PD-AAR-474

FARMING SYSTEMS DEVELOPMENT PROJECT

Eastern Visayas

MID-PROJECT EVALUATION REPORT

MAY 1985

Project Cooperators

MINISTRY OF AGRICULTURE AND FOOD, Region VIII
VISAYAS STATE COLLEGE OF AGRICULTURE
CORNELL UNIVERSITY
FARMERS, Region VIII

Republic of the Philippines
FARMING SYSTEMS DEVELOPMENT PROJECT
EASTERN VISAYAS
OFFICE OF THE PROJECT DIRECTOR
Magsaysay Blvd., Tacloban City 7101

MAY 17 1985

ENGR. FELIX V. QUERO, JR.
Project Director
Farming Systems Development Project-
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Magsaysay Blvd., Tacloban City

Dear Engr. Quero:

We are pleased to submit our Mid-Project Evaluation Report of FSDP-EV. The Evaluation Team was commissioned by the Project Director's Office to conduct this evaluation from April 29 to May 17, 1985. Major findings and recommendations of the inter-disciplinary evaluation team are focused on four areas: (a) Research Development Strategy, (b) Project Implementation (c) Project Organization and (d) Research Areas. Recommendations were also formulated to increase effectivity of the project during its remaining life and follow-on activities necessary for the attainment of the overall goal of the project. We have also incorporated key points and considerations resulting from our discussions during the presentation of our initial findings and recommendations to the Regional MAF, VISCA, Project Staff, and other agencies involved in the program on Wednesday, May 15 at the Regional MAF Office.

It is our distinct honor and previlege to be given this opportunity to evaluate the project. We hope that our combined insights and recommendations will help in assuring the gains and continued effectivity of the project in the attainment of its goals of helping the small farmers of Eastern Visayas.

Thank you.

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ACKNOWLEDGEMENTS

The team who conducted the Mid-Project Evaluation of PSTP-SY express their profound gratitude to all those who extended their help without which this process could not have been completed.

To the farmer cooperators and non-cooperators alike from the six sites who patiently answered our questions, accomodated our field visits, and offered their hospitality;

To the SMIU Site Leaders and staff for facilitating site visits within the brief evaluation period; for their willingness to spend long hours answering questions and the survey questionnaire;

To the Project Director and staff for providing us all the necessary support in the conduct of the evaluation and preparation of the report, and for also patiently answering our questions and granting us temporary take-over of their offices;

To the IRRI Regional Director's Office for accomodating our preliminary presentation of findings and recommendations; for giving their useful insights on the PSTP-SY;

To VISCA Officials, the Technical Coordinator, and Assistant Technical Coordinator for Research and Development and their staff for facilitating our stay and accomodating our changing schedule of interviews and visits to their experimental sites; for bearing with us during the interview sessions;

To the Steering Committee members for accomodating our team interviews even at their homes during Saturdays and Sundays

because we had very little time for the evaluation;

To the Cornell Technical Group, Tully and Clive, for providing frank and meaningful insights, patiently answering searching questions, and for their hospitality;

To our excellent support staff; Soloy Alberico and Isaias Costelo, Jr. (Dun) our drivers who worked far beyond the normal hours to accomodate the hectic schedule and whose concern for our safety is truly humane and ours to keep as a gratitude; to our translator Mrs. Teresita Balmes who patiently accompanied and helped us with the task of communicating with our farmer respondents of varied dialects; to Mrs. Wilma L. Alar and Mr. Gonzalo Seline, Jr., our typist and illustrator, respectively, from the PPI who helped us meet the last minute schedule of documentation; to Mr. Chito Ledina, our Administrative Assistant who was mainly responsible for arranging the "nuts and bolts" of everyday operation so we could concentrate on our individual and group technical inputs;

To the NFAC for giving us this rare opportunity but difficult responsibility of reviewing the FSSP-EV;

To USAID and UPLB Development Foundation Inc. for arranging the contract and for their confidence;

And to all who have assisted us, we express our sincere gratitude and thanks.

THE EVALUATION TEAM

May 17, 1985

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I. PROJECT EVALUATION SUMMARY

The FSLP-EV is now going into its fourth year. Most of the target activities including construction of infrastructure facilities and equipment acquisition have been completed. Degree level and short-term training programs for both ViSCA and MAF staff have been completed as targetted. Technical assistance, especially long-term consultants, have been obtained as scheduled. Some modifications in short-term technical assistence schedules were observed.

Six (6) SRPUs are in place and operating; although San Isidro, listed in the original document, was replaced. The initial diagnostic phase of the farming systems program was weak, constrained by a major commodity per site approach, and generally "top to bottom". As field experience has accumulated the approach is evolving towards a more holistic and problem-solving approach. The program is now emphasizing farmer participation, although possibly somewhat at the expense of technology generation. Field research at most sites has not yet progressed beyond researcher-managed trials. Recommendation domains have not been clearly defined.

Institutional linkages, especially between ViSCA and MAF, have improved considerably. There is still a need to strengthen intrainstitutional (within ViSCA) and interinstitutional (between MAF, Bureau of Lands, and Bureau of Forest Development) linkages.

Such improved linkages would strengthen both back-up research and overall impact of the project.

Follow-on support for 3 years after life of the project and after FSILP-EV has been incorporated into the regular structure of the MAF is necessary to fully derive institutional benefits from the farming systems research approach to agricultural and rural development. The follow-on should be designed by the MAF, PEC, and ViSCA, and should include careful evaluation of technical assistance, research methodology, and training needs of the project.

II. EXECUTIVE SUMMARY

A Mid-Project Evaluation was conducted for the Farming Systems Development Project-Eastern Visayas as requested by the Project Director's Office. The evaluation was conducted from April 29 to may 17, 1985 to a) identify changes necessary to improve the impact of the project during its remaining life and b) identify follow-on activites needed to attain project goals.

EVALUATION METHODOLOGY. Nine key evaluation points were initially stated in the TOR. These dealt with research priorities and information on target beneficiaries; project efforts and the needs of limited resource farmers; research station versus traditional technologies; responsiveness of "up stream" research; tenancy and land access; risk and uncertainty; the project conceptual approach; the farming sytems approach, land use systems, and variability; and PAF and ViSCA linkages. These points were subdivided into components and other issues were added for examination; the group eventually persued at least 16 identified topics at each field site and about 50 questions at the different agencies participating in the project.

The evaluation, carried out by an interdisciplinary team, included: a) review of project documents and related literature, b) a series of interviews with project implementors--officials, administrators, technical assistance, SFMU staff, and ViSCA and PTC staff members, Technical Group members, Steering Committee members, and others, c) visits to the 6 field SFMU sites and interaction with the SFMU teams, d) interviews with cooperator and non-cooperator farmers, e) visits to project agencies (PTC, ViSCA, PAF, others), f) almost daily team synthesis and analysis meetings, g) feedback sessions with project implementors, and h) final analysis and write-up.

OVERALL PROJECT STRATEGY. The project has been evolving from a somewhat limited major commodity improvement approach towards a broader, farming systems approach. In so doing, the project still needs to strengthen its understanding of basic system diversity and dynamics at the local level. The project has started to emphasize farmer participation, perhaps somewhat at the expense of technology generation. The SFMUs are moving towards more extension and less basic research. A balance needs to be maintained, especially since technologies still need further testing and refinement under different conditions. Very positively, the SFMUs and the ViSCA back-up researchers are developing a needed problem-solving approach in which problems are specific, local, and farmer-identified. Interdisciplinary work is developing; and, in all, the project is moving towards a true farming systems approach.

PROJECT IMPLEMENTATION. The evaluation describes how research and development arebeing implemented; and makes recommendations as to how implementation could be more effective. The recommendations started with the team's agreement that: More attention needs tc be given to problem identification and to targeting of research and development activities. Better use needs to be made of exploratory survey procedures. More attention needs to be paid to research methodology. A smaller share of project resources can be devoted to cropping patterns trials. The nature of farmer participation needs to be changed somewhat. Back-up research needs tc be more closely related to problems faced by resource poor farmers. Better advantage needs to be taken of the interdisciplinary composition of site teams and the ViSCA technical group. Most recommendations are specific points to improve research methodologies.

PROJECT RESEARCH. Project research is evolving from a relatively narrow cropping patterns and varietal trials focus towards a broader farming systems approach. Problem identification and interdisciplinary work is improving. The team examined research activities concerned with: cropping pattern trials and varietal testing; livestock; marketing; variability (in farmer resources, practices, knowledge, and innovation); land use systems; land access; potential benefits from improved management of minor crops; on-farm non-crop production; soil erosion, pests, and diseases; risk, uncertainty, and farmer decision making; agricultural engineering; and labor use patterns.

ORGANIZATION AND MANAGEMENT. Institutional linkages, especially between FSDP-EV and ViSCA, have been established. There is a need for additional formal and informal linkages with the BFD and BL tc clarify land statuses at some of the project areas. Linkages between FSDP-EV and other related ViSCA programs would improve technical assistance and back-up research. Procedures for recruitment of technical assistance provided by Cornell University need to be improved. The FSDP should be incorporated into the regular structure of the MAF-RIARS; and contractual SRMU personnel should be provided items prior to end of the project.

FOLLOW-ON. A follow-on period of three (3) years after the life of the project would allow institutionalization of the farming systems approach in rural and agricultural development. Follow-on should be designed by the MAF, PDC, and ViSCA, and must consider consultancies, training, extension, and research methodology of the FSR/E. USAID support is needed for training, technical assistance, and research. Local training should be emphasized. Short-term technical assistance should utilize local consultants. Long-term technical assistance should be provided for agricultural economics/agricultural anthropology.

III. CONCLUSIONS AND RECOMMENDATIONS

PROGRAM MODIFICATIONS DURING LOP

PROJECT STRATEGY

1) The SRMUs need to allocate time for both: a) problem identification leading to research and technology development and testing and b) farmer mobilization or participation.

2) The project should relinquish the pre-mandated focus on only major commodity cropping patterns and should broaden its perspective to include other significant aspects of the farming system, especially in order to allow project responsiveness to whole farm system complexity.

3) The SRMUs will spend the majority of their time on relevant, problem solving, technology generating, and systems understanding FSR. However, the SRMUs will have a defined extension role.

4) Where background knowledge is adequate, descriptive research can be de-emphasized. Specific problems need to be identified and corresponding exploratory and follow-up research needs to be carried out. Formal research should include hypotheses generation and pre-specification of analytical methods to be used.

5) Formal site research should concentrate on technology and evaluation (suggested research areas in the chapter on project

Rsearch also emphasizes gaining a better understanding of system parameters).

6) ViSCA back-up research should be generated from problems identified at the sites.

7) The ViSCA technical group must reorient the project towards an interdisciplinary approach by working together on the many multifaceted real-life farmer problems that can be addressed only by interdisciplinary efforts.

PROJECT IMPLEMENTATION (The Recommendations listed in this section are condensed from the corresponding chapter.)

1) After the June workshop, the site agronomist (researcher), economist, and livestock specialist should form a team, along with a representative from the ViSCA technical group, to carry out an exploratory survey in a barangay where there are few or no cooperatives. Among others, the survey would have an open question on the farmers' views of his/her major problems. Two distinct sets of problems should be identified--resource constraints and management problems (including pests and disease). Specific proposals should be formulated for addressing the identified problems, including folow up descriptive-diagnostic research, if needed. This exploratory survey exercise should be repeated every six months in a new barangay.

2) Site researchers (agronomists, economists, and livestock) should have at least 1/2 day per week of uncommitted time to

circulate around barangays where research is being conducted in order to interact with non-cooperators.

3) Each site team should be required to develop and submit for approval a list of not less than five key problems faced by non-cooperator farmers in their site which the team feels they can and want to address.

4) Site teams should be encouraged to contact other government agencies such as the BFD and the Bureau of Lands for information contributing to system understanding and problem identification.

5) At least one session at the June workshop should address (a) system identification, (b) alternative criteria for stratifying populations for research and analysis, and (c) the concept of recommendation domains. Stratifying schemes should be sought which go beyond hectarage and barangay. Not all stratifying schemes should be based on household characteristics.

6) All research proposals must include a statements on (a) the target beneficiaries and (b) what stratifications will be used to analyse any data collected.

7) Decisions on target beneficiaries, research priorities, and stratification criteria should be based on upland population characteristics throughout the entire project municipality, rather than on populations in particular barangays or sitios.

8) Preference should be given to baseline studies which

begin with extensive informal surveying.

9) It should not be a requirement that formal follow-up surveys be carried out if it can be demonstrated that informal surveying has accomplished most of the reseach objectives.

10) Among proposals calling for formal surveys to characterize target populations, preference should be given to those employing random sampling procedures.

11) Preference should be given to monitoring research preceded by an exploratory survey leading to identification of specific needs and problems.

12) Preference should be given to monitoring research proposals which include statements as to the analyses to be carried out and/or the hypotheses to be tested.

13) Preference should be given to monitoring research employing pre-coded forms.

14) Unless plans are made to carry out analyses to provide more than descriptive information on labor use patterns and peak labor periods, the proposed labor allocation research proposal should not be approved.

15) By the second (or at most third) year a farmer has participated in a cropping patterns trial, all management and implementation should be left to the farmer. No inputs (including labor and planning assistance) should be provided.

16) If it is not possible to change a cropping patterns

trial to a FM-FI format after the third year, the pattern should not be continued except following special approval of the Steering Committee. Instead, the most successful components of the pattern should be tested in a component trial framework, or passed on for dissemination.

17) The most successful components of each cropping pattern trial (judged by technical and economic analysis, and cooperators' assessments) should be tested in farmer managed and implemented (FM-FI) trials with non-cooperators.

18) Whenever possible a single farmer practice should be used in each cropping patterns trial.

19) Increased use of superimposed trials within the cropping patterns trials is needed. Key decisions could be made regarding varieties, spacings, and other components of cropping patterns recommendations with relatively small marginal investments of researcher time. Additional replications could be accomplished by component trials (using the same treatments, but leaving non-experimental variables at the level of existing farmer practices) on non-cooperators' fields.

20) To continue cropping patterns trials, there is a need for a seed multiplication component that goes beyond what is currently being provided at ViSCA.

21) Site agronomists should be encouraged to reduce their management input to cropping patterns trials in order to create

time for identifying topics for component and overlay trials and for implementing such trials.

22) To facilitate flexibility and timely response to farmer problems, a standard research proposal should be developed to test and evaluate differences in existing farmer practices. Each site agronomist would be required to implement at least one component or overlay trial during the coming season.

23) The June workshop should have at least one session on uses of T-tests, ANOVA, and regression analysis in carrying out agronomic and economic analyses of results of agronomic trials.

24) A larger number of agronomic variables should be monitored in two to three cropping patterns trials per site (the same pattern). This data collection and analysis should be the responsibility of the site agronomist. Since time is limited, monitoring can be limited to data which is needed to address identified problems (such as the problem of peanut pod filling in Jaro). For the first year, a standard set of agronomic data should be collected on one pattern at several sites to better evaluate whether the results justify the time investment. It would be possible to use regression analysis to sort out the individual contributions of environmental and farmer inputs to crop growth response. Significant results would automatically represent a synthesis of findings across sites.

