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PARATECHNICIAN SPECIALIST REPORT

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USAID-FEDECOOP

COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

(COSTA RICA)

Submitted to

AGRICULTURAL COOPERATIVE DEVELOPMENT INTERNATIONAL

By

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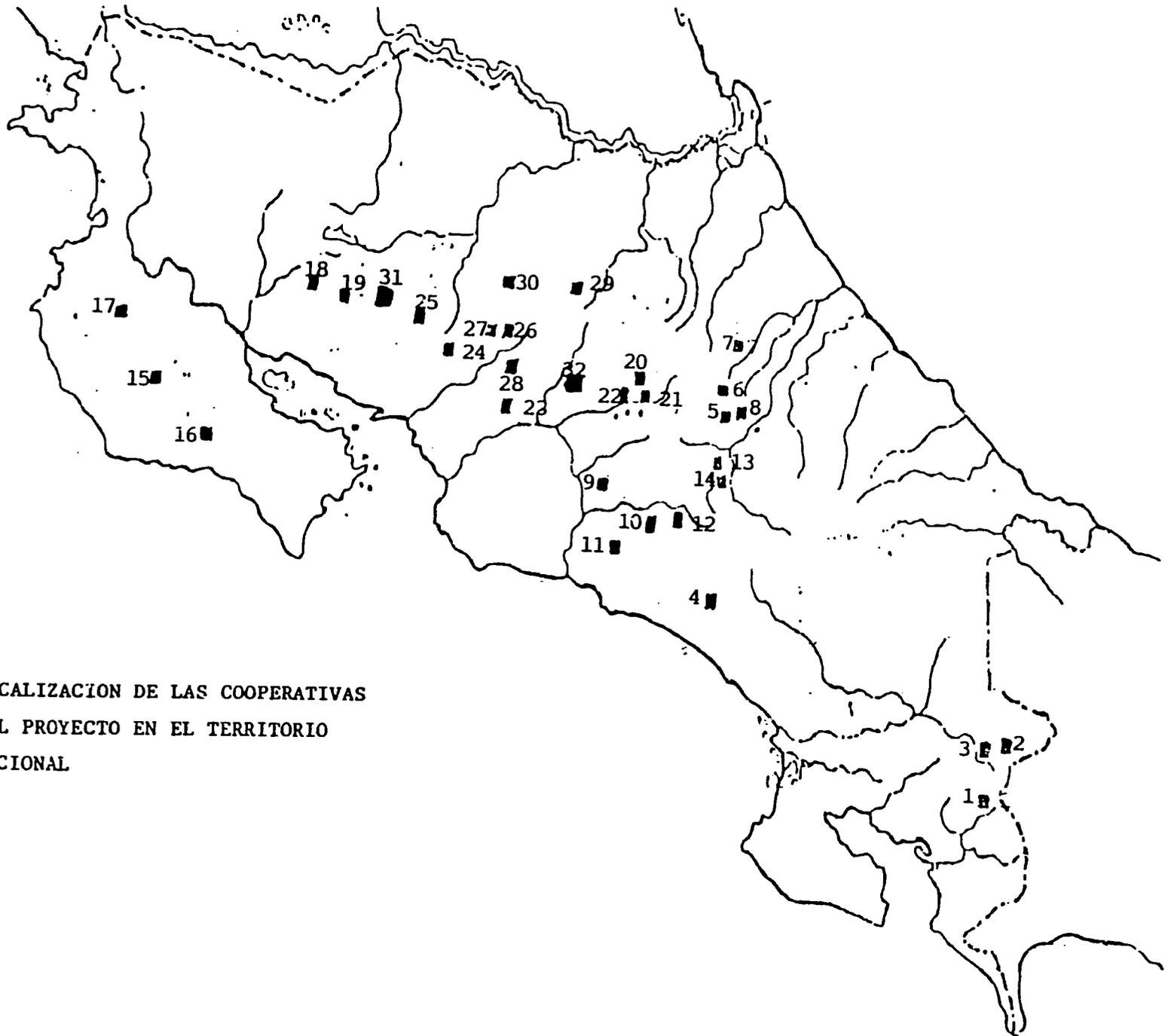
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PART A.

EXECUTIVE SUMMARY
PARATECHNICIAN SPECIALIST REPORT

USAID-FEDECOOP
COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

This is a summary report on the study of present and potential use of paratechnicians in the Costa Rican Coffee Technification and Diversification (CTD) Project. The objectives of the study were to determine the number of paratechnicians needed; to establish criteria for their selection; to design a workplan for their effective use; and to describe how they would help in the successful operation of the loan program.

The study methodology was a combination of field investigation, discussion with project officials, review of literature on paraprofessional use in rural development projects and exploration of present and future means of using paratechnicians in the local cooperatives. Twelve of the 31 cooperatives in the federation were visited for the discussions. A standard series of questions were used although the discussions were always informal and exploratory rather than a tightly ordered interview. The sample of cooperatives and members chosen included all climatic areas of the country and variations in cooperative size. They were chosen by judgemental criteria rather than randomly according to probability sampling techniques.

The review of the literature on paraprofessionals in rural development revealed that this type of worker has been used for many years and in many different types of programs throughout the world. The name most commonly used is "paraprofessional" and the duties generally are for local outreach in the delivery of technical services. The principal advantages of using this kind of worker are economical and acceptance in the local communities. Selection, training and supervision are the key areas of concern in developing a successful program using paraprofessionals.

The goals of the CTD Project are related to the coffee rust disease that was first discovered in Costa Rica in December of 1983. The goal of technification is to raise the level of technology through the use of chemical inputs, resistant varieties and improved cultural practices. The goal of diversification is

to substitute the marginal plantings of coffee with other viable crops that are more adapted to the area. There are four components of the project to make it operational. First, the Project Coordination component will give overall direction from an office in the FEDECOOP headquarters in San Jose. Second, the Applied Technology component will be responsible for identifying and propagating crops that show promise for diversification. Third, the Technical Assistance component will provide technical information and direct assistance in the field to FEDECOOP farmer members in coffee improvement practices as well as with new crops. It is this component that is most related to the proposed paratechnician program. In order to carry out this part of the project, 14 additional agronomists and 52 paratechnicians will be hired and transportation for them will be improved by adding 21 four-wheel drive vehicles and 39 trail motorcycles. Fourth, the credit component is responsible for guiding the provision of loans to the farmers so that the new technology can be applied.

The results of the present investigation indicate that the local cooperatives are economically strong and many of them have been functioning for over twenty years. The membership of the local cooperatives is increasing and additional cooperatives have asked for membership in the federation. Education is an important aspect of the life of the cooperatives which reaches the present membership and prospective members. The CTD Project seems to have strengthened the cooperatives and the federation as it has worked with the farmers.

The success of the CTD project stems from a deeply felt need for change due to the coffee disease, a technological package that has proven itself, an institutional structure that was in place and working prior to the crises, the availability of trained technicians and a workable credit program that provided the resources at the farm level. The decision to implement this program through the cooperatives seems to have been a wise one for it offers a system that is directly responsive to the farmers needs.

The present investigation did encounter some aspects that are of local concern and merit consideration. The concerns most often mentioned are: the lack of sufficient funds to meet the request for new loans, the uncertainty as to whether the pay-back money will be available for a rotating loan fund at the local cooperative level in the future, the need for improved selection of some of the agricultural products that are sold through the local cooperatives, the lack of transportation for the tech-

nicians, the need for improved relationships with some of the public sector professional agronomists, the need for training in extension teaching methods for the agronomists, a need for more credit management training for the agronomists, and continued promotion for cooperative members and agronomists alike so that technical assistance costs can be seen in relation to the economic benefits that are produced.

The proposed paratechnician program was discussed at all institutional levels in relation to the need to expand and improve the technical assistance coverage. Little interest was found in the use of paratechnicians in most of the cooperatives unless it was discussed in terms of the improved efficiency and effectiveness of providing technical assistance to more beneficiaries. In order to implement the paratechnician program at this time there are four general areas of needed emphasis: promotion, setting guidelines for operation, setting up a training program and clarifying the method of financing.

The general areas of concern are translated to specific recommendations that are based on the field investigation, the discussions with project officials and the experience with paratechnicians in other rural development projects throughout the world. These recommendations are summarized below:

1. A regional training course in extension methods should be held as soon as possible which would include both professional agronomists and paratechnicians.
2. The cooperatives should be visited by the central staff and training team prior to the training course for promotional purposes and to get local input for the courses. Additional visits should be made at least once yearly to each of the member cooperatives for promotional and feed back purposes by the project director and key staff members.
3. A paratechnician manual should be prepared before the training course that can be discussed in the local cooperatives, used in the training sessions and revised later for use in the local cooperatives. The manual should address the questions of selection, training, supervision, financing and transportation.
4. The number of paratechnicians that was proposed in the original project plan is still a good goal to aim toward but will only come in time and with continued promotion.

5. Continued dialogue is needed to determine the best name for the paratechnicians in that some of the cooperatives are not sure that "paratecnico" describes the kind of worker they want.

6. It seems important to remember that the CTD Project, which offers needed credit and technical assistance, should serve to strengthen the democratic process and autonomy of the local cooperatives above everything else. This may mean a longer time is needed to accomplish project goals and that education, dialogue and discussion rather than directives should be the means employed to implement all aspects of the project, including the paratechnician program.

PART B.

PARATECHNICIAN SPECIALIST REPORT

USAID-FEDECOOP

COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

I. Statement of the Problem

The principle objective of this study is to review the present operation of the Coffee Technification and Diversification (CTD) Project in order to formulate a program for recruitment, training and implementation for strengthening the paratechnician component. The study is further outlined in the Scope of Work as follows:

- "1. Determine the number of paratechnicians needed to remedy project deficiencies.
2. Establish eligibility criteria for hiring paratechnicians.
3. Design a workplan and methodology for the paratechnician program.
4. Describe how the paratechnicians would interface with the loan program, i.e., facilitating improved quality control of the loans recommended by the paratechnicians." (See Appendix I, Scope of Work).

Section VI of this report gives some indications of how the paratechnician component can interface with the loan program and other aspects of the project. Section VII gives some specific procedures and activities that can be used in the implementing and of strengthening the paratechnician program.

Included in the report are sections covering the proposed operation of the project (Section IV) as well as the present use of technical assistance in the local cooperatives (Section V). A synthesis of an extensive review of the literature related to the use of paraprofessionals in rural development is included in Section III. The review of the literature is the basis for some of the recommendations that are presented in the final sections.

The focus of the present study is on the potential use of paratechnicians at the local cooperative level. Consequently, most of my time was spent in the field with paratechnicians, professional agronomists, cooperative managers and cooperative members (who are also coffee growers). Prior to the field visits, contact was made with administrative personnel in AID and FEDECOOP in order to better understand the operation of the CTD Project. The personal contacts were also reinforced with numerous written reports that explain different aspects of the project and the paratechnician component.

