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EXTENSION SPECIALIST

CONSULTANCY REPORT

for the

COSTA RICA COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

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## LIST OF ACRONYMS

- ACDI -Agricultural Cooperative Development International
- CATIE -Centro Agronomico Tropical de Investigacion y Ensenanza  
-Center for Research and Education in Tropical Agriculture
- FEDECOOP -Federacion de Cooperativas de Cafecultores, R.L.  
-Federation of Coffee Cooperatives
- ICAFFE -Instituto de Cafe de Costa Rica  
-Costa Rican Coffee Institute
- INA -Instituto Nacional de Aprendizaje  
-National Training Institute
- MAG -Ministerio De Agricultura y Ganaderia  
-Ministry of Agriculture and Animal Husbandry
- USAID -United States Agency for International Development  
-Agencia para el Desarrollo Internacional de los Estados Unidos

# EXTENSION SPECIALIST CONSULTANCY REPORT

for the

## COSTA RICA COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

### EXECUTIVE SUMMARY

This is a summary of the report on my activities in Costa Rica as Extension Specialist during the period of May 1st to 15th, 1988. During this period of time, I interviewed officials in the AID/FEDECOOP and USAID offices in San Jose at the beginning and end of the period. The remainder of the time was occupied in field visits to 16 of the 32 local cooperatives and interviewing Project technicians, cooperative staff and farmers.

As a result of these visits, my observations and from the related written reports, I conclude:

- that the Project continues to operate well;
- that the technical assistance is reaching most of the beneficiaries;
- that the technicians that have been hired in the local cooperatives are of middle-level training rather than the para-technician level that was anticipated in the Project plan;
- that the training that has been initiated by Dr. Ledesma for all technicians has worked out well;
- that the regional structure that is proposed can help in giving the necessary back-up and coordination for an on-going supervised credit program at the cooperative level;
- and that the period remaining in Project life should be directed toward establishing a system of supervised credit with an adequate structure, with well selected and trained personnel and with established norms for operation.

Based on these observations and conclusions, I recommend that:

- the training courses that have been initiated by Dr. Ledesma be completed;
- that these courses continue to include Extension Methods, Coffee Production Skills, Credit Supervision and add Cooperative Education;

- that these courses include practical skills as well as theory and allow time for discussion and sharing among technicians;
- that technicians from other agencies be invited to attend the courses so that interagency cooperation can continue to be fostered;
- that a person be appointed part-time to help coordinate the present and future training courses;
- that the coordinator help establish links with local experts that can help with future training events;
- that the coordinator help find sources of technical literature that can be used by the technicians as they work with the farmers;
- that the Project budgeting process continue to be communicated to the cooperative members so that they can fully understand the costs as well as the benefits of technical assistance as part of supervised credit;
- that regional structure be established and the role of the regional coordinator be further clarified in terms of duties, accountability, localization, experience and skills so that personnel can be found for the positions and adequate training be given for the job;
- that the integration of credit and technical assistance be fully prescribed in the duties of the regional coordinators and where possible, for the local technicians as well;
- that discussions be continued to clarify the best workable model of technical transfer for Costa Rica that uses localized technicians that can give adequate coverage at an affordable price (which may often mean the use of middle level technicians rather than paraprofessionals); and finally,
- that consideration be given for an impact evaluation of the Project at the beneficiary level using probability sampling techniques in order to fully document what seems to be a very successful supervised credit project.

## EXTENSION SPECIALIST CONSULTANCY REPORT

for the

### COSTA RICA COFFEE TECHNIFICATION AND DIVERSIFICATION PROJECT

This is a report on the my activities in Costa Rica as Extension Specialist during the period of May 1 to May 15, 1988. The general outline of the report is as follows: A. Scope of Work; B. Study Goals and Methods; C. Findings, which include comments on the general functioning of the Project, the technical assistance component of the project, the training courses for technicians and the future operation of the technological transfer model; and, D. Recommendations. Also attached are a number of related materials that form an appendix.

My activities during this period corresponds to the scope of work (ACDI, April 14, 1988) which outlines the following duties:

- "1. Evaluate the progress of the paratechnician model that has been implemented under the supervision of Dr. Rafael Ledesma.
2. Assure that the paratechnician model being developed corresponds closely to that originally proposed by you last year.
3. Make recommendations with respect to changes, revisions and adaptations that need to be made to assure effective technology transfer.
4. Make recommendations for an integrated system of credit supervision.
5. Collaborate in the design and structure of the new system of regional supervisors and the relations with the agronomist that FEDECOOP-affiliated cooperatives are hiring.
6. Examine the content of the paratechnician courses already given and their benefit for coffee growers.
7. Other duties as may be assigned by Frank Astacio, ACDI's Coffee Credit Specialist, which are consistent with the overall scope of this assignment.
8. Prepare a detailed draft technical report of your activities prior to departing from Costa Rica. The outline of this technical report should be agreed to by FEDECOOP and Frank Astacio, prior to preparation.

## METHODOLOGY

### A. Study goals and methods;

Upon arrival on the field, discussions were held with the project administrators at the FEDECOOP office and related project personnel in the office of USAID. As a result of these discussions, my first concern in the study was the present and future training needs of the technicians. The discussions at all levels was directed at determining the utility of the two Extension Methods training courses that had already been given by Dr. Ledesma in light of completing the first cycle of training for the technicians in all regions of the country. There are three additional training courses that part of this cycle of training that was proposed. Related to this, is the urgent need and justification for sufficient funding to complete the courses.

The next area of concern in the study was the present operation and outcome of the model that is being used for technology transfer (technical assistance). This includes the use of locally based technicians with lesser training which follows the paratechnican model that was part of the original project plan of work as well as the recommendations made earlier in my report on the subject. It also includes the integration of credit supervision as part of the technicians' duties.

My third concern was the overall operation of the Project. Both the training program and the general work of the technicians can only be evaluated in the context of the operation of the Project as a whole. This was also an important consideration in the investigation.

My fourth concern was for the future. The present situation of training, technical assistance in general and the overall operation of the project give a basis for looking to the future. A fundamental concern in the present investigation is how all of these activities work together to strengthen the local development process through the cooperatives. With this in mind, a number of questions were proposed at all levels as to the future operation of technical assistance at the cooperative level; ie: what model can best be used for service delivery? how can it be justified at the farm level? what are the training needs of technicians and local leaders? what is the best organizational structure? and, what will be the method of financing once the project finishes?

## Investigation Methodology:

My investigation was directed at the local level. I requested access to as many local cooperatives as possible with related farm visits. Of the total of 12 working days in Costa Rica, nine of those were spent in the field. I talked with the technicians, with the project beneficiaries, with cooperative managers, with elected cooperative officers and with project personnel in the central office. I used in-depth interviewing as the investigation methodology. The interviews were guided by a checklist of items that were discussed in conversational style. Some interview notes were recorded at the time of the interview and complete recording was done immediately after the interview. All notes were reviewed and recorded permanently each evening on a portable word processor. A summary the information for each cooperative can be found in Appendix A.

## Coverage:

Sixteen of the 32 cooperatives were included in the investigation. All climatic and cultural areas were included in the investigation although no attempt was made to use a random sample. The cooperative included are: Tilaran, El Dos, Palmares, Montes de Oro, La Cenizosa, Cerro Azul, San Vito, Agua Buena, Sabalito, San Isidro, Dota, Tarrazu, Leon Cortes, Llano Bonito, and Cartago. (See Appendix B for a map with location of the cooperatives) In all cases, technicians were interviewed and in most cases the cooperative office was visited and the managers and officials took part in the discussions. Farm visits were also a part of the time spent in the local cooperatives. Some of the farms visits took as long as 5 hours to complete which allowed discussions with a number of beneficiaries and the exploration of many aspects of technical assistance with the technicians.

