.
- (4) Assisted a faculty member in using the DRIS method for evaluation of soil fertility.
- (5) Approximately 25 percent of Ing. Lidia de Romas' time and approximately 10-15 percent of Mr. Walker's time was devoted to CURLA.

7. Summary and evaluation of fulfillment of specific responsibilities:

(a) per USAID/CID contract objectives:

- (1) No evidence of activity or plans directed toward identifying, designing or adapting a system for the evaluation of soil fertility that is easily identifiable, easy to manage and practical. This is a major undertaking and could easily take half of the staff members' time.
- (2) In terms of coordinating laboratory, greenhouse and field soil fertility research and correlating results, no data are available due to data processing problems but the level of work is adequate and on track. Work of Ing. Ramos has focused on greenhouse and laboratory work.
- (3) The design, planning, and conduct of research on soil fertility is at an appropriate level for the establishment of benchmark data. The number and complexity of the experiments is greater than needed for a short-term program without planning for continuation of the research beyond the duration of the HARP Contract. There is limited information generated by these complex experiments that can be used directly by small farmers.
- (4) Fertility levels used in the trials reviewed were at the level where one expects economic

returns rather than maximum agronomic returns.

- (b) 1983 plan of work (primera) objectives:
 - (1) Calibrating all field responses with laboratory soil nutrient analyses is very desirable, but must be viewed as a long-term project requiring well beyond the time frame of the HARP contract for completion.
 - (2) The responsibilities set forth for the soil fertility specialist at CURLA seem to have been started and/or are in various phases of completion with the exception of the special studies.

- (c) 1983 plan of work (postrera) objectives:
 - (1) Evaluating residual fertilizer effect left from the primera crop for the postrera crop was started but results were not available at this time. This is again a long-term project because the benefits are subject to seasonal and environmental variability which require multiple seasons to adequately evaluate.
 - (2) Trials to evaluate the effect of N, P, K and plant density on potrera beans and N rates on ratoon rice were established but data are unavailable at this time.

- (d) Evidence has been presented that cooperation of the HARP soil fertility group and the DIA staff in the Yoro and La Masica areas was very good. The staff at La Masica were very complementary about the interaction with the HARP staff although they indicated a need for more contact, especially at the administrative level. The MRN field staff felt they could ask for assistance when needed.

Work at Cuyamel was the least successful and can probably be related to the low level of DIA and extension staffing. Throughout most of the first year of activity only one researcher and one extension person were there.

8. Recommendations:

- (a) Activities initiated in 1983 were very ambitious. HARP research efforts are associated with activities that commonly are a part of long-term projects. A start must be made, but plans should be made to aid DIA in completing calibrating soils in the project area over an extended period to permit fertilizer recommendations to be based on soil analysis.
- (b) Efforts should be made to get data processed and summarized as quickly as possible to be shared with MRN staff and administrators.
- (c) Assist the MRN staff in establishing a procedure of publishing an annual summary of all soil fertility tests for broader information sharing among

- researchers and extension personnel, and as a means to preserve results for others to find and use in the future.
- (d) Many of the plots with 2x3 or 2x4 factorial designs were too complex to be useful to the Honduran extension staff for farmer field days. Thus some attempt should be made to coordinate some simplified one or two factor experiments (demonstrations) in the general area of the multiple factor studies.
 - (e) Develop MRN capacity to assume activities initiated by HARP so that these activities do not cease upon termination of Contract.
 - (f) Maintain a strong MRN training component in planned activities.

CURLA

1. HARP personnel who are involved with CURLA include:
 - Dr. Charles R. Ward (CID Entomologist)
 - Dr. Wilmer M. Harper (CID Agricultural Economist)
 - Dr. Dinesh Sharma (CID Weed Scientist)
 - Mr. James G. Walker (CID Soil Fertility Specialist)
 - Ing. Lidia de Ramos (Honduran Soil Fertility Specialist).

Short term personnel brought in to work with CURLA include:

- Dr. Melchor Ortiz (CID Statistician)
- Dr. James Zimmerman (CID Entomologist).
- Dr. Austin Haws (CID Experiment Station Management Specialist).

2. General responsibilities:

The 1983 Plan of Work (Primera) states that "at the request of USAID/Honduras HARP allocated ten percent of its total time to activities at CURLA. Activities will be conducted with the departments associated with the respective professional specialties of the HARP team. In addition, HARP will facilitate NMSU's BIFAD (Board for Food and Agricultural Development) activities at CURLA." The 1983 Plan of Work (Postrera) further states that "HARP will continue to foster the development of the computer and data analysis facility which was initiated at CURLA under HARP/NMSU/USAID auspices during the 1983 primera time."

Specific responsibilities assigned to the individual HARP Team members have been previously stated in the sections on individual disciplinary activities.

3. Evaluation of CURLA related activities:

- (a) Time commitment of HARP staff time has apparently exceeded the original agreed upon 10 percent.
- (b) Facilitating the NMSU/BIFAD activities has involved a substantial amount of HARP management time with substantial benefit to CURLA and NMSU but with a negative short-term impact on the MRN program

- related activities. There is a potential long-term benefit to MRN associated with the influx of better trained personnel coming out of CURLA in the future.
- (c) Participation of HARP team members has been unequal. Only one of the Honduran professionals has been actively involved at CURLA. Among the CID team members greatest involvement has been by the agricultural economist, followed by the soil fertility specialist and the weed control specialist. The entomologist could have spent more time but team leader duties prevented more time allocation. In total the HARP team spent an estimated 15 percent of their time at CURLA.
 - (d) A benefit of the association with CURLA has been the assistance of the CURLA staff in the conduct of some workshops prepared for the MRN staff.

4. Recommendations:

- (a) HARP should work toward integration of the research effort of CURLA staff with the basic research needs of MRN, i.e., foster a collaborative and complementary relationship between CURLA and MRN.
- (b) HARP should focus on faculty development seminars and workshops which will increase the CURLA research capabilities.
- (c) The CURLA faculty should be invited to participate in MRN training workshops and short courses.
- (d) The HARP staff should provide formal training for the CURLA faculty on FSR and/or on-farm research methodology and philosophy.
- (e) HARP should minimize direct instruction to students, not because this is undesirable but because of the time demands.

Dissemination

1. General responsibilities and personnel involvement:

All personnel in HARP (and in the DIA and DEA staff) have a responsibility to assist in dissemination of research results from research (DIA) to DEA agents in the field and ultimately to the end users (farmers). This is identified as steps or phases (7) and (8) of the FSR activities in the technical plans of work for HARP as follows:

(7) Extension of appropriate techniques and technology throughout the target area; and

(8) Diffusion of technology which has been demonstrated to farmers to be appropriate and acceptable to the recommendation domain within the target area.