The following paragraphs are prepared as a brief summary of the important background information on the CTD Project and paratechnician component. This is followed by the section on the use of paraprofessionals in rural development. The potential for strengthening the paratechnician component and the specific recommended activities and procedures are found in the last sections of the report. Additional material is found in the appendix that will give further detail to items that are included in summary form in the main body of the report.

II. Study Methodology

A. SCHEDULE OF ACTIVITIES:

Most of the two weeks in Costa Rica was spent in the field. A schedule of visits was prepared that included coffee cooperatives in the central plateau, the Atlantic area, and the Pacific area. (See Appendix II, Schedule of Field Visits) There was also time to talk with the officials related to the project in the central offices of FEDECOOP (Federacion de Cooperativas de Cafecultores) and USAID (United States Agency for International Development). Twelve cooperatives were visited and more than 100 people interviewed in relation to the technical assistance program. (See Appendix III, People Interviewed)

Prior to the time spent in Costa Rica, a complete review of the literature on the use of paraprofessionals in rural development was completed. This gave a good basis for judging the present level of use as well as exploring the possibilities for future application of paraprofessionals during the conversations with the people interviewed.

B: STUDY METHODOLOGY:

The interviews were conducted in an informal manner, starting with the overall project results in terms of coffee improvement. The present and future potential for technical assistance was discussed with emphasis on the aspects that seem to give good results as well as areas of need. The use of paratechnicians was discussed in terms of more efficient coverage that could more adequately meet the needs of a supervised credit program. Notes were taken on all of the topics discussed in the interviews in order to verify the commonalities as well as the unique aspects of each location. The discussions served as a source of information as well as an opportunity to explore new possibilities.

C. QUESTIONS ASKED IN INTERVIEWS:

Although a conversational manner was used in the interviews, the following questions were asked in all of the cooperatives, where appropriate, in order to more fully understand the how things operated. The conversations were sometimes in group but usually with individuals.

1. How do you select the paraprofessionals? (In those cooperatives where they were employed or about to hire).
2. What are the characteristics of the paratechnicians that you now have?
3. What are the ideal characteristics of a paraprofessional?
4. How do you train them?
5. What are the characteristics of your professional agronomists?
6. How are the professional agronomists trained to work with the paratechnicians?
7. What special preparation has been made in the cooperative so that the best use can be made of the paratechnician?
8. How do you offer your technical assistance services to the farmers at the present time? What kinds of activities?
9. What is needed to improve your technical assistance service to the farmers?
10. Can the technical assistance that you are offering be justified in the economic benefits that result?
11. Do you have any plans in the near future for expanding the coverage of your technical assistance?
12. What is your present budget for technical assistance?

III. Paraprofessionals and Rural Development

The use of paratechnicians is not a new idea. They have been found in many places and called by many names. The name that is most common and generally used to refer to this kind of worker is "paraprofessional" rather than "paratechnician". That title will be used throughout this section. The use of the word "paraprofessional" is more of generic preference than to indicate that it is the only correct name. Each program that has used this kind of worker has chosen the title that is best understood in the given situation. In both the name and the function, the adaptation to local needs is one of the strengths of this kind of a program.

As early as 1947 there are reports of village health aides in Alaska and farm-demonstrators in the agricultural extension service in the United States. Even before this, volunteer local leaders worked as assistants to professionals in the delivery of community services. However, there has been a marked increase in interest as well as a proliferation of programs using paraprofessionals in the last two decades. These people, often viewed as front-line workers, are being used to meet the challenge of providing assistance to those not ordinarily having access to needed services. They are now found in both local and national programs; in rural and urban areas; and in industrialized and developing nations. (Esman et al. 1980; Gritzinger 1981)

Economics is cited as one of the principal reasons for using paraprofessionals. Local people, with less costly training, can help provide needed services at a price agencies can afford to pay. (Lamb & Clack 1974; Wortman & Cummings 1978; Gritzinger 1981). Community accessibility is closely associated with economics. The highly trained professional is usually neither willing nor able to live permanently in those areas where services are most needed because of isolation as well as life style. The paraprofessional is usually a member of the community, he has both empathy and understanding of the local problems and is available when most needed. (Esman et al. 1980).

The specific role of the paraprofessional is determined by the nature of the program; it can range from helping farmers obtain economic resources (Gritzinger 1981) to providing medical attention to remote villages (Paddock & Paddock 1973). If the program goal is to deliver some type of service, whether it be first aid, assistance in applying for credit, food supplies, or technical innovations for farming, the paraprofessional fulfills this need by making the services available to the public. When a paraprofessional is teaching new technologies to farmers, they are performing an educational role. When they talk to the people about taking part in a change program that will better the village, they are performing a motivational role. Paraprofessional roles also include record keeping, collection of data and its analysis, maintaining equipment (water pumps, facilities, etc.), and demonstrating technological innovations (Esman et al. 1980). Thus, the role of the paraprofessional is determined by the nature of the program he is working in, and this in turn is based on the perceived needs of a locality.

Selection is a key aspect in successful programs that use paraprofessionals. They should be selected from the local area; these people will be known in the community in which they will be working and can aid in insuring the success of the program. (Esman et al. 1980; Beers 1970; Gritzinger 1981) It is recommended that those recruited to work within their community at least show or feel some sense of obligation to that community. (O.M. Collective 1971). Also, people should be selected that are seen with leadership qualities accepted in their community. (Beers 1970; Wortman & Cummings 1979). Education is an important criteria in selection. Some programs in development have used people that have a limited education and even successfully used people that were illiterate; others have a requirement of college training. Usually the training is of intermediate level; higher than that of the people served but less than that of the professionals that they work under. Some have used people that have been successful beneficiaries of the program itself, thus they already have some of the necessary training for the program that is being implemented. (Nesman 1985) Educational background, then is determined by what the program is trying to achieve. (Esman et al. 1980; Gritzinger 1981).

The mode of selection is also important. (Esman et al. 1980) Three modes of selection have been identified, (1) community selection where the community completely controls the selection process; (2) joint selection where both the community and sponsoring agency select the paraprofessionals; and, (3) agency selection where the agency has complete control over who is to be selected as a paraprofessional. The literature in-

dicates that when the community is involved in the program, including selection, the program will have a better likelihood of being successful. Thus, not only is it better to use people who come from the community for paraprofessional work, it is also wise to allow the community, which will benefit from the program, to have an active part in the selection process. Having the community's input on who should be retained or replaced as a paraprofessional gives the community more feeling of responsibility for the success of the program. (Esman et al. 1980; Gritzinger 1981)

The training of paraprofessionals is another important aspect. The actual training of paraprofessionals can and does vary from program to program. Some type of pre-service training is almost always used which involves training before entering the field. These training programs can range anywhere from a few days to many months and may be a combination of practical and classroom training. (Esman et al. 1980; Beers 1970) Continuing, in-service training which involves on-going training sessions while the program is under way, is also essential. (Esman et al. 1980). This type of training can keep the paraprofessionals up-to-date and can help maintain their morale in addition to adding knowledge and skills. (Esman et al. 1980) Further, this type of training is viewed as an important aspect of supervision, in that a good supervisor helps the paraprofessional develop new skills on an ongoing basis. (Thigpen 1979) There is a recognized danger of over-training of paraprofessionals and the result is a desire to migrate from the rural to the urban setting in search of better employment. (Smith as found in Esman et al. 1980) Further, when training the paraprofessional, it is important to keep in mind the needs of the area in which they will be working and the specific tasks that they will be performing. Cases are cited where paraprofessionals were trained for unneeded tasks which created a conflict of interest between them and the farmers. (Paddock & Paddock 1973; Esman et al. 1980)

Supervision of a paraprofessional program is seen in the literature as one of the main contributing factors in determining the success of the program. Thigpen (1979) supports this view in his analysis of the characteristics of a supervisor that make for a better relationship. Of the seven characteristics that were proposed as most helpful, the most important one was availability. That is, the paraprofessional found that the supervisor was approachable both temporally and psychologically. The remaining six factors are emotional support, behavior modeling, organizational support, client-focused feedback, paraprofessional-focused feedback, and skill development. For any of these six factors to be carried out by the supervisor, he must first be available to the paraprofessional. The close relationship of

supervision and training is also seen in the definitions. In behavior modeling, the paraprofessional learns from the example of the professional; in paraprofessional feedback, the supervisor may examine strengths and/or weaknesses in the personal awareness of the paraprofessional; in client-focused feedback, the supervisor may discuss certain aspects of the program in regard to the client and suggest alternatives where problems arise; in skill development, the paraprofessionals learn new skills through in-service training or discussion.

Organizational support is also part of supervision but not always rated very high by the paraprofessionals nor the supervisors. However, the results of analysis of many paraprofessional programs, indicate the paraprofessional is more dependent on the organization for support than a professional because of his limited training and lack of experience. In an early evaluation of the paratechnician program in the Honduras Small Farmer Improvement Project, it was found that supervision was an area of needed improvement. (Nesman, 1986)

Finally, the following recommendations are found in the literature on how to "create" a successful supervisory program in relation to paraprofessionals. First, the supervision of paraprofessionals should be conducted by on-site visits, with length of visit and quality of supervision more important than the frequency of visits. These visits are viewed as essential for the paraprofessional to maintain credibility in the eyes of the client. Supervisors' primary function should be reinforcement and support with control being a secondary function. The supervisor should be familiar with the area where the paraprofessionals are working and understand the context in which the work is being carried out. Also, the community in which the paraprofessional is working, should be allowed to participate in the supervisory function by providing recommendations for the program and the best use of paraprofessional as the program is being carried out. An analysis of needed materials and supplies for the program is also necessary so that these materials are ready for use when needed. (Esman et al. 1980)

Evaluation of paraprofessional programs is important if they are to become more effective and efficient. The type of evaluation will vary from program to program, however, there are some principals that should be followed. First, description of the goals and objectives of the program are in order. An inventory of activities and needed resources should be made in the planning stage (that is, what needs to be done in order

to achieve the goals and objectives). An analysis of the community before the implementation of the program is needed to establish a baseline. Follow-up studies can be done to determine progress and accomplishments. (Porter 1970; Beers 1970) A program should be constantly monitored while it is in progress and the information fed back into the program for the purpose of revisions. If a program is to receive positive evaluation from the client community it must provide the community something tangible and valued as soon as possible.

III. The Coffee Technification and Diversification Project

The description and purpose of the Coffee Technification and Diversification (CTD) Project are best described in the Memorandum of Understanding between the United States Agency for International Development (USAID) and the Federacion de Cooperativas de Caficultores, R. L. (FEDECOOP) dated March 27, 1985. In Attachment I and under the section titled "I. Background" are found the following paragraphs:

"With the discovery of coffee rust (*Hemileia Vastatrix* Berk & Br.) in Costa Rica in December, 1983, producers were faced with not just another pest which lowered yields, but instead with a disease that, under the right ecological conditions and if uncontrolled, is capable of virtually eliminating the entire production of a coffee plantation. This disease therefore represents a serious economic threat not only to the individual coffee growers, (estimated to number approximately 48.5 thousand), but also to the Costa Rican economy as a whole. Given the importance of coffee as a major source of foreign exchange earnings (\$237.0 million in 1982) and as a source of employment (90.2 thousand workers during the peak harvest), then the magnitude of the problem becomes more apparent.