## FINDINGS

### Functioning of Overall Program:

The program seems to be working well. This is particularly true at the level of the cooperatives and on the individual farms. In terms of increased production, the farmers can now begin to see just what improved technology can do. A number of remarks such as: "from 5 fanegas\* to 40 fanegas per hectare\*\* in three years"; "from previous production highs of 20 fanegas to 40 fanegas, and the crop hasn't reached it's peak production yet"; "total cooperative processing of 52,000 fanegas in the previous harvest year and last year 57,000 fanegas processed -- mostly due

to increased production from Project beneficiaries", etc., etc..

There are also comments related to improved land tenure where the Project has helped those who were agricultural laborers to become secure small land owners due to increased production and more intensive land use. From the point of view of cooperative strengthening, the Project has made membership more attractive and increased membership. Along with this is the conviction that strong cooperative education programs are needed so that the "clients" become "cooperative members" in the fullest sense. The Project has also served as a means of assistance to Indians that have been hard to reach in other economic development projects. The improved coffee production is seen by many as the needed economic base that can be the starting point to try out other crops without the risk of losing everything if they don't work out.

The Project has given credit experience to a number of farmers that had not had it before and perhaps goes even further in setting an example of supervised credit where technical assistance is a necessary part to insure that the credit is well used. The future payback level will be a good indicator as to how true this is throughout the country.

Finally, the Project is serving as model in the delivery of technical assistance through private means so that the farmers realize both the benefits as well as the cost of such services. This is an important point for the continuation of the model after the USAID assistance is completed.

#### Technical Assistance Component:

The technical assistance component of the Project is closely related to higher production at the farm level. By no means were the farms visited a random sample of those served by the Project, yet we were able to see some of the contrasts in farms of beneficiaries that were not doing as well and in further contrast to farmers that were not using the technological package. I think that there is good evidence of an effective delivery system of technical assistance.

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\* One fanega = 400 liters in volume or the equivalent measure of green coffee to give approximately 100 pounds of dry coffee.

\*\* One hectare = 10,000 sq. meters or 2.47 acres.

The model that was proposed in the Project paper and that was affirmed in the report last year called for a sizable number of paratechnicians (local producers with little formal technical training) as part of the technical staff at the local cooperative level. This has not happened to the extent that was anticipated. The technicians that have been hired at the local level have been more at the middle level of formal training (graduates of secondary school agricultural training). This was also noted in the evaluation report prepared by Dr. Tinnermeier in a section entitled "Lessons Learned":

"A third lesson of the project is less positive. The concept of using paratechnicians (other farmers and community members) to reduce the technical assistance costs has not been accepted in Costa Rica as readily as in other countries. This suggests the use of paratechnicians needs to be studied carefully within the country context. In the case of Costa Rica, the university educated agronomists are reluctant to use less educated personnel as a mechanism to channel technical advice to farmers. This is primarily because they are afraid erroneous recommendations might be made by overzealous paratechnicians. The agronomists are also skeptical that farmers will follow advice from less trained people. Because of this resistance to the paraprofessional concept, this approach is being studied and introduced more slowly than planned originally for the Project." (Tennermeier 1988:25)

On the other hand, the technicians that have been selected do meet the essential criteria of paratechnicians in that they have local roots and earn lower salaries that are more within the possibilities of local cooperatives to sustain.

At this stage, the original model of technological transfer (technical assistance) should be revised based on the working reality that has been found in Project experience. Rather than focus on "paratechnicians" as they are known in other countries, the focus should be on the use of technical assistants with lower levels of training that are from the local area and that can be sustained economically by the local cooperatives. (See Appendix C, "Paraprofessionals in Rural Development") These basic principles seem to be operating well in many of the cooperatives now and can be applied to others to improve the overall efficiency and effectiveness of technical assistance in the Project. This is important to insure continuity in the future.

There is no substitute for locally based technicians. This means more than just being assigned to a local area. It means having roots in the area, feeling at home there and even being there on weekends. It is hard for a young technician "to be a prophet in his own country" but the results show that it is not

only possible, it has been done in this Project and gives even greater credibility once the respect has been established. Even such small things as the wife's family connections in the area serve to strengthen this relationship. This is one of the strong aspects of other programs that have used paratechnicians but it also seems to be true with most middle level technicians. In contrast, this is one of the reasons that highly trained and highly paid technicians do not usually work as well; they have their roots somewhere else. It does not distract as much when these well trained professionals function as a backup for local technicians but even then they must be available to the local technicians, especially if the local technicians are of limited formal training. The regional structure that is being proposed is related to this backup link and is worthy of further discussion in this report.

The second important point is related to financing technical assistance. Generally technical services can be delivered at the local level more efficiently and effectively by locally oriented technicians. They must have backup to do a good job because their training has not prepared them in the underlying scientific aspects of sophisticated technology. The Project has helped the local cooperatives guarantee technical assistance at the local level through the 2% interest arrangement. As the number of beneficiaries has increased to an adequate level, it is possible for the cooperative to automatically obtain the necessary funds to hire a technician. This has made it possible for almost every cooperative to hire a technician, at least at the paratechnician or mid-level category. This financial arrangement has worked well but if technical assistance is to continue in the future, this arrangement must be well understood by the cooperative officials and members at the local level.

Technical assistance through the public sector has usually been seen as a free service from the farmers point of view. This arrangement has also been plagued by little accountability at the local level so that funding and administrative problems distract from it's effectiveness in the long run. The technical assistance in the Project has been proven at the farm level to be a necessary economic input that can more than pay for itself. This should be emphasized at all levels so that it becomes part of the ongoing budget of the local cooperatives that has the backing of the managers as well as the individual members.

Not only the costs of the local technicians should be known and approved by the local cooperatives but the financing of the regional professionals that serve as backup personnel should also be open and understood at the local level. The continuity of an effective and efficient technical assistance delivery system depends on this kind of local approval.

The unique and powerful aspect of cooperatives in rural

development is they depend on local control; all of the financing for future technical assistance will be paid by the farmer. Unless that becomes part of a known and approved structure now it will die with the end of the Project.

There are other aspects of the present technical assistance that are important. There is a great deal of interagency cooperation in most areas so that the technicians work together with those from the Ministry of Agriculture (MAG), the banks, the National Training Institute (INA), and others. This can be strengthened further by joint planning and training events in the future.

The cooperative has been greatly helped by the allocation of motorcycles from Project funds. A number of different methods have been used by local cooperatives to try to solve the transportation problem. The results of these experiences could be summarized and serve as the basis for future recommendations to all of the cooperatives.

The use of local leaders has also been noticeably in some areas and this has improved the outreach efficiency of the technicians. As more group extension methods are used, the local leaders can be an important link between the community and the technician as they help to sponsor an event.

The evaluation by Dr. Tennermeier also noted that there had been little use of the Project funds allocated to the preparation of written technical materials. Some materials are being prepared at the local level (See Appendix D, Samples of Written Material Used in Group Meetings) and the same kind of thing could be prepared for use throughout the whole country.

Additional methods and techniques that the technicians use in working with the farmers will be considered in the next section which focuses on training courses.

#### Training Courses for Technicians:

As a result of the investigation last year, training courses in Extension Methods were proposed for all of the technicians working in the Project. The original idea was to provide training for the new paratechnicians that were being hired at the local level. Most of them had less academic preparation and additional training was seen as an important supplement. During the investigation, it was also noted that even those with more academic training had had little training in Extension Methods

and the communication aspect of technological transfer. The courses were planned so that all of the technicians related to the Project could participate in the training. The first course was planned for the Guanacaste/Nicoya area.