2. Summary and Evaluation:

Because of the short duration of the HARP Contract these two phases cannot be activated and have been deleted from the HARP plan

of work. It is recommended by HARP that phases (7) and (8) be carried out by the permanent MRN research and extension staff working in the target area. This is important but not sufficient.

This plan loses sight of the constant dissemination of research results and techniques in all FSR experiments through informal discussions, farmer participation, neighbor observation and the "ripple effect". This may be the most effective means of dissemination of well-executed on-farm research and is a major argument for increasing farmer active participation in on-farm research.

However, this does not preclude the necessity for keeping good records, collating and analyzing results, and publishing them in a form that can be readily used and understood by farmers. Problems of research results not being available from previous years is a severe constraint to increased farmer utilization of research findings.

3. Recommendations:

- (a) A mechanism must be developed for following up at the end of this Contract so that all data are collected, analyzed, put into proper form and published.
- (b) There should be a regional and national summary of all research data annually, at the completion of an experiment and at the termination or transfer of a research worker who was responsible for an experiment or field of research.
- (c) Field days and seminars should continue to be an integral part of all FSR and extension programs.

V. ISSUES AND RECOMMENDATIONS

Commitment and Coordination

Recommendations are usually based on the assumption that the sponsors are committed to allocate sufficient resources in order to accomplish the goals of the project or contract. In this case, however, the evaluation team is not convinced that GOH and USAID have made serious commitments to this Contract nor that GOH has made a serious commitment to DIA or the Project in general.

One way to express commitment is through adequate and stable funding. GOH has never apparently made nor carried through this financial commitment to the Project or the Contract. The Contract proofs for this lie in delayed and sporadic salary payments, travel reimbursements, etc. For the Project the reader is referred to the 1981 evaluation. Although USAID has committed adequate funding to the Project, the Contract has suffered through uncertain funding for training programs and for a possible extension from 18 to the originally scheduled 24 months.

Another way to express commitment is through the dedication of adequate time and attention by planners and administrators. The failure by USAID and GOH to coordinate and clarify the scope and direction of work by HARP has been evident throughout this report. The sponsors have not taken the time to plan and coordinate together. Regular meetings have not been held in which appropriate USAID, DIA, other MRN and HARP personnel could effect this coordination and clear up some of the confusion. A major continuing problem has been delays and non-arrival of salaries and reimbursements for Honduran personnel. The sponsors have not solved this problem, and part of the reason is the lack of time and attention given to it. The insignificance of this Contract to USAID was also demonstrated by the lack of participation in the evaluation, including the absence of the Project Officer from the meetings in San Pedro Sula at which the preliminary report of the evaluation team was presented.

The evaluation team has no magic solution for this lack of commitment, but plans for the remaining months of this Contract must recognize the lack of past commitment and the probable absence of such commitment in the future. The Project and Contract were designed to build and strengthen Honduran agricultural research institutions. This effort is done without GOH commitment, DIA leadership, and the participation and leadership of Honduran scientists.

Recommendation No. 1: Meetings be scheduled immediately in which DIA leadership, the MRN Regional Director for Region 3 (San Pedro Sula), the USAID Project Officer and/or Agricultural Development Officer, the HARP COP and the HARP Assistant COP (head of the Honduran component) meet together to reach some agreement on the following issues:

- (a) Scope and plan of work for the remaining months of the Harp Contract which expires in July 1984.
- (b) Salaries for Hondurans members of HARP.
- (c) Relationship and lines of authority among DIA, the Regional Director and HARP.
- (d) Possible extension of the Contract for another six months past July, including scope and plan of work for those added months.

Any decision reached in these meetings should be put in writing (Spanish) and distributed to all of the participants. These immediate meetings are, for all intents and purposes, emergency meetings to discuss and settle issues that are of immediate critical importance. As these issues are resolved, temporarily or permanently, these emergency meetings should evolve into regularly scheduled meetings every two weeks or so to discuss normal business in a coordinated way.

Scope of Work

The evaluation team has made observations and recommendations throughout this report concerning the scope and plan of work for HARP, but MRN, USAID and HARP officials must make decisions. How much training? What kinds of technical work? More research in the field? These decisions are for the short-term, immediate future. What is possible to accomplish in a few months, and what are the highest priorities?

Recommendation No. 2: In the few remaining months, with or without an extension, HARP should radically cut back on its direct involvement in field research and concentrate on analysis of existing data, technical support for Honduran researchers, and training. Training may take the form of short courses as well as one-on-one or small group backstopping and trouble shooting in which HARP members provide real in-service training to other researchers as they grapple with design, monitoring and analysis problems that come up in their ongoing research. In this way technical support and training merge. Analysis of existing data would focus on identifying research priorities, providing data sets for later research to build upon, recommending alternative technologies that might be used in farmer-managed trials, and working through a trial-based dialogue about research methodologies.

Agricultural research and science in general are based on a process in which problems are identified, questions asked, tentative hypothesis generated, tests designed and conducted to prove or disprove hypotheses, data collected and analyzed, analyses and data disseminated, and so on in a continuing cycle. Merely designing and conducting tests is not research or science. Analysis is the hardest work, and that includes deciding which problems to study and which questions to ask, as well as deciding the meaning and significance of data collected.

DIA and HARP are not conducting nor advancing research if their staffs merely generate trials and collect data. CID/NMSU staff discovered a major problem at the start of their work. Previous researchers had shifted to other jobs and not left behind adequate records of their data and analyses. This behavior means that the earlier research was wasted; it did not benefit DIA, Honduras or the farmers. HARP staff should address this problem by assuring that their own research is analyzed, documented and disseminated, and by assisting other DIA researchers through training and technical support to analyze, document and disseminate their research.

Financial Security and Planning

The most important financial issue is Honduran salaries. This priority is sometimes overlooked by CID/NMSU staff whose salaries are assured, but the Project and UNAT are based on Honduran and expatriate participation. Continued uncertainty over salaries and over tenure (reference to the departure already of one Honduran) tends to minimize if not eliminate Honduran participation and leadership in HARP. More important is the continued constraint to Honduran research careers and longer term planning, noted earlier in the 1981 evaluation, and the continued frustration of Project institution-building efforts.

HARP training efforts have also been constrained by uncertain funding. Although in 1983, USAID apparently promised more funding for training, that has not materialized. Any collaborative agreement that HARP might contemplate in the area of training in its final months will be frustrated if USAID does not have or release the funding. This issue needs to be considered in the meetings with DIA and USAID and a budgetary request for training submitted and approved. If the necessary funding is somewhere between the Finance Ministry and MRN, that needs to be clarified and the money released.