25) Farmer cooperators are no longer representative, even if

they once were. Therefore, final stage screening must be done via FM-FI trials with non-cooperators.

26) Workshops should be held to synthesize findings related to the cropping patterns trials. These workshops could be sponsored by the ViSCA technical group. Non-project individuals active in solving problems faced by upland farmers should be included. It would also be desirable to hold workshops to synthesize project findings from other areas of research.

27) All decisions to extend recommendations beyond the format of FM-FI trials, must be approved by the Steering Committee.

28) Proposals to begin extending a technology should include an impact assessment statement. The impact assessment statement must include: (a) a listing of target beneficiaries, (b) a statement on any aspects of the technology which might require further refinement, (c) an assessment of the impact of the recommendation, if adopted, on the productivity and welfare of the target beneficiaries, and (d) a statement on the expected impact on the agroecological system if the recommendation is adopted by a large proportion of the target beneficiaries.

29) Some form of remuneration should be provided to farmer trainers.

30) Cross site visits and demonstration visits should include non-cooperators as well as cooperators.

31) As soon as possible, PDC staff should discuss with site teams the difference between research and extension and clear guidlines should be cooperatively developed as to how the seperate roles can be communicated to farmers.

32) Preference should be given to back-up research proposals prepared by interdisciplinary groups rather than by a single reseacher.

33) Preference should be given to back-up research proposals which include a section on research justification citing results of prior FSDP research or expressed needs of site team members.

34) All research proposals must include a statements on (a) the target beneficiaries and (b) what stratifications will be used to analyse any data collected.

35) Decision on target beneficiaries, research priorities, and stratification criteria should be based on upland population characteristics throughout the entire Region (for upstream back-up research) or a municipality (for downstream back-up research), rather than on populations in particular barangays or sitios.

36) Preference should be given to back-up research which is to be conducted at SRMU sites.

37) Preference should be given to back-up research which is designed to allow statistical analysis of the seperate effects of experimental variables.

38) Preference should be given to back-up research which

includes as controls the best of known farmer practices and, in cases where applicable, practices being used by site teams in their own trials.

39) Preference should be given to research which has been preceded by an informal exploratory survey which has led to identification of specific needs and problems.

40) Preference should be given to research proposals which include statements as to the analyses to be carried out and/or the hypotheses to be tested.

41) It should not be a requirement that formal follow-up surveys must be carried out, if it can be demonstrated that informal surveying can accomplish most of the objectives of the research.

42) Among proposals calling for formal surveys to characterize target populations, preference should be given to those which will employ random sampling procedures.

43) Among proposals calling for eventual computer data analysis, preference should be given to research which will employ pre-coded forms.

PROJECT RESEARCH ("Suggestions" for research are included in the corresponding chapter)

1. Problem identification by the site and back-up researchers is an ongoing evolving activity that ought to

continue, especially in looking for opportunities for addressing farmer problems at the whole-farm system level.

2. Continue to develop interdisciplinary and site and farmer relevant problem solving research that considers the wider, whole-farm context.

PROJECT ORGANIZATION AND MANAGEMENT

1) Guidelines for who can do what kind of reesearch at the sites should be established and agreed upon by all concerned groups to avoid site-level confusion.

2) Develop stronger interdisciplinary and inter-program linkages in ViSCA between the FSDP-EV technical group, the Center for Social Research (CSR) and other related programs.

3) Commit release time up to ten man-days per month per member of the ViSCA technical group to visit SRMU sites.

4) Encourage more interdisciplinary back-up research with site-problem focus given high funding priority.

5) There is a need for clear guidelines as to the relative role of ViSCA and the PDO technical group in providing techanical assistance to site teams.

6) A social scientist of the ViSCA-CSR should be included as a member of the technical group.

7) Site researchers, especially the economists, should be given regular appointments as early as possible. A further commitment should be made to give permanent positions to

livestock specialists before the start of the follow-on phase of the project.

8) A radio communication link should be established between ViSCA and PDO.

9) The designation of site researcher should be changed to Crop Specialist. The site leader should allocate his time between extension (70%) and administration (30%).

10) The Crop Specialist should assume the monitoring of agronomic data from cropping studies. This would release the site economist to concentrate on socio-economic research.

11) Data collection activities need to be revised. Research aides can be trained to collect most of the monitoring data if appropriate pre-coded forms are used,

12) Research proposals that do not require additional funding and which reflect site needs can be approve by PDO without passing through the SC and RPMC. This change should not, however, jeopardize already approved reseaech and should emanate from both the site staff and technical staff of ViSCA.

13) The plan to send 15 additional staff for short term training abroad should be reconsidered.

14) Conduct regular training for project staff at ViSCA on different phases of FSR/E by using as much as possible materials and experiences gathered from the FSDP-EV. Full utilization of local expertise from other similar projects in the country must

be employed in these training programs.

15) Recommendation domains of technologies generated from the project should be defined and used as basis for selecting farmers for cross site visits.

16) We concur with the recommendations of the SC to support and recruit only short term consultants who can work with the project for not less than one month; and that the local counterparts should draw the terms of reference for the Cornell technical consultant.

17) During life of the project, preference should be given for a long term technical consultant. A TA in social science is an immediate need that should be considered. An alternative would be substantial local administrative assistance to the long term social science consultant.

18) PDO should organize a working committee to draw a list of needed technical consultants; or the existing list should be reviewed for modification based on the needs expressed by SRMU's and local technical staff.

19) Local consultants should be given preference for short-term technical assistance.

20) A local administrative staff can be recruited to assist the field representive so that more social science technical input can be provided to the project.

INTEGRATION OF FSDP-EV INTO RIARS

1) Integrate FSDP-EV into the RIARS System by August 1985.

2) A study should be conducted to examine the 10 research sites (6 FSDP and 4 RIARS) before October 1985 to determine which sites should be retained. In cases in which a substantial number of conditions relevant to farming systems development in two or more sites overlap, only one site should be retained.

3) A special committee consisting of staff from ViSCA, RIARS, FSDP, and the Regional MAF office should be formed by June 1985 to prepare details of the merger.

FOLLOW-ON ACTIVITIES

1) The follow-on phase should be designed by the PEC, ViSCA and MAF.

2) Support for the follow-on activities should be funded by USAID for a period of 3 years with corresponding counterpart funds from GRP. This is an assurance for the full realization of the benefits that will acrue from the full institutionalization of the farming systems approach in agricultural and rural development.

3) Consultancies from outside of the country should be re-evaluated in light of a possible need for a wider choice of consultants, preferably for long term technical assistance in two

areas: (a) training and extension and (b) agricultural economics/economic anthropology with extensive FSR/E experience. This type of assistance should be detailed by the follow-on design team formed for this purpose.

4) Funding of technical assistance from abroad should come directly from USAID and not through the Ministry. The money used for this purpose should be grant money and not loan money.

5) An emergency fund available directly from USAID should be alloted for use by the technical consultant with approval by the PDO to facilitate conduct of research and project activities.

6) ViSCA back-up research on upland sites representing agroclimatic zones different from that of the ViSCA research station and applicable to a range of recommendation domains should be supported.

7) ViSCA's training activities should be supported through the grant funds.

8) Advanced degree manpower training both locally and overseas for MAF and ViSCA should continue to be funded. A wider choice of schools/universities actively involved in FSR should be tapped. However, provisions should be made by MAF to accomodate and provide a sound placement of those who have been trained for advanced degrees in order to avoid losing them. It might even be more desirable to have them trained within the country.

IV. PROJECT EVALUATION METHODOLOGY

Upon request of the Farming Systems Development Project-Eastern Visayas (FSDP-EV) Project Office, USAID contracted a team consisting of UPLB-PESAM staff (through the UPLB Development Foundation Inc.) and other consultants from within and from outside the Philippines to carry out a mid-program evaluation.

The scope of work for the evaluation was defined by the FSDP-EV Project Office in the form of two general evaluation objectives. It was specified that the evaluation was to be structured around nine key evaluation questions.

GENERAL EVALUATION OBJECTIVES. General Evaluation Objectives were: 1) to identify changes in project implementation that will improve impact of the project during the remaining life of the project; and 2) to make recommendations for possible follow-on activity, with specific attention to activities that will facilitate moving from the project purpose to attainment of the goal of improving the livelihood of small-scale rainfed farmers in selected agroclimatic areas of the Eastern Visayas.

KEY EVALUATION POINTS. Key Evaluation Points were stated in the TOR. The team was to examine the:

1. Adequacy of process by which information on target beneficiaries and local situation is factored into decisions on research priorities at the site level.

2. Extent to which mechanisms have been developed for identifying: (a) the needs of the less influential, less endowed smallholder farmers and (b) a process to screen outlines of research or actions which are unlikely to be useful to limited resource farmers.

3. Extent to which research and development process continues to begin with "research station technology" as opposed to beginning with indigenous and traditional technology.

4. Extent to which mechanisms are in place and being utilized for making "up stream" research responsive to the needs of limited resource farmers.

5. Extent to which the research and development process is dealing with the issue of tenancy/share cropping.

6. Extent to which risk and uncertainity are considered in asessing the potential benefits of technologies.

7. Extent to which the research and development agenda is part of an overall conceptual approach to development and whether this conceptual framework can accommodate updated empirical information.

8. Adequacy of the farming systems approach as presently being implemented for identifying critical issues in the land use systems and the suitability of this approach for identifying management strategies for dealing with variability.

9. Adequacy of existing links and administrative arrangements between the Ministry of Agriculture and Food (MAF) and the Visayas State College of Agriculture (ViSCA).

EVALUATION METHODOLOGY. The evaluation procedure was to follow, in many respects, characteristics of the farming systems approach to research. The evaluation began with a review of literature on the project and a series of interviews with key project participants. This was followed by exploratory visits to field sites and project agencies to assess activities of project personnel and the process being followed to achieve project objectives.

The key element of the evaluation methodology was iterativ.

dialogue among members of the interdisciplinary team. In addition to interdisciplinary perspectives, team members brought to the evaluation a wide range of experiences with research in several sites in the Philippines, and in other countries.

The evaluation team formulated specific comments and recommendations relating to each of the two general and nine specific evaluation points. These were presented to our primary clients--project personnel, ViSCA and the Regional MAF--in sufficient time to allow full discussion of identified issues and proposals.

The evaluation proceeded through five stages: a) evaluation preparation, b) visits to each of the SRMU field sites, c) visits to the project agencies, d) information analysis and synthesis, and e) feedback to representatives of ViSCA, RPMC, PDC, MAF, USAID, and the SRMUs. The activities for each of these stages are described below.

PREPARATORY ACTIVITIES. Three days of preparatory work allowed the team to: 1) review available reports and related litertature at FSDP-EV office, Tacloban; 2) carry out dialogues and interviews with the Project Director and staff, Regional Director of MAF, Assistant Director for Crops, MAF, Assistant Regional Director for Livestock, MAF, Provincial Agriculturalist, ViSCA and Cornell staff (topics discussed were those identified in the evaluation terms of reference); 3) carry out a group question and answer session with the SRMU staff, formulate an

interview questionnaire for the SRMU personnel, and administer it to 23 site staff members able to meet with the evaluation team at the PDO office (results were analyzed for further evaluation use before field site visits began); 4) formulate a checklist of overall objectives to be addressed during site visit interviews with cooperator and non-cooperator farmers, and SRMU staff; 5) formulate a checklist of topics to be addressed during interviews at Project Agencies; 6) finalize an itinerary/schedule of visits with SRMUs and to project agencies.

SITE VISITS. Site visits were made to each SRMU and consisted of interviews with cooperator and non-cooperator farmers, and visits to field trials and the project areas. In addition, a two to three hour discussion, comment and feedback session was held with each SRMU team (and the Municipal Agricultural Officer (MAO) were available). Each evening following site visits the team held debriefing sessions to review findings and revise the site visit checklist for the following site visit. During each debriefing session, one to two team members served as recorders to assure that major findings and identified issues were summarized, to be available during preparation of the evaluation report.

Half-way through the field site visits there was a day of dialogue to synthesize observations to that point and to evaluate how remaining site visits could best serve evaluation objectives. Site revisits were made during the final week of the evaluation,

as felt necessary, to gather additional information on key issues that emerged during team analysis.

VISITS TO PROJECT AGENCIES. Evaluation preparatory activities took place at the PDO office, Tacloban. During this period, issues were discussed with PDO staff. In addition, the PDO was used as an office base during days on which four of the site visits were carried out and during the final week of the evaluation. This generous support of the evaluation team greatly facilitated interaction between the team and project officers. Several days (see Process Documantation) were spent at ViSCA. Meetings were held with the Technical group and members of the Steering Committee. Particular attention was paid to on-going SRMU back-up research activities. Two visits were made to the Regional Office of the MAF. The Leyte National Agricultural College was visited.

ANALYSIS AND SYNTHESIS. A primary form of analysis was nightly meetings of all evaluation team members. Descriptive/qualitative data from SRMU questionnaires were tabulated and analyzed to orient the team as to some of the experiences and perceptions of the SRMU staff members. Team information synthesis meetings were held periodically, especially when project personnel were not working. The last five days were spent analyzing results and writing drafts of the report.

FEEDBACK PROCESS. Findings were presented to the FSDP-EV office and field staff, RPMC, and other interested parties on May

15, 1985. A dialogue was held with Dr. Edgardo Quisimbing of MAF-ARC and Dr. Samuel Go, Officer-in-charge at VISCA. An initial draft of the evaluation report was prepared by May 17, 1985. The complete evaluation report will be prepared by May 24, 1985 and submitted to the FSDP-EV Office; VISCA; Cornell Technical Assistance Staff; Regional Director (Region VIII) MAF; Dr. E. Quisimbing, MAF Central Office; and USAID.

EVALUATION TEAM COMPOSITION.

A. Team leader

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B. Members

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V. FSDP-EV RESEARCH AND DEVELOPMENT STRATEGY

By learning from successes and failures, the FSDP-EV overall development strategy has been evolving from a narrower to a broader approach, and from a cropping systems approach to a farming systems approach. The project has increased its emphasis on farmer participation, has been engaged in technology extension, and has made progress in adopting more of an interdisciplinary and locally relevant problem solving approach to research.

PARTICIPATION AND TECHNOLOGY GENERATION. The evaluation team observed evidence of increased farmer-cooperator participation and site team responses to such participation. Farmer cooperators have been able to feed their concerns, experiences, and evaluations into the project; and the SRMUs have responded by modifying cropping pattern trials and other site activities. The evaluation team cautions, however, against an overemphasis on trying to improve farmer welfare through mobilization of farmers and their existing resources at the expense of trying to develop new technologies and resources.

Both of these approaches--farmer mobilization and technology development--are being used simultaneously by the and FSDP-EV and some confusion appears to exist as to the effects of each on production. While mobilization of farmers certainly can have

significant short-term benefits, long-term benefits can be limited if the farm system itself is not significantly changed.

Project successes have included introduction of new technologies in the form of improved crop varieties and management practices. Farmer participation has played a complimentary role in the introduction and extension of the technologies. The SRMUs need to continue to encourage farmer participation while, at the same time, recognizing the drawbacks of limiting project attention to mobilization at the expense of technology generation.