It was recommended that an expert in Extension Methods be contracted for this work which would include prior visits to the area to promote the courses and gather local information on specific needs that could help determine course content. The course in Guanacaste included: Extension Methods, Credit Supervision, and Coffee Production. The first course was held on December 8th to 11th (1987). A second one was held in the southern zone on March 15th to 19th (1988). There are three more courses planned so that all of the cooperatives of the country can have a chance to participate. (Ledesma 1987;1988) It was deemed wise to conduct the present study at the mid-point of this training cycle in order to make any necessary adjustments in the training plan and justify the need for necessary funding.

The evaluations completed at the end of each of the two courses by the participants were favorable as to the course content as well as the methodology used. They also gave suggestions for further training needs that should be part of an on-going training program. In the field visits now, I was particularly interested in finding out how much of the course content was of immediate use in the daily activities of the technicians as another means of evaluation and to give some hints as to adjustments that might be made for the remaining courses.

In my visits I noted that a number of the technicians were now more serious in planning and evaluating their work. I found detailed work plans already prepared in some cooperatives and plans in process in others. I was also interested in the increased use of group methods (gathering a number of farmers together for a demonstration on one of the farms, etc..). The group method is both effective and efficient as a way of reaching an ever increasing number of beneficiaries. It also allows the inclusion of more cooperative members that are not in the supervised credit program but are eager to improve their planting methods as they have observed the results that their neighbors have had. The growing demand for farm visits by beneficiaries and non-beneficiaries is an index of the success of the Project and of the confidence in the technicians but it has made an impossible work load if all of the instruction has to be done with each farmer individually. Supervised credit still requires farm visits but the time required is much less and it can be combined with group meetings.

The comments from the participants have been helpful in giving ideas for the courses that remain as well as the planning of on-going training. They suggested that the courses should be

even more practical and provide new skills for immediate application as well as theory. They would rather have less theory and more time to try things out during the training session. Along with this is the need to have other courses in the future so that everything doesn't need to be included in one course.

The participants also felt that one of the most important parts of the course was the interchange of ideas with other technicians from other places. All of them face similar problems and some had found workable solutions that could be shared. This was particularly meaningful when it was placed in a theoretical context so that it could have even wider application to other situations later.

It was also suggested that the training in Extension Methods, Credit, and Coffee Production be examined in the context of cooperatives. Most of the experience in technical assistance has been conducted in the public sector through governmental agencies. There are some special applications that need to be considered when it takes place through a cooperative. For this reason, there is a feeling that Cooperative Education should also be a part of the courses and there should be time for discussing the implications.

The final comment is related to financing and timing of training courses. The training events should be part of an annual plan of work so that the necessary participation and backing can be assured. The technicians indicated some frustration in having to change work plans because training events that were in the calendar had to be postponed. There still is some opposition among managers and local cooperative members to "their technicians" being absent for a number of days from the cooperative. This feeling of ownership is good in terms of local responsibility but it means that scheduling agreements that have been planned locally should not be broken by external demands without some thought and mutual discussion.

#### Future Operation of the Technological Transfer Model and Technician Training:

The following comments are made with the personal conviction that the cooperatives that form part of FEDECOOP provide an excellent setting for sustained rural development. The fact that they are driven by local initiative and resources makes this possible. All use of external resources then must be evaluated in terms of strengthening the local cooperative, both economically as well as in wider social terms. The model of technical assistance that has been developed and that will evolve in the future must be evaluated in terms of that sustained development.

Training to improve the efficiency and effectiveness of technical assistance should also contribute to sustained development. Other factors such as the structure for delivery of technical assistance, the selection of personnel, and financing are also important. Some mention has been made already but these aspects deserve further comment in terms of future operations.

Regionalization of technical assistance is one aspect that is now being discussed as part of future operation. Now that most of the cooperatives have their own resident technician, the kind of assistance that the central Project office has offered needs to be re-examined. Most of the cooperatives do not need technical assistance from the central office for day-to-day farm visits but they do need technical back-up as well as periodic training for their personnel to upgrade their knowledge and skills. This is especially true because many of the local cooperatives are served by middle level and paratechnician level personnel.

The proposal that has been prepared by the central office would provide a regional structure with a "coordinator" that would give the kind of backup help that is needed to fill the knowledge gap. This plan seems to offer many advantages in the strengthening of the technical assistance delivery system of the Project. The regional coordinators could help in the integration of the content areas that provide important skills at the cooperative level (credit, agronomics, extension methods, and cooperative education). Further, this plan could fit into a model that includes regional assistance for planning, training and monitoring supervised credit.

It appears that the future of credit and technical assistance is closely related to a revolving loan fund. The regional structure then could be considered as part of a monitoring system for supervised credit. It would have as its main goal the effective use and payback of production credit. The costs of such a regional system would also come from this loan fund. The establishment and operation of such a loan fund is beyond the scope of this study but the selection, training and supervision of the regional coordinators does fit here.

Once the regional structure is more clearly defined, then the job description of the coordinators can be outlined. Some of the required skills can best be obtained through proper recruitment. Specialized training will also be needed and this could be obtained through professional short courses, travel/training courses and on-the-job training. The period immediately ahead could be used as a period of trial and training so that a regionalized supervised credit program can be established while some external funding assistance is still available.

The movement toward a regional structure of technical assistance is not without some dangers. It should be examined and developed with the same final outcome in mind as was suggested above: how will it contribute to sustained development that is based on strengthening the local cooperatives? The study of organizational structures is helpful in examining this question. Most organizational structures are top-down and they develop bureaucratic characteristics in spite of all attempts to prevent it. The cooperative is unique because it is bottom-up and this difference is fundamental in planning for the future.

The proposed change in structure can help to maintain local control but it has to be done deliberately. For this to happen the local cooperatives should take part in the decisions related to the regional structure. The questions of criteria for selection of personnel, budget formation, sources of revenue, job description, accountability, and all other aspects of operation should be a concern of the local cooperatives as well as the central office.

The new structure could be instituted and sustained by external resources alone but to be an important part of insuring the continuation of the kind of technical assistance that has helped make the Project a success up to now, will require local backing. There is an inherent dilemma when needed resources of money and knowledge come from an external source -- there are always some limitations and direction that must come from the external source to make it work. This is certainly true with the present supervised credit program and will need to be part of any future credit fund that is created. Just how much and when the external direction can shift to the local level is a hard question to answer. Ultimately, the responsibility must be in the hands of the farmers who are paying the bill. Again, the cooperative offers a unique opportunity for local initiative in sustained development. All Project activities and organizational structures should be evaluated with this in mind.

#### CONCLUSIONS AND RECOMMENDATIONS

Based on the previous discussions, the following conclusions and recommendations are listed below:

1. Continue with the original plan to offer the courses in Extensions Methods along with Credit Supervision and Coffee Production skills in all areas served by the project. Project funding should be provided so that this can be completed.

2. Incorporate some of the suggestions in the three courses that are yet to be given so that there is an emphasis on practical skills as well as basic theory.
3. Use each training event as an opportunity to also strengthen the knowledge and understanding of the cooperative movement.
4. Continue to foster interagency cooperation at the local level and provide backing for this by inviting technicians from other agencies to participate in the training events whenever possible.
5. Consider the possibility of appointing someone at the central office level to help coordinate the on-going training events and to find sources of technical information that could be used in the field. This could be done as a part-time assignment, in cooperation with the proposed regional coordinators and the office of Education of FEDECOOP.
6. Search for national experts that can continue with the training needs in the future. In the specific case of the three courses planned to complete the first cycle of Extension Methods, national experts might be invited to help Dr. Ledesma so that they can give further help in the future.
7. Continue to examine the relationship between the technician and the local credit committees and provide added skills in the training events so that supervised credit and technical assistance can be seen as a set of combined skills rather than separate.
8. Continue to promote the concept of the proven economic value of technical assistance. This can be done through dialogue and discussion at all levels and by making all technical assistance budgets known so that the farmers and managers are aware how much it costs and what it represents in economic benefit.
9. Continue to clarify the model of technology transfer that best fits the situation in Costa Rica through dialogue and discussion at all levels. This may well mean that some of the numeric goals for the number of paratechnicians and other personnel may need to be adjusted. The basic principals behind the use of paratechnicians are still sound in terms of localization and cost but these goals may be better reached in Costa Rica by hiring middle level technicians in

some cooperatives.