A third financial issue concerns the possible extension of the Contract for an additional six months (through January 1985), but this issue comes after an agreement has been reached on the scope and plan of work through July, on Honduran salaries and training funds. Any planned extension must be based upon a clear statement of the work to be accomplished. That cannot be done until there is an agreement upon the work to be done during the remaining months of the original Contract and until there are enough funds to adequately work during that period. On the other hand, HARP administrators and professional employees are in an untenable situation when they do not know whether the Contract terminates in July or runs until January.

Recommendation No. 3: If agreements have not been reached and sufficient USAID funding for training and for the extension assured in writing before the end of February 1984, HARP should terminate at the end of its scheduled 18 months.

A consistent criticism of agricultural research in Honduras

has been the weakness in planning. The continued uncertainty of HARP funding provides a USAID-inspired case study of the relationship between uncertain funding and poor planning. Since there may be no funding past July, everyone should be closing down, wrapping up and getting ready to hand over their data, analyses and programs. Honduran professionals and some of the CID/NMSU staff will be seeking new jobs at the termination of this Contract. Since the termination may be in July they (as rational people) should be searching for new employment and diverting some of their attention from the present. Given the uncertainty, no one in HARP should be wasting their time planning for the August 1984-January 1985 period because they should be hard at work finishing what they started.

Research Methodology

Research methodology (PFSR-FSR) has been a divisive topic in HARP but there is no need for that to continue. Some of the early problems have been resolved or may be resolved as a result of this evaluation. The present members of the HARP team all know each other (with the exception of the recently arrived CID/NMSU economist), and all of the CID/NMSU team are well acquainted with many aspects of Honduran agriculture and institutions.

HARP has an important opportunity now to examine as a team, Hondurans and expatriates together, the basic features of PFSR and to propose to DIA ways in which DIA scientists may experiment with alternative methods. The few remaining months of the Contract are too few for HARP itself to really test these ways. The basic assumptions for HARP should be:

- (a) PFSR represents a Honduran methodology that has evolved and been accepted as a better way to conduct research than the methods that were customary in the early 1970s.
- (b) Any methodological modifications to PFSR that are proposed by HARP should represent solutions to problems encountered by Honduran DIA professionals or by expatriates working in Honduras.
- (c) Any methodology may be improved, and any methodology that evolved under one set of conditions may not be appropriate in another environment or at a later date.
- (d) Other countries and programs may have worked out research methods and reached conclusions that will allow DIA to skip ahead and save time and effort.
- (e) Programs and analyses coming from other countries or conditions should be treated as hypotheses to be tested and should neither be adopted nor rejected without critical examination.

Recommendation No. 4: The HARP team should schedule regular weekly meetings lasting several hours in which the single topic is research methodology. As a team HARP should examine its experiences in 1983 and other relevant Honduras information to find if there are methodological problems, concerns or suggestions. Honduran members of HARP should lead the discussion, and expatriates should listen to the Hondurans to learn what they consider to be important methodological constraints or problems in the Honduran context.

The discussions should be firmly based on actual experience. What is the purpose of PFSR in Honduras? What hypotheses are being tested? How appropriate are these? How does rapid personnel turnover affect research? Is the trial sequence appropriate in all situations? How may research reach better conclusions quicker? What have HARP personnel learned from each other about better research? What are the major problems encountered and how might they be avoided or solved? What may be learned from CATIE, CIMMYT, ICTA, CIAT, FSSP, etc.? What would work or not work in Honduras, and why?

One purpose of these weekly meetings (special meetings or assignments may become appropriate as the dialogue continues) is to provide suggestions to the DIA Director and to other DIA research professionals about methodological alternatives. Another purpose is to better capacitate the Honduran members of HARP as methodologists and self-aware researchers. These professionals were selected for HARP in recognition of their professional achievements, and they will continue to play leadership roles in Honduras.

The evaluation team suggested several specific topics that could be examined in these HARP discussions.

1. Present joint survey activities combine research, extension and other programs under the leadership of the planning unit to produce information that may be used by everyone (caracterizacion multiproposito). This enlace is commendable, but does research need much more information about farming systems than it gets from these joint surveys? If more information is needed, what types of information, and how could it most effectively be obtained (farm records, interviews, formal surveys, trials, etc.)?

2. National and international programs have different mandates and resources. How may DIA most effectively utilize international programs such as CATIE, CIMMYT, CIAT, CIP, etc.? Often these IARCs provide data from trials conducted in Honduras or in ecologically similar areas. Could DIA use this data to speed its series of trials?

3. Farmers combine many enterprises, often including off-farm employment and business, to earn a living and satisfy their family's needs and desires. Basic grains and beans are fundamental enterprises and deserve a major share of DIA's

attention. Sometimes minor crops, livestock, processing or marketing activities that are already part of local farming systems may provide more leverage for DIA in its attempts to increase rural living standards. A minor crop, for instance, for which there is a large unsatisfied demand in Honduras or in other countries may be an opportunity where a small research input may have a large multiplier effect on cash income. How could DIA maintain its important concentration on basic grains and beans while allocating some resources to specific minor enterprises with high potential? Can UNAT members now identify some of these enterprises? This is not a request to add more trials to the present number but to identify priorities. The number of trials at present seems excessive.

4. What would be gained by increased farmer participation in research? Are farmers now as involved as they should be? How is information about farmer preferences and farmer perceptions of various treatments fed back into the research process? How may DIA predict whether farmers will adopt or reject specific recommendations? What are some specific examples of rejection, and why did it happen?

5. DIA has established in PFSR a sequence of trials. It starts with many treatments, complex design, on station and controlled entirely by researchers. As more knowledge is accumulated, the better treatments are moved off station and tested under conditions more similar to those under which the ultimate clients (Honduran farmers) will be facing. The number of treatments is fewer; designs are simpler; farmer management is increased and DIA control decreased; and the treatments are exposed to a broader range of environmental variables. How is this process working? What are some examples of the use of simpler design? How did they work? Are there some treatments or other alternative technologies identified in previous DIA or IARC research that seem promising enough to move into more farmer-managed trials? The evaluation team thinks there would be important benefits if HARP established or recorded some well-documented trials and trial sequences for use in training.

6. If HARP desires FSSP assistance in training, HARP first needs to clarify the topics for which training is desired and for which there is a consensus. Training and technical support should reinforce and extend the areas in which there is consensus rather than contribute to any disagreements. For which areas and topics is there a consensus that training is needed?