Efforts at irradiation of coffee rust have been mostly unsuccessful. Once it appears in a plantation, control rather than elimination of the pathogen has proved to be the only means of combatting the disease. Control can be accomplished by carrying out two main activities: technification and diversification.

Technification consists of raising the level of technology employed in individual plantations through the use of chemical inputs, resistant or tolerant varieties, and improved cultural practices. Although Cost Rica's average level of technification is one of the highest in the world, it is estimated that approximately 40% of all coffee growers (19,400 farmers) are utilizing inadequate technology with

resultant yields far below the national average. The plantations of these farmers are therefore the most vulnerable to attack by coffee rust due to their low level of technification, and they also represent potential sources of inoculum for the propagation of the disease.

Diversification involves the substitution of marginally productive coffee plantations, located in areas which are not ecologically suited for coffee production, with other crops that are more adapted to those areas. Through the elimination of these non-productive plantations, the number of areas available for propagation of the disease is reduced. Some of the substitute crops already identified are cardamom, macadamia, and avocado."

The project, as outlined, has four components: 1. Project Coordination; 2. Applied Technology; 3. Technical Assistance; and, 4. Credit. There are aspects of each one of these four that are related to the proposed paratechnician program and for that reason they are mentioned below.

The Project Coordination component will give direction to the overall operation of the project and a small staff will be located at the central office of FEDECOOP in San Jose. One of the responsibilities is to coordinate the technical assistance that will operate in the member cooperatives. As is stated in the section entitled "1. Project Coordination", this unit will be responsible for a number of project activities including "...management of all project personnel; training of project agronomists and paratechnicians; and coordination from outside consultants and institutions."

The Applied Technology component will be specifically responsible for crop diversification. Part of the job will be the selection of new varieties and supervision of coffee nurseries that are located in each cooperative. This component also is responsible for the identifying and propagating crops that show promise as profitable market crops that can be substituted for coffee. It is stated that this component will "also assist the project coordinator in the preparation of the training courses for agronomists and paratechnicians in production technology for both coffee and diversification crops."

The Technical Assistance component has even more bearing on the use of paratechnicians as can be seen in the section describing these activities:

"This component will provide technical information and direct assistance in the field to FEDECOOP farmers in the areas of coffee production and crop diversification. To carry out these extension activities, 14 additional agronomists and 46 paratechnicians will be hired to complement the 10 agronomists and 6 paratechnicians that are already working in FEDECOOP's cooperatives. These 24 agronomists and 52 paratechnicians, besides providing technical assistance to farmers, will also supervise the project's credit activities at the field level. Technical information will be disseminated to coffee growers on an individual basis, in group presentations, and through the use of written material such as pamphlets. The grant will finance 21 four wheel drive vehicles and 39 trail motorcycles as transportation for the project agronomists and paratechnicians, respectively, as well as the costs of publications and other costs associated with this component. FEDECOOP and its cooperatives will finance the personnel costs of this component, as well as 3 vehicles and maintenance expenses."

The Credit component is responsible for providing the production loans to the FEDECOOP members so that they can take part in the coffee technification and crop diversification activities. As was mentioned above, the project agronomists and paratechnicians have responsibilities in the supervision of the credit at the farm level. They are responsible for helping the members in the application of the technological package that is recommended for irradiation of coffee rust and increasing production. They are also responsible for verifying the application of the proper technology at the right time and in meeting their loan pay-back obligations.

As can be noted in the description above, the proper functioning of the project depends the application of a tested technological package which in turn requires field personnel that are well trained, sufficient in number and able to give timely assistance to the farmer members.

V. Present Level of Technical Assistance in the Cooperatives

In studying the paratechnician program it is difficult to separate it from the technical assistance component of which it is a part. In turn, it is impossible to look merely at the technical assistance component without seeing it in the context of the CTD Project and the local cooperatives through which it operates. All of these elements begin to have meaning in terms of their potential for sustained rural development if they are considered within the context of the local cooperative, and for that reason this is the starting point chosen for the analysis of the information gathered during the two weeks in Costa Rica.

A. COOPERATIVES:

I visited twelve cooperatives and talked to all of the key people related to the technical assistance component. It is not possible to say that the findings are statistically conclusive for the sample chosen for interviewing and observing was judgemental rather than probability based. None-the-less, the sample is representative of the different geographic areas and membership sizes so that the observations are valid as generalizations. (See Appendix IV, Summary of Field Information)

1. Economically strong: Most of the cooperatives have been functioning for over twenty years which gives a good idea of their strength and durability. In spite of the adverse coffee market, none of the cooperatives is likely to fail. The economic analysis of the cooperatives is considered in a separate report based on a parallel study conducted at the same time. (Torres, 1987)

2. Growing Membership: The present membership of the cooperatives in the federation is 39,800 and continues to grow. There are 31 member cooperatives and another large one asked to be admitted to the federation during the two week period that this study was in progress.

3. Autonomous organization: Even though they are affiliated with FEDECOOP and depend on the central organization for many services, each one of the local cooperatives is an independent decision making body. The support services that are supplied by the central organization are administered by a professional staff. This staff is responsible to the board of directors of the federation which is composed of representatives from the local cooperatives. Each Monday, this board of directors meets to give guidance to the professional staff.

This type of community based decision making is characteristic of the cooperative movement and gives a unique dynamic as well as some special conditions that must be remembered when introducing new ideas and projects. Any new idea or project that is introduced at the top or from the outside must win its own way on its merits and can not be mandated! The only authority that operates is the "authority of ideas" rather than the "authority of position". For anyone that is used to operating in a public sector bureaucracy, a corporate organization or any other institution that is authoritarian in nature, will find it difficult. Ideas must be sold on their own merit. At the same time, this is one of the great strengths of the cooperative movement, the power comes up from the bottom and the potential is multiplied by the number of active members.

4. Education is important: Because new ideas and skills must be sold on their own merits, the educational process is one of the fundamental activities of the cooperative. I attended the closing ceremony of a training course that was held in a small village near San Isidro del General on August 14th. There were 70 people -- men, women, and children -- that received certificates of participation. The training course was organized by the local coordinator who was a farmer member of the cooperative but wanted his neighbors to know more about the operation of the cooperative so that they could join. All of the cooperatives that were visited in the two week period had educational activities related to cooperative principles as well as credit, coffee production, health, crop diversification, and many other topics.

The agronomists in all of the cooperatives visited were involved in educational as well as service activities as part of their job. Most of them had short articles in the news sheets that went out to members; some took part in radio programs; they organized field days with farmers for special instruction; they had special short courses related to credit and coffee production; -- their work was educational in the broadest sense of the word.

5. CTD Project results: In many ways the project has served to strengthen the cooperatives. The technological package that has been delivered through the cooperatives has made it a more attractive organization for increasing farm production. The fact that favorable credit has been available through the cooperatives makes it even more attractive. The availability of the agronomist to help at the farm level has also been an attractive feature. The results in the field are now becoming evident to

all people at the community level and they see the cooperative as the means of making it possible.

At the same time, there are also some dangers in CTD Project assistance to the cooperatives, one of which is increased dependency. One of the great strengths of the cooperative movement is the possibility of using local resources for sustained development. If the traditional decision making process at the local level continues, it will minimize this danger. For those responsible for offering resources from an external source, it is important not to push projects too fast or too far beyond the level of acceptance at the local level. It is easy to apply pressure in many subtle ways and to make "offers that are hard to refuse" so that a program will get under way and see quick results. The end result, however, may be dependency rather than sustained development.

B. CTD PROJECT OPERATION:

The project seems to be working well. The number of participants is beyond the original projections for this point in time. There is now a greater demand for credit than ever before. The number of farmers that are using the technology on their own with other sources of financing has almost duplicated the number using project credit. It is important to point out those factors that seem to be part of this success. They are listed in the following paragraphs. (See Appendix V, Analysis of Beneficiary Participation)

1. Felt need: The enthusiastic adoption of drastic renovation would not have been possible in such a short time if the coffee rust had not created the strong felt need on the part of the coffee producers. The literature on the adoption of innovations emphasizes that there is no better motivation for change than this sense of need.

2. The technological package: Desperate need can be present but there must be an available solution at hand if changes are to be made. The fact that there had been active experimentation with new methods of coffee culture going on before the problem emerged and that a viable package was available is another necessary ingredient in the project's success. For example, I found that as early as 1978, experimentation was going on in the area of Hojancho which included new varieties and cultural prac-

tices. As early as 1982 some farmers were getting yields as high as 80 fanegas/HA as a result of these experiments. With a tested package available and the need imposed by coffee rust, a good base was available for change.

3. Institutional structure: The cooperative organizational structure offered a vehicle to bring needed resources to the local level to meet the felt needs. The fact that the cooperatives had a history of joint problem solving and that each local cooperative was connected to others in like circumstances, gave the advantage of local initiative and at the same time contact with external resources. Just as through the local cooperatives the individual coffee grower had found that things could be done that he alone could not do, he also realized that through FEDECOOP he was able to do things that could not be done as a single cooperative; especially if they were a smaller one. FEDECOOP was already a working organization that had proven its worth in collective buying of agricultural supplies, in marketing coffee and as a source of information on improved technology.

4. Availability of technicians: Another necessary ingredient in the technological package is to have people to carry the new knowledge from the experimental centers to the farm. This is especially crucial when the new techniques are great departures from the traditional wisdom of the farmers and include a number of interrelated parts that must fit together in a scientific way. The coffee renovation plan is just such a package and it required qualified technicians to help in its establishment at the farm level, especially at the early stages of adoption.

The earlier technical assistance given by agronomists of FEDECOOP, the Ministry of Agriculture (MAG), and the Coffee Institute (ICAFE) had already set the stage for a program of technical assistance that was accepted by the farmers. When the coffee rust arrived, there was already technology, an institutional structure and trained technicians ready to help solve the problem.

5. Availability of Credit: With the initiation of the CTD Project, credit now became available so that the other factors could become operational. A program of supervised credit with available funds at a reasonable rate, a guarantee of professional assistance through accepted channels, and an institutional framework to make it happen on a large scale, all came together in the project so that the needs that were felt at the local level could find a solution. These are the ingredients that have guaranteed a high level of success.

6. Fine tuning: The program is not without problems but they seem to be ones of fine tuning rather than drastic change. Not all of the growers are convinced that drastic renovation is required and further dialogue would help them fully understand its importance. The technical package works very well but the agronomists still need help in testing out new products and finding better ways of treating insects and diseases. One of the requests heard in every cooperative was the need for continued investigation and research and a better way to communicate this to the agronomists that are in the field. The loans that have been allocated to the farmers have helped get the new plantings started and soon they will be in full production but there is considerable concern about how well the loans will be paid back and if this money then will be available for a revolving fund that can in turn help other farmers. The request for credit education is a specific need that should be considered seriously in future operations. Finally, technical assistance at the level of the cooperatives has brought a new realization to most of the cooperative members that it is something that they cannot get along without. Now, new ways must be found to broaden the coverage and to give the assistance in an efficient manner so that it is economical, available to all and can be sustained in the future.