10. Clarify the specific role of the proposed regional coordinator in terms of duties, loyalties, accountability, localization, role in strengthening the local cooperatives, etc.. With this description of the job and the personal characteristics, the right people can be selected to occupy these positions and training programs planned. Suggestions from the local cooperatives should be part of this description.
  
11. Consider the possibility of an evaluation of the results of the Coffee Improvement and Diversification project using probability sampling techniques. The results of such a study can be used as verification and to give strength to arguments for sustaining the technical assistance/supervised credit combination in rural development through cooperatives and other private organizations not only in Costa Rica but in other countries as well.

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## APPENDIX A

### NOTES FROM FIELD INTERVIEWS

Tuesday 3 May Ing. Omar Alpizar from Tilaran and El Dos.

-Selection of Pts: people from the area; known moral calibre; son of cafetalero; one graduated from colegio agropecuario Sta. Elena and the other from Colegio Agropecuario La Fortune de Bagaces; 5 years of secondary school; ages 20 and 24; earn 12,000 per month;

-Training of Pts: regional meetings for training and sharing; every 3 months; of 2-3 days duration;

-Regional supervision; a step to make TA more accessible to farmers at local level;

-Future: if project were to end now, the outcome has been good and important but if it were to carry out to logical finish it has an opportunity to make an impact on the local and national economy that can really make a difference; it took years for the conservative farmers to believe in the project and now they are ready to go;

-A continued update in technical training is needed.

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May 2, Juan Carlos Romero, Gerente de el Cenizero en Nicoya:

-The meeting with farmers on April 22 of this year was a good evaluation;

-Formation of "unidad tecnica" that includes specialists in water, agronomics, and cooperatives;

-Credit supervision is important;

-Monthly meetings for evaluation and planning;

-Short courses given on the farms;

-The school program;

-The plan of farm visits;

-The cooperation with INA and the cooperative technician;

-Best name is "agronomo asistente" rather than "PT".

-Future use of the schools as a demonstration area as well as an area of production with money going to school, it requires the help of the parents that also learn new techniques.

May 3, Palmares with Ing. Otto Arguedes the regional director of extension of MAG who is instituting a new program of integrated rural development and investigation;

-The cycle starts out with a problem that is considered by a technical team of three or more; this is converted to a planned experiment with activities, responsibilities and times for carrying them out; it is a combination of both investigators as well as extension; the problems start at the farm level; the program will be officially started this week; this model is based on the experiences of 17 years as agent in Palmares.

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May 4, Montes de Oro El Cedral in Miramar of Punta Arenas

-Tecnico and Gerente is Victor Julio Arce

-The TM is Fernando Poraza and he has been there for only a short time; he did not take part in the training although Victor did;

-The cooperative also is new and was formed when Victor, who was the local MAG agent saw the need and helped get it organized; he was then named as gerente and given a leave from MAG; because of this relationship there is a close working arrangement with MAG as well as with the bank and other agencies in the community;

-There are 360 (87) socios and it is growing; there are private coffee buyers in the area also but more and more of the farmers see the advantage in the cooperative and are joining;

-There are 48 beneficiaries in 1988 which is up from 29 last year; the first year in the program was in 1987 so this is new;

-The TM has use of a project moto; he is 22 years old ; graduated from colegio agropecuario; is a farm boy from the area; he earns about 12,000/month

-The planning part of the course was helpful and it also reinforced the experience in the MAG so that a farm visit sheet is prepared that has the details of the visit and the recommendations that were given; the farmer signs the sheet and he also keeps a copy; this individual sheet then is added to the overall record sheet so that a constant report is available of the monthly activities and the situation with each beneficiary;

-The field day was held on the farm of one of the main members of the cooperative; he and his two brothers are in the cooperative and all plant coffee; the main reason for the meeting was to give out fifty sprayers that had been bought with help from the German development organization at a discount price; 50 sprayers were given out and they would be paid for over a two year period; the demonstration of the use of the sprayers was planned for a

later date so that specialists could come and also bring other types of equipment; there were about 75 people there and there were short speeches by the agency reps, eggn, and the farmers; the meeting was impressive; the location was about an hour from the cooperative office and up at a higher elevation; the coffee is grown in this mountain valley by farmers who's parents imigrated from San Ramon about 50 years ago; the community now has electricity, schools, an improved road, water but no high school; the outstanding factor in the area is the cooperation between agencies and this was part of the remarks of most of the speakers; coffee is just now becoming an important crop because it has been hard to get bank credit in areas outside of the central plateau.

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May 5, La Cenizosa in Santa Cruz:

- Manager: Juan Carlso Romero
- Tecnico: Ing. Juan Bautista for Fedacoop
- Tecnico: tecnico Rafael Fuentes for MAG
- Promotor: Pedro Gutierrez;
- Coop members: 140
- Beneficiarios: 74; 67 HAs; since 1985
- Inter agency cooperation: this coop is characterized by interagency cooperation; mentioned were programa mundial de Alimentos (PMA); INA; MAG; IDA; Fundacion Eber;
- With outside agencies they have tried to use the help as an incentive for local initiative rather than a gift; especially for the food programs;
- Climate: the climate is a factor that is important; last year most of the bean crop was lost and this happens often; it was also a hard year on young coffee plants; this has led to a lack of confidence in intensive cropping and helped to give feeling of futility; large farms dedicated to cattle, low water cropping or irrigation with high capital inputs; this is partly related also to the migration to other areas.
- Cultural past has also had it's effect with "three colonizations" leaving the people with no self identity and little self worth.
- Radio is used to announce visits and other aspects of coop program;

- Promoter is working on school program and was preparing a handout for each of the school children;
- Agricultural supply store; this is the only part of the cooperative that is providing funds at the moment; the coffee plantings are only now beginning to produce and there was none that was marketable before; the store also serves as an outlet for TA and the store manager has been given training to be able to help the farmers when they need to know which products will help solve their problems;
- The promoter helps in the arrangements for the meetings and making contacts; he is not considered a technician and is not used as such;
- The MAG technician gives full time to the coffee growing area and working with the beneficiaries as well as those who are not; the head of the MAG office is part of the TA team that is formed to work on general agricultural problems;
- All of the coop personnel double up to help when it is crop time and even to haul the coffee in;
- All of those working on coffee plan jointly so that each month and each week they know what has to be done and who will be doing it; this plan also includes the INA training group and there is sharing of resources so that the job can get done;
- The job is hard on family life and the two with families have wives from the local area so that they are not alone;
- Recommendations for courses: planning has been helpful and is now being used; need more on credit; need some time to practice the new methods; need some time for exchange and interchange of ideas; need some time to talk about cooperatives and development philosophy; need to think about future training at local level and as continuation;
- Future: what will happen when project finishes: many things will continue, already the almacegos are planted without external financing; credit is coming from bank with a local agreement; land titles are being processed so that local credit will be possible for some more; need to consider how the TA will be financed in the future; need to have enough to finish the training courses; training is one of the things that will help for the self continuation in the future; regionalization may help;
- The coop will be self sustaining with a crop of 6,000 fanegas; this will not come for a few years; most of those now financed are planting more on their own with personal funds;
- Within the cooperative there are some that are dissatisfied with the management and would like to take some aspects over for themselves; perhaps this is true for the beneficio and now that it is operating it would be a good personal business.