USAID Involvement in Agricultural Research

This evaluation concentrated on the specific HARP Contract with some reference to the entire Project. USAID is also involved with other projects such as Mejores Alimentos and appropriate technology in Comayagua and is well advanced toward participating in an autonomous research foundation. These disparate projects are not obviously parts of a coherent single program, and it is not easy to see how any of these advance FSR.

Recommendation No. 5: USAID should commission an evaluation of its agricultural research and development efforts. A major component of these efforts should continue to be support for FSR, so it is important to have FSSP participation in this broad evaluation. GOH commitment and Honduran professional leadership are issues that must be addressed, as well as any relationship between an institute and FSR.

Reports

Quarterly reports from HARP have been delayed, fragmented and a source of dissatisfaction for MRN because they seem to identify HARP as solely a CID/NMSU endeavor. In addition, the constant flow of TDY consultants, NMSU/BIFAD-funded and other visitors to and from HARP, San Pedro Sula and CURLA puzzles and irritates many Hondurans. They are unsure whether funds committed by USAID to MRN and DIA are being used to support other agencies, and they are sure that scarce resources in the form of HARP time are being diverted. The sixth recommendation is rather long in order to cover all of the essential points.

Recommendation No. 6:

(a) Quarterly and annual reports are required by Contract to be in Spanish. These reports need to be more rapidly distributed to USAID and DIA. There are no Contract requirements for reports in English or for monthly reports; these are voluntary, much less important, and should not be allowed to interfere with required reporting and actual work.

(b) HARP is a joint DIA/USAID/CID/NMSU activity, and all these sponsors need to be properly identified on all reports and all cover pages. All sponsors need to approve any changes in scope or plan of work, and any changes should always be placed in writing and circulated to all sponsors and team members.

(c) HARP is a team of seven (was eight) professionals. The HARP quarterly reports should include everybody's quarterly reports. If DIA has specific requirements for Honduran members of HARP their quarterly reports may reflect that but they must be included in HARP reports.

(d) All short term (TDY) personnel need to hand in preliminary reports before they leave Honduras, and they should have a personal meeting with the HARP COP and the DIA Director (at his discretion) before leaving. Final reports should be in Spanish and in Honduras within one month of departure. No report has yet been received from the TDY person for research station management, and that is long overdue.

(e) DIA and the MRN Regional Director should be informed in advance of all CID or NMSU administrative or technical people who will be visiting Honduras and HARP. If the visitors are on another mission and not directly connected with HARP it would nonetheless be polite and correct form for them to

leave a brief note with DIA before they leave noting their trip, itinerary, any contributions they made to HARP and their appreciation of MRN hospitality if received. This will minimize misunderstanding as well as emphasize that HARP time, vehicles, etc. are accountable to MRN (DIA) as well as to USAID.

Secondary Recommendations

1. As individuals and professionals all eight members of HARP during 1983 appear to have been hard working, well qualified and concerned about their work. The team suffered from design changes, financial problems, its position in the social and hierarchical structure, and professional differences of opinion, not from personal incompetence nor lack of desire. HARP team members should be commended for their work output under these trying circumstances.

2. There is little socioeconomic input into UNAT. This input should be strengthened, perhaps by collaborative research with social science faculty at CURLA or other universities.

3. Although the evaluation team was asked to assess the Mejores Alimentos project, the team was not given any micro economic analyses concerning prices, costs, markets, etc. for tomato production. These analyses are critical to any assessment.

APPENDIX A

EVALUATION TEAM ITINERARY

23-31 JANUARY 1984

- 1/22 Sunday Evaluation team arrived in Gainesville, Florida.
- 1/23 Monday Morning: Formal team briefing by Dr. Dan Galt (FSSP) at G001 McCarty Hall, University of Florida. Informal briefing continues. Dan Galt was present to answer questions and help locate additional documentation.
- 1/24 Tuesday 7:30-9:15 am: Flight from Gainesville to Miami on Air Florida 391.
1:00-3:05 pm: Flight from Miami to Tegucigalpa on Air Florida 129.
Flight was delayed one hour setting back afternoon meeting. Team was met at Tegucigalpa airport by USAID representatives and taken to hotel. Change in hotels further delayed meeting with USAID.
4:30-5:30 pm. USAID briefing at embassy by Bryan Rudert (Project Officer), Mario Contreras (Technical Support Officer), Gordon Straub (Project Officer), and Orlando Hernandez (Evaluation Officer). Clarified scope of evaluation.
Evening: Supper with several USAID and HARP staff. Met CID evaluation team of Merle Niehaus (NMSU) and Bill Shaner (CSU).
- 1/25 Wednesday Morning: DIA briefing at MRN by Adan Bonilla, (DIA Director) Gerardo Reyes (DIA Assistant Director) and Antonio Silva (DIA UNAT).
Afternoon: Drive to Comayagua and visit appropriate technology project (Gwyn Williams) and Mejores Alimentos. From Comayagua to San Pedro Sula and check into hotel. Evaluation team is accompanied by Mario Contreras for USAID.
- 1/26 Thursday Morning: HARP briefing by entire HARP team at MRN Regional headquarters.
Afternoon: Some of evaluation team interview Roberto Larios (MRN Project Director) and Francisca de Escoto (Research-Extension Liaison for Region). Others visit Guaymas Research Station and Cuyamel area. Contreras returned to Tegucigalpa.
- 1/27 Friday All day: Part of team travels to Yoro Valley and others go to La Ceiba and CURLA to visit field sites and interview MRN (DIA and DEA) staff and farmers.
- 1/28 Saturday All day: Report writing. Final checks with HARP and MRN officials to clarify some points and receive documentation.
- 1/29 Sunday All day: Report writing. Consultations with HARP COP and CID evaluation team.
- 1/30 Monday Morning and part of Afternoon: Oral presentation in Spanish of preliminary evaluation report and MRN Regional headquarters. Appendix C includes list of those attending. No one attended from USAID; Gerardo

Reyes represented DIA.

Rest of day: Report writing and modification to include points raised during days discussions.

1/31 Tuesday

Morning: Half of evaluation team left Honduras.

Team leader and one other remained and made another presentation of the (modified) preliminary draft of evaluation report. This time USAID was represented by Mario Contreras; DIA Director Adan Bonilla also attended (Appendix C includes full list of those attending). Copies of modified preliminary report in English were distributed at beginning of meeting to HARP COP, USAID representative, Adan Bonilla and Roberto Larios. Oral presentation was in Spanish. Afternoon: Visit to United Brands research center (near San Pedro) which is proposed headquarters for new autonomous research institute. Rest of evaluation team left Honduras.