C. TECHNICAL ASSISTANCE:

In the previous section technical assistance was mentioned in terms of being one of the factors that is responsible for the success of the project. Technical assistance is examined in more detail in this section to see just how it is working and where there are areas of needed improvement.

1. There are 41 professional agronomists related to the project according to the reports prepared in June of this year. This number is not complete because some of the cooperatives have new workers and others are in the process of hiring. In addition to the agronomists that are working full time in a specific cooperative, there are eight that are employed by the project office and help in the smaller cooperatives that are not able to hire a full time worker. In some cases the smaller cooperatives have a full time paratechnician that works under the supervision of the visiting agronomist. (See Appendix VI)

2. The demand for technical assistance by the farmers is more than can be met by the present number of workers. All of the agronomists and cooperative managers felt that it would be ideal to be able to visit each one of the beneficiaries once monthly. Most of the technical assistance staff now find themselves, "putting out fires" and rushing from one emergency to another rather than attending to the needs of the beneficiaries in an

orderly fashion. They also feel some frustration in that they would like to help all of the cooperative members but their time is not even sufficient to adequately attend to the beneficiaries. There was even some expression that the regular members were unhappy in that there was not enough credit for them to receive a loan and in addition, the ones that did receive credit also had an additional benefit in getting technical assistance.

3. There is a need for better selection of agricultural products. Many of the agronomists also expressed frustration in the comparable cost and quality of some of the agricultural products that were available to the farmers through the cooperative. They felt that investigation and quality control could be improved and better done at the level of FEDECOOP than at the field level.

4. Transportation is often lacking. This problem was mentioned at every cooperative and is common for this kind of work. Coffee is grown in areas that are not easily accessible. There are many activities that can be done in groups but there is no substitute for periodic farm visits. When the change in technology is drastic such as that of complete renovation, it requires even closer assistance at the farm level. This can not be done without reliable transportation. It is evident that this will always be one of the most costly aspects of technical assistance and needs to be considered very carefully if a system is to be initiated that can later be continued by the cooperatives themselves. The use of special motorcycles is now being tried and the reaction is mixed.

5. Cooperation with other agencies offering technical assistance is needed but not always available. Some of the cooperatives have had excellent assistance from the agronomists of the Ministry of Agriculture (MAG). In other areas there have been problems of competition and even giving the farmers counter instructions. One thing that has been done to bring about more cooperation is to have periodic meetings of all of the professional technicians that are working in the area. They have been able to look at common agronomic problems and develop a joint approach so that they are not duplicating services and can reinforce each other. In other areas this kind of cooperation has not been possible.

6. Training in extension methods is needed. Most of the agronomists have been well trained in the agronomic aspects of their job but they all expressed a desire to know more about how to work with farmers. Sometimes this need was expressed in terms of "effective communication methods" or "human relations" or "methods for the transfer of technology" or "methods of field education" -- however expressed, they would like to have some special seminars or a short course that would include these kinds of topics. This was also expressed as a need by the cooperative administrators in terms of making the technical assistance more effective and efficient.

7. There is a need for training in credit management and farm management. Both the agronomists and the cooperative managers expressed a need to know more about credit management and how to help the growers become better farm managers. They were not sure if this should be considered part of the agronomist's job or not but they should at least have some training in the area and in some cases would have to take major responsibility for this as well as the agronomic aspects.

8. It is important to see technical assistance as a necessary economic input. All of the suggestions for improvement of the technical assistance offerings of the cooperatives were related to a new realization that it is a necessary input that can more than pay for itself. Technical assistance has seldom been seen in terms of economic efficiency. The project has helped a great deal for the cooperatives, the individual members and the technicians themselves to see technical assistance in economic terms. This is important because it will help insure that it will continue in the future. This can be even further emphasized in the future at all levels by making the costs and the benefits clear to everyone.

VI. Present and Potential Use of Paratechnicians:

The use of paratechnicians in the coffee improvement project has not been of great interest when approached as a separate component by itself. There are a number of factors that seem to be related to the lack of interest in a paraprofessional program.

Costa Rica has a higher level of coffee technology than some of the other countries that have used paratechnicians. They also have a higher educational level and this is often found among the coffee producers themselves, especially among those who are elected officials of the cooperatives. There is also a professional protectionism that is common among technicians that are university graduates so that there is a reluctance to consider the use of people with lower levels of training. Further, there has been little emphasis traditionally on economic efficiency in technical assistance because it has usually been offered by the public sector where accountability at the local level has not been of major concern.

On the other hand, when the use of paratechnicians is seen as part of a possible way to improve the the efficiency of technical assistance delivery at the cooperative level, then it is of great interest. At each one of the cooperatives visited, the possibility of the use of middle level technicians was explored in terms of meeting the strongly expressed need for additional coverage. With this approach, the professional agronomists and cooperative managers found many areas that could be well taken care of by technicians with lesser training and thereby freeing the professionals for tasks that are urgent and not now being covered adequately.

A. IMPLEMENTATION OF THE PARATECHNICIAN PROGRAM:

There are now a number of the cooperatives that have middle level technicians and an additional number that are almost ready to hire them. There are a number of steps that can be taken to facilitate this process. In order to look at these steps, there are four areas of concern that are addressed here: promotional activities, the preparation of guidelines, training and financing.

1. Promotion: Additional discussions are needed at all levels. The dialogue that was initiated during the two weeks in the field needs to be continued. All of the member cooperatives should be visited to discuss the possibility of increasing the coverage and efficiency of technical assistance by the use of paratechnicians. Unless it can be seen as a logical step that meets their needs now and fits in their future plans, it will not work. Not all of the cooperatives will want this arrangement, at least for a while. Perhaps after it has proven effective in some locations it will be adopted in others.

2. Preparation of Guidelines: A list of suggestions in the form of a paratechnician manual should be prepared that can serve as the basis of discussion and later application for the selection, training, supervision, assignment of activities, and payment of middle level technicians;

3. Training: Training is needed for the effective use of paratechnicians. Not all of the professional agronomists are prepared to work with and through an assistant. This could well be included in the extension training that has been requested. It could be included in a broad sense that would focus on working through local leaders, promoters, or any type of helper that can extend the efforts of the agronomist. The training of the professional agronomists could include the selection, training and supervision of these potential assistants. A manual of guidelines could be prepared in conjunction with the training that could serve as a guide in the field.

4. Financing: The level of financial help that is available for technical assistance through the project needs to be further clarified. (How can the 2% that is destined for technical assistance become available to the local cooperatives and what are the different alternatives for it's use).

These general suggestions have been translated to specific recommendations for the implementation of the paratechnician component in the section that follows.

VII. Recommendations for Paratechnician Component*

The following recommendations are presented as specific steps that can be taken to move the paratechnician component forward. They need to be discussed and adjusted but should be considered as soon as possible. The timing is right to move ahead on this aspect of the CTD Project. The coffee picking season is a good time to schedule training courses for the technical assistance personnel.

1. Training course in extension methods: A training course in extension methods should be held as soon as possible. The course should be prepared for both professional agronomists and paratechnicians although there would be some variation in the topics covered.

The courses should be offered regionally, beginning in the Guanacaste area. It should be at least 3 days in length and cover three main areas: an update on the latest agricultural technology, credit management and extension teaching methods. The credit and extension aspects could be presented with both groups together; the agronomic aspects might need the separation of the two. The course should be well planned so that "hands on" type of experience and time for dialogue is included in the learning process. At least part of the emphasis should be on program planning so that efficiency and effectiveness in technical assistance could be a goal of the course. The course should be well planned and well manned so that it can be a model for the other areas.

2. Promotional visits to local cooperatives prior to the course: Each of the cooperatives that would send technicians to the course should be visited prior to the course so that goals can be discussed, not only with the technicians but with the administrators and directors of the cooperatives. These visits should continue the form of dialogue that was initiated during the present study so that the cooperatives can make a direct input to the kind of technical assistance that they think would best serve them. It can also be used to expand their understanding of technical assistance to include the use of paratechnicians and other means of increasing effectiveness and efficiency. The visitation team should include a specialist in each of the three main areas: agricultural technology, credit and extension. This type of visit can serve many functions and it seems important that a team such as this, accompanied by the project director, visit each of the member cooperatives at least once yearly.

3. Preparation of manuals: Prior to the course, a simple manual should be prepared that can serve as a guide for the use of paratechnicians in the local cooperatives. It can be discussed and revised as an outcome of this course and other courses that are held in other regions later. The process of discussion and revision is as important as the product although the manual can later be used in its revised form in the cooperatives. A simple credit manual is already available and a manual of extension methods would also be useful as part of the course and for later use in the cooperatives. (See Appendix VII, Sample Paratechnician Manual)

4. Number of paratechnicians: The number that was originally stated in the plan of work (52) is not unrealistic. It will not be possible for this number to be employed immediately but should be worked toward. It is not unlikely that within two years this number could be reached and even surpassed.

5. Selection of paratechnicians: Two criteria that are already in operation and should be continued are: a person from the area; a person that has at least secondary or equivalent education at an agricultural technical training institution. The professional agronomist now helps in the selection but the co-operative board of directors or the administrator makes the final decision; this arrangement also seems sound. The young men that have been chosen so far are in their early twenties. This seems to be working but in other countries they have found that two or three years older gives better results. Other qualities such as ability to communicate, high moral standards, leadership qualities and good physical health are also important. This needs further elaboration in the paratechnician manual.

6. Paratechnician job description: The job description should be carefully worked out in the local cooperative before recruiting. There are types of tasks that should be considered including crop production, credit, promotion, education, referral and information gathering. Some examples that are now being used can serve as a guide in preparing the local job description:

- Collection of soil samples;
- Field verification of the proper application of an agricultural product such as fertilizer or insecticide;
- Field assistance to introduce a new practice such as laying out contour lines;
- Field visits to see how well a crop is progressing;
- Help the farmers in the preparation of credit applications;
- Field visit to verify that credit was properly used;
- Delivery of the beneficiary credit balance statements;
- Farm visit to announce and promote field days, group meetings and short courses;
- Work with professional agronomist in field on all aspects of technical assistance when time permits;
- Help in the central office to meet farmers when they come for information or to pick up agricultural products;
- Help in the preparation of news sheets to be sent to members;
- Help with demonstration plots;

Any of these activities that become part of the paratechnicians job description should be done in collaboration and under the supervision of the professional agronomist with the assistance of the credit and other specialists. This area also needs further elaboration in the paratechnician manual.