-Not all cooperatives in the area have been successful and most have not; the lack of good financial administration is usually the reason; this cooperative started with very little knowledge of what it was all about; more training needed to keep it going.

-Coffee can be an economic base for the Los Angeles area and then diversification can begin with Avocodos, vegetables for tourist market; ornamentals, etc to follow as add-on crops. The area can repopulate and begin to serve as a community base again. More of the land can be planted to coffee that is now in pasture.

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Cerro Azul, Nandayure Nicoya, May 6

-Manager; Willam Zuniga

-Tecnico; Jaun Bautista of project

-Tm: Porfirio Sanchez;

-MAG: helped up until recently; -German Guademus

-Members 275(87), 269 now; Beneficio:169 listed in 87; 145 parcels now; 92.75 HAs in 87; coop started in 1961;

-Production is now about 6,000 fanegas and has a capacity for about 7,000

-Also has: agr supply store with hardware and some groceries and drygoods; another agency in field; owns a farm with 6ha of coffee and plant nursery; a hydroelectric plant that now gives electricity to the beneficio but before served the whole area (now the ICE line comes in) the plant saves about 300,000 colones a year;

-Transportation: the moto has been in use for about 2 months and came just in time because all of the local visitis depended on the help of MAG worker that has been transferred or on Juan B that had to also serve the other two areas;

-Planning: the yearly plan of work is made in combination with the other two coops and then is adjusted locally eacy month and eacy week in a planning session;

-Methods: group methods have helped to solve the transportation problem and to stretch the work;

-Outside help: the local worker feels well backed up with the telephone and with the weekly meetings even though the Agr. Ing. is not there all of the time;

-Credit coordination: Juan B is member of credit commission so has a part in all of the decisions; now the new FARM INFORMATION SHEET will help in the selection of the farmers for credit in a more orderly way; the sheet with the recommendations will serve to make the decisions based on technical information.

-TA training may be needed in order to put all of this farm data in a computer bank so that it can be used for a standard report both for local use as well as for the central office.

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May 7, Sat. palmares with cooperative and MAG

-Ing. Otto Arguedes of Mag;

--Agr. Hugo Ledesma of coop

-Ing. Jorge Rodriguez

-Manager Luis C. castillo

-Asst. manager Jose Vasquez

-Ing Edo. Arias of MAG

-Cano Indio crop for ornamental export is planted with 20-25,000 plants /Ha this gives 60,000 feet of cana every 3 years which is now worth 9 C per foot or about 540,000 which is equal to 180,000 per year

-The coffee refuse recycling project which allows each of the members to haul off a proportional amount of compost in relation to the crop sold. They are now calculating the productive worth of adding this to the soil; it has another value in that the greatest source of stream contamination in Costa Rica is the coffee refuse that is dumped.

-Nematode control: the joint experimental plots that are testing the use of different products over a five year period to see the results; the farmer helps but they are there for the application and for the harvest so that all can be done correctly; the areas also serves as a field day education point; they are also ready to try "crotolario" as a plant control of nematodes;

-Cano Indio result demonstration: another farm serves as a result demonstration in the planting of different types of ornamentals and in different forms; it is by the roadside and well marked so that all can see it as well as serve as a field day spot;

-Ornamental cooperative: this is another result of inter-agency cooperation with both the coffee coop as well as the MAG and bank working together to get it started; it has members all over the country and is constantly expanding;

-TA training: the main reason for the meeting was again to confirm the possibility of joint training courses for all of the technicians that are working in the area; the courses have been planned so that the groups will not be too large and can use local facilities to keep costs down; two are planned for the Central Plateau area because of the large number of people involved; the original plan prepared by Ledesma seems sound; we also talked about periodic training needs for the future;

-TA financing for the future: the need for planning so that credit and TA can be continued and improved was also discussed; some kind of a model and structure is needed to assure that TA will continue in the future; even in the MAG there needs to be a plan that assures the use of TA when credit is used and even for general crop improvement; the 2% model used by FEDECOOP/AID was discussed as a possible starting point; this needs to be pushed and developed even further;

-The future: the problem of future project financing was also discussed and what it means for present plans; the external financing that is available now should be used to assure that a self sustaining structure is set up for the future.

-Both my and the Ledesma reports were requested so that we could continue working together (by MAC).

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May 9, Agua Buena de Coto Brus

-Manager: Victor Delgado

-Tec: Ing Jorge Mario Rodriguez

-Tec: Jose Angel Diaz (2 months)

-Beneficiaries: 135/109.5 HA

-Members : 900

-History: in 1985 there was a problem of credit that had been given out but without any TA; some of the credit had to be pulled back;

-With the gradual use of TA and supervision things were cleaned up but still not enough TA; with the offer of the 2% and a moto the technician was hired and already the difference is noticeable;

- there are systematic farm visits and the credit is supervised at the farm level;
- Beneficiaries = 148 in 1988 and 109.5 HA; also there is 7HA in Macademia and 3.5 in Cardomomo; in 87/88 the crop was of 26,000 fanegas
  - The area has a past culture of cattle so little experience in intensive crop culture; most are family farms of about 5HA and no great land concentration; the coffee prospects have improved in the last two years with credit, better roads and now TA;
  - The cooperative is 23 years old so it has some history;
  - Resources: beneficio, agricultural supply store, supermarket; the capacity of the beneficio is about 800 fanegas per day but it is too small and within two years they will need to send part of the crop away if they cannot enlarge it;
  - There is no cooperative promoter now but the cooperative spirit is better than before due in great part to credit and TA.
  - The technician earns 30,000 colones per month but as yet there is no fixed TA budget or amount for transportation or supplies;
  - TA work schedule: 4 days in the field and two in the cooperative; he is available to the farmers in the office or at the supply store for consultation;
  - The technician is a member of the credit commissions and prepares a informe tecnico de la finca for consideration in the meeting;
  - The inspector de cafe has helped the new technician get around in the area also ;
  - Radio program: the weekly radio program helps to announce and also to give out ideas by radio;
  - TM selected from many that applied; had coffee growing experience; from the local area; was known to be responsible; family known in the area and respected; had middle level preparation;

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Tues May 11, San Vito de Coto Brus

-Manager : Claudio Esquivel  
-Ing Jorge Mario Rodriguez

-Ing. Luis Mora

- Agr.Tec. Carlos Brenes M.
- Ing. Oscar Jimenez
- Tec. Roberto Rodriguez M - PT
- Members 3,600/ Bene: 791 with 606.74 HA
- Average yield was 20 fanegas and now is 50
- History: in 1985 there were 85 renovations but problems with program and even some of the credit had to be stopped
- 120,000 C per HA is the general loan level in program but only 100,000 was given out so that it could reach more farmers; 714 HA financed but 1000 HA actually planted with an average of .9 HA per farmer
- There is about 20% of cooperative land with credit now but much more is technified;
- Farms are small and rather equal in size of 2-3 ha each;
- The interest payment was of 90.3% in first year which is high: there is now 82,000,000 out in credit
- All credit is approved and supervised by credit commission; the farm level inspection is done by the tecnico who also has voice and vote on the commission; the credit record is also considered;
- There are 4 tecnicos, they work by sectors and rotate so that all are visited about 6 or 7 times a year; the credit is given in parts so that the farms must be inspected before the next level of credit is approved;
- The beneficio can handle 1,400 fanegas/day now but this year they will need a 2,500 level; where will the money come from for the increased capacity; they can send some of the coffee to other areas but this increases the transportation cost;
- They now have 40 HA in macademia and this will increase with the new plants; there will soon be about 600 HA between San Isidro and San Vito;
- Needs: courses on cooperativism so that people that came in for credit can become good members; laboratory for doing soil samples; 2 more technicians; help with credit tasks in office; a specialist in macademia; a project moto;
- Needs: TA for accountants; administrative councils; agronomics; extension methods; must remember the dates so that nothing is scheduled during the harvest time (after Jan 15th is fine)
- Basic data on all of the socios has been collected
- Credit assurance is needed if beneficio is to be amplified or the beneficio might be too big; the two things need to go

together;

-There is a preoccupation with the macademia market; this needs to be worked on for future;

-Bank vs cooperative: the cooperative has a much higher recuperation rate because of the payment retention system; this should be kept in mind when the new system is planned.