2/2 Thursday

Team leader met with FSSP staff for debriefing and presentation of modified preliminary report, G001 McCarty Hall, University of Florida. Present were Chris Andrew, Pete Hildebrand, Eugenio Martinez Dan Galt, Steve Kearl and Jim Dean.

APPENDIX B

LIST OF PEOPLE MET BY TEAM

USAID Gordon Straub - Project Officer
 Dr. Mario Contreras - Technical Officer, HARP Project
 Bryan Rudert - Project Officer
 Orlando Hernandez - Evaluation Officer

DIA-Tegucigalpa Ing. Adan Bonilla - Director
 Ing. Antonio Silva - UNAT, former member of HARP
 Ing. Gerardo Reyes - Assistant Director

HARP Team Dr. Charles Ward - COP, Entomologist
 Ing. Norberto Enrique Urbina - Assistant COP, Entomologist
 Dr. Dennis Sharma - Weed Control Specialist
 Ing. Mario Bustamante - Weed Control Specialist
 Dr. Michael Bertelsen - Agricultural Economist
 James Walker - Soil Fertility Specialist
 Ing. Ligia Ramos - Soil Fertility Specialist.

NMSU TDY Dr. Melchor Ortiz - Statistician

CID Evaluation Team Dr. W.W. Shaner - Professor, Colorado State University
 Dr. M. Niehaus - Chair, Department of Agronomy, NMSU

FSSP Dr. Dan Galt - Agricultural Economist

Region 2 (San Pedro) Guillermo Alvarado - Regional Planning Director
 Hector Fernandez - Regional DIA Chief
 Enrique Cano - Regional DEA Chief
 Ing. Roberto Larios Mejia - Regional MRN Director
 Ing. Francisca de Escoto - Regional MRN Research/Extension Liaison

Comayagua Yoro Gwyn Williams - Project Leader, UDA/Comayagua
 Ing. Oswaldo Paz - Director, Sub-Region 1, Region 2
 Ing. Ramon Medina - Head of Research, Sub-Region 1 and Region 2

La Ceiba Ivette Rico de Ponce - Direccion Litoral Atlantico

CURLA Ing. Jorge Soto - Director
 Ing. Freddy Starkman - Teaching Coordinator
 Mario R. Alvarado

Guaymas Experimental Station Ing. M. T. Palao - Experiment Station Director
 Ing. Julio Romero - Principal Plant Breeder (Maize)
 Ing. Victor Mendez - Assistant to Principal Corn Breeder
 Ing. Armando Borges - in charge of Weed Control Research

Ing. Jose A. Badia - in charge of production
Ing. Aaron Aquilis - in charge of Yula research
Ing. Alfredo Escoto - in charge of National Rice Program
Agr. Eddy Soleman - Rice Program

Cuyamel Ing. Leopoldo Crivelli - on-farm research coordinator
Agr. Amberto Dominguez - extension agent
Orlando Benjamin Alvarado - CURLA student doing senior
paper on soil fertility

La Masica Menelio Madariaga
Ing. German A. Flores - Enlace Tecnológico
Custavo Batiz - IRRI Assistant Director, Litoral Atlantico
Region

APPENDIX C

REFERENCE DOCUMENTS

1. HARP PUBLICATIONS

A. Work Plans (all in English)

1. 4/18/83 (Draft), 1 January 1983 to 31 December 1984
2. Primera (1983A), 1 January 1983 to 31 October 1983, #83-20
3. Postera (1983B),
4. 1984 Plan, 1 January 1984 to 31 December 1984, #83-

B. Quarterly and Annual Reports (English and Spanish)

1. First, 1 Jan 83 to 31 March 1983, #83-4
2. Second, 1 April 1983 to 30 June 1983, #83-5
3. Third, 1 July 1983 to 30 Sept 1983, #83-10
4. Informe Trimestral, 1 March 1983 to 30 June 1983.
Antonio Silva
5. Informe Trimestral, July to September 1983,
Antonio Silva
6. Informe de Actividades, March to June 1983,
Norberto E. Urbina
7. Informe Trimestral, 1 July to 30 September 1983
Norberto E. Urbina
8. Informe Trimestral, April to June 1983, Mario
Dustamante
9. Informe Trimestral, July to September 1983, Mario
Dustamante
10. Informe de Actividades del Trimestre, March to
June 1983, Ligia Ramos
11. Informe Trimestral, July to September, Ligia Ramos
12. First Annual, 1 Jan 1983 to 31 Dec 1983, #83-

C. TDY Reports

1. Computer Science, Melchor Ortiz, June 22-July 10, 1983,
#83-11
2. Experimental Statistics, Melchor Ortiz, January 6-14,
1983, #83-3
3. CURLA Entomology Collection, James Zimmerman, July 2-29,
1983, #83-14
4. (Plant Pathology) Orientation and Inspection Visit to
Honduras and HARP, J.A. Booth, July 25-29, 1983, #83-

D. Special Studies

1. Paspalum conjugatum: A Literature Search, Charles G. Dean,
June 13, 1983, #83-8
2. Panicum maximum; Panicum purpurascens: A Literature
Search, Charles G. Dean, June 13, 1983, #83-9
3. Sistemas de producción para arroz y maíz en Copasol:
problemas y perspectivas de investigación, September 1983
4. Resultado de tres encuestas realizadas en el valle de Yoro
durante 1982, December 1983
5. Agricultural Policy Paper Number 1: Policy for Agricultural

- Research, Wilmer Harper
6. Como Prevenir la Diseminacion de Caminadora (Rottboellia exaltada) a Otras Areas en Honduras, September 1983

2. USAID PUBLICATIONS

A. Project

1. PID Agricultural Research Project, Ministry of Natural Resources, Honduras, August 1978
2. PP Agricultural Research Project, Ministry of Natural Resources Honduras
3. PP Honduras Agricultural Sector II Program 522-0150
4. Agriculture Sector Assessment for Honduras, August 1978
5. Project Evaluation Summary, August 1980
6. Evaluation of USAID Honduras Agricultural Research Project No 522-0139 with the National Agricultural Research Program (PNIA), March 1981

B. Contract

1. Request for Technical Proposals (AID-PAN-82-6) Agricultural Research Project - Ministry of Natural Resources - National Agricultural Research Program, March 15, 1982
2. Cost Reimbursement Contract for Agricultural Research in Honduras, October 1982

C. CDSS

1. Country Development Strategy Statement: FY 1981 Honduras, January 1979
2. Country Development Strategy Statement: FY 1981 Central America Region