Recommendation:

1) The SRMUs need to allocate time for both: a) problem identification leading to research and technology development and testing and b) farmer mobilization or participation.

BREADTH OF THE FARMING SYSTEMS APPROACH. During the design of the Farming Systems Development Project the MAF development strategy was oriented strongly towards improvement of yields of major commodities. Both the MAF and USAID wanted to utilize a farming systems approach, but may not have fully understood the concepts and corresponding implementation requirements. As a result, the project was somewhat constrained by the initial emphasis on major commodity components.

Flexibility to respond to complexities encountered at the field level and a broad based approach are key to FSR. The project is developing flexibility and is broadening its scope of

concerns. Examples include the introduction of livestock specialists into the SRMUs, developing socioeconomic research, and more attention being paid ecosystem variables. Such a broader aproach is to be encouraged and should enable the work of the SRMUs to be distinct from that of the PTVTs, which in turn will allow the MAF a comparative evaluation of the two systems.

Commodity-based cropping patterns research has not been successful in the uplands. Continued emphasis on cropping patterns and component crops is not recommended to the degree that such an approach limits responsiveness to the needs of the changing whole farm system.

Recommendation:

i) The project should relinguish the pre-mandated focus on only major commodity cropping patterns and should broaden its perspective to include other significant aspects of the farming system, especially in order to allow project responsiveness to whole farm system complexity.

RESEARCH AND EXTENSION. The SRMUs are currently engaged in extension. The evaluation team, however, was unable to identify technologies completely ready for broad extension. The ipil-ipil contour technology is clearly adapted to a number of areas for addressing soil erosion and fertility problems. Testing at different sites having different conditions is still needed, however.

The SRMUs are now involved with cooperator organizations in order to develop site work plans, evaluate research results, and

extend technologies. Activities at some sites now include the extension of technologies to non-cooperators. The evaluation team recognizes the extension role being played by the SRMUs. Until technologies are better developed, however, research needs to be emphasized over extension.

Recommendation:

1) The SRMUs will spend the majority of their time on relevant, problem solving, technology generating, and systems understanding FSR. However, the SRMUs will have a defined extension role.

THE EVOLUTION OF FARMING SYSTEMS RESEARCH. Need for a broader systems perspective does not necessarily mean that more time should be spent on descriptive research. The SRMUs by now have a good field knowledge of local farming systems. They now need to identify their knowledge gaps and establish corresponding practical research priorities.

The SRMUs are possibly not fully utilizing their experiences and locally-based knowledge to prioritize research. The labor allocation survey may serve as an example. Site workers may already sufficiently know the local structuring of labor constraints such that the research may not be a top priority (even though project relevant).

While a whole farm systems conceptual approach is needed, improvements of the systems can be aided through simple trials designed to answer some of the major problems identified. Currently there are no experimental trials apart from the farmer-

managed cropping trials.

Recommendation:

1) Where background knowledge is adequate, descriptive research can be de-emphasized. Specific problems need to be identified and corresponding exploratory and follow-up research needs to be carried out. Formal research should include hypotheses generation and pre-specification of analytical methods to be used.

BACK-UP AND SITE RESEARCH. Technology verification has been the major emphasis at the site level, but is expensive and often inefficient in solving specific farmer problems. The team noted a natural de-emphasis of this approach over time in favor of technology evaluation and (in some cases) generation. ViSCA back-up research has also been shifting from an upstream to a downstream approach, a trend to be encouraged.

Recommendations:

1) Formal site research should concentrate on technology and evaluation (suggested research areas in the chapter on project Research also emphasizes gaining a better understanding of system parameters).

2) ViSCA back-up research should be generated from problems identified at the sites.

DISCIPLINARY TO INTERDISCIPLINARY. The success of FSR relies on developing an interdisciplinary approach. The project has had some difficulties in understanding the different contributions of different disciplines, recognizes the problem, and is making progress towards interdisciplinary integration.

The contribution of the social scientist is crucial to the

success of FSR. The site teams and the technical staff as a whole have not yet adequately considered social, economic, and institutional aspects of farmer problems.

Recommendation:

1) The ViSCA technical group must reorient the project towards an interdisciplinary approach by working together on the many multifaceted real-life farmer problems that can be addressed only by interdisciplinary efforts.

VI. RESEARCH AND DEVELOPMENT IMPLEMENTATION

The preceding chapter outlined shifts in project strategy which the evaluation team hopes will help meet project and MAF objectives. Most of the recommended shifts reinforce directions in which the project is moving. This chapter assumes the vision for project strategy identified above and addresses implications for project research and development implementation.

Farming systems projects may inevitably evolve over time. Practionners learn by experience and adjust methods periodically to better serve farmers. There are difficult balances to be achieved between:

a) a comprehensive view, as is needed to target research, but a pragmatically narrow view, as is needed to be effective problem solvers;

b) taking advantage of farmers' perspectives but not being limited to farmers' experiences;

c) major changes which may be hard to adopt versus minor changes which are easier to adopt; and

d) caution so as not to mis-lead farmers, but not so much caution that farmers (and MAF officers) become discouraged waiting for recommendations.

The proper balance at any point in time may not be the best balance at another point in time. It is commendable that participants in the FSLP, from the site teams to the upper administrative levels, recognize a need to refine strategies and implementation methods and have already taken steps to make the program more comprehensive and, we believe, more effective. The

tone of this chapter, and indeed the whole evaluation, is therefore one of facilitating current trends.

In general, the evaluation team feels that the research and development strategy of the FSDP will be more effective if the following are carried out:

a) more attention is given to problem identification and to targeting of research and development activities;

b) better use is made of exploratory survey procedures;

c) more attention is paid to research methodology;

d) a smaller share of project resources is devoted to cropping patterns trials;

e) the nature of farmer participation is changed somewhat;

f) back-up research becomes more closely related to problems faced by resource poor farmers; and

g) better advantage is taken of the multidisciplinary composition of both site teams and the ViSCA technical group.

The following specifies how the FSDP is implementing research and development, and recommendations as to how implementation could be more effective. The goal is to outline steps the FSDP might take so farming systems research and development efficiently uses IAF resources while accomplishing the objective of improving farmer welfare. Observations and recommendations are presented first for site team activities, and then for back-up research.

SITE TEAM ACTIVITIES

PROBLEM IDENTIFICATION. The project was designed to address

the needs of upland farmers. To accomplish this, the project administration predetermined a focus on particular cropping patterns. The purpose was to make sure that research was done on crops grown by upland farmers, rather than on lowland rice. While the approach was effective in directing research to previously neglected crops, it eliminated problem identification as the first step in the farming system approach at the site level.

Despite the initial top-down problem specification, problem identification has been an important field activity of the site teams. Problems have been identified via both informal and formal observations and surveys. The accumulated experience of team members has led to insights regarding farmer problems transcendig results of any single survey or research activity.

Needed now are mechanisms for translating the intuitive understandings site team members have of farmer problems into research which might solve those problems. The first step is viewing problem identification as an explicit activity of site team members. There is also a need to build the capacity of team members for using descriptive information on farmers problems to identify specific issues or hypotheses to subject to further research. Development of this skill could be a single most effective way of improving the contribution of site teams.

Recommendations:

1) After the June workshop, the site agronomist (researcher), economist, and livestock specialist should form a

team, along with a representative from the ViSCA technical group, to carry out an exploratory survey. The survey should be carried out in a barangay where there are few or no cooperators. The survey would have a defined checklist addressing crops grown and associated practices, animals, fields and tenure, and--most important--an open question on the farmers' views of his/her major problems. Two distinct sets of problems should be identified--resource constraints and management problems (including pests and disease). The results should be discussed and an integrated report of priority farmer problems and a system description should be included in the following monthly report. Within two weeks, representatives of the MTC and ViSCA should meet the field team and discuss specific proposals for addressing the identified problems, including follow up descriptive-diagnostic research, if needed. This exploratory survey exercise should be repeated every six months in a new barangay. The time commitment should be no more than 2-3 days for the survey, 1/2 day for the write-up, and 1/2 to 1 day in figuring out follow-on activities.

2) Site researchers (agronomists, economists, and livestock) should have at least 1/2 day per week of uncommitted time to circulate around barangays where research is being conducted in order to interact with non-cooperators. The focal point of these discussions should be (a) the purpose of the project, (b) project activities, and (c) elicitation of farmers' felt needs. Identified problems should be included as a seperate section in each researcher's monthly report.

3) Each site team should be required to develop and submit for approval a list of not less than five key problems faced by non-cooperator farmers in their site which the team feels they can and want to address. These problem areas, once approved, would constitute a statement of the team's objectives. Teams should be encouraged to revise their lists on a regular basis.

4) Site teams should be encouraged to contact other government agencies such as the DFL and the Bureau of Lands for information contributing to system understanding and problem identification.

TARGETING RESEARCH. Initial targeting was not in the hands of the site teams. Targeting was predetermined by the project mandate on upland farmers and the crop pattern mandates of the site teams. As one result, progress has been limited on use of the concept of targeting research in setting and evaluating

research priorities. Most teams merely target farmers with less than 3 ha of land, while acknowledging there are major differences in the circumstances of farmers within this "target" population.

Little stratifying of farmer target populations was done due to the implicit assumption that all farming households in upland areas are relatively homogenous (once location and cropping pattern are factored out). The assumption might have been reasonable in a program oriented towards a commodity promotion approach.

As the project broadened its focus, the need for stratifying schemes became apparent to most of the site teams. Several teams have developed and use different criteria for stratifying their area populations for research. Matalom, for example, divides farmers by areas based on soil types corresponding to the two project barangays. The Gandara team distinguishes among farmers having upland or lowland fields, or both, and distinguishes among barangays based on topography. Easey makes a division between two barangays taking into account soils and topography.

In general, however, more attention is needed to both targeting of research and alternative ways of stratifying samples for research, data analysis, and making recommendations. Also, as a rule of thumb, different stratifications are needed for different research issues. Some issues transcend farm households, and therefore, the household is not always the

appropriate level of analysis.

Recommendations:

1) At least one session at the June workshop should address (a) system identification, (b) alternative criteria for stratifying populations for research and analysis, and (c) the concept of recommendation domains. Stratifying schemes should be sought which go beyond hectarage and barangay. Not all stratifying schemes should be based on household characteristics. Communication of the RD concept is particularly important. It should be emphasized that definition of RDs follows problem identification. RDs are distinguished as being groupings (often of farm households) facing the same set of problems and for whom the same set of solutions will be relevant. In general, solutions will be different for households with significantly different levels of resources, even if they are facing the same major problems.

2) All research proposals must include a statements on (a) the target beneficiaries and (b) what stratifications will be used to analyse any data collected.

3) Decisions on target beneficiaries, research priorities, and stratification criteria should be based on upland population characteristics throughout the entire project municipality, rather than on populations in particular barangays or sitios.

BASELINE STUDIES. Several baseline surveys have been administered, including a cropping patterns baseline survey, a socio-economic profile survey, sondeos, and a livestock baseline survey. For the most part, the surveys have been used primarily for system description, rather than as diagnostic tools. Only two of 27 responses on the SPMU Questionnaire said the baseline surveys contributed to problem identification.

General description--not related to problem diagnosis--is needed, since the upland rainfed areas are substantially different from where the bulk of agricultural research has been carried out. But the opportunity costs of time and resources

spent on baseline surveys should be a serious consideration since the project is in its third year and since most of the baseline surveys have had long turn-around times. While some of the problems responsible for lengthy turn-around time have been solved, others--such as limited time of ViSCA staff--remain.

To make baseline surveys more effective, extensive informal surveying and pre-testing of questionnaires are needed. In many, if not most cases, implications for technology development research can be based on pre-survey activities, and formal follow-up surveys can be eliminated.

Recommendations:

1) Preference should be given to baseline studies which begin with extensive informal surveying.

2) It should not be a requirement that formal follow-up surveys be carried out if it can be demonstrated that informal surveying has accomplished most of the reseach objectives.

3) Among proposals calling for formal surveys to characterize target populations, preference should be given to those employing random sampling procedures.

MONITORING ACTIVITIES. Site teams have been and are engaged in monitoring. The primary monitoring activity has been data collection on cropping patterns trials and on associated plots where the farmer follows his own practices. Site economists currently collect most of this data and also monitor prices in local markets. Livestock practices monitoring has been carried out over the last year at several sites.

Monitoring research can play a valuable role in the

descriptive/diagnostic phase of farming systems research. The possibility of identifying and analysing farmer problems can be increased through monitoring activities, but it should not always be assumed that monitoring is either the best or the most efficient way of identifying and evaluating farmer problems.

It is premature to comment on the livestock monitoring, but, in reference to the cropping patterns and price monitoring programs, it appears that monitoring has not provided enough information to justify the resources invested.

The limited contribution of the cropping patterns monitoring is largely due to the data collection procedures. The written forms for cropping patterns monitoring mix field observations with collection of input-output data, and are not appropriate for taking best advantage of either. The input-output data must be hand extracted for analysis and, therefore, little analysis has resulted. Even with improved forms, there would be difficulties in use the cropping patterns monitoring data since only one arbitrarily selected farmer field is monitored--aside from the trial plot--eliminating the possibility of interpreting data in a whole farm context.

Beyond data collection problems, monitoring has been inefficient because systems of data analyses were not adequately considered initially. This applies to the market monitoring as well as the cropping patterns monitoring. To justify resources for monitoring, it must be clear what analyses are to be carried

out on the data and that the planned analyses will provide insights not obtainable through other, less costly, activities.

Recommendations:

1) Preference should be given to monitoring research preceded by an exploratory survey leading to identification of specific needs and problems.

2) Preference should be given to monitoring research proposals which include statements as to the analyses to be carried out and/or the hypotheses to be tested.

3) Preference should be given to monitoring research employing pre-coded forms.

4) Unless plans are made to carry out analyses to provide more than descriptive information on labor use patterns and peak labor periods--such as estimating elasticities of labor supply to different enterprises, or deriving the marginal value product of labor at different times in different activities--the proposed labor allocation research proposal should not be approved.

CROPPING PATTERNS TRIALS. The cropping patterns trials have been a major activity of the SFMU teams. The cropping patterns were developed on the basis of (a) a baseline survey of cropping patterns, (b) a policy mandating research on certain crops at each site, (c) observations of a project design group, (d) national recommendations, and (e) knowledge of back-up researchers. Once designed, cropping patterns trial designs were presented to and discussed with site teams and farmer cooperators. Some modifications were made and some proposed patterns were dropped.

Initially, site teams managed the trials and provided inputs to make sure farmers could implement the cropping pattern. Modifications have since been made in cropping patterns being

pursued at each site, based largely on farmers' reactions. Some examples of changes include: dropping fertilizer after farmers said they do not have sufficient capital (and in response to the Process Evaluation report), reducing plot size, adding ipil-ipil hedgerows, changing varieties back to local varieties in some locations, changing plant spacing, and some substitution of crops for those in the initial pattern.