7. Paratechnician training: The specific recommendations for a training program are beyond the scope of this report but there are some standard procedures that are recommended.

a. Start with the list of functions of the paratechnician that are prepared in the job description;

b. Determine the tasks that are part of each of the major functions; (for example in coffee renovation: 1. Cleaning the field; 2. Laying out the contour lines; 3. Selection and transporting the plants; 4. Preparing the holes and transplanting; 5. Cultivation practices for young plants; 6. Fertilizing the young plants; etc..)

c. Determine the teaching/learning objectives that include knowledge content, attitude content and specific skill content.

d. Prepare the specific course or educational meeting with the priorities of the agricultural calendar in mind. Include those things that will be soon needed and used rather than too much general knowledge that might be used some time in the future.

e. Use teaching methods that include a problem solving approach with dialogue and discovery built in. Include demonstrations and hands-on kind of opportunities. Each of the participants should be able to practice the new skill during the teaching event. Beware of the traditional lecture approach that talks down to the learner. (As educators we tend to teach the way we have been taught and formal schooling has not prepared us well for effective informal teaching).

f. Include extension teaching methods as part of the content of any short course or teaching event. The most effective way to teach communication skills for working with farmers is for the instructors in the short courses to use the kind of methods that the field workers can use later.

g. The training should be done in short courses, special seminars and constant in-service instruction. One of the best ways is the "walking-and-talking" method as the professional agronomist and the paratechnician visit the farms together. This should be done periodically even after the paratechnician has been working for some time.

8. Supervision of paratechnicians: It is recommended that the professional agronomist be considered as the official supervisor of the paratechnician. The job description should be the starting point of supervision and used later for evaluation. It is possible that the job description will change and this needs to be acknowledged in writing.

The job description will serve well for program planning and this should be done at least monthly and recorded for all to see. It will also need weekly adjustments. A yearly program of work is also important so that important events can be planned for ahead of time. Unless the plans are converted to a calendar they will not likely be carried out.

Some kind of activity report should be used so that the services rendered to individual farmers can be recorded. This is absolutely necessary in a supervised credit program but is good practice also for any technical assistance. This activity report can also serve as the basis of the monthly report of activities for the paratechnician. (See Appendix VIII, Sample Activity Report Sheets)

A monthly report of activities should be prepared that starts with the proposed plan of work. The report should also include such things as the number of individual farm visits, topic or problems dealt with on the visits, number of people contacted in groups, other professionals and groups contacted, educational material prepared and specific problems encountered.

Planning and reporting are not the only aspects of supervision. While planning together, the professional agronomist can serve as an instructor for many of the activities that the paraprofessional will have to carry out alone. Planning and reporting sessions will not substitute for being available for problem consultation and, more important, working together in the field. The professional agronomist, even though assigned to supervise a number of cooperatives, should accompany the paraprofessional on a farm visit to each beneficiary at least once a year.

9. Financing of paratechnician component: A clearer statement concerning the 2% differential in interest that is available for technical assistance needs to be prepared so that all of the cooperatives understand how it is financed. They also need to know the procedure for claiming this 2% when they are ready to employ someone (especially true for the smaller cooperatives). This could also be part of the paratechnician manual so that the rationale as well as the procedure can be understood.

At the CTD Project administrative level, it is recommended that the future financing of the project be clarified so that the local cooperatives can plan ahead. Will new money be available for additional loans? Will the present loan repayments be part of a revolving fund that can continue to produce a 2% portion for technical assistance? Is there any possibility that the present 7% that was directed to finance a special project in CATIE can now be directed to this project and perhaps help to strengthen technical assistance?

It is important that all of the financing arrangements for technical assistance be open and understood by the local cooperatives so they can see the costs and benefits. This needs to be emphasized in the ongoing education of cooperative members so that it will be a part of the future life of the cooperative. The project has helped in this direction and can make an even greater impact in the future.

10. Transportation: The motorcycles should be distributed as planned with the specific goal of increasing the efficiency and effectiveness of technical assistance -- technical assistance that includes agronomic as well as credit supervision. Priority should be given to the smaller cooperatives and those that are just now adding their own technician. Somehow, the local cooperatives should participate in the financing of the motorcycles so that the costs are available for all to see and they will see the value. This is the only way that transportation will be available in the future as part of ongoing technical assistance.

11. A name for the paratechnicians: The search for the right name for the paratechnicians should continue. Neither the idea nor the name were very popular at the beginning of the project. The idea is now growing but the right name has yet to be found. The one that seems to be best understood and accepted at the moment is "technico medio". Other names such as "technico asistente", "technico ayudante", and "paratecnico" have also been used. This could be included in the dialogue at the cooperative level; in the preliminary manual; and in the courses so that the right name can be found.

12. Local autonomy: It is important to remember that the local cooperatives are autonomous organizations and not part of a bureaucratic structure that receives orders from the top. All of the recommendations that are made here need to go through discussion and revision. It is not always easy to know just how far compliance must be demanded by an outside agency in order to make assistance available.

A cooperative is a special kind of an organization in which change comes through education rather than mandate. Behind all of these recommendations is the hope that democratic procedures will be strengthened at the local level and for this reason the process of working toward change is as important as the product. The most important recommendation in the use of paratechnicians is that it should in no way violate this democratic process, rather, that it be strengthened.

* I would like to help in the organization and initiation of the extension training course as part of strengthening the paratechnician component. I also would like to recommend that Ing. Epaminondas Lopez be hired for a longer period of time to help implement these recommendations. He has a postgraduate degree in Agricultural Extension and considerable experience in the field with coffee producers. He also worked with me before in establishing a program of paratechnicians.

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PART C. APPENDIX

- I. Scope of Work
- II. Schedule of Field Visits
- III. People Interviewed
- IV. Summary of Field Information
- V. Analysis of Participation
- VI. Agricultural Technicians Working on the Project
- VII. Sample Paratechnician Manual
- VIII. Sample Activity Report Sheets

APPENDIX I. Scope of Work



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Donald Crane
*Sr. Vice President,
Management Services*

28 July 1987

Dr. Edgar G. Nesman
704 Vanderbaker Road
Temple Terrace, FL 33617

Dear Dr. Nesman:

This is your letter of assignment as a Paratechnician Specialist to work for ACDI on a short-term basis in Costa Rica. This assignment involves formulating a program for recruitment, training and implementation for strengthening the paratechnician component of ACDI's Coffee Technification and Diversification activity, operating under a USAID Operational Program Grant in that country. While on this assignment you will be working closely with Mr. Frank Astacio, ACDI's Coffee Credit Specialist in Costa Rica.

A. Your scope of work is as follows:

1. Determine the number of paratechnicians needed to remedy project deficiencies.
2. Establish eligibility criteria for hiring paratechnicians.
3. Design a workplan and methodology for the paratechnician program.
4. Describe how the paratechnicians would interface with the loan program, i.e., facilitating improved quality control of the loans recommended by the paratechnicians.

Prepare a detailed report of your technical activities within 10 days after departing Costa Rica. The outline of this report should be agreed to by Frank Astacio prior to preparation.

APPENDIX II. Schedule of Field Visits

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DR EDGAR G. NESMAN. - FIELD TRIP PROGRAM

Wednesday 12, 1987

- ✓ 1.- Coope-Pejibaye 9:00 am.
- ✓ 2.- " Suiza 11:00 "
- ✓ 3.- " Aragón 2:30 pm.

Thursday 13, 1987

- ✓ 1.- Coope-Leco 9:00 am.
- ✓ 2.- " Tarrazú 11:00 "
- ✓ 3.- " Dota 2:30 pm

Friday 14, 1987

- ✓ 1.- San Isidro, El General 10:00 am.

Saturday 15, 1987

- ✓ 1.- San Isidro (Visit to Farmers) 6:30 "

Monday 17, 1987

- ✓ 1.- Coope-Atenas 9:00 am.
- ✓ 2.- " Palmares 2:00 pm.

Tuesday 18, 1987

- ✓ 1.- Coope-El Dos 9:00 am.
- ✓ 2.- " Tilarán 2:00 pm.

Wednesday 19, 1987

- ✓ 1.- Coope- Cenizosa 8:00 am.
- ✓ 2.- " Pila Angosta 11:00

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APPENDIX III. People Interviewed

USAID COSTA RICA:

- Michael Foster, Contract Officer
- Ross W. Wherry, Project Officer

FEDECOOP:

- Nautilio Monge, General Manager
- Diego Sanchez, computer center

USAID-FEDECOOP CTD PROJECT:

- Rafael A. Alvarado, project general coordinator
 - Gilberto Gutierrez, senior agronomist
 - Frank Astacio, ACDI Coffee Credit Specialist
 - Mario Castillo, data processing
 - Roberto Esquivel B., field agronomist
 - Rodrigo Gutierrez, "
 - Jorge Rodriguez, "
 - Jorge Obando, "
 - Omar Alpizar, "
 - Juan Mendez, "
 - Jose Vargas, "
 - Hans Garita, " (specialist in macademia)
- Mario Marengo F., advisor to project on information systems

COOPERATIVA PEJIBAYE:

- Jose Miguel Vargas, field agronomist
- (Also talked to former manager)

COOPERATIVA SUIZA:

- Mario Arroya, agronomist
- Victor Jimenez, manager
- Fernando Hernandez, farmer beneficiary
- (Also talked to three other members of staff and 2 members of board of directors)

COOPERATIVA ARAGON:

- Roberto Castro, senior agronomist
- Rafael Vargas, acting cooperative manager

COOPERATIVA LECO:

- Emilio Picado, agronomist
- Jorge Gamboa, manager
- (Also talked to three other members of staff and two members of board of directors)

COOPERATIVA TARRAZU:

- Bernardo Barbosa, agronomist
- _(Also talked to manager and two other members of staff)

COOPERATIVA DOTA:

- Roberto Ciciliano, agronomist
- (Also met with manager and four members of credit committee)

COOPERATIVA EL GENERAL:

- Ricarado Castro R., manager
- Carlos Castro, assistant manager
- Henry Fonseca C., agronomist and project coordinator
- Mariano Leiva, project agronomist
- Gerardo Quesada, project beneficiary
- Benigno Badillo, "
- Franciso Alfaro, "
- Esteben Rojas, "
- (Also met with education director, director of radio programs, head of data processing, manager of coffee processing plant, two other agronomists, manager of mobile store, three members of credit committee and participated in educational meeting in the community with 70 people present)

COOPERATIVA ATENAS:

- Ileger Cubero, member, board of directors
- Rafael Angel hidalgo, "
- Ulises Arce Arce, assistant manager
- Guillermo Villegas, member credit committee
- Elsia Sibaga Soto, project secretary
- Guillermo Ordonez Ruiz, project agronomist
- Virginia Castro, accountant
- Oscar Ramirez, agricultural technician

COOPERATIVA PALMARES:

- Juan Jorge Rodriquez, agronomist
- Hugo Armando Ledezma V., "
- Lori Fuentes Valemoano, cooperative promotor
- Francisco Vasquez Carranza, Accountant

COOPERATIVA EL DOS:

- Omar Alpizar, agronomist
- Juan Carlos Alvarez, assistant agronomist
- Heriberto Castro, accountant
- Raul Villalobos, manager

COOPERATIVA TILARAN:

- Omar Alvarez, manager
- Juan Castro, asstistant manager
- Luid Alejo Alvarez, ccountant

COOPERATIVA CENIZOSA:

- Frank Lopez Ramirez, accountant
- Rafael Antonio Fuentes, MAG agronomist assigned to project
- Brett Campbell, Peace Corps volunteer
- Jorge Alfaro, cooperative promoter

COOPERATIVA PILANGOSTA:

- Oscar Campos, manager
- Hugo Suarez, cooperative promoter
- Gerardo Quesada, member board of directors
- Luis Salazar, accountant
- (Also visited three beneficiary farms and talked with three members of credit committee)

APPENDIX IV. Summary of Field Information

NAME OF COOPERATIVE: PEJIVALLE

LOCATION: Near Turrialba

DESCRIPTION: 270 members; had 14,260 fanegas of production in last harvest; has 124.25 HA in renovation and 126 beneficiaries; about 51% of area is in renovation

ACTIVITIES: has standard activities with coffee processing and a small store for agricultural supplies and general merchandise

PEOPLE INTERVIEWED: the agronomist from the central office and the former manager

TA PERSONNEL: agronomist from central office and has just now hired a paratechnician

TA ACTIVITIES: standard activities that include farm visits to deal with weed control, nutritional problems, use of fertilizer, spraying techniques, advice on which products to use

TA ORGANIZATION: the paratechnician will work as an assistant to the visiting agronomist

TA BUDGET: not defined

TA NEEDS: transportation is a big problem and we could not reach the cooperative office on that day due a mud slide

OBSERVATIONS: this is one of the smaller cooperatives and is a contrast to the larger ones visited on the same day

NAME OF COOPERATIVE: Suiza

LOCATION: about 40 minutes from Turrialba on the highway that leads to Limon, then on a non-paved road for a short distance.