3. CID PUBLICATIONS

Proposal RFTP AID-PAN-82-6, May 11, 1982

4. GOH PUBLICATIONS

A. DIA

1. Presupuesto y Plan Operativo, Año 1984, Noviembre 1983
2. Agricultural Research in Honduras, 1978
3. Funcionamiento del Programa Nacional de Investigación Agropecuaria y su Integración en un Sistema Tecnológico, May 1981
4. Memoranda concerning "Enlace Tecnológico", 1983
5. El Desarrollo de la Investigación Agrícola en el Sector Público de Honduras, Robert Waugh, April 1981
6. Propuesta de Reestructuración del Programa Nacional de Investigación Agropecuaria, Noviembre 1980

B. Direccion Agricola Regional del Norte, Programa Nacional de Extension Agropecuaria

1983 Caracterización del Área de Influencia de Agencia de Extensión de Cuyamel, Cortes

5. MISCELLANEOUS SOURCES

Byerlee, Derek, Larry Harrington and Donald L. Winklemann, 1982, "Farming Systems Research: Issues in research strategy and technology design", In American Journal of Agricultural Economics:64:5 (December):897-904

Contreras, Mario Ruben, et.al., 1977, "An Interdisciplinary Approach to International Agricultural Training: The Cornell-CIMMYT Graduate Student Team Report", Cornell International Agriculture Memoograph

De Walt, Billie R. and Kathleen M. De Walt, June 1982, A Farming Systems Approach Report No. 1: Cropping Systems in Perspire, Southern Honduras, INTSORMIL

Galt, Daniel, et.al., 1982, Farming Systems Research (FSR) in Honduras, 1977-81: a Case Study, Working Paper No. 1, MSU International Development Papers, Michigan State University

Safilios-Rothschild, Constantina, 1983, "Women and the Agrarian Reform in Honduras", in Land Reform: Land Settlement and Cooperatives, FAO, Rome 15-24

Safilios-Rothschild, Constantina, September 1983, The Impact of Agrarian Reform on Men and Women in Honduras

Whyte, William F., Participatory Approaches to Agricultural Research and Development: A State-of-the-Art Paper, Rural Development Committee ARE No. 1, Cornell University

APPENDIX D

PEOPLE ATTENDING PRELIMINARY REPORT MEETINGS

1. MONDAY, 30 JANUARY 1984

6 HARP team members (Ing. de Ramos was absent.)
4 FSSP Evaluation team members
2 CID Evaluation team members
Ing. Gerardo A. Reyes, DIA Assistant National Director
Ing. Roberto Larios Mejia, Regional MRN Director
Guillermo Alvarado, Regional Planning Director
Ing. Francisca de Escoto, Regional MRN Research/Extension
Liaison
Hector Fernandez, Regional DIA Chief
Enrique Cano, Regional DEA Chief
Dr. Melchor Ortiz, NMSU TDY Statistician

19 people registered themselves as attending; more people attended.

2. TUESDAY, 31 JANUARY 1984

6 HARP team members (Ing. de Ramos was absent.)
2 FSSP evaluation team members (Hansen and Marvel)
Dr. Mario Contreras, USAID Technical Support Officer
Ing. Adan Bonilla Contreras, DIA National Director
Ing. Gerardo A. Reyes, DIA Assistant National Director
Ing. Antonio Silva, UNAT Agricultural Economist
Ing. Roberto Larios Mejia, Regional MRN Director
Ing. Francisca de Escoto, Regional Research/Extension Liaison
Hector Fernandez, Regional DIA Chief
N. Reyes Discua, DIA agent

16 people registered themselves as attending; more people attended.

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APPENDIX E

ACRONYMS USED IN THE TEXT

Governmental Agencies

BIFAD	Board for International Food and Agricultural Development
CATIE	Centro Agronomico Tropical de Investigacion y Ensenanza
CIAT	Centro Internacional de Agricultura Tropical
CID	Consortium for International Development
CIMMYT	Centro Internacional para el Mejoramiento de Maize y Trigo
CIP	Centro Internacional de la Papa
COP	Chief of Party
CURLA	Regional University Center for the Atlantic Coast
DEA	Department of Agricultural Extension
DIA	Department of Agricultural Research
EAP	Escuela Agricola Panamericana
FSSP	Farming Systems Support Project
GOH	Government of Honduras
HARP	Honduras Agricultural Research Project
IADS	International Agricultural Development Service
IARC	International Agricultural Research Center
ICTA	Instituto de Ciencia y Tecnologia Agricola
MRN	Ministry of Natural Resources
NMSU	New Mexico State University
PID	Project Identification Document
PNIA	National Agricultural Research Program (now DIA)
PP	Project Paper
RFTP	Request for Technical Proposals
TDY	Temporary Duty (short term)
UNAT	National Unit for Technical Support
USAID	United States Agency for International Development

Research Methodologies

FSR	Farming Systems Research
OFR	On-farm research (also called PFSR)
PFSR	Pioneering Farming Systems Research (also called OFR)

Pests

CEW	Corn Ear Worm
FAW	Fall Army Worm

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APPENDIX F

RESUMEN EJECUTIVO

El proposito principal del Proyecto de Investigacion Agricola (Núm. 522-0139) es ayudar al Gobierno de Honduras (GOH) a expandir sus servicios de investigacion agricola dentro del Ministerio de Recursos Naturales (MRN), respondiendo mejor a las necesidades tecnologicas de los agricultores independientes pequeños y medianos, y de los agricultores de la reforma agraria. El proyecto se inicio en octubre de 1978 como un contrato a un país sede con fondos directos al Programa Nacional de Investigacion Agricola del Gobierno de Honduras (PNIA, ahora DIA). El impetu del proyecto se debilitó al finalizar el ano 1980 por razones politicas y económicas en Honduras.

En octubre de 1982 otra fase del proyecto empezo con la firma de un contrato de asistencia técnica (TA) con el Consorcio para el Desarrollo Internacional y su principal institucion, la Universidad de Nuevo Mexico, (CID/NMSU). El Contrato (522-0139-C-00-2059) de 18 meses fue financiado con los fondos sin usar del proyecto y trajo consigo cuatro asistentes tecnicos, cada uno por 18 meses, y apoyo adicional de asistencia técnica temporera.

Esta evaluacion es la primera para el HARP (Proyecto de Investigacion Agrícola de Honduras) pero la tercera de cuatro programadas para este proyecto madre. Las otras dos evaluaciones fueron hechas en febrero de 1980 y en abril de 1981, y esta se llevó a efecto casi tres años más tarde, en enero de 1984.