Site teams screened out components of the trial patterns which obviously did not work or which farmers felt were impractical to implement. Modifications in trial design were made on an ad hoc basis, however. Such changes of introduced patterns eliminated one of the major purposes of cropping patterns research. It would be very difficult to evaluate results of an introduced pattern over time and across sites.

Also, there appears to have been little coordination across sites attempting to introduce similar patterns. In some cases, pattern variations represent needed adaptations to location specific circumstances. This is necessary and desirable in a farming systems program. In some cases, however, differences in varieties, spacing, and planting patterns exist which are not necessary for specific environments. An example is the use of strip planting of corn and peanuts in Bontoc, where at most other sites corn and peanuts are being promoted in intercropping patterns. In such cases, cross-site synthesis meetings could help to resolve practice is to be examined through research.

A key evaluation team observation across sites is that, after elimination of aspects of the patterns not liked by cooperators, relatively modest changes have actually been introduced. Where farmers have adopted cropping patterns recommendations, primarily new crops or varieties have been accepted. Spacing and seeding patterns have also been accepted. The evaluation team suggests that the sum of the modest changes accepted will improve farmer productivity. However, the patterns trial format may be needlessly complex and resource consuming relative to the results obtained.

Without second guessing whether cropping patterns trials should have received so much emphasis, the evaluation team suggests that the trial format should be changed so that a small proportion of site team resources are devoted to the trials. Each site team noted time demands of the cropping patterns trial, and most expressed a desire to refocus their programs on other activities. We would agree with such a change.

Recommendations:

1) By the second (or at most third) year a farmer has participated in a cropping patterns trial, all management and implementation should be left to the farmer. No inputs (including labor) should be provided. Farmer management should also mean that management schedules are not discussed or set at monthly farmer meetings, unless seperate meetings are held at which site researchers are not present.

2) If it is not possible to change a cropping patterns trial to a FM-FI format after the third year, the pattern should not be continued except following special approval of the Steering Committee. Instead, the most successful components of the pattern should be tested in a component trial framework, or passed on for dissemination.

3) The most successful components of each cropping pattern trial (judged by technical and economic analysis, and cooperators' assessments) should be tested in farmer managed and implemented (FM-FI) trials with non-cooperators.

4) Whenever possible a single farmer practice should be used in each cropping patterns trial. This might be accomplished by having cooperators discuss and agree upon a single best "farmer practice" for them all to use. This will enable farmers to informally compare their own practice to the "best" existing farmer practice, as well as to the SR/U introduced practices.

5) Increased use of superimposed trials within the cropping patterns trials is needed. Key decisions could be made regarding varieties, spacings, and other components of cropping patterns recommendations with relatively small marginal investments of researcher time. Since the number of replications would have to be small in a superimposed context, additional replications could be accomplished by component trials (using the same treatments, but leaving non-experimental variables at the level of existing farmer practices) on non-cooperators' fields. Superimposed trials (in conjunction with accompanying component trials) should be replicated at more than 10 sites.

6) To continue cropping patterns trials, there is a need for a seed multiplication component that goes beyond what is currently being provided at ViSCA.

COMPONENT AND OVERLAY TRIALS. During the first year of the project, several site teams ran varietal component trials. Since then, the time required to manage and implement the cropping patterns trials forced teams to deemphasize or even eliminate component trials. Similarly there has been too little time to pursue overlay trials. (Overlay trials superimpose treatments, such as amount or timing of weeding, on an existing plant stand.)

The inability to pursue component and overlay trials may be limiting the teams' contributions to solving farmer's problems. Variations in farmer practices have an unknown relationship to productivity. Moreover, there are components of the cropping

patterns trials and new component practices being developed at VISCA and at MAF research stations which have differential impacts on productivity.

Simple tests of no more than two to four treatments might help farmers and site researchers evaluate which components should receive priority as introductions into existing farming systems. Some examples might include: (a) benefits from placing 2 corn seeds in closely spaced hills versus 4-5 widely spaced hills, (b) camote varieties, (3) intercropping versus strip cropping corn and peanuts, and (4) adding a cassava intercrop to camote. Component trials are also useful for evaluating levels at which inputs such as fertilizer might be applied so as to gain some net benefit but still be consistent with farmers' concerns over capital investments and associated risks.

Generally, plot sizes in component and overlay trials need be no more than 50 to 100 square meters. As a rule, small plots with more replications are preferable to large plots with fewer replications. Rarely is it necessary to collect labor data for component and overlay trials. A major advantage of component and overlay trials is that a simple, clear result is often obtained which can be forwarded to farmers in understandable terms.

Recommendations:

1) Site agronomists should be encouraged to reduce their management input to cropping patterns trials in order to create time for identifying topics for component and overlay trials and for implementing such trials.

2) To facilitate flexibility and timely response to farmer problems, a standard research proposal should be developed to test and evaluate differences in existing farmer practices. The proposal would include a standard time allocation to this activity for the site agronomist, perhaps 20%, and a standard small amount for needed materials. The proposal would authorize the PDO to approve the specific subjects of component and overlay trials, as long as the amount of material support was below the agreed upon level in the proposal. Each site agronomist would be required to implement at least one component or overlay trial during the coming season.

SCREENING AND SYNTHESIS. In screening technologies, site teams appear to rely on observation, farmer comments, and partial budgeting--with greater emphasis on the first two. The committment to extensive farmer interaction and to basing screening decisions on farmer observations is an important project feature. However, one cannot rely only on farmer reactions, without corresponding technical or economic analysis. Individual and overall benefits differ; as do short and longer-term benefits. These factors mitigate against reliance on perceptions. For the same reasons, direct observations of the researchers should be verified by formal analysis when possible.

The only formal screening procedure now being used is partial budgeting. This is a useful tool, but is not generally used to assess many changes at a time, as has been the case in the project. Partial budgeting is not capable of identifying which of the several changes introduced in a trial are responsible for differences in net returns. Moreover, where few replications are used in trials, it is difficult to place confidence intervals on results even when large differences in

net returns are observed.

The informal, intuitive method of screening technologies is probably a best single screening method when deciding among particular introductions for the participating cooperators. But problems can arise in the synthesis of results. First, it is not clear how farmers who do not have several years of experience with an introduced variety or practice will react. Second, there are no standard criteria for comparing experiences across sites where the same or similar practices have been tested.

There has been little formal synthesis of research findings either within sites over time, or between sites. Despite a need for additional analysis and synthesis of results, some team members already feel there are too many reporting requirements. Nevertheless, if results are to have any significant impact on target populations (beyond immediate project cooperators) additional attention will have to be given to formal analysis for screening introductions and synthesis of findings within and across sites.

Recommendations:

1) The June workshop should have at least one session on uses of T-tests, ANOVA, and regression analysis in carrying out agronomic and economic analyses of results of agronomic trials.

2) A larger number of agronomic variables should be monitored in two to three cropping patterns trials per site (the same pattern). For example, soil nutrients, moisture and temperature, percent field emergence, and percent losses to particular pests and diseases could be measured (or calculated) and related to productivity per unit land, seed, or labor. This data collection and analysis should be the responsibility of the site agronomist. Since time is limited, site agronomists should

direct such monitoring activities only toward data which is needed to address identified problems (such as the problem of peanut pod filling in Jaro). For the first year, a standard set of agronomic data should be collected on one pattern at several sites (corn + peanuts, for example), to better evaluate whether the results justify the time investment. Following the above approach, it would be possible to use regression analysis to sort out the individual contributions of environmental and farmer inputs to crop growth response. Significant results would automatically represent a synthesis of findings across sites.

3) Farmer cooperators are no longer representative, even if they once were. Therefore, final stage screening must be done via FM-FI trials with non-cooperators. Such screening should be carried out before a substantial committment is made to extending a recommendation.

4) Between now and the end of the life of the project, a series of workshops should be held to synthesize findings related to the cropping patterns trials. Subjects might include: (a) crop/variety introductions for corn and rice upland cropping systems, (b) ipil-ipil hedgerows and contour planting, (c) coconut undercropping, and (d) integrating upland and lowland farming. These workshops could be sponsored by the ViSCA technical group. Non-project individuals active in solving problems faced by upland farmers should be included. Once a standard format is established, it would be desirable to hold workshops to synthesize project findings from other areas of research.

EXTENSION AND DISPERSALS. Each of the site teams spends considerable time on extension. This is reflected in farmers' perceptions of the project. When evaluation team members asked cooperators what is the purpose of the project, they usually responded "to give advice to farmers." When the same cooperators were asked in what ways they have benefited from the project, they usualy cited new introduced crops and varieties, the provision of inputs for cropping patterns trials, and the livestock dispersals.

It is inevitable and desirable that farming systems teams be

involved in extending the recommendations they develop. They should know best te appropriateness of a recommendation. However, providing inputs and advice to a small, select group of cooperators should not be the role of farming systems teams. This is more true with respect to livestock dispersals, since a carabao can have a major impact on farmer welfare.

Emphasis on extension would not be a major concern of the evaluation team if it were not for three factors. First, extension activities are for the most part not including non-cooperators. The evaluation team spent time with non-cooperators and found they knew little about the project and project activities. Second, extension work has hidden the main purpose of the project from target beneficiaries--so they cannot become full participants in the technology development process. What little was known about the project by non-cooperators related to the extension role of introducing new crops and varieties. Very few farmers, cooperators and non-cooperators, had any notion that farming systems involves research to develop and screen new technologies.

A third concern, perhaps the most important, is that extension activities are preceding somewhat prematurely and could eventually serve to undermine project and farming systems credibility. Even the most outstanding technology promoted by the project--ipil-ipil contour hedgerows--has several unanswered questions relating to management and applicability to different

micro-environments.

It would not be advisable to delay extension of technologies such as the ipil-ipil hedgerows while all details are worked out. New issues and problems always arise during the diffusion of technologies. However, teams should maintain an orientation of working on improving and adapting technology recommendations, rather than assuming a technology is completely ready.

Both cooperator and non-cooperator farmers should be able to clearly distinguish whether a proposal by a team member is a proven, extendable recommendation, or merely a technology being tested.

Recommendations:

1) All decisions to extend recommendations beyond the format of FM-FI trials, must be approved by the Steering Committee.

2) Proposals to begin extending a technology should include an impact assessment statement. The impact assessment statement must include: (a) a listing of target beneficiaries, (b) a statement on any aspects of the technology which might require further refinement, (c) an assessment of the impact of the recommendation, if adopted, on the productivity and welfare of the target beneficiaries, and (d) a statement on the expected impact on the agroecological system if the recommendation is adopted by a large proportion of the target beneficiaries.

3) Some form of remuneration should be provided to farmer trainers.

4) Cross site visits and demonstration visits should include non-cooperators as well as cooperators.

5) As soon as possible, PDC staff should discuss with site teams the difference between research and extension and clear guidlines should be cooperatively developed as to how the seperate roles can be communicated to farmers.

BACK-UP RESEARCH

SETTING RESEARCH PRIORITIES. A main concern of the evaluation team with respect to back-up research was whether mechanisms are in place and being utilized for making back-up research, both upstream and downstream, responsive to the needs of resource poor farmers. One of the main indicators is the extent to which farmer practices have influenced design of back-up research.

In general, it appears that there are adequate mechanisms in place for making back-up research responsive to resource poor farmers. Members of the ViSCA technical group are assigned to specific sites to ensure they interact with farmers and site teams on a regular basis. A further mechanism is the role of the steering committee to evaluate proposals and make recommendations to the RPMC.

These mechanisms, however, do not function as well as they might. For example, ViSCA staff have various competing time committments and cannot spend as much time in the field as they would like. There are structural problems. The ViSCA group is not well linked with other programs at ViSCA nor with back-up research being carried out within the NAP. Also, several members of the ViSCA technical group have had relatively little experience with the farming systems approach and appear to be struggling with identifying research directly related to the needs of resource poor farmers.

Despite observed problems, the evaluation team was impressed with the interest and dedication of the ViSCA group. In addition, the ViSCA group recognizes where its back-up research has been deficient. Leadership within the group is taking key steps to ensure that ViSCA back-up research is responsive to the needs of the resource poor. These steps, such as making ViSCA site team members responsible for the quality of proposals coming from sites should be encouraged.

Recommendation:

1) Preference should be given to back-up research proposals prepared by interdisciplinary groups rather than by a single researcher.

2) Preference should be given to back-up research proposals which include a section on research justification citing results of prior FSDP research or expressed needs of site team members.

3) All research proposals must include a statements on (a) the target beneficiaries and (b) what stratifications will be used to analyse any data collected.

4) Decision on target beneficiaries, research priorities, and stratification criteria should be based on upland population characteristics throughout the entire Region (for upstream back-up research) or a municipality (for downstream back-up research), rather than on populations in particular barangays or sitios.

TECHNICAL RESEARCH METHODOLOGY. The evaluation team visited several back-up trials at ViSCA and saw a few examples of back-up trials at SEMU sites. Few of the trials had defined control plots based on current farmer practices, and many were not based on experimental designs which would allow statistical analysis of seperate trial components.

In some cases, trials are of a design nature and formal

analysis is not a major purpose. The evaluation team recognizes the need for such trials. However, before trial results are formulated into recommendations for site teams to pursue in on-farm trials, it would be preferable to be test treatments using more formal experimental designs.

Recommendations:

1) Preference should be given to back-up research which is to be conducted at SM/U sites.

2) Preference should be given to back-up research which is designed to allow statistical analysis of the seperate effects of experimental variables.

3) Preference should be given to back-up research which includes as controls the best of known farmer practices and, in cases where applicable, practices being used by site teams in their own trials.

SOCIO-ECONOMIC RESEARCH METHODOLOGY. Little socio-economic back-up research has been carried out. Socio-economic members of the ViSCA technical group have been involved in analysing data and writing reports based on several baseline surveys. Opportunities for socio-economic back-up research should increase in the future since remaining reports on the socio-economic profile surveys are near completion. There are, in fact, several proposals pending for socio-economic back-up research.

The main concern of the evaluation team is that the mistakes made on the baseline and monitoring activities of the site team be avoided by the ViSCA group as increased attention is given to socioeconomic back-up research. In particular, it is important that this research be based on farmers' problems, that there be

extensive use of exploratory surveying to make sure issues are well understood, and that any formal surveys be designed so that a reasonable turn-around time can be expected.

Recommendations:

1) Preference should be given to research which has been preceded by an informal exploratory survey which has led to identification of specific needs and problems.

2) Preference should be given to research proposals which include statements as to the analyses to be carried out and/or the hypotheses to be tested.

3) It should not be a requirement that formal follow-up surveys must be carried out, if it can be demonstrated that informal surveying can accomplish most of the objectives of the research.

4) Among proposals calling for formal surveys to characterize target populations, preference should be given to those which will employ random sampling procedures.

5) Among proposals calling for eventual computer data analysis, preference should be given to research which will employ pre-coded forms.

VII. PROJECT RESEARCH

The evaluation team encountered a healthy and evolving program research orientation. ViSCA back-up research and the formal and informal research work of the SPMUs reflect a growing body of knowledge and experience gained through field activities and an evolving concern for working with a more holistic farming system rather than with only cropping patterns. While interdisciplinary work is always an ideal difficult to effect, the program is making progress in this area.