-Land ownership: 90% of the members of coop were peons at one time but who have become small land owners through the coop; the project has helped them to become economically stable; a number of large tracts have been sub-divided and sold to the small farmers but they could not have made it without coffee which gave them an economic base;

-Success: " from 5 fanegas to 40 in three years because of the project" is a typical story in the area. the diffusion of the technology has been considerable;

-Agronomic conditions: the land is exceptional in the area and most of the former pasture can be planted to coffee; the coffee has helped to bring in roads and electricity that has helped in other aspects of development;

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May 11, Sabalito de Coto Brus

-Manager Bolivar Fonseca who was not present

-Tec: Jorge Mario Rodriguez of the project

-TM is Abilio Barantes Hdz

-Membersx 1300; Benef: 145 with 140.5 HA and 11 HA of Macademia; 43,000 fanegas last year; 24 years in operation; all small farmers and 74% hve less than 25 fanegas to sell; most migrated from Tarazu area and had some coffee experience; before had TA from bank and MAG;

-TA visits made together at first; a sheet of practices used as a guide; a permanent practice sheet is left with the farmer as a record and reminder; the cooperative education meetings are used as contact points;

-Financing TA: done with the 2% which is based on the 87 credit allocation; 50 HA or 6,000,000 as the base; the present TA budget is for 21,000 c/monthss; 3/4 time in field TA and 1/4 time in suministros; spends half days in office and in store on Tues, Thurs, Fri; has some trials going with salesmen; is doing some base investigatiuon; can use radio but has no regular program; will use group meetings later but now needs to visit all of

the beneficiaries; uses "orden de crédito" as a confirmation that the farmer is carrying out recommendations;

-Selection: local person; coffee experience; good interpersonal relations;

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May 11 Wednesday; Visit to San Isidro of Perez Zeledon

-Staff: Henery Fonseca Tec; Guillermo Quiros, Agr; A. Narango, Agr; Eduardo Esquivel, Agr. in office; Ricardo Castro, manager

-603 beneficiarias with 442 HA and 3400 members

-an average of 1.6 HA per member; all small farmers;

-TA in Groups: the use of the "coordinator" in the local community to organize and call all to the meetings; all are invited so that non beneficiaries can participate also; for example in San Blas yesterday there were 9 people present, 7 of them are benes and the other two no; it is a "small sized dia de campo" with the instruction done in the field; the meetings are topic related so that there is a focus; each meeting is accompanied with a written handout sheet which they will keep and accumulate and it will become a reference manual; the topics are related to the time of year and the activities of that time; the meetings are from 8.30 to 12 and there is time then to visit other farms if necessary; the announcement of the the meetings is also given in the weekly radio program; there have already been 5 group meetings and the plan is to have 4 each week; this will take the place of the individual farm visits; it has been tried in one of the three sectors and will later be expanded; each community will get a visit every 6 weeks; up to now the zones have been rotated among the TAs; this frees time for other activities; there has been a record of visits (both before and now with groups) for evaluation and record purposes; the planning session that started the group method was held on January 23 and was an outcome of the extension methods course;

-Survey: they have surveyed most of the beneficiaries (and members) in terms of the technical assistance needs and the effectiveness of the project; the score on the financed crops has been high (usually in the 80s and 90s on the credit, ta, and other items measured)

-IFAN: the Instituto de fomento Agro Industrial has been offering some courses and they have invited the TAs' attendance; have not gone because there hasn't been time

-Needs: to keep selling the TA as a service that pays; manager: "we will not cut it out after the project ends because it has been proven"; the local coordinators can help in the TA PR; the TAs need more training in the credit diagnostic at the farm level; need to include an aspect of savings in the credit

training so that it is included in the promotion at the farm level; the moto is needed now so that the TA visits can be done more efficiently; training in accounting is also needed; computer training may become important and they are ready now to have their own micro in the TA office to do data analysis and report writing;

-Course recommendations: more on agronomic topics; new crop knowledge needed; one week is too long for people to be out of the office; include the new technicians in the future courses that were not able to attend the first ones even though they are from the other areas;

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May 12, visit to Dota, Tarazu, Leon Cortes and Llano Bonito:

Dota in Sta Maria de Dota:

-Manager is Orlando Lopez z.

-Tec is Ing Jorge Obando from project office

-Tec is Agr Roberto Urena

-Members 480; Bene 36; HA 37; Fanages 23,000

Tarrazu in San Marcos de Tarrazu:

-Manager is Jorge Adalberto Gadinez b

-Tec is In Jorge Obando

-Tec is Ing Bernardo Barboza P.

-Tec is Ricardo Hernandez

-Tec is Alexander Cordero

-Members 1313; bene 192; ha 393.59 or now 420; 55,500 fanegas

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Leon Cortes of San Pablo de Leon Cortes:

-Manager is Jorge Gamboa J;

-Tec is Ing Jorge Obando

-Tec is Ing Emilio Picado M

-Tec is Agr Roberto Sanchez P

-Tec is Maximo Gamboa F.

-Members=1900 and clients 3100; bene 615; HA 441.67; 43,000 fanegas and 1,500 per day cap.

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Llano Bonito of Llano Bonito de Leon Cortes:

-Manager is Fco Quiros Mora

-Tec is Ing Jorge Obando

-Tec is TM Luis Casdtro a.

-Tec is TM Marvin Duran A.

-Members 561 or 600; bene 346; Ha 143 or 151.75 now; 12,800 fanegas or 300/da

-Extension methods needs: more practice time instead of theoretical; more application; could use analysis of cases; work plans and evaluation skills;

-Credit training needs: more in general; direct relation to credit in cooperatives; relation to cooperative administration; farm level economics and credit; use INCAE; need simple accounting system to pass on to beneficiaries (perhaps could be related to their cooperative and credit accounts;

-Future training needs: some long term courses should be considered on an individual basis; more care needed so that changes in plans in central office do not conflict with planning at local level (it is hard to foster local program planning if training and other central office plans are set and then changed; use of computers in TA at local level; gerentes and consejo administrativo also need training and orientation if Technicians are to work effectively; Gerentes need to see the value of TA training or they are not likely to allow time or other resources for it; need to analyze the costs to the technician for training events; not all are paid well and many receive no help for training costs;

-Perhaps one way to gain confidence of manager is to see what kind of problems he faces and see how the TA activities can help in solving them; this may help to become accepted as an assessor; Tecs need training in the farm management or administracion de empresas; program planning is being initiated now;

-Agronomic training: more needed;

-Regional differences require that the training be regional

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May 12, Cartago:

Coope Cartago of Cartago:

-Agr. Norman Gomez is tec (saw in field supply store)