Brevemente enumeraremos los objetivos de esta evaluacion:

1. Señalar los logros y debilidades del presente contrato.
2. Colocar estos logros y debilidades en el contexto del proyecto y la presente situación del país sede.
3. Determinar si el contrato debe ser extendido por otros seis meses.
4. Recomendar cualquier medida correctiva para el tiempo que queda de Contrato.

Los seis problemas específicos del Contrato que han surgido durante 1983-1984 y las recomendaciones para resolverlos hechas por el grupo que evaluo el Contrato, son los siguientes:

Problema 1. Encomienda y Coordinacion.

Fallos originales en el diseño o interpretacion del Contrato de como el personal de asistencia técnica extranjera encajaría en DIA, incluyendo el fallo de diseñar un proyecto de ayuda a la investigacion de sistemas

agricolas (FSR) de solo 18 a 24 meses de duracion, ha causado problemas interminables. La correspondiente confusión de como HARP encajaría en la parte organizadora en relación con DIA, USAID, y NMSU ha contribuido a crear un sentir entre los hondurenses de que HARP no es parte del Ministerio. Esta ha sido una preocupacion desde el inicio del Contrato.

Recomendación 1. Llegar a un acuerdo entre DIA, el Director Regional del MRN, USAID, y el personal de HARP en (a) la encomienda de trabajo para el resto del contrato con HARP (hasta julio de 1984); (b) salarios para el personal hondureño de HARP; (c) las relaciones y los límites de autoridad entre el DIA, HARP y el Director Regional del MRN; (d) y si posible extender el Contrato por seis meses mas.

Problema 2. Confusion en el plan de trabajo.
Por lo menos tres cambios han habido en la distribución de trabajo en este Proyecto, todos hechos bien por el USAID o el DIA. HARP no ha tenido nada que ver en esto sólo aceptar esos cambios o retirarse.

Recomendación 2. Durante los ultimos seis meses del Contrato HARP debe (a) quitarse drasticamente de toda investigación directa en el campo; (b) concentrarse en analizar los datos existentes; (c) darle todo el apoyo tecnico a los investigadores hondureños; y (d) enfatizar sobre el entrenamiento.

Problema 3: Seguridad financiera y planeamiento.
Un hecho financiero importante ha sido la consistente incertidumbre sobre los salarios del personal hondureño de HARP. HARP ha sido afectado en sus entrenamientos y en lograr la extension del Contrato por otros seis meses por otros problemas financieros.

Recomendación 3. Si no se ha llegado a un acuerdo, y no se ha puesto por escrito que el USAID tiene suficientes fondos para el entrenamiento y extension antes de finalizar febrero de 1984, HARP debe terminar al cumplirse sus 18 meses de existencia.

Problema 4: Metodología de Investigación.
Existe un problema de argumentos metodológicos recurrente y consistente sobre diferentes definiciones de lo que es "investigación de sistemas agrícolas" e "investigación en la finca". Otro de los problemas es el desacuerdo que hay sobre que tiempo debe durar el liderazgo extranjero que HARP debe proveer. Estos problemas han contribuido a la falta de organización y a una estructura de oposicion entre los empleados hondureños y los del NMSU de HARP.

Recomendación 4. El grupo de HARP debe programar reuniones regulares semanales donde el único topico de

discusion sea la "Metodologia de Investigacion". Como grupo HARP debe examinar sus experiencias de 1983, asi como cualquier otra informacion pertinente sobre Honduras, para identificar los problemas metodologicos. El personal hondureno de HARP debe ser el que lleve la voz cantante con los companeros extranjeros escuchando para aprender lo que los hondurenos consideran los mas importantes apremios metodologicos en el contexto hondureno. Los topicos especificos de discusion estan señalados en la evaluacion. (Véase sección V, Hechos y Recomendaciones).

Problema 5: Participacion en la Investigacion Agricola del USAID.

USAID esta envuelto en un sin numero de proyectos existentes y propuestos en el área general de la investigacion y desarrollo agrícola. No hay obviamente ningun programa que una estos proyectos o clarifiquen su relacion con el FSR.

Recomendacion 5. USAID debe pedir una evaluacion de sus esfuerzos en la investigacion y desarrollo agricola. El grupo que evalúa este proyecto considera que un mayor componente de estos esfuerzos debe ser el constante apoyo al FSR. Por eso es la importancia de la participacion del FSSP en esta amplia evaluacion. Las encomiendas del GOH, el liderazgo hondureno profesional y las relaciones entre el propuesto instituto y el FSR son hechos que se deben considerar.

Problema 6: El Informe escrito, las audiencias y los visitantes del Proyecto.

Los informes trimestrales de HARP han sido demorados, fragmentados y causa de insatisfaccion para el MRN porque creen que identifica a HARP solamente como un experimento del CID/NMSU. El flujo de consultores (TDY) y visitantes para y de HARP, San Pedro Sula y CURLA confunden e irritan a muchos hondurenos. Se preguntan de dónde provienen los fondos para estas actividades y la cantidad de tiempo que dichas visitas le roban de sus prioridades que es la investigacion.

Recomendacion 6: (a) HARP debe reenfocar su atencion en sus informes anuales y trimestrales que el Contrato requiere que se hagan en espanol. Estos informes necesitan ser distribuidos mas rápidamente tanto al USAID como al DIA. (b) Todos los patrocinadores del proyecto, incluyendo a DIA, USAID, CID/NMSU y a todo el personal de HARP, necesitan estar propiamente identificados en todos los informes y en las cubiertas de éstos. Todos los patrocinadores deben aprobar los cambios en cuanto al plan de trabajo. (c) El informe trimestral de HARP debe incluir todos los informes trimestrales de todo el personal de HARP. (d) Todo personal temporero debe dejar una copia de su informe en espanol antes de salir de Honduras. También deben tener una reunion personal con el HARP COP y el Director del DIA (a su

discreción). Los informes finales deben ser en español y deben estar en Honduras antes de un mes de su partida. (e) DIA y el Director Regional del MRN deben ser informados con tiempo suficiente de todas las personas, tanto administrativas o técnicas, que visitaran a Honduras y a HARP. Esto reduciría las ideas erróneas y enfatizaría en cuanto a que el tiempo y los vehículos de HARP pueden ser usados tanto por el USAID como por el DIA/MRN.

Otras recomendaciones específicas están detalladas en este informe, especialmente en la Sección IV - Productos (Outputs) y en la Sección V - Hechos y Recomendaciones (Issues and Recommendations).

Metodología de Investigación

Honduras y los hondureños están entre los pioneros en establecer y desarrollar una metodología de investigación que es ahora conocida con el nombre de investigación de sistemas agrícolas (FSR). El propósito básico de este nuevo acercamiento es hacer la investigación más productiva cambiando las prácticas de producción de los agricultores. La idea básica es que la investigación que se queda en la estación no sirve para los agricultores y esto es un lujo que no pueden afrontar muchos países.