Recommendations.

1. Problem identification by the site and back-up researchers is an ongoing evolving activity that ought to continue, especially in looking for opportunities for addressing farmer problems at the whole-farm system level.

2. Continue to develop interdisciplinary and site and farmer relevant problem solving research that considers the wider, whole-farm context.

The evaluation team examined research both proposed and being carried out by the SPMU's and by ViSCA. We interacted with program researchers to learn about their work, to become familiar with problems or constraints encountered, and to determine the overall vision guiding research activities.

This chapter reviews research being carried out and considers areas in which additional research may be useful. Areas identified are not a checklist of topics to be separtely researched for the sake of doing research and do not constitute a recommended research plan. Rather, they are areas identified by

both the evaluation team and by the program as being directly relevant to the program in meeting its farming systems development objectives.

The initial cropping research reflected an assumption that low productivity of the main commodity is the major problem and opportunity for local farming systems improvement. Research at the site level has been structured by the initial definition of areas, determination of beneficiary populations, commodities to be worked with, and methodologies to be followed for problem identification, research, and research implementation. A result was an institutionalized decrease in interest in alternative opportunities and problem identification not usually going beyond the farmgate. The evaluation team supports the developing idea that research must be prioritized, locally appropriate, problem solving, and should continue the trend of interdisciplinary consideration of the whole-farm system.

The program agrees with the idea that upland farmers dynamically manage a range of resources and continually seek new viable alternatives and is ready to work with the broader population of non-cooperator farmers (and their resources and circumstances). Benefits of a wider scope include better understanding of strata of farmers in each site, how resources access differ, how access is improved, farmer knowledge and innovation, problems and constraints specific to different sub-groups, conditions that allow for technologies adoption,

conditions that block adoption, ecosystem appropriateness of technological recommendations, and the nature of the resources themselves and the direction in which the agroecosystem is headed due to the human use patterns.

To different degrees, program research now deals with improving cropping patterns, improving livestock resources, problem identification, understanding farmer diversity, understanding resource access and management, examining alternatives to the major commodity approach, understanding of the farming system in the wider agroecosystem, and farmer constraints and decision making.

CROPPING PATTERN TRIALS AND VARIETAL TESTING are program cornerstone research areas. Much has been accomplished at each site on seeking improvements in the major identified cropping patterns (Comments regarding research methods are found in the Implementation chapter). Back-up research getting underway includes work on ipil-ipil vs. madre de cacao contour hedgerows, anii and ipil-ipil shade trees vs. ipil-ipil and madre decacao hedges as sources of organic materials for coffee and abaca establishment, field crops screening and seed multiplication the effects of mani-manihan on primary crops, corn varieties, and multi-story cropping under coconut. Several additional crop research proposals are being developed.

LIVESTOCK resources and problems have received increased project attention with the fielding of livestock specialists at

the SRMU's, with strong expertise at the Technical Group level, and with several program activities and research projects. The program carried out a livestock baseline survey, had the short-term services of an outside livestock consultant, and has included livestock dispersal at each field site. Also at the field site level has been livestock monitoring, some extension work, consideration of vaccination needs, and monitoring of animals dispersed as a sort of informal suitability trial. Research being developed includes work on reproductive performance of gilts fed with coconut and banana trunk, evaluation of indigenous feed materials, ipil-ipil leaf supplements and carabao milk performance, monitoring of on-farm livestock activities, and pig and chicken management and performance. Interdisciplinary research to consider how local target farmer groups structure access to livestock resources is getting underway.

MARKETING is being studied, is well represented in terms of ViSCA expertise, and was addressed by an outside short-term consultant. SRMU economists are monitoring local price data. Back-up research includes one on-going and two proposed marketing studies.

VARIABILITY in existing farmer resources, practices, knowledge, and innovative behavior: Site teams are beginning to give more attention to differences in farmers, practices, and resources within and across sites. The various Sondeos,

socioeconomic profiles, and baseline studies reflected an assumption of homogeneity with data presented largely in terms of modal distributions. Cooperator selection and technologies being developed and methods of working with site farmers have, as one result, assumed homogeneity.

Additional informal research would still be useful on the diversity of farmer sub-groups, different resources and systems of access, utilization, and management, farming practices, local social organizations, and multiple strategies. Understanding diversity would allow for better targeted research and extension efforts, and would allow for a better understanding of cases of adoption and non-adoption.

Better understanding of within and across site variability should also allow better identification of target populations and their particular practices and problems, of potentially effective farmer demonstrators, and of what constitutes innovation (and which farmers are innovators). In this case, rather than new research, what can be suggested is simply re-conceptualization of the information now being gathered. At the site level more, even informal, interaction with non-cooperators combined with paying attention to diversity and differences rather than looking for the common patterns can be suggested.

LAND USE SYSTEMS. Program personnel have repeatedly found that overall land use patterns in the uplands are more complex and multifaceted than in the lowlands and that human land use

patterns directly affect the productivity and sustainability of the system; land resources and patterns of resource access and use are extremely varied both across and within sites; and that program strategies that do not adequately consider the larger system of which the farm and the farm family is a part may emphasize short term gains at the expense of longer term sustainability.

The program has identified the critical interaction between uplands and lowlands. Awareness of different types of land resources and of the different patterns of human use is increasing. The SR/U researchers may be able to easily synthesize their knowledge in this area in order to assist the back-up researchers in better designing their research and in order to more efficiently discuss technology development in terms of the different land use patterns at each site.

LAND ACCESS and tenancy/share cropping issues are clearly of major interest to many program workers. Information, however, has neither been systematically collected nor been utilized in considering technology development. Some of the SR/Us apparently do not know the many arrangements by which farmers get and use land, and the different land statuses at their sites.

The absolute quantity of land or other resources is less important than the various social-institutional factors that determine access to those resources--kinship, marriage ties, different types of ownership, tenancy and sharing arrangements,

other forms of affiliation, agrarian reform participation, traditional systems of resource sharing, traditional systems of credit and emergency assistance, traditional rights and laws, and land jurisdictions based on national policies and laws, as well as competing factions, land loss to government concessionnaires, displacement of tenants by plantation agriculture, and displacement by infrastructure development projects.

Farmer adoption is always highly dependent upon land access. Adoption of improved soil management techniques and of perennials usually depends in part upon perceptions of permanence and ownership (security of land tenure), among others. The program has tended to stay away from addressing land access and tenancy issues partially because agrarian reform and CLT/CLT issues are sensitive and need to be handled with care--as they are being currently handled.

However, further careful examination investigation of lands status and local structures for gaining access could only aid the program: possible BFD or BL jurisdiction of lands can have profound effects upon site farmers and the project.

Thus, a suggestion is to a) simply find out the status of lands in the area--whether owned; owned, tenanted, and subject to agrarian reform programs; under the jurisdiction of the BFD; or under the jurisdiction of the BL, and b) to informally continue to gather information on the various local systems or methods by which people get and share land resources.

Similarly, other means by which farmers gain access to both land and other farm resources can be recorded at the different sites. The projects are aware of some cooperative labor groups and systems of draft sharing. Kinship ties, informal networks and affiliations, and the divisiveness of local competing factions operating at the community level can be considered.

POTENTIAL BENEFITS FROM IMPROVED MANAGEMENT OF MINOR CROPS. The program seems quite ready to expand beyond the focus on the major commodity crops. One consultancy pointed out the value of vegetables for home consumption and nutrition, even if not feasible for commercial production. In parts of some sites there is small-scale commercial vegetable production. Tobacco is a minor but possibly significant crop at some sites. Various crops in the different sites appear to be important, possibly income generating, or desired and planted by farmers: coffee, fruit trees, cacao, castor bean. The advantage of perennials in environmental maintenance should not be ignored.

The suggestion is that SRMUs can be oriented towards thinking about, based upon their field observations, possible minor crops in which the program might efficiently and effectively be able to assist the target farmers.

ON-FARM NON-CROP PRODUCTION INCOME. The Gandara SRMU is looking at carabao milk and cheese production. But, for example, other SRMUs are not examining the importance of romlon planting and mat weaving (Bontoc), abaca stripping, coconut processing,

tuba and bahalina production, tobacco curing, and bird catching. Again, this is an area in which the SPEUs can simply be thinking about in the course of their continued interaction with farmers. Some low-cost, simple technology development in these areas may be possible and may contribute significantly to meeting program goals.

SOIL EROSION AND FERTILITY, PESTS AND DISEASES. The program has made much progress in identifying soil erosion and fertility problems, seeking and developing solutions, and extending technologies to farmers: e.g., ipil-ipil contour strip cropping. This is especially encouraging since at the beginning of the program, ecosystemic variables related to sustained resource management were given little consideration.

Also, the interaction of ecosystemic variables within the farming system is now being looked at in terms of rotation and long term fallows, decreasing fertility, fallow dynamics, and commodity production constraints. Plant succession, fallow utilization, soil types and erosion and severity of depletion with cropping and completeness of regeneration are project relevant. Cropping pattern research must consider the sustainability of the possible recomendations and the implications of that sustainability in terms of farmer willingness to make necessary trade-offs. The program might also investigate coordinating cropping patterns within fallow cycles, as do farmers.

In dealing with extending the Villaba success, the program may want to investigate the specific contributing factors and then make tentative conclusions as to the wider applicability of the technology: Most Villaba cooperators have relative, land tenure security; soils are not overly acidic, farmers were familiar with native ipil-ipil; and soil erosion is a problem. In terms of the overall program strategy, there may be a need to emphasize that cropping intensification must consider possible environmental degradation. Mulching, green manuring, composting, contour ditching, soil traps, and other soil erosion control and soil fertility measures might be worth examining at the different sites.

The benchmark survey indicated that farmers were very concerned with insect pests. This area has not been emphasized by the program. In our short visits, farmers mentioned cacao and insect problems, camote weevils, corn borers and planting timing, rice blast, weeds and gabi, weeds and peanut, and livestock pests and diseases.

Overall, benefits can be derived from a more complete understanding of the larger agroecological system at each site. Better understanding of dynamic and sometimes evolving whole-system interactions would allow for work to be more appropriate to farmer, family, community, downstream populations, and to future populations dependent upon the resources. The notions of systems change, oscilation, and evolution rather than static

systems would be useful in considering overall system degradation.

RISK, UNCERTAINTY, FARMER DECISION MAKING. This is an area to be considered in terms of the potential adoption and benefits of new technologies.

With the across-the-board stopping of working with fertilizer (in response to the Process Evaluation report's recommendation), the program seems to have accepted that all of the target farmer populations have very high levels of risk aversion regardless of different probablities of losses and potential gains. Different farmer risk management strategies given different circumstances may be worth investigating. The projects have not yet considered that farmers with different resources are able to bear different levels of risk. Not planting perennial crops due to possible calamities or due to possible ejection by landlords was a strategy cited by the SRUs. In which cases could perennials be planted? On the other hand, large trial size has ignored the farmer interest in maintaining a diversified system. Overall, upland farmers usually maintain a very diverse multiple enterprise allowing insurance against the effects of failure in particular areas. Project inputs in one area must consider the effects in the other areas.

The program seems to have made several assumptions about farmers decision making: Farmers are profit maximizers, have a preference for self-sufficiency in food crops, have a preference

for farming, and are highly risk-averse. This may or may not be an accurate depiction of some or all of the farmers, but is important to know in order to consider the differential adoptibility of technologies.

The projects' experiences with typhoon and drought has provided a better understanding of a few of the risks and probabilities the farmer considers in making decisions. The program may benefit from additional understanding of risk and uncertainty, corresponding farmer decision making, and of decision related intra-household processes and inter-household linkages. This is an area that might be best addressed by the ViSCA social scientists.

More recording of farmer technical knowledge related to resource use and management may also be beneficial in understanding facters influencing farmer decision making and of farmer innovation.

AGRICULTURAL ENGINEERING and implements improvement is a concern of the program. Four research projects have been proposed. These include work on seed production and storage, soil and water characterization in Bolongan soils, improvement of the traditional carabao reversible plow, and use of contour mounds for soil erosion control.

A range of other tools and implements such as simple improved weeders and planters, and pruning tools could be examined. Contour ditching, soil traps, and water impoundment,

for micro-irrigation projects or fishponds might also be considered by the agricultural engineer.

LABOR USE PATTERNS and the roles of different household members has been proposed as an area of research concern by the Technical Group. The SRMUs have some knowledge of labor constraints. Understanding of within and across household and within community labor patterns over time would be project useful. A clear concept of types of diagnostic analysis would be needed to aid in understanding and dealing with labor conflicts.

VIII. PROJECT ORGANIZATION AND MANAGEMENT

The farming systems development program necessairly requires adequate multi-agency linkages and an appropriate organizational structure for effective implementation. Linkages developed by FSDP-EV with academic institutions, government agencies and the farmers are impressive.

The linkages and the organizational set-up must be responsive to needs at the site level especially when institutional capability is being built-up to implement a farming systems approach. This responsiveness has not yet been well enough accomodated into the organizational structure of FSDP-EV. Necessary linkages with government agencies such as the BFD, Agrarian Reform, and Bureau of Lands has not yet been made in spite of a need to clarify land classification and tenure issues in most of the sites. Roles of different groups and institutions involved in FSDP-EV have to be continuously clarified as the project evolves. If the FSDP-EV approach is to be more holistic and problem-focused, flexibility and adequate research back-stopping will be needed.

The organizational set-up of FSDP-EV must also systematically respond to policy-generation emanating from a farmer-oriented and bottom-up approach. This is not adequately considered at present.

More importantly, incorporation of FSDP-EV into the regular

MAF structure is needed to strongly institutionalize the approach in the MAF.

PROJECT ADMINISTRATION: PROJECT DIRECTOR'S OFFICE (PDO). The PDO provides administrative and logistical support, and serves as a clearing house for all activities conducted at the SR/U field sites. The PDO has its own technical staff supporting its monitoring and evaluation activities. The technical staff at present, however, is inadequate because three of the PDO personnel are completing advanced degrees abroad.

During earlier project implementation the PDO was forced to control research at the SR/U field sties because the site staff complained of several instructions emanating from various technical groups involved in the project, a common problem for a multi-agency project.

Recommendation:

1) Guidelines for who can do what kind of reesearch at the sites should be established and agreed upon by all concerned groups to avoid site-level confusion.

PROJECT ADMINISTRATION: STEERING COMMITTEE (SC). The SC represents an institutional linkage between ViSCA and the MAF and serves as a working group of the Regional Project Management Committee (RPMC). The SC is the forum for evaluating research proposals from the SR/Us and the ViSCA technical group, and for identifying and resolving issues related to project implementation.

While the SC serves an important purpose, there are

indications that, in some cases, there are differences in perspectives between site researchers, technical group, and the SC. Equally important, there are indications that differences in perspectives among members of the SC occassionally prevent the SC from acting as quickly as it might otherwise.

It will be helpful to program regular site visits by members of the SC to keep them up-to-date with site problems and situations.

PROJECT ADMINISTRATION: REGIONAL PROJECT MANAGEMENT COMMITTEE (RPMC). This is the highest policy-making body of the FSDP-EV. The RPMC provides an effective link between the project and heads of institutions. It is an important committee of the project which should be maintained.