-capacity: 52,000 in 86-7 and 57,000 in 87-8

-from 10 fanegas to 15 to 25 to 40 at full growth

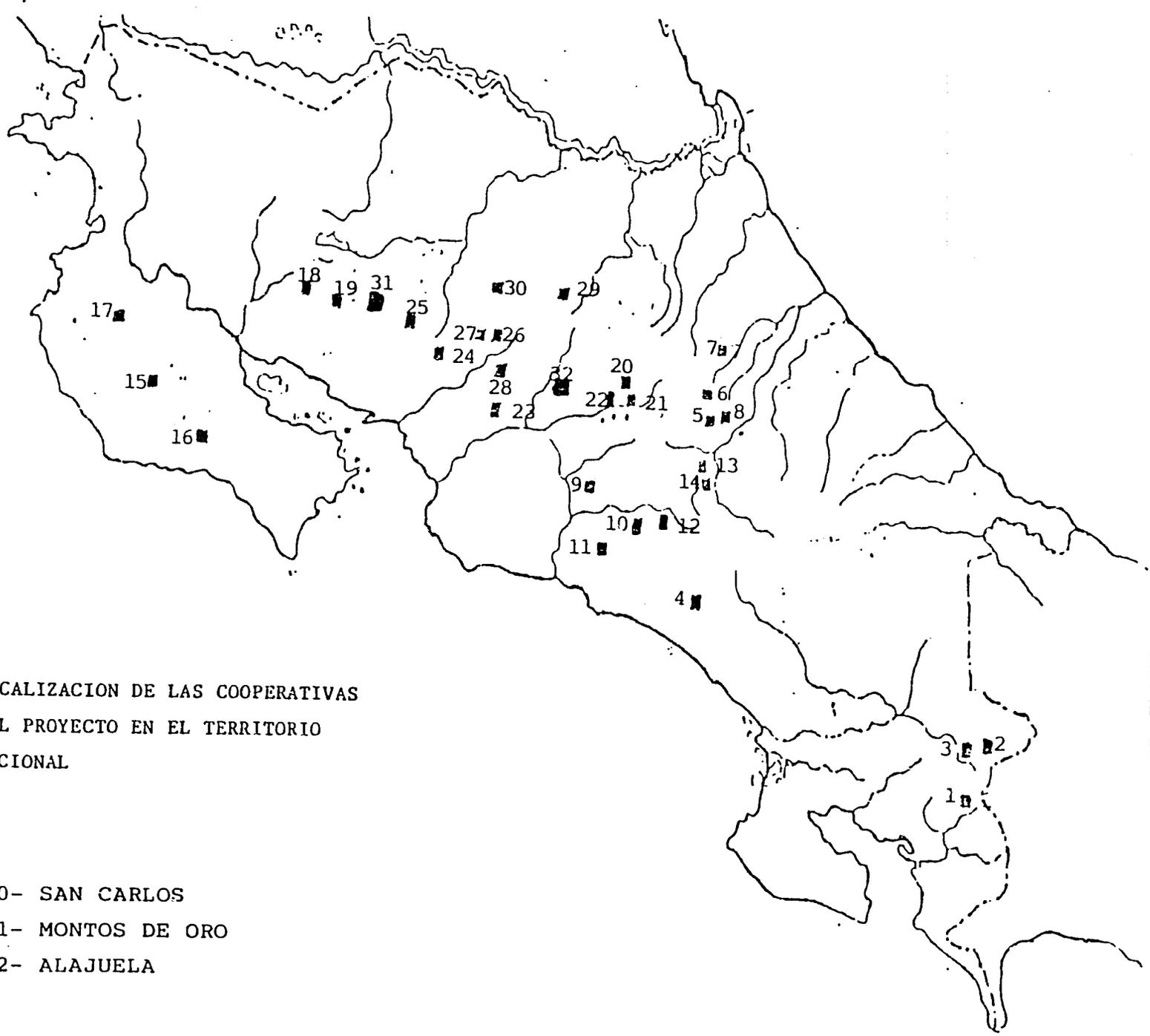
-problem of low salaries; this is relatd to the lack of understanding of the value of TA and the need to sell the product; perhaps a study of TA results could be done that could give a statistical backing to TA

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- 1 - AGUA BUENA
- 2 - SABALITO
- 3- SAL VITO
- 4- EL GENERAL
- 5- ARAGON
- 6- SUÍZA
- 7- SANTA TERE
- 8- PEJIBAYE
- 9- LLANO BONITO
- 10- TARRAZU
- 11- LEON CORTES
- 12- DOTA
- 13- CARTAGO
- 33 14- UNION
- 15- PILA ANGOSTA
- 16- CERRO AZUL
- 17- CENIZOSA
- 18- TILARAN
- 19- EL DOS
- 20- PIRRO
- 21- SANTA ROSA
- 22- LIBERTAD
- 23- ATENAS
- 24- PALMARES
- 25- SAN RAMON
- 26- NARANJO
- 27- SAN JUANILLO
- 28- VALVERDE VEGA
- 29- SARAPIQUI

LOCALIZACION DE LAS COOPERATIVAS  
DEL PROYECTO EN EL TERRITORIO  
NACIONAL

- 30- SAN CARLOS
- 31- MONTOS DE ORO
- 32- ALAJUELA



## APPENDIX C

### PARAPROFESSIONALS IN RURAL DEVELOPMENT

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 indicates 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. Also, 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, or ganizational 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 on 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. (Nesman 1988)

APPENDIX D  
SAMPLE MATERIAL PREPARED FOR GROUP MEETINGS

PROGRAMA DE ASISTENCIA TECNICA  
A NIVEL DE GRUPOS  
PROYECTO USAID-FEDECOOP

Coopeagri El General R. L.  
GERENCIA  
Recibido el 2 de 2 de 83  
Hora 11.30 Firma Ana

JUSTIFICACION

Coopeagri El General cuenta con 3 100 asociados productores de café y entre ellos 529 participan de un programa de renovación de cafetales financiado por el Proyecto USAID-FEDECOOP R.L.

El Proyecto USAID FEDECOOP contempla el otorgamiento de Asistencia Técnica a los usuarios, la cual se realiza con tres Ingenieros Agrónomos que cubren el programa mediante una programación de visitas a las fincas, y de acuerdo a una zonificación ya establecida.

Cabe destacar que además de la asistencia que se da a los usuarios del proyecto, la misma también es requerida por productores asociados no financiados, por lo que es imposible dar cumplimiento a las solicitudes que se presentan. Ante esta situación es que se pretende desarrollar un programa de asistencia técnica a nivel de grupos. Seguidamente se presentan los objetivos y la metodología a utilizar para darle cumplimiento.

OBJETIVOS

El programa de Asistencia Técnica a nivel de grupos que pretende desarrollar el Proyecto USAID-FEDECOOP de Coopeagri El General R.L. tiene como objetivos los siguientes:

- 1- Proyectar los servicios de asistencia técnica de la Cooperativa, tanto a los asociados usuarios del Proyecto de Renovación de Cafetales como a los asociados que no están financiados.
- 2- Obtener un mejor aprovechamiento de los Ingenieros Agrónomos que participan en la Asistencia Técnica.
- 3- Establecer acciones por parte de los agrónomos tendientes a generar nuevas alternativas de producción para los asociados.

METODOLOGIA

Para desarrollar el programa de Asistencia en Grupos se utilizarán las siguientes acciones:

1- Programación de reuniones:

El Ingeniero responsable de cada zona realizará una programación de las charlas y en las comunidades que se impartirán.

2- Relacion con coordinadores:

Se considera de gran importancia en la ejecución del programa la participación de los coordinadores a efecto que ayuden en la invitación de asociados, consecución del local cuando sea necesario y otras acciones que se requieran.