El proyecto original era de apoyo a los esfuerzos pioneros de Honduras en desarrollar una metodología de investigación más efectiva, y cualquiera que haya trabajado en DIA (entonces PNIA) antes del año 1977 puede atestiguar sobre los cambios que han ocurrido desde entonces. Este contrato era para continuar de un modo más efectivo la evolución de una serie de métodos proveyéndoles apoyo técnico a los ya existentes grupos regionales, mejorando los niveles técnicos de los empleados del DIA a través de entrenamientos en el trabajo y participando en su planeamiento.

Aunque ahora hay mucha más literatura sobre el FSR y un creciente consenso de opiniones sobre cómo definirlo, los pioneros (los científicos y los programas) estaban trabajando desde mucho antes. Estos trabajos enfatizaban la necesidad de hacer pruebas en las fincas y no en estaciones experimentales de investigación, porque su ambiente es especial y los tratamientos y las variedades que resultan mejor en las estaciones puede que no sean las mejores en las fincas. Este trabajo pionero también enfatizó el cultivo de granos básicos porque estas cosechas son la principal preocupación de los agricultores; esto significaba un cambio pues antes la preocupación principal era la producción para exportación. Los pioneros del FSR estaban preocupados de que los agricultores no adoptaran las recomendaciones de la investigación. Para que se adoptaran las técnicas recomendadas éstas tenían que ser apropiadas y beneficiosas en algún sentido. Para lograr que entendieran que era lo apropiado, estos pioneros enfatizaron en una cooperación multidisciplinaria entre técnicos y científicos sociales y en aumentar la comunicación entre investigadores, científicos y agricultores.

Estos intereses y énfasis generales en las situaciones pioneras del FSR fueron restringidos por hechos prácticos ya establecidos. Como se podían hacer cambios en las ya existentes unidades de investigación tanto nacionales como internacionales? Como en cualquier procedimiento ya instituido, los propuestos cambios teóricos y prácticos fueron adoptados por un determinado país, localidad y/o agencia. Este proceso evolutivo de cambiar las metodologías

de investigación se adaptan mejor y más rápido en algunos países que en otros y las instituciones para la investigación que van surgiendo varían de un país a otro.

Honduras fue uno de los países pioneros en los años 70 en evolucionar su sistema indígena de FSR, y el enfoque del DIA refleja este trabajo pionero: en la finca (no solamente en la estación), usando sondeos como guías para las investigaciones multidisciplinarias para saber cuáles eran los granos básicos. Como en cualquier campo de investigación, los científicos siempre están buscando mejores métodos, por ej. el programa "Enlace Tecnológico de Olancho ha sido recomendado para su adopción a través de todo el país porque el MRN piensa que este va a trabajar mejor. En Honduras, como en cualquier otro país, los agrónomos y científicos sociales están conscientes de que estos métodos establecidos pueden necesitar mejoras, pero todo el que trabaja en Honduras reconoce los cambios tan grandes que han ocurrido en esta última década.

Los ciudadanos hondureños han tomado el liderazgo en iniciar y dirigir algunos de estos cambios en la metodología de investigación. En Honduras, como en todo país, sin embargo, se logran grandes ventajas prácticas uniendo los talentos científicos nacionales con los extranjeros. En los E.U.A., un país notorio por sus ciencias agrícolas y sus universidades, hay también muchos científicos extranjeros trabajando, y se aprecian sus talentos y contribuciones.

Las preguntas y desacuerdos concernientes al HARP y al FSR parecen basarse en el grado de liderazgo que los empleados del CID/NMSU están dispuestos a ejercer y a cuando y cuanto la existente metodología del DIA necesita ser revisada. La actual metodología hondureña la llamaremos Pioneering FSR (PFSR) en este informe para distinguirlo de la metodología del FSR descrita en literatura actual.

El grupo del CID/NMSU obviamente cree que fueron contratados por el USAID y el DIA para proveer liderazgo técnico y apoyo, y que el economista agrónomo del CID/NMSU (más que el grupo en sí) era el principal responsable de proveer ese liderazgo. Al mismo tiempo el grupo creía que habían serias debilidades en el PFSR (el cual el informe del HARP lo refiere como investigación al nivel de finca u OFR), y que se debía reemplazar por el FSR. Estas creencias están bien documentadas en los planes de trabajo y en los informes trimestrales.

Cualquiera de estas posiciones del DIA sobre este particular no aparecen en los informes pero sí en las acciones. Obviamente hay una fuerte resistencia de parte de los hondureños en el DIA, incluyendo por lo menos a la mayoría de los empleados del HARP, de que el CID/NMSU asuma el liderazgo en implementar el FSR y en modificar el PFSR. También parece haber una fuerte resistencia, similar a la

anterior, para cualquier modificación del PFSR pero esto no está claro (refiérase al Enlace modificado) y se hace confuso por la controversia por el liderazgo.

Una vez más el fracaso por parte del USAID, DIA y CID/NMSU de aclarar desde el comienzo del HARP su diseño y mandato sigue confundiendo la operación de este contrato. El contrato no especifica ningún liderazgo ni definiendo ni estableciendo el FSR, pide el apoyo y guía de los profesionales del CID/NMSU como parte de una mayor UNAT. Aunque de hecho el HARP es UNAT y el CID/NMSU dirige a HARP, otra cosa es que el DIA consistentemente ha tratado de mantener y sostener el liderazgo hondureño. Es muy posible que el DIA inicie cambios en la encomienda de trabajo del HARP los cuales fueron diseñados para impedir lo que los dirigentes del DIA vieron como un liderazgo indeseable del CID/NMSU.

Estos desacuerdos profesionales sobre la metodología han sido personificados por los economistas agrónomos desde que el economista del CID/NMSU era el responsable de iniciar el FSR y el economista hondureño encabezaba el grupo hondureño (y anteriormente era el Director Nacional del DIA). Estos desacuerdos sobre el PFSR-FSR fueron los principales responsables de que el USAID decidiera no renovar el contrato de trabajo al economista hondureño cuando expiró a fines de diciembre de 1983, y el descontento sobre este hecho aparentemente fue el causante de la partida de Honduras del economista del CID/NMSU más o menos al mismo tiempo.

Estos desacuerdos son más fundamentales que simples conflictos personales (aunque estos pueden haber sido un factor) como lo ha demostrado el hecho de que los desacuerdos y contrariedades entre los grupos hondureños y del CID/NMSU continúan a pesar de la partida de los dos primeros economistas.