ROLE OF VISCA. The role of ViSCA is to provide technical support in planning, implementing, and evaluating project activities. ViSCA also provides the necessary administrative support for the Cornell Acting Field Representative and ViSCA based FSDP-EV staff and is responsible for back-up research.

Presently, there is an increasing demand by the SRMUs for technical help that the ViSCA staff is not able to adequately meet, largely because of academic commitments. Back-up research has tended to be oriented more to the disciplinary interests of the technical group and less to the immediate problems and needs at the sites. Recently, however, there has been a reorientation of the back-up research to relate to site problems.

The intended long-term role of ViSCA is training and support of FSDP-EV in the form of back-up research. In the next 1 1/2 years, members of the ViSCA technical group will need to work closely with the SRMUs to strengthen the capability of the site staff and gain the necessary experience which can be translated into academic and training programs.

Recommendations:

1) Develop stronger interdisciplinary and inter-program linkages in ViSCA between the FSDP-EV technical group, the Center for Social Research (CSR) and other related programs.

2) Commit release time up to ten man-days per month per member of the ViSCA technical group to visit SRMU sites.

3) Encourage more interdisciplinary back-up research with site-problem focus given high funding priority.

LINKAGES BETWEEN PIO AND ViSCA. Linkages exist between PIO and ViSCA through the SC, the RPMC, and the ViSCA technical group (which supports the SRMUs). It took time to develop these linkages and it is impressive that these exist. The appointment of a new Technical Coordinator for FSDP-EV seems to promise an improved linkage between PIO and ViSCA.

The SC linkage also serves to neutralize strong disciplinary interests of members of the technical group as reflected in the back-up research proposals. The SC may at times maintain a different view of research priorities relative to those of the SRMUs and the technical group. Such differences in views must be coordinated as much as possible.

Recommendations:

1) There is a need for clear guidelines as to the relative role of ViSCA and the RDC technical group in providing technical assistance to site teams.

2) A social scientist of the ViSCA-CSR should be included as a member of the technical group.

LOGISTICAL, PERSONAL, AND PROFESSIONAL SUPPORT OF SRMUs. Logistical support of the SRMU staffs in terms of vehicles, offices, motorcycles, and incentives appears to be adequate. However, maintenance and operating expenses, procurement of good seeds, soil sample analyses, and gasoline procurement procedures seem inadequate. A problem corrected this year was delay in salaries. A bigger problem, however, is the lack of security of positions--especially for the site economists, livestock specialists, and support staff. Threats of eliminating contractual positions can have a very negative impact on site staff morale; while at the same time the dispareity in salaries creates problems among SRMU members.

Logistical support at ViSCA and PEO (Tacloban) seem adequate in terms of offices, dormitories, vehicles and equipment. Maintenance of these facilities and equipment may be a problem in the future.

Professional support of the SRMUs is weak. Once a month visits of members of the technical group are inadequate. Reasons cited as constraints on additional visits were other commitments of the members of the technical group, lack of mobility, and the peace and order situation.

Support by Municipal Agricultural Officers (MAOs) of SRMUs

is limited. The MACs see the SRMUs as performing similar functions for more money. There is a need for stronger linkages and communication with the MACs.

Recommendations:

1) Site researchers, especially the economists, should be given regular appointments as early as possible. A further commitment should be made to give permanent positions to livestock specialists before the start of the follow-on phase of the project.

2) A radio communication link should be established between VISCA and FLC.

ROLES OF SRMU TEAM MEMBERS. The SRMU teams combine disciplines and functions. Internal integration as an extension team appears adequate. Integration is weak, however, in terms of research (as reflected by the quality of research proposals). Most site research data are collected by the site economist, livestock specialist, and research aides. There is also an uneven distribution of tasks. For example, the site economist is collecting most of the data on cropping trials, livestock, market prices, labor allocation patterns, and case studies. The SRMUs have branch offices where the site leader spends a significant amount of time on administration. The site researcher designation is confusing since the livestock specialist and site economist are also researchers

Recommendations:

1) The designation of site researcher should be changed to Crop Specialist. The site leader should allocate his time between extension (70%) and administration (30%).

2) The Crop Specialist should assume the monitoring of agronomic data from cropping studies. This would release the site economist to concentrate on socio-economic research.

3) Data collection activities need to be revised. Research aides can be trained to collect most of the monitoring data if appropriate pre-coded forms are used.

APPROVAL OF RESEARCH PROPOSALS. Until recently, approval of research proposals from the SRMUs took a long time. There were several reasons. Proposals had to pass through various committees, requiring long deliberation. The proposals are poorly designed and were not revised after revisions were requested. There has been significant divergence in views as to kinds of research needed at the site between SRMUs and Steering Committee Members.

Recommendations.

1) Research proposals that do not require additional funding and which reflect site needs can be approve by PDO without passing through the SC and RPMC. This change should not, however, jeopardize already approved reseaech and should emanate from both the site staff and technical staff of ViSCA.

TRAINING WORKSHOPS. Most degree and non-degree training attended by MAF, PSDP-EV, and ViSCA staff was conducted abroad. Required technical and administrative assistance was provided by Cornell University. This year a training workshop on socio-economic methodologies will be conducted at ViSCA. Other training workshops conducted at ViSCA came about as responses to needs expressed by the site staff, such as courses on partial budgeting and use of hand calculators. In early 1983, a training course was conducted locally on FSR methodology with ViSCA staff,

local speakers, and Cornell technical staff as resource persons. The course dealt with concepts, research area and target farmer selection, farmers' views, and technological, biological, and socio-economic research. This was followed by preparation of planned activities at each site.

The training workshop attended abroad by MAF, Project Staff, and ViSCA staff were useful as an additional incentive as well as in developing conceptual frameworks for FSR/E. It was, however, generally felt that the differences between the Philippines and the areas visited limited operational applicability of what was learned.

On the other hand, cross-visits to demonstrate technology is a commendable project activity. This is illustrated by the rapidity by which ipil-ipil strip cropping was adopted in Villaba. The project utilized Villaba cross-visits of farmers from the other 5 research sites. However, since the recommendation domain for this technology was not well defined, non-applicability was apparent after farmers who visited Villaba were encouraged to try the technology unaware that their respective areas are not within the technology's recommendation domain.

Recommendations.

1) The plan to send 15 additional staff for short term training abroad should be reconsidered.

2) Conduct regular training at ViSCA on different phases of FSR/E by using as much as possible materials and experiences gathered from the FSDP-EV. Full utilization of local expertise

from other similar projects in the country must be employed in these training programs.

3) Recommendation domains of technologies generated from the project should be defined and used as basis for selecting farmers for cross site visits.

CONSULTANCIES. Considerable man-months of long and short term technical assistance from Cornell University have been provided to PSDP-EV.

Technical assistance promoted linkages between MAF and ViSCA, facilitated training arrangements at Cornell, and, to a limited extent, helped provide direction to the project. Project and ViSCA technical staff can recall quite distinctly only the inputs of the short-term livestock consultant as having a significant effect on project direction. Other short-term consultants were ineffective because of their short period of stay or because they were not able to effectively communicate with their counterparts.

The long term consultant who presently doubles as field representative cannot provide the vital technical assistance in social science because of a substantial administrative load. During the remaining life of the project, social science technical assistance is needed.

Recommendations.

a) We concur with the recommendations of the SC to support and recruit only short term consultants who can work with the project for not less than one month; and that the local counterparts should draw the terms of reference for the Cornell technical consultant.

b) During life of the project, preference should be given

for a long term technical consultant. A TA in social science is an immediate need that should be considered. An alternative would be substantial local administrative assistance to the long term social science consultant.

c) PDO should organize a working committee to draw a list of needed technical consultants; or the existing list should be reviewed for modification based on the needs expressed by CRMU's and local technical staff.

d) Local consultants should be given preference for short-term technical assistance.

e) A local administrative staff can be recruited to assist the field representive so that more social science technical input can be provided to the project.

INTEGRATION OF FSDP-EV INTO RIARS

Officials of the MAF, Region VIII, agree that FSDP-EV and the RIARS should be integrated into one program. FSDP-EV and RIARS have similar goals and functions; and differences between the two programs lie in scope and approach. RIARS is examining cropping patterns in rainfed lowland and upland fields. The RIARS management now wants to use a farming systems approach and to expand its activities into upland areas.

Currently there are six FSDP-EV research site and four RIARS research sites. Total number of sites is ten: two in Western Samar, one in Eastern Samar, four in Leyte, two in Southern Leyte, and one in Biliran Sub-province. Some of these sites, especially in Leyte and Southern Leyte, may possibly represent similar sets of recommendation domains.

Recommendations.

1) Integrate FSDP-EV into the RIARS System by August 1985.

NEW ORGNIZATIONAL STRUCTURE OF RIARS. Upon integration, there would be one RIARS Manager and one Assistant Manager. The Project Director of FSEP-EV and the present RIARS Manager will occupy these positions (see proposed organizational chart).

Site reseach teams taking the place of the SRMUs and FTVTs will be called Field Reseach Management Teams.

Membership of the SRMU teams will remain the same during the life of the project but should be reconsidered (by 1987) to trim membership to four or five depending on site needs: Extension Specialist, Crop Specialist, Economist or Social Scientist, Livestock Specialist (if needed) and one Research Aide may be hired for each team.

Membership of the RIARS teams will remain the same during the life of the project. The RIARS core staff economist shall, after merger, assist the RIARS teams to conduct needed socioeconomic studies. Additional team members to be considered by 1987 include an economic researcher, a livestock specialist, and a home management technician.

The Regional Project Management Committee would be dissolved. The Regional Research Council of RIARS will remain and be expanded to include other members of the RPMC who are not members of the RRC.

The Steering Committee of FSEP-EV will remain and may expand to include other staff members of the MAF including the RIARS

manageer and others.

Recommendations.

1. A study should be conducted to examine the 10 research sites before October 1985 to determine which sites should be retained. In cases in which a substantial number of conditions relevant to farming systems development in two or more sites overlap, only one site should be retained.

2. A special committee consisting of staff from VISCA, RIARS, PSDF, and the Regional MAF office should be formed by June 1985 to prepare details of the merger.

IX. POST-OPERATIONAL ACTIVITIES

Visions and assumptions after life of project are that: a) FSEP-EV will be fully integrated into MMAS and stability of critical positions of SMIU staff will be secured. Complementarity of functions between MMAS and FSEP-EV staff at all levels will have been achieved by this time; b) there will have been some effective technology generated by the SMIU's, different recommendation domains will have been fully characterized, and a major follow-on activity will be the multiplication of these technologies with the involvement of the Agricultural Production Technicians (APT), Subject Matter Specialists (SMS), Extension Technicians and FAO's. The required support services for the technology will have been identified and should be tapped in the following: c) another major activity of the project will be the further strengthening of ViSCA's role as a training center for MMAS in the region as well as its capacity to provide strong back-up research. ViSCA should consider directing back-up research for upland areas outside of the ViSCA research station in Baybay which represents a distinct but unique agroclimatic condition from the rest of the province. The other alternative is for ViSCA to fully utilize its linkage with MMAS to cover research areas representing other agroclimatic zones of the province and region.

There is a need to evaluate the technical consultancy to

make it more effective for the follow-on. Experiences on consultant services during the life of the project can be used in the design and formulation of details for the follow-on. The prevailing perception of project staff and ViSCA is that technical assistance has not been very effective in establishing new diagnostic tools and research designs for the farming systems project on-site. This needs to be re-evaluated.

Mechanisms of cementing the integration of RIARS and FSDP-EV should be examined during the follow-on. Development training materials and emphasis on on-site training will be required in the follow-on phase of the project. RIARS needs more of a systems research approach in addition to extension.

There is also the need for a deliberate planning of site expansion where the learned FSR/E methodology can be tested.

Recommendations.

1) The follow-on phase should be designed by the PIC, ViSCA and MAF.

2) Support for the follow-on activities should be funded by USAID for a period of 3 years with corresponding counterpart funds from CRP. This is an assurance for the full realization of the benefits that will acrue from the full institutionalization of the farming systems approach in agricultural and rural development.

3) Consultancies from outside of the country should be re-evaluated in light of a possible need for a wider choice of consultants, preferably for long term technical assistance in two areas: (a) training and extension and (b) agricultural economics/economic anthropology with extensive FSR/E experience. This type of assistance should be detailed by the follow-on design team formed for this purpose.

4) Funding of technical assistance from abroad should come directly from USAID and not through the Ministry. The money used

for this purpose should be grant money and not loan money.

5) An emergency fund available directly from USAID should be alloted for use by the technical consultant with approval by the PEO to facilitate conduct of research and project activities.

6) ViSCA back-up research on upland sites representing agroclimatic zones different from that of the ViSCA research station and applicable to a range of recommendation domains should be supported.

7) ViSCA's training activities should be supported through the grant funds.

8) Advanced degree manpower training both locally and overseas for MAF and ViSCA should continue to be funded. A wider choice of schools/universities actively involved in FSR should be tapped. However, provisions should be made at MAF to accomodate and provide a sound placement of those who have been trained for advanced degrees in order to avoid losing them. It might even be more desirable to have them trained within the country.

APPENDIX A: PROJECT DATA

TITLE : Farming Systems Development Project

LOCATION : Eastern Visayas

PROPONENT : Government of the Phillippines (GOP)

IMPLEMENTING AGENCY : Ministry of Agriculture and Food
Region No. VIII
Tacloban City and
Visayas State College of Agriculture

GOAL : To improve the livelihood of the small farmers in selected rainfed areas in Region VIII.

PURPOSE :

(1) To establish a proven mechanism for adapting rainfed agricultural technologies to the resource conditions of Region VIII.

(2) To disseminate such technoligies found appropriate.

EXPECTED OUTPUTS :

(1) Six field research/demonstrations sites established and functioning.

(2) Increased capacity of MA Regional Staff to plan, coordinate, and undertake farming systems research and disseminate improved technologies.

(3) Improved adminstrative and research capacity of VISCA to support farming system development in Region VIII.

TARGET BENEFICIARIES :

Estimated direct beneficiaries are some 360 small farm households in Region VIII.

DURATION : Five (5) years

COSTS	:	AID Grant	$ 1.4M
		AID Loan	1.6M
		GOP Counterpart	2.813M
		Total Cost	$ 5.813M
YEAR STARTED	:	1982	

APPENDIX B: SEMU QUESTIONNAIRE

The evaluation team constructed a questionnaire to explore the project experiences and perceptions of the SEMU site staff members. Questions, question intent, responses and frequencies of responses, and some tenatative interpretations are presented. The data analysis/interpretation was carried out to give the site team a better initial idea about areas to expore with site staff during the field visits.