DESCRIPTION: there are 1750 members and last year they sold 41,789 fanegas; there are 55 project beneficiaries and they have a total of 221 HA in renovation

ACTIVITIES: they have a coffee processing plant, a central office, a store that sells agricultural products and general merchandise, training courses

PEOPLE INTERVIEWED: the manager, the technicians, three members of the board of directors, and visited a beneficiary on his farm

TA PERSONNEL: two time professional agronomists and an para technician assistant

TA ACTIVITIES: they try to visit each of the beneficiaries once a month but it is impossible even with an assistant; they use training courses to reach more people; group meetings also help

TA ORGANIZATION: the paratechnician works as an assistant to the agronomist but carries out many of his activities by himself

TA BUDGET: not listed as such

TA NEEDS: gradually they are getting organized so that the regular activities are more orderly

OBSERVATIONS: the beneficiary expected to get 75 fanegas/HA this year from his first planting and that is more than double any harvest that had ever had before; he has also planted two other fields with his own funds and helped other farmers as well with the technology; the paratechnician was hired from eight that applied for the job; also considered were his farm background and his personality that gave him acceptance by the farmers.

NAME OF COOPERATIVE: Aragan

LOCATION: on the edge of Turrialba

DESCRIPTION: this is one of the larger, older and better organized of the cooperatives in the federation; it has 1,400 members and sold 38,750 fanegas last year; there are 302 beneficiaries although all are not in coffee; this cooperative also had a large sugar processing plant in the past but not now; there are 350.25 HA in renovation;

ACTIVITIES: they have a large coffee processing plant; the sugar mill is there but not used now; they do sell cane to another plant; they also are trying out other crops, especially macademian nuts;

PEOPLE INTERVIEWED: There were four agronomists, the assistant manager, the accountant, and a few members of the board of directors sat in with us for a time

TA PERSONNEL: Not all of the agronomists were assigned to work with the project beneficiaries because they have had technical assistance in operation for many years prior to the project;

TA ACTIVITIES: standard activities with farm visits, training courses, group meetings, etc..

TA ORGANIZATION: the head agronomist supervises the work and stays close to the central office to be available when farmers come in

TA BUDGET: they have had a regular budget for technical assistance for many years and the project budget is part of it

TA NEEDS: they do not feel that paratechnicians would fit their needs because many of the growers are also well trained; the answer for them is to better use their professional agronomists

OBSERVATIONS: after the formal meeting was over; a number continued to meet with us informally and talk about the project in general and the technical assistance needs

NAME OF COOPERATIVE: COPELECO

LOCATION: In Leon Cortes, directly North of San Jose. About an hour's drive from the city.

DESCRIPTION: This is in an area that has less rainfall so that the total production is lower although the number of cooperative members is large (3,100). There are 588 beneficiaries that are in the renovation program with a total of 441.67 HA. They are just now finishing a new coffee processing facility that will be finished at peak harvest time. The manager was an active and open person that was willing to explore new ideas. We met with all of the agronomists of the area as well as the accountant, and the head of computer data processing.

ACTIVITIES: In addition to the coffee processing, they had a supply house for agricultural products and a general store. There were other cooperative facilities also but our discussion was focused on technical assistance.

PEOPLE INTERVIEWED: The the agronomists, a paratechnician, the manager, and other cooperative staff.

TA PERSONNEL: There were two professional agronomists and one paratechnician.

TA ACTIVITIES: Standard activities such as farm visitation, training courses and group meetings.

TA ORGANIZATION: The lead agronomist helped coordinate and supervise the activities of the assistant agronomist and the paratechnician. We discussed the means of selection of the paratechnician and how the work was supervised. It was seen as important to properly introduce the paratechnician to the community so that he would be accepted. It was difficult at first because he was from the same locality but gradually he proved that his knowledge and skill was needed at the farm level. The paratechnician travels the area on a motorcycle and found it the best method.

TA BUDGET: There was no amount given but the cooperative has seen that it is an important investment. The backing of the manager in this case is one of the reasons that it is working.

TA NEEDS: The problem of transportation is always present even though they do have jeeps and a motorcycle available. They still are not able to visit each of the beneficiaries every month.

OBSERVATIONS: This was a dynamic cooperative and the relationship of the agronomists, manager and other staff members was open and progressive. They have not been afraid to try new things and can be helpful to other cooperatives in sharing experiences.

NAME OF COOPERATIVE: Tarazu

LOCATION: Near Leon Cortez and one of the three cooperatives that are close together.

DESCRIPTION: This cooperative has only 1,313 members and is not as large as Copeleco although it is famous for the high quality coffee that is exported. There were 50,035 fanegas produced in the last harvest which indicates more production per member than some of the other cooperatives. There are 659 beneficiaries and 393.59 HA in renovation. This is one of the highest percentages of members participating in renovation of all of the cooperatives in the country.

ACTIVITIES: The activities of the cooperative are concentrated on coffee although related cooperatives deal with other things such as gasoline sales and credit. They have a large warehouse for sales of agricultural and domestic products.

PEOPLE INTERVIEWED: I talked to the resident agronomist who had been there a few months. He met with the group earlier at Copeleco and I rode with him between cooperatives so that we had a chance to talk in more detail.

TA PERSONNEL: There is but one agronomist.

TA ACTIVITIES: He has a large list of beneficiaries and even a large group of members that would like assistance. He prepares a monthly list of visits which does not even cover half of the beneficiaries and, often can not even keep up with the list. He spends much of his time meeting emergencies as they come up. He meets most of the farmers as they come in to the agricultural supply store and he tries to be there each afternoon to talk with them. He also has many that come to his office in the cooperative building.

TA ORGANIZATION: There is little possibility of getting additional help at the moment. The manager was not at all positive in his view of adding a paratechnician unless he could help in the credit recuperation activities.

TA BUDGET: Not outlined as such.

TA NEEDS: More help is needed to adequately serve the number of beneficiaries.

OBSERVATIONS: The manager felt that the new agronomist was much better organized than the former one. He felt that they did need extra help in credit recuperation and felt that a paratechnician might be the best way to do it. If this were the case, then special training in credit would be necessary.

General Fields Notes

The following notes are taken from my field journal that were recorded daily. Some of these notes are included here for they give additional meaning to the material summarized earlier.

"We met the agents, talked for a short time and then went with them to visit one of the farmers about 20 minutes away. He had three different plantings from 1985, 86 and now in 87. He expected a crop of about 75 qq this year in the first commercial crop. In addition to his own, he helped his neighbors in their planting and served as a leader. He would plant even more if more credit were available and has almost duplicated the area with his own resources."

"There are two agents and one assistant working out of the office. The assistant was hired after a written exam and then selected out of 8 who applied for the job. Also considered were the personal qualities and past experience with coffee. He agent worked with the assistant and let him take part in group activities so that he would be accepted by the farmers. There was a tendency noted to talk down to the farmers but this is often a problem for the agents also. The need for supervision by the agent was emphasized and not all agents would work well as supervisors."

"This is one of the biggest and oldest cooperatives in the federation. It also handles sugar cane and other crops but no longer grinds sugar. There are three agents and a supervisor working in the area. The manager served as general spokesman for the group and expressed the need for more assistance but at the level of full agents rather than assistants. The discussion lasted for about 2 hours with everyone taking part."

"Out of these talks and observations the following points came out:

1. All aspects of improving the coverage of technical assistance should be considered and above all, the means of transportation;
2. If there were enough money, the first choice would be to hire full agents rather than assistants;

3. In those places where there are agents paid by the members, there may be a feeling by some of them that do not get loans that they are discriminated against in two ways, not getting a loan and then not getting their share of technical assistance. The cooperative is obligated to give 65% of the technical assistance time to the beneficiaries. This pushes even more for additional coverage.

4. Age, training, personal characteristics, time of trial, activities, amount of time -- were all discussed in relation to hiring further help.

5. The fact that there is technical assistance now available through the central agents and the results of the technical package all may work together to convince the small and less progressive cooperatives that it is important to hire their own agronomist.

6. If the central agents could use an assistant and gradually help these smaller cooperatives to see the importance of having an assistant, this might be a way of getting the program started. The agents could continue to give supervision and gradually the assistants could take over more responsibility and be hired locally. The economic benefit would pay the salary of the worker.

7. One of the biggest barriers is to convince the cooperative board of directors that they should hire an assistant. Some are not convinced that they need any help and others feel that only a full agent is needed."

"Met with manager and all of the technicians (including those from other cooperatives in area). The cooperative was large with many buildings and just now building a large warehouse that should be ready by the peak harvest time. There were two agents and one paratechnician working and with transportation. The manager was a very active and open person and ready for new ideas. The computer facilities were very good and everything was up to date. We explored all of the possibilities of paratechnician work and got some good ideas on characteristics, training and supervision. The discussion of the job did not get to specific tasks but agreed that it should be clarified."

"I rode with agent and had a chance to talk over the points discussed earlier in the larger group. He was alone with an extremely large beneficiary list and even more members. He had a monthly list of visits and spend Monday in office. He also spent the late afternoons in the agricultural supply store so that he was available to talk with the farmers that came in to buy products. He had little time to visit members and could not always keep schedule of visits to beneficiaries due to urgent problems that called for immediate farm visits. He saw little possibility of additional help."

"In discussions with the manager he felt that the new agronomist was better organized and that there was little need for further assistance. One job that needed further help was related to the credit recuperation. Here was a possibility of adding an assistant. The need for credit integration with other activities was emphasized in that confidence establishment was needed before credit recuperation issues were dealt with. This could only come by periodic contact in farm visits rather than waiting for the moment that payback time came. This opened the door for the use of paratechnicians that could help in regular farm visits and also have special preparation in credit."