3- COMUNICACION RADIAL:

Se pretende hacer uso del espacio radial de la Cooperativa para difundir la programación de cada Ingeniero, hacer la invitación correspondiente a cada comunidad y hacer un pequeño comentario sobre los aspectos que tocará la charla.

4- PARCELAS DEMOSTRATIVAS:

El Ingeniero determinará en cada comunidad donde se vaya dar la reunión, dos parcelas: una que esté en excelentes condiciones donde se pueda apreciar la manifestación de las buenas prácticas de cultivo y otra parcela que no reúna las condiciones deseables y donde se pueda dar recomendaciones que sirvan al conjunto de participantes.

5- LA REUNION DE GRUPO:

La reunión en grupo se hará al aire libre, en la parcela demostrativa. Se inicia con una explicación teórica de las labores más próximas a realizar en el cultivo, ( cada ingeniero tendrá la libertad en cuanto a las técnicas y medios de comunicación). Posteriormente a la exposición teórica, y, una vez contestadas las inquietudes, se hará un recorrido a las parcelas donde se darán explicaciones prácticas y donde se puedan extraer conclusiones por parte de los participantes e inferirlos a sus propias parcelas.

6- BOLETINES SOBRE MANEJO DE CAFETALES:

Adicionalmente a las explicaciones teóricas en la reunión, se entregará un folleto previamente elaborado por los ingenieros del proyecto, en el cual van incluidas las prácticas de manejo para las labores de cultivo futuras.

Los boletines cubrirán la información por trimestre, de tal forma que los cuatro folletos que se entreguen en orden del cumplimiento del programa conformarán un documento en el que se contemplan todas las prácticas de manejo para el cultivo de café.

En el anexo número 1 se presenta el temario que llevará cada folleto.

7- VISITAS ESPECIALES :

Las visitas especiales quedan condicionadas a aquellos casos que se presenten a productores y que se salgan de lo común en el cultivo de café y que se haga estrictamente necesaria la presencia del agrónomo.

8- EVALUACION:

Periódicamente se realizarán evaluaciones del programa para realizar los ajustes en caso que sea necesario.

9- Como medida complementaria al programa, cada ingeniero dispondrá de un día a la semana que estarán en la oficina, para evacuar consultas de asociados que acudan a ésta.

PRACTICAS PARA LOS MESES DE ENERO A MARZO

1. Manejo de la sombra:

El café por naturaleza propia necesita desarrollarse bajo sombra, pero este factor debe manejarse adecuadamente tomando en cuenta las condiciones climáticas de cada zona.

Para la época de verano, en las partes más bajas del cantón y por las características de las fincas de la mayoría de los productores, se debe usar sombra regulada hasta de un 50%, permitiendo así la penetración de rayos solares para que el café vaya a tener una buena floración y a la vez, se defiende de la sequía, evitando así la pérdida enorme de agua del suelo.

Recordemos que las especies adecuadas para la sombra lo son el poró, seguido por el guaba; las musáceas (banano, plátano, etc.) no son convenientes por la gran competencia por nutrientes y agua que le hacen al cultivo del café.

En almacigales de café no hablamos de sombra, ya que lo ideal es que al momento de hacer el almacigal, se cuente en el lugar con riego para la época no lluviosa.

2. Encalado de suelo:

La mayoría de los suelos de Pérez Zaldón presentan problemas de acidez, por lo que quizá el suyo no es la excepción. Para contrarrestar los daños que ello causa al café en cuanto a la indisponibilidad de nutrimento y toxicidad de otros, se recurre al uso de fuentes de calcio neutralizantes de esa acidez, ya sea como Carbonato de Calcio o Cal. Es preferible a nivel nuestro, el uso de carbonato de calcio por presentar mejores características físicas y no ser tan quemante o cáustico como la cal.

Esto se debe hacer por lo menos un mes y medio antes de la aplicación de fertilizante al inicio de las lluvias.

La forma de saber exactamente cuanto aplicar de cal es por medio de un análisis de suelo, lo cual es imposible para todos los productores; por ello mejor consulte a su Ingeniero Agrónomo, encargado de cubrir la zona para que éste, de acuerdo a la zona y condiciones del cultivo, pueda darle una recomendación bastante acertada, sin tener que recurrir al análisis de suelo en todos los casos.

Para almacigales se debe blanquear bien el terreno, ya desmenuzado, empleando la recomendación general de 30 quintales de Carbonato de Calcio por ---- hectárea.

3. Poda:

La poda se debe realizar una vez finalizada la cosecha y preferiblemente ya entrada la época seca, para evitar contaminación por hongos en el corte y pérdida del tronco.

El sistema a emplear dependerá de la plantación que cada uno tenga. Para escogerlo se debe pensar en las condiciones económicas del productor, en el agotamiento existente, la variedad, distancia de siembra, condiciones climáticas, etc.

Ahora con la existencia de La Roya del café, el sistema debe permitir que entre mayor cantidad de luz al cafetal, dando una adecuada formación a la planta y que no haya proliferación de hijos bajo excesiva sombra.

En las visitas consulte al ingeniero, de manera que quede bien claro de cómo debe realizar esta labor en su cafetal.

4. Control de enfermedades:

El medio adecuado para el desarrollo de enfermedades es en la época lluviosa, pero en el verano se presentan algunas por la falta de agua y es cuando se controlan varias de las que existían en la época lluviosa. Algunas de éstas son:

a. Mal de hilachas:

Esta enfermedad es propia de la época lluviosa, con alta precipitación y baja luminosidad, que es difícil de contrarrestar. El control más efectivo es en la época de febrero a abril con el uso del Arseniato de Plomo, fungicida muy tóxico pero con medidas extremas para --- protección, se emplea en café con poco riesgo. Pida la receta y autorización a su ingeniero al llegarse el mes de febrero, así como las indicaciones para su aplicación.

b. Ojo de gallo:

Si no se arregló bien la sombra en la época lluviosa y no se hizo -- buena poda, presentándose esta enfermedad, el control de ésta se realiza de igual forma que para el control del mal de hilachas.

C. Llaga macana:

Aparecen parches de plantas secas totalmente y con su sistema radical totalmente destruido. Estas plantas se deben eliminar, para sembrar después, habiendo tratado el suelo con PCNB o Terrazán. Se emplea en dosis de 1 onza de PCNB por galón de agua por metro cuadrado o por planta.

d. Chasparría:

Se presenta en plantas adultas provocando caída de hojas, pero si en invierno se hacen atomizaciones con cobres, ésta se previene.

Es más frecuente en almácigos, lógicamente bajo riego, empleándose -- para su control fungicidas como Benlate, Difolatán, Zincofol, Ferbán y Maneb. Se deben aplicar cada 15 - 22 días, aprovechando además para agregar distintos abonos foliares.

e. Enfermedad rosada:

Si ésta apare se debe controlar de igual forma que el Ojo de gallo y mal de hilachas.

NOTA IMPORTANTE: Recuerde que lo anterior es en beneficio de su cafetal y que no debe de sacrificar su vida por él corriendo riesgos con los agroquímicos. Consulte su manual de Manejo Seguro de Plaguicidas.

ANEXO 1

TEMARIO

FOLLETO N° 1

- Poda de café
- Arreglo de sombra
- Control de enfermedades
- Control de malezas
- Encalado

FOLLETO N° 2

- Deshija
- Fertilización
- Control de plagas
- Control de enfermedades
- Control de malezas
- Arreglo de sombra
- Conservación de suelos

FOLLETO N° 3

- Control de enfermedades
- Control de malezas
- Control de plagas
- Fertilización
- Arreglo de sombra

FOLLETO N° 4

- Control de enfermedades
- Control de plagas
- Control de malezas
- Fertilización