1a. Among the Benchmark Survey, the Socioeconomic Profile Survey, and the Sondeo, which has been the most useful to your work (INSTRUMENT USE)?

xxxxxxxxxxx	Benchmark Survey:
xxxxxxxxxx	Socioeconomic Profile:
xxxxxx	Sondeo:

1b. Give reasons why each has or has not been useful (REASONS)?

xxxx	supplies preliminary data about com/farmers
xx	ident farmer problems
xxxxxx	formulate cropping patterns
xxx	formulate research
xxx	ident target beneficiaries
xxxxx	benchmark did not meet intended task/not analyzed
xxx	socioec prof not avail/too late
x	survey not appropriate

TENATATIVE IDEAS. Staff members made choices, but reasons given indicate relatively little use of the instruments for obtaining needed preliminininary information and as diagnostic tools. Responses also indicate instrument problems, including lack of appropriateness and timeliness.

2. What questions do you still have about the farmers in your area that have not been answered (WHAT FARMER DATA GAPS ARE PERCEIVED)?

x	Farmers ask about low production.
x	still investigating
xx	what farmers will do after project
x	farmers want capital assistance
x	labor allocation
xxx	no answer
xxx	(farmers ask) why seeds...soils...
x	response to calamity
x	why farmers continue shifting cult
x	will project help farmers
x	use of pasture legumes
x	reason for non-adoption
x	why farmers cannot distinguish their problems
x	how will adopt
x	lack of capital/credit
x	indigenous knowledge

TENATIATIVE IDEAS. Most staff members are apparently satisfied with their knowledge. Only a few responses--why farmers practice shifting cultivation, labor allocation, response to calamity, why non-adoption, and why farmers cannot distinguish their problems--indicated that staff members thought they needed more information. There may be a need for training to develop a problem solving orientation. Staff members may not be aware of types of information that can and should be generated by socioeconomic profiles, baseline surveys, and Sondeos, and of the potential uses of such information.

3a. What are the different groups of farmers at your site (PERCEPTIONS OF DIVERSITY, METHODS OF STRATIFICATION)?

xxxx	small/medium/large
xxxxxxx	tenant/landowner(s)
x	homogeneous/small
x	agrarian reform beneficiaries/other
xxx	small/large
xx	lowland/upland
x	lease/tenant/shifting/owner
x	very poor
x	degrees of poorness

3b. Which of these groups are likely to benefit from the cropping patterns research at your site (IDEAS CONCERNING WHO ARE TARGET BENEFICIARIES)

xxxxx	small
xxxx	upland
x	poor
xxxxxx	all
x	tenants
x	abaca owners
x	owner cultivator
x	80%

TENTATIVE IDEAS. Staff members divided respective site farmers primarily by land tenure and size of holding, and said that beneficiaries would either be all farmers or small upland farmers. Groupings listed do not relate strongly to intended project interventions and do not reflect an understanding of local diversity of farmers and farmer circumstances. A result is that the idea of addressing technology development to particular technical and social/economic situations may be lacking.

4a. What are the major needs of farmers with whom you are working (PERCEPTIONS OF MAJOR NEEDS OF FARMERS)?

x	more field trips/training
xxx	improved seed/varieties
xx	feed
x	road
xxxx	improved technology
xxxxxx	soil fertility
xx	counter soil erosion
xx	better income
xx	increase production
xxx	draft animals
xxxxx	capital
xx	labor
x	inputs
x	clothing
x	shelter
x	education
x	livestock
x	marketing

4b. How were these needs identified (HOW IDENTIFIED)?

xxxxx	Survey
xxxxxxxxxxx	Cooperator response
xxxxx	Observation
xx	Trials

4c. Do non-cooperating farmers have other needs (PERCEPTION AS TO REPRESENTATIVENESS OF COOPERATORS, EXTENT OF INTERACTION WITH NON-COOPERATORS)?

xxxxxxxxxxxxxxxx	same
x	need advice
x	more

4d. How were these needs identified (HOW IDENTIFIED)?

xxxx	survey
xxxxxxx	observation
xxxxxxxxxx	farmer response
xx	no answer

TENTATIVE IDEAS. A wide range of farmer needs were identified. The list reflected awareness of resource constraints, need to increase production, need for improved technology, agroecosystem constraints, and others. Needs identification was mostly accomplished through interaction with farmers and observation. Again, there is no sense that farmers and farmer circumstances are diverse and that the cooperators are distinct--at least in terms of respective needs--from the non-cooperators.

5a. What are the special needs of poor farmers (IDEAS ABOUT TAILORING PROJECT TO POOR FARMERS)?

xxx	training/field trips
x	recognition
xxxx	food
xxxxxxxxxxx	money/capital/credit
xxx	technology
x	improve soil
x	improve productivity
x	draft animals
x	labor
x	inputs
x	carabao
x	improved living standards
x	calamity assistance
x	own land

5b. Are there any practices that might be good for poor farmers but not for rich farmers (WORKING IDEAS ABOUT FARMER STRATIFICATION AND TARGETING OF RESEARCH, DEVELOPMENT, EXTENSION)?

x	shifting cultivation
x	zero tillage
xxxxxx	none/same
x	contour farming
x	less input farming
x	no answer
xx	intensive cropping
x	use of organic matter
x	manage scarce resources
x	ipil-ipil contouring

5c. What are the more successful but poor farmers doing different than the less successful poor farmers (PERCEPTIONS ABOUT DIVERSITY OF FARMER PRACTICES WITHIN TARGET POOR, IDENTIFICATION OF BETTER OR INNOVATIVE PRACTICES)?

x	higher productivity
xxx	better farming
x	diverse farming
x	own land
x	own work animal
xx	send children to school
xx	don't have ipil-ipil contouring
x	no answer
x	nothing
x	preservation of resources
x	use organic fertilizer
x	crop rotation
x	good varieties
xx	?
xx	industrious
xx	less successful hires as labor
x	in debt/sells crop prior to harvest
x	large family (less succ)
x	more vices
xx	outside farm activities (less succ)
xx	lack of improved tech
xx	more acceptance of improved tech
x	attitude
x	intelligence

TENTATIVE IDEAS. Staff members say only that poor farmers are poor. Lacking is conceptualization that technical and development strategies addressed to the poorer might necessarily

be different from those addresed to the better off. Respondents realize that strategies such as the use of commercial fertilizers too expensive for everyone in their area cannot be recommended, but have not taken the idea a step further to include strategies suitable for some and not others within their sites.

Different stratifications are needed for particular research issues; and a clear idea of the relevant research context--farmers field, household, or community is needed. Training may be needed in systems conceptualization.

Responses concerning strategies of the more successful reflected (to a small degree) the old idea that the poorer are poor because of difference in intelligence, attitudes, "vices", and industriousness.

6a. If you were a farmer at your site would you use the project recommended cropping patterns or would you continue with your existing practices (ASSESSMENT OF APPROPRIATENESS AND BENEFITS OF PROJECT RECOMMENDED STRATEGIES)?

xxxxxxxxxxxx	yes
x	depends
xxx	no

6b. Why (CROSS-CHECK)?

x	introduced=increased profit/production
xxxxxxxx	yes, but only selected parts
xxxx	introduced=better
x	depends if=higher income
xxx	no, not proven to be superior

6c. What would be the farmer investment required if they were to adopt practices now being tried at your site (AWARENESS OF REQUIRED FARMER INVESTMENT)?

x	doubles
x	inputs hard to obtain
x	area/land
x	attention/understanding
x	cooperation
x	minimal
xxx	time/labor
x	capital
x	fertilizer
xxx	not answered
xxxx	seeds
x	invests if benefits high
x	more training/seek information

6d. How much more labor and capital would the farmer have to provide (SAME AS 6c.)?

x	capital=same
xx	labor=same
xxxxxxxx	more time/labor
xxxxxxx	more capital
x	less labor, capital
xxx	no answer
xx	don't know

TENTATIVE IDEAS. The concept of selecting only parts of recommended sets of technologies is good. More "if-then" thinking might be valuable. While the question may have been leading, awareness of the increased labor and capital demands of the introduced technologies seems strong. Analysis of marginal returns to both resources should be carried out (rather than partial budgeting).

7a. Have farmer objections to proposed introductions been recorded (PROCESS OF INTERACTING WITH FARMERS)?

xxxxxxxxxxxxx	yes
x	no
x	no answer

7b. If so, what use has been made of the infromation (SAME AS 7a.)?

xxxx	modify, improve research
x	given to higher-ups, discussed
xx	no answer
xxxxxxxx	improve/revise cropping pattern
x	recorded objection

TENTATIVE IDEAS. The project policy is apparently to pay attention to farmer feedback. We do not know if modifications in project strategies resulted or if mechanisms exist for responding to farmer inputs. Ad hoc modifications may preclude formal analysis. Feedback mechanisms for experimental design are presently unknown.

8a. What are the most striking examples of farmer innovation at your site (RECOGNITION OF FARMER INNOVATION)?

xxxx	planting ipil-ipil strip
xx	contour farming
xxxxxx	planting/adopting improved variety
x	intercropping...
xx	control pests using local resources
x	abaca rehabilitation
x	crop spacing
x	formulate own chicken feed
x	use of legumes in fallow
x	planting shelled peanut rather than w/shell
x	don't know
x	involvement of farmers at meetings
x	modification of ipil-ipil pruning

8b. What was learned from these cases (WHAT WAS LEARNED)?

xxx	ipil-ipil technology
xx	stabilize soil fert w/legumes
xxx	no answer
x	farmers select relevant technology
x	unshelled peanut not eaten by ants, chicken
x	changing the cropping pattern
x	hard to process information
x	abaca can be grown in marginal lands
x	peanut crop did not sustain soil fert
x	sweet potato produced good yield
x	more yield
x	control erosion

8c. Who are the more innovative farmers at your site (DEGREE TO WHICH INNOVATIVE FARMERS ARE BEING IDENTIFIED)?

xxxxx	farmers w/capital/rich farmers
xxxxxxx	farmers w/land
xxx	farmers w/education
xxx	farmer cooperators
x	MAF officers
x	members of brgy council
x	officers of relig. orgs
x	farmers who have attended trainings
xx	adopters
xx	no answers
x	not poorest

TENTATIVE IDEAS. The staff seem to equate innovation and adoption/ability to adopt. Few, if any farmer innovations were

listed. Innovators were said to be those with more resources, better education, and those who adopted new technologies or are cooperators. Again, a lack of knowledge of in-place systems and farmer experimentation is apparent.

9a. Have the OLT and LIC Agrarian Reform programs been instituted at your site in the last few years (AWARENESS OF LAND STATUS AND AGRARIAN REFORM PROGRAMS)?

xx	yes
xxxxxxxxxxxx	no
x	don't know

9b. What has been the effect on the project (PERCEPTION OF IMPORTANCE OF ISSUE)?

xxxxxxxxxxx	none/no answer/na
xx	farmer afraid to adopt, fear of losing land
x (yes)	eager to adopt to pay back loan
x (yes)	cooperators have benefitted

10. Have there been any tenant-landlord problems at your site because of the project (AWARENESS OF TENANT-LANDLORD PROBLEMS)?

xxxxxxxxx	no
xxx yes	(owner took land back, no formal agreement)
xx yes	(affects decision making/adoption)
x yes	(minor prob)
x yes	(Mestock number limited by land owner)

TENTATIVE IDEAS. (for 9 and 10) The responses suggest that tenure is not a problem. Documents and other informants suggest that tenure is a real and sensitive problem. The importance of the issue is indicated by responses to "landlord-tenant problems". Tenure patterns are clearly varied and complex between and within sites.

11. What do farmers at your site do when hit by a major calamity (AWARENESS OF COPING/ADAPTIVE MECHANISMS)?

x	help each other
xxxxx	migrate to other areas/seek employment
xxxxxxxx	seek off-farm labor
xxxx	use wild food crop (Kurot)
xx	harvest ipil-ipil for cash
xx	sell chickens and pigs
xxxxx	plant short term crops/subsistence crops
x	cottage industries

x	get govt assistence

TENTATIVE IDEAS. Off-farm and non-farm activities are important in facing calamities. The need for a larger perspective or context of analysis in certain cases is indicated. The traditional landlord as insurance policy is apparently no longer present.

12. From whom do you take instructions regarding your research and experiments? Be specific regarding people and different activities (ARE THERE CONFLICTING SOURCES OF INSTRUCTIONS?).

xx	farmer cooperators
xxxxx	site staff
xxxxxxxxxxxxxx	PLO
xxxxxxxxx	ViSCA tech staff
x	steering com.
xxxxx	consultants
x	no answer

TENTATIVE IDEAS. As desired, the role of the PLO relative to ViSCA has apparently grown since the 1983 evaluation. A possibly continuing problem is that site staff are still taking overlapping sets of instructions from the different entities in charge.

13. Describe your time allocation in a typical day (TIME ALLOCATION).

x	all day discussing w/farmers
x	half-day w/farmers, half w/non-cooperators
x	all time as site leader
xxx	visiting farms, writing observations
x	Mon., Fri morning in office, rest at farms
x	field office, farms w/ farmers, write-up, discussion
x	follow farmers' schedule
xx	supervise, visit, write-up
x	admin., supervisory, other functions
x	most time survey, survey analysis
x	survey farmers
x	half-half office, field
x	office, assist team

TENTATIVE IDEAS. Not enough detail.

14. What are your suggestions to make the project more valuable to the farmers at your site (IDEAS ABOUT WHAT IS NEEDED FOR FARMERS)?

x	expand the research areas
x	continuous site visitation
x	more funds for farmers
x	tested technology should be responsive to farmers
xxxx	more training
xx	credit
xxxxxx	need SMRU to continue after proj
xxxx	extension
x	assistance
x	site staff need to know more about FSR
x	get more farmer responses
x	no answer
x	supply inputs
x	benefit all farmers
x	work hard w/ farmers

TENTATIVE IDEAS. Responses indicate belief that project is helping farmers. The need for more staff training and for stronger extension (of what ?) appears reasonable.

15. What are your suggestions to make the project more valuable to the MAF (PERCEPTIONS AS TO PROJECT AND MAF GOALS)?

xxxxxxx	closer project linkages w/ MAF
xx	train MAF personnel in FSR/technology
xx	project personnel should not be changed
xx	generate technology for extension
xxx	no answer/don't know

TENTATIVE IDEAS. The program is supposed to strengthen the capacity of MAF. While closer/stronger linkages were recomended, we need to know what specific types of linkages are possible and effective. What are the current linkages?

16. How could the project be made better for you (WHAT RESPONDENT NEEDS)?

x	extend project duration
x	no limit on farmer cooperators
x	project guidelines should be reviewed before implementation
x	salaries should be the same
xx	more training
x	if technology transfer is successful
xx	permanent position w/ same work
x	tours to other projects
xxx	no answer
x	more direction by higher ups
x	training abroad
x	closer linkages between site staff, PIC, consultant

TENTATIVE IDEAS. The staff would like job security, equal salaries, and further training. These are expected and reasonable.

APPENDIX C: OBJECTIVES CHECKLIST FOR SITE VISTS

To assess:

1. Whether significant areas of farmer problems stemming from whole farm system linkages (or opportunities for farm system improvement) have not yet been identified by SR/U teams, or not feed-up by SR/U teams to Back-up researchers.

2. Farmer innovation and testing procedures and determine implications for project on-farm experimentation methodology.

3. The assumption that target populations are homogenous with respect to technology development research, within site zones.