"Here we met with the manager and the board. They had just recently hired an agent with training in San Carlos. He had raised coffee in the area so knew the people well and was older. This area is very traditional and few beneficiaries were listed. There was little possibility of a another assistant and it was early yet to see how the agent would work out. The need for promotion activities was emphasized."

"-Each cooperative has different needs, modes of operation and styles of management;

-Promotional activities need to be included in technical assistance (TA) tasks;

-Credit activities need to be included in TA package."

"Met with TA group and other officials of cooperative board. Sat in on evaluation and gathered many good ideas of functioning and noted questions for later discussion with TA group. Visit to coffee processing plant to see new installations and observe the first coffee being processed. Lunch with about 20 of cooperative group including members of board. Spent most of afternoon with TA group talking about the organization and activities. Evening trip to Villa Argentina to participate in closing session of a short course on cooperatives."

"Saturday morning at 6:30 departed for trip to visit project beneficiaries. Three TAs went with us to visit farms about 45 minutes up in the mountains. Walked and talked most of the morning with Sr. Benigno the local coordinator of cooperative."

Visited his plantings and those of his neighbors. Went on to visit two other plots nearer to town and on level land. Returned to office at 11am to talk with education director and the one who prepares the radio program. (also saw the computer facilities and talked with the computer programmer as well as the operator on Friday afternoon) Talked with the coop manager who spends the week in a INCAE management training program but returns on the weekend to help keep things up to date. The management group would like to continue in contact and make further contacts with cooperatives in other parts of the world to exchange ideas and develop solidarity."

"MULTISERVICE COOP: The cooperative has tried to look at the total development situation of the valley and included coffee, cane, milk, and is now looking at other crops like macademian nuts for diversification. They have a sugar mill, a coffee processing plant, a milk processing plant and 6 farms that are part of the holdings. They have a small medical clinic, a general store, an agricultural products store, a traveling store, and other small enterprises. They emphasize cooperative education at all levels and try to help all in the cooperative organization to improve their knowledge and skills.

MAG RELATIONS- There have been some problems in the relations with the Ministry of Agriculture (MAG) TAs. It has not been possible to coordinate the efforts to the degree that the recommendations to the farmers are agreed on. The farmers have expressed some frustration to get conflicting advice on how to carry out different practices. Training may be part of the problem and professional jealousy may be present also.

PT POSSIBILITIES- Within a month there should be one para-technician (PT) that will become part of the TA group. A means of justification and securing the PT, there was a list of functions which served as a rationale for hiring. It was felt that this person can be of great assistance in some of the routine tasks so the the professionals can be free to do more of the diagnostic and follow-up work.

COORDINATORS-A unique aspect of the work in this cooperative is the use of community coordinators. When the cooperative began to grow in many different directions it was felt that a better means of constant contact with the members was needed. About two years ago they started electing a person in each community to be the liaison person with the cooperative and the services offered.

This person also represents the community in the board of directors as well as in the annual assembly. Even though this means that only about 300 members represent the cooperative in the assembly, last year there were over 800 people present in the meeting which indicates an interest as well as grass roots decision making.

EDUCATIONAL ACTIVITIES-The cooperative has given a great deal of emphasis to education and uses every opportunity to help in this area. There is a department of education and a full-time director. The cooperative course in Villa Argentina is a good example of this. There were 70 people that received certificates of participation which meant that they had been present for a minimum of two of the three days. It included men, women, and children as young as 12 years old. The course started with 30 the first day and built up to 70 by the time it had finished. It was held in the community school which was a two teacher size and had about 54 pupils in the six primary grades. The classes were held in the afternoon and evening for three days. A number of brief talks were made by both the cooperative staff as well as the people from the local community. This had been organized by the coordinator who was a member of the cooperative. Most of the people were not members and even the coordinator had had no opportunity to know about cooperative principles and philosophy. After the presentation of certificates there were pictures taken, a few interviews on tape for the Sunday radio program and everyone was served a meal which had been prepared by the local community. In these kind of events a number of the staff take part as part of a general orientation to cooperative activities at all levels. In this trip, I went with the manager of the processing plant, the technical engineer in charge of the installations of the processing plant, and the office secretary to the cooperative manager. They also had a chance to make a few comments about their role in the cooperative and express remarks about the way cooperatives operate in terms of the local community. The participation of cooperative employees in this form serves a function of making them a part of the whole movement and helps keep the vision fixed on the local community and member as the key to success.

RADIO PROGRAMS-Each Sunday morning the cooperative has an hour-long radio program. It serves to announce activities of the cooperative, remind members of meetings, tell about services available, give technical advice, give market advice, and also includes music and greetings. Listenership is high and it has gradually been able to improve through feedback letters and information from the communities. The programs are prepared on a very low budget and the program tapes are prepared in a corner of the board room on Saturday morning by one of the members of the office staff who has a special interest in radio although he has no formal training.

EDUCATIONAL FOLDERS- The TA department has found it useful to prepare simple instructions for some of the key practices in the technical package. This is one area that there could be cooperation between cooperatives and perhaps a workshop to help in the preparation. This also could include the use of other audio visuals for effective communication of ideas.

PRODUCT TESTING-There was an expressed need for product testing before they are part of the technical package. There is not enough time for field followup to test products and not all of the recommended products have been effective.

JOB DESCRIPTION- Most of the TA jobs have been listed by functions. In order to request a PT they also prepared one for the assistant.

FUTURE FINANCING- The possibility of selling the value of TA in terms of its economic advantage was discussed. The TAs should try to calculate the economic advantage and begin selling the idea to the beneficiaries as well as all other levels in the cooperative. It should be understood that TA is not free so that when it comes out of cooperative funds it will be approved.

INSPECTOR DE CAFE- there are three full time inspectors that travel to all of the pickup stations to check on the accounts and the quality of the coffee that is coming in. They also take messages to coordinators so serve a linking function also.

WEEKLY PLANNING MEETINGS- the TA group has weekly planning meetings to readjust the workloads and talk about common problems. There is a monthly work plan that is posted and announced in the communities but they also have flexibility. The weekly planning meetings are also a part of the mode of administration at the manager level.

THE COMPUTER CENTER-The computer has five terminals and had all of the reports on file. They will soon have all of the beneficiaries listed also and now have a 8x11 file that holds a folder on each one which is updated with each visit and financial operation. There is excellent data for crosstabs on development characteristics and correlations. There is an open invitation for socioeconomic studies if graduate students are interested."

APPENDIX V. Analysis of Participation

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PROGRAMA USAID-FEDECOOP R.L.
ANALISIS DE PARTICIPACION DE
ASOCIADOS DE CADA COOPERATIVA
18 6-87

COOPERATIVA	1985		1986		1987		TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
	HAS	BENEF.	HAS	BENEF.	HAS	BENEF.	HAS	BENEF. RENOV.	BENEF. ALMACIGO	BENEF. DIVERSIF.	BENEF. PROGRAMA	ASOCIADOS COOPERATIVA	PARTICIP.
AGUA BUENA	10.00	17	57.50	65	42.00	53	109.50	135	20		155	900	17.22
ARAGON	59.25	48	200.00	96	91.00	34	350.25	178	12	112	302	1275	23.69
ATENAS	24.00	18	147.75	111	54.00	41	225.75	170	11		181	1100	16.45
CARTAGO			69.94	59	30.00	43	99.94	102	2		104	1400	7.43
CERRO AZUL	5.25	9	37.50	53	50.00	69	92.75	131	38		169	275	61.45
SANTA TERE	19.75	33	40.75	26	24.00	15	84.50	74	16	10	100	560	17.86
EL DOS TILA			12.50	17	21.00	15	33.50	32	1		33	269	12.27
DOTA	8.50	7	18.50	20	10.00	9	37.00	36			36	480	7.50
EL GENERAL	156.92	221	197.91	242	112.00	140	466.83	603	28		631	3400	18.56
LEON CORTES	155.00	249	174.97	242	111.70	97	441.67	588	27		615	3100	19.84
LIBERTAD	82.77	41	232.00	121	112.00	71	426.77	233	11	2	246	1150	21.39
LLANO BONITO	37.00	93	65.00	153	41.00	82	143.00	328	18		346	561	61.08
NARANJO	165.00	147	182.06	162	112.00	94	459.06	403	61		464	2225	20.85
PALMARES	100.37	74	156.45	118	106.00	42	362.82	234	42		276	1304	21.17
PEJIBAYE	16.25	21	77.00	87	31.00	18	124.25	126	8	5	139	270	51.48
PILA ANGOSTA	5.75	6	70.00	43	50.00	22	125.75	71	29		100	208	48.08
PIRRO	53.00	12	39.00	8	45.00	10	137.00	30			30	170	17.65
SABALITO	5.75	9	84.75	76	50.00	60	140.50	145	19	13	177	1300	13.62
SANTA ROSA	104.00	86	87.50	64	81.00	52	272.50	202	7		209	780	26.79
SARAPIQUI	11.50	8	9.20	8	25.00	17	45.70	33	2	1	36	250	14.40
SAN CARLOS			45.00	37	20.00	37	65.00	74	1	23	98	3580	2.74
SAN RAMON	110.50	104	89.00	74	96.00	65	295.50	243	35		278	2710	10.26
SAN VITO	88.74	172	406.00	476	112.00	143	606.74	791	29	26	846	3600	23.50
SUIZA	59.25	41	97.75	99	64.00	55	221.00	195	26	17	238	1750	13.60
TARRAZU	149.59	309	132.00	203	112.00	147	393.59	659	33		692	1313	52.70
SAN JUANILLO	149.67	138	200.00	153	112.00	67	461.67	358	28		386	2600	14.85
UNION	9.70	3	42.35	19	25.00	10	77.05	32	1		33	1200	2.75
VALVERDE VEGA	29.00	39	85.00	109	75.00	87	189.00	235	22		257	1050	24.48
TILARAN	7.00	1	26.25	22	51.00	30	84.25	53	2	10	65	520	12.50
CENIZOSA	7.00	7	10.00	10	50.00	36	67.00	53	21		74	140	52.86
MONTES DE ORO					27.00	29	27.00	29			29	360	8.06
TOTALES	1630.51	1913	3093.63	2973	1942.70	1690	6666.84	6576	550	219	7345	39800	18.45

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APPENDIX VI. Agricultural Technicians Working on the Project

GRUPO DE TECNICOS DEDICADOS AL PROGRAMA USAID-FEDECOOP R.L.

	<u>TECNICO COOPERATIVA</u>	<u>USAID</u>
1	AGUA BUENA	
2	ARAGON	4
3	ATENAS	2
4	CARTAGO	1
5	CENIZOSA	1
6	CERRO AZUL	1 PARATECNICO
7	DOTA	1
8	EL DOS	1
9	EL GENERAL	4
10	LIBERTAD	3
11	SUIZA	1
12	LEON CORTES	2
13	LLANO BONITO	1 PARATECNICO
14	NARANJO	2
15	PALMARES	2
16	PEJIBAYE	
17	PILA ANGOSTA	
18	SAN RAMON	1
19	RIO PIRRO	1
20	SABALITO	
21	SAN CARLOS	7
22	SAN JUANILLO	1
23	SAN VITO	2
24	SANTA ROSA	2
25	SANTA TERE	
26	SARAPIQUI	
27	TARRAZU,	
28	TILARAN	1
29	UNION	
30	VALVERDE VEGA	
31	MONTES DE ORO	1
32	ALAJUELA	1

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APPENDIX VII. Sample Paratechnician Manual

INSTITUTO HONDURENO DE CAFE

DIVISION AGRICOLA

PROYECTO AID-IHCAFE

MANUAL PROVISIONAL DE PARATECNICO

Este manual ha sido preparado en forma provisional para el uso de los extensionistas en sus trabajos con los paratecnicos. Las recomendaciones que aqui se incluye estan basadas en la evaluacion del uso de paratecnicos hasta la fecha, las experiencias de otros programas similares en otras paises, y en las discusiones durante el Seminario/Taller con los jefes regionales efectuado el 11 de Noviembre de 1985 en las oficinas centrales de IHCAFE. Despues de un tiempo de uso, este manual sera revisado para asi preparar un manual permanente.

Las divisiones principales de este manual se relaciona con los aspectos de mayor interes en asegurar la buena marcha en un programa de paratecnicos o sea:

- 1). Funciones y actividades principales del Paratecnico;
- 2). La seleccion del Paratecnico;
- 3). La capacitacion del Paratecnico;
- 4). La organizacion, administracion y supervision del Paratecnico; y,
- 5). La evaluacion del programa de Paratecnicos.

1. FUNCIONES DE LOS PARATECNICOS

A. Funciones Principales

- 1). -Actuar en representacion de IHCAFE en las comunidades donde sirven, dando toda informacion y ayuda tecnica que este a su alcance.
- 2). -Actuar en representacion de sus comunidad, buscando toda ayuda posible del IHCAFE y otras agencias para el bienestar de los grupos que atiende.
- 3). -Actuar siempre como ayudante y trasmisor de las tecnicas que le asigne el Extensionista.

B. Actividades a Desarrollar

Como Practicante

- 1). -Asistir al Extensionista en las actividades practicas que realiza con los nucleos de pequenos caficultores como: control de plagas y enfermedades, uso de abonos y construccion de aboneras, conservacion de suelos, trazado de campo, ahoyado y trasplante, uso de sombra, etc..
- 2). -Supervisar a los pequenos cafetaleros para garantizar que las practicas recomendadas sean ejecutadas en forma adecuada y oportuna.

Como Educador

- 3). - Colaborar con el Extensionista en la coordinacion de actividades de capacitacion dirigida a los grupos de pequenos productores de cafe.
- 4). -Monitorear los programas de comunicacion de masas del Proyecto AID-IHCAFE (programas radiales, cassettes, rotfolios, etc..)
- 5). -Servir como medio para llevar mensajes y avisos oficiales de IHCAFE a las comunidades y personas especificas.
- 6). -Llevar mensajes y programas de motivacion y promocion para las comunidades.
- 7). -Ayudar a organizar y apollar en la convocatoria de reuniones de grupos en las comunidades para fines de promocion, educacion o demostracion de tecnicas con el Extensionista.
- 8). -Ayudar en la promocion de la technificacion del cafe con el no beneficiario.

Como Observador / Investigador

9. Recoger informacion sobre problemas en el cultivo de cafe y de otra indole que pudiera servir en la oficina regional para montar programas nuevos de servicio.

II. SELECCION DE LOS PARATECNICOS

A. Criterios

- 1). - Tener solvencia moral y ser de la confianza de los demas miembros de la comunidad en la que actuara. (Preferencia para los casados y con familia).
- 2). - Demostrar interes de servicio publico y espiritu de cooperacion con los demas convecinos de su medio.
- 3). - Ser preferentemente un beneficiario exitoso del Proyecto AID-IHCAFE ya que estos han demostrado ser receptivos a la technificacion.
- 4). - Ser cafecultor promedio en cuanto a area sembrado en compracion con los de la zona.
- 5). - Radicar en el medio cafetalero, o sea en la zona donde ejercera su funcion de Paratecnico.
- 6). - Demostrar liderazgo entre los demas caficultores de su comunidad.
- 7). - Tener edad comprendida entre 18 y 50 anos y capacidad de desplazamiento (con preferencia de edad entre 20 y 35 anos).
- 8). - Saber leer, escribir y tener facilidad de expresion (con preferencia haber cursado el sexto grado de escolaridad).

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B. Proceso de Seleccion

- 1). - Empieza con la observacion del individuo en la comunidad por el Extensionista en su trabajo como caficultor y beneficiario.
- 2). - Despues de observacion durante los cursos de capacitacion y de su manera de compartir sus conocimientos con sus convecinos, puede ser seleccionado a trabajar como Paratecnico si se presenta la oportunidad.

III. CAPACITATION

A. Relacion con Funciones

- 1). - Los modulos de capacitacion deben incluir todos los aspectos tecnicos relacionados con sus funciones como: control de plagas y enfermedades, uso de abonos, conservacion de suelos, limpieza del cafetal, trazado de campo, ahoyado y trasplante, uso de sombra, cuidados con nuevas plantaciones, uso de credito, etc..

B. Forma y Lugar de Capacitacion

- 1). La capacitacion se llavara a cabo a traves de entrenamiento en servicio y de cursos cortos. El enfasis sera en los aspectos practicos con algo de teoria para asi dar la razon o el porque de las practicas.

- 2). La planeacion, promocion y ejecucion de los cursos sera la responsabilidad de la seccion de capacitacion y divulgacion tecnica del departamento de Extension con la ayuda de las oficinas regionales y agentes de extensnion local. La capacitacion principal debe ser local y diaria, esta debe ser respaldada con cursos y otras actividades regionales y nacionales.

IV LA ORGANIZACION. ADMINISTRACION Y SUPERVISION DEL PARATECNICO

- 1). - El Extensionista debe planear el trabajo con el Paratecnico, supervisarle en el campo, y darle ayuda necesaria para fortalecer sus areas de debilidad.
- 2). - Cada Extensionista puede trabajar con varios Paratecnicos de acuerdo a la cobertura de su agencia.
- 3). - Cada paratecnico pudiera servir hasta 20 beneficiarios y asi visitar de 3 a 5 por dia. En las epocas criticas del cultivo debe tener tiempo para visitar el beneficiario una vez a la semana o quincenal de acuerdo a la extension de la zona.
- 4). - El Paratecnico siempre se ve como ayudante temporal. Su periodo de trabajo sera relacionado con el calendario de actividades cafetaleras y siempre dejando tiempo para que realice actividades en su propia finca.

- 5). - El Extensionista debe recojer semanalmente o quincenalmente informacion del Paratecnico sobre las visitas, como: el nombre de la personas visitadas, lugar, asuntos tratados, practicas demostradas, problemas detectados, y asuntos pendientes para otra visita. Tambien el informe debe incluir datos sobre reuniones con grupos y contactos con otras organizaciones y agencias.
- 6). - El Extensionista debe llevar los resultados del Departamento de Investigacion a los Paratecnicos y este a su vez transmitara al Extensionista las necesidades planteados por los cafecultores de su zona.
- 7). - Semestralmente se llavara a cabo un seminario orientado al Extensionista para un mejor uso del Paratecnico.
- 8). - El Jefe Regional desidira sobre el valor del pago del jornal diario del Paratecnico el cual sera de L6 a L8.00 dependiendo de la zona.
- 9). - La contratacion del personal Paratecnico sera hasta de 8 meses por ano con 20 dias por mes

LA EVALUACION DEL PROGRAMA DE PARATECNICOS

- 1). - Los informes semanales o quincenales serviran de base de una evaluacion global de los resultados del programa de Paratecnicos lo que incluira costos y cobertura.
- 2). - La evaluacion global contendra, entre otras cosas:
 - el numero de Paratecnicos por region;
 - el numero de actividades realizados.

APPENDIX VIII. Sample Activity Report Sheets



COOPERATIVA DE CAFICULTORES DE LLANO BONITO R.L.
PROGRAMA USAID-FEDECOOP R.L.

ASISTENCIA TECNICA AGRONOMICA

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FORMULARIO DE SUPERVISION DE CAFE No. _____

Localidad: _____ Fecha: _____

Nombre del Asociado _____ Número: _____

Tipo de Préstamo _____ Año _____ Area _____ Plantas _____

Situación de la Plantación	1	2	3	4	5
Control de Malezas	1	2	3	4	5
Control Fitosanitario	1	2	3	4	5
Estado Nutricional	1	2	3	4	5

Enfermedades Presentes	01--	02--	03--	04--	05--
	06--	07--	08--	09--	10--

Plagas Presentes	11--	12--	13--	14--	15--
	16--	17--1	18--	19--	20--

Hizo análisis de suelo		Si--	No--
Acató recomendaciones	Total _____	Parcial _____	No--

OBSERVACIONES: _____

RECOMENDACION:

Beneficiario _____

Técnico _____

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ENFERMEDADES:

- 01 Mal de Talluelo (*Rhizoctonia Solani*)
- 02 Chasparria (*Cercospora Coffeicola*)
- 03 Antracnosis (*Colletotrichum Coffenum*)
- 04 Ojo de Gallo (*Mycena Citricolor*)
- 05 Enfermedad Rosada (*Corticium Salmonicolor*)
- 06 Roya (*Emileia Vastatrix*)
- 07 Derrite (*Phoma Costarricensis*)
- 08 Moho de Hilachas (*Pellicularia Kolleroga*)
- Roselinia (*Rosellinia Bunodes*)
- Llaga Macana (*Ceratocistis Fimbriata*)

PLAGAS:

- 11 Jobotos (*Phyllophaga* pp.)
- 12 Cortadores (*Agrotis* spp.)
- 13 Escama Verde (*Coccus Virides*)
- 14 Arañita Roja (*Oligonychus Yothersi*)
- 15 Piojillo de la Raíz (*Neorhizóecus Coffeae*)
- 16 Cochinilla de la Raíz (*Dysmicoccus Brevipes*)
- 17 Minador de la Hoja (*Leucoptera Coffealla*)
- 18 Cochinilla Harinosa (*Planococcus citri*)

NEMATOSOS:

- 19 *Pratylenchus* sp.
- 20 *Meloidogyne* sp.

PLAN DE TRABAJO A DESARROLLARSE CON EL AUXILIO DEL
CAFETALERO DE ENLACE O PARATECNICO Y FINANCIADO CON RECURSOS DEL
PROYECTO AID-IHCAFE.

DURANTE EL MES DE _____ DE _____

REGION _____ AGENCIA REGIONAL _____ EXTENSIONISTA _____

o.	NOMBRE(S) DE EL (LOS) PARATECNICO(S)	LUGAR(ES) Y FECHA(S) A REALIZARSE	ACTIVIDAD A REALIZARSE	NOMBRE DE EL (LOS) BENEFICIARIOS	COSTO LPS. DE LA PROGRAMACION (E)

BS.

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