4. Whether cooperators are representative of wider populations of farmers, in terms of the practices they use and problems they face.

5. Whether cooperators feel they have directly benefited from trials conducted on their fields, and if so, how.

6. Relationships between SR/U staff and other representatives of the MAF in the project areas.

7. The adequacy of ViSCA, PEO, and MAF logistical, personal and professional support to SR/U teams.

8. The importance of research on soil erosion, soil fertility, and pest and disease problems relative to the currently emphasized cropping patterns research.

9. Adaptations in the cropping pattern experiment at each site relative to the planned experimental design and why adaptations were made.

10. Labor use patterns and the role of different household members in order to determine whether a significant investment of research resources into labor allocation research is justified.

11. Alternative criteria for stratifying target populations for cropping systems, livestock systems and whole farm systems research.

12. Relationships between resource management and risk management.

13. The nature of farmer participation in project research activities and ways that better advantage might be taken of farmer insights.

14. The extent to which practices being introduced in cropping patterns trials differ from current farmer practices.

15. Farmer perceptions of what farming systems research is, comparing views of both cooperator and non-cooperator farmers.

16. Activities and roles of SR/U team members and the extent to which team members are complementing each others efforts.

APPENDIX I: ISSUES CHECKLIST FOR PROJECT AGENCIES VISITS

RESEARCH AND DEVELOPMENT STRATEGY

1. To what extent does the research and development process begin with research station or "shelf" technology as opposed to indigenous knowledge and technology?

2. What interest is there in farmers and farmer circumstances?

3. To what extent do practices being introduced in cropping patterns trials differ from current farmer practices?

4. What are farmers perceptions of what is farming systems research?

5. Is back-up research appropriate with respect to farmers' circumstances and needs of the site teams?

6. What is the nature of back-up research proposals in terms of justifications and objectives?

7. To what extent is the research and development agenda part of an overall conceptual approach to development?

8. Can the conceptual framework of the program accommodate updated empirical information?

9. What should be the balance between research and extension in the program?

10. Do cooperators feel they have benefited from participation in the program? If so, how?

11. Is the farming systems approach, as presently being implemented, adequate for dealing with critical agroecological system dynamics?

PROGRAM IMPLEMENTATION

1. Are mechanisms in place and being utilized for making "up stream" research responsive to the needs of limited resource farmers.

2. How is information on target beneficiaries and local situations being factored into decisions on research priorities at the site level?

3. What procedures have been followed for designing cropping patterns research?

4. What adaptations have been made in the cropping pattern experiments at each site, and why were adaptations made?

5. Does information on current farmer practices influence design of back-up research?

6. Have mechanisms been developed for identifying the needs of the less influential, less endowed smallholder farmers?

7. What procedures are being used to screen out lines of research or actions which are unlikely to be useful to limited resource farmers?

8. What is the nature of farmer participation in program research activities and how can better advantage be taken of farmer insights?

9. Are cooperators representative of wider populations of farmers?

10. Are criteria for stratifying target populations adequate?

11. Are the methodologies for back-up research adequate?

RESEARCH AREAS

1. To what extent has the program identified significant farmer problems or opportunities for improvements stemming from farm system linkages?

2. To what extent has the program identified variability in existing farmer resources, practices, knowledge, and innovative behavior?

3. To what extent has the program identified critical issues in land use systems?

4. To what extent has the program identified land access and tenancy/share cropping issues?

5. To what extent has the program identified problems related to soil erosion and soil fertility?

6. To what extent has the program identified problems related to pests and disease?

7. To what extent has the program identified relationships between risk and uncertainity and the potential benefits of new technologies.

8. To what extent has the program identified farmer decision making and management strategies for dealing with variability?

9. To what extent has the program identified labor use patterns and the roles of different household members?

10. To what extent has the program identified on-farm non-crop income generating activities?

11. To what extent has the program identified possible improvements in agricultural engineering and implements?

12. To what extent has the program identified patterns of kinship and local social organization as affects resource access?

13. To what extent has the program identified potential farmer benefits from improved management of minor crops?

PROGRAM ORGANIZATION

1. Are existing links and administrative arrangements between the Ministry of Agriculture and Food (MAF) and the Visayas State College of Agriculture (ViSCA) adequate?

2. Is existing logistical, personal, and professional support of SRMU teams adequate?

3. What are the roles of SRMU team members and to what extent are team members complementing each others efforts?

4. Do SRMU team members with degree-level training have greater potential for problem solving research than those with lesser training?

5. What are the relationships between SRMU staff and other representatives of the MAF in the program areas?

6. What relationship is envisioned between SRMU field teams, extension agents, subject matter specialists, and MAF research station researchers after the project is incorporated into the MAF?

7. What is the role of VISCA in back-stopping the FSDP?

8. What relationship is envisioned between VISCA and the FSDP after the project is incorporated into the IAF?

9. How does the technical group effect an interdisciplinary approach?

10. Are incentives for technical group members adequate for doing back-up research and for assisting site teams?

11. Why does approval of research proposals take so long?

12. Why has there been a delay in data analysis and report preparation?

13. Are the changing roles of VISCA, the REC, and the SRMUs acceptable?

14. Is there a need to link with other agencies or VISCA programs?

15. What procedures are followed in (a) deciding on the subjects of training workshops, (b) developing workshops, and (c) assessing the value of workshops?

16. Which consultancies have been most beneficial in assisting field research activities?

APPENDIX E: PROCESS DOCUMENTATION

SUNDAY, APRIL 28. Five members of the Evaluation Team left Manila for Tacloban City in the late afternoon flight to carry out the mid-project evaluation of "Farming Systems Development Project-Eastern Visayas". The team is composed of: Percy Sajise, Sam Fujisaka, Enrique Pacardo, David Hitchcock, and Doyle Baker. The administrative assistant, Charito Medina had arrived two days earlier. Inocencio Bolo, another team member, joined two days later. Director Felix Quero met the team at the airport and accompanied us to Village Inn Hotel.

MONDAY, APRIL 29. A briefing was held at the Project Office off the Maharlika Highway. The meeting was called by Director Quero and Percy to provide an opportunity for the evaluation team to meet Project Development Office (PDO) officers and Site Research Management Unit (SRMU) staff and discuss the itinerary and purpose of evaluation.

In order to facilitate the evaluation process, it was suggested that the specific issues drawn up by USAID and stated in the Terms of Reference (TOR) be presented to the body for comments. In this connection, the list of nine issues were reproduced and distributed to SRMU staff and PDO staff. Percy informed the group that the evaluation process will focus on these issues and other related questions. Long discussions followed.

The key issues proved tough for SRMU staff to comprehend. Breaking up these issues to a more comprehensible questions, therefore, was in order. When this was done, more staff members participated in the discussion.

According to one Site Leader, site teams are organized at the site into Site Researcher, Economist, Livestock Specialist, Home Management Technician, and Clerk. The four specialists and the Site Leader interact with the farmer-cooperators.

In the afternoon a tentative itinerary was drawn up and presented, after which the whole group was split into three sub-groups of Site Leaders, Researchers, and Economists. Percy talked with the Site Leaders, Ike and David with the Researchers, and Sam and Doyle with the economists. The meeting ended at about 5:00 p.m. with SRMUs more or less being familiar with the intention of the evaluation. Since the itinerary was not yet finalized, the SRMU staff stayed overnight at the PDO.

TUESDAY, APRIL 30. The meeting with the PDO and SRMU staff

continued in the morning. The itinerary was presented again and discussed. The schedule as finally approved was as follows:

Date	Site/Purpose	Overnight stay
April 30	PDC	Tacloban
May 1	PDC	Tacloban
May 2	Jaro	Tacloban
May 3	Candara	Tacloban
May 4	Basey	Tacloban
May 5	Team analysis of visit	Tacloban
May 6	Villaba	ViSCA
May 7	Matalom	ViSCA
May 8	Mtg. with ViSCA staff	ViSCA
May 9	Team analysis	ViSCA
May 10	Bontoc	ViSCA
May 11	Mtg. with ViSCA/Cornell Staff	ViSCA
May 12	Team analysis/site revisitation	Tacloban
May 13	Team analysis/site revisitation	Tacloban
May 14	Team analysis/writing	Tacloban
May 15	Presentation of findings	Tacloban
May 16-17	Writing of final report	Tacloban

A questionnaire was given to SRMU staff to answer and the results were analyzed. The meeting ended at 11:00 a.m. and the SRMU staff left for their respective sites. The rest of the day was spent by the team going over written reports at the PDC and occasional discussion with PDC staff around. In the evening the team was invited to a dinner at Dr. Clive Lightfoot's residence. All team members were present including Bolo who checked in the hotel early in the evening. Other guests at dinner were the Regional Director, Mr. Ayaso, Felix Cuero, and Deputy Regional Director for Livestock, Dr. Crais.

WEDNESDAY, MAY 1 (Holiday). The day was spent at the PDC preparing key questions for the farmers. Results of SRMU survey were tabulated and finished by noon, thanks to the availability of the PDC microcomputer for the team's use.

In the afternoon a team meeting was held to discuss the key issues for site farmers. After the specific issues were agreed upon by team members, an issue checklist was prepared. A translator from ViSCA arrived in the afternoon. She is fluent in Tagalog, English, Waray, and Cebuano and would work with the team during site visits.

In the evening, the team had a dialogue with Engineer Cuero,

Dr. de Cuia, and Clive Lightfoot at the PDO. Felix gave a brief historical development of the project and its organizational structure. There was a long discussion on cropping pattern approach being pursued by the project. Some concern was expressed whether this approach is the best way to operationalize farming systems research. Felix explained that the project staff had been trained to do cropping pattern trials at UPLB and, besides, a cropping pattern approach had been recommended from the top. It was pointed out by one team member that cropping pattern research is useful to find whether this method of agriculture intensification could augment the income of the resource poor farmer. The meeting was finished at 10:00 p.m.

THURSDAY, MAY 2: VISIT TO JARO (LEYTE). The team left Tacloban at 7:30 a.m. and arrived at Jaro 8:15 a.m. The SRU staff were present and the team split into two groups, each with a translator. Farmer cooperators were interviewed at their farms. There are two barangays where experiments were located: Hibucawan and Daro.

At noon the team members and site staff converged at the SRU office for lunch followed by a report by the Site Leader. The Jaro staff are as follows:

Eleodoro Lepasanda	-	Researcher (crops)
Gina Aves	-	Economist
Rolando Pipe	-	Livestock
Thelma Triste	-	ICT
Yolanda Costelo	-	Research Assistant
Nemesio Gonzales	-	Research Assistant
Evelyn Lego	-	Clerk
Epimaco Sotto	-	Site Leader

The Site Leader said there are 12 farmer-cooperators in his unit. The dominant crop is coconut with rice or corn planted underneath. The existing farmer cropping pattern is corn-upland rice under the coconut for three years followed by root-crops substituting corn in the fourth and fifth year and then fallow for 3-4 years. According to the technician, farmers complain about the difficulty of cultivating the land after the fallow period due to the thick cogon, talahib, and some trees the farmer has to remove.

Discussion followed the Site Leader's report, and additional points were made by researcher Eleodoro. Points taken up included access of cooperators to the road, no seed formation in peanut crop, low pH, pest of cacao, fallows, fertilizer trials, the research methods, and others. Discussion finished at 4:00 p.m. Team members then left to interview non-cooperator farmers, including the barangay captain. The team left Jaro at 5:30 p.m.

for Tacloban.

During dinner the team reviewed the visit to Jaro. It was agreed that the team should compile into the computer the impressions and significant observations made by each team member. This should be the procedure to be followed in evenings after each site visit. Sam and Doyle agreed to enter information into the computer for the team.

FRIDAY, MAY 3: VISIT TO CANTARA. The team left Tacloban at 5:00 a.m. in two vehicles, had breakfast along the way, and arrived at the SMMU site at 9:00 a.m. The site is one-and-a-half kilometers from the town and covers three barangays: Sto. Nino, Matimonan, and Sidmon. The first activity in the briefing was the introduction by the Site Leader of his staff:

Antonio Gunaday	-	Site Researcher
Francisco Ocado	-	Economist
Rizalito Ramirez	-	Livestock Research Asst.
Edgar Estil	-	Economic Researcher
Aniceto Alinan	-	Site Leader
Cil Velarde	-	Research Aide
Eufrecina Rama	-	Research Aide
Manuel Voz	-	Site Clerk

According to the Site Leader, the existing pattern practiced by the farmer are: rice-fallow and corn-fallow. The farmer plants only one crop a year. The introduced cropping pattern are: 1. corn and peanut - upland rice; 2. Mung - corn and peanut - upland rice; 3. peanut - upland rice; 4. ipil-ipil strips and Mung and peanut - UR.

Pattern one did not fare well. The corn used was improved tiniguib. The upland rice crop did not fare well due to very poor germination. The variety used was kalinayan. All the cropping patterns tried had failed.

After the briefing the team split into three groups, each group being accompanied by one or two SMMU staff to act as guides and translators. One group composed of Percy and Sam went to Matimonan and the other two groups proceeded to Sto. Nino where most of the farmer cooperators (or farmer researchers as they are called) are living. Sto. Nino is a cluster of houses quite far from the upland area where the farm trials are found. The splitting of the evaluation team into three was done in order to cover more ground. The team interviewed cooperators and non-cooperators and visited the on-going farm trials. In many cases the cooprators are cultivating upland and lowland areas.

The team re-grouped at 1:30 p.m. for lunch at Candara

ociation with the SRMU staff. During lunch, informal discussion and sharing of impressions took place, facilitating the flow of ideas among team members and the SRMU staff. At 2:30 p.m. field visits continued. Percy, Sam, and Chito were able to visit Sidmon while Doyle, Bong, and David continued work started earlier in the day. Enrique (Ike) stayed at the SRMU site to get a briefing from some SRMU staff and take a look at the Site Reports.

We left for Tacloban at 5:00 p.m. Mid-way, heavy rains forced the drivers to reduce speed, delaying arrival at Tacloban. After a quick dinner at the hotel, the team met at Percy's room until 1:30 a.m. This was the second after site visit meeting. The team summarized and discussed significant events, observations, and impressions.

SATURDAY, MAY 4: SITE VISIT TO BASEY (SAMAR). With Percy having left for Manila, Sam acted as Team Leader. The team left Tacloban at 8:15 a.m. and arrived at Basey 8:45 a.m. Basey's topography consists of flat lands and rolling hills. Coconut predominating in the lowlands was all but devastated by the recent typhoon "Uncang" and was not yet fully recovered. Like Gandara, most of the 20 farmer-cooperators cultivate both upland and lowland areas.

The SRMU staff at Basey is composed of:

Mariano Acaba	-	Site Leader
Leonaldo Apura	-	Researcher
Rebecca Apura	-	MT
Renato Bistrajo	-	Livestock Specialist
Jaime Cabiling	-	Economist
Nancy Ruth Penfirada	-	Clerk

The team conferred with individual SRMU staff members on specific issues for half an hour. After about 30 minutes, a group of about 10 farmer-cooperators arrived at the SRMU office. Many came from a barangay located uphill and had waited for the team since 8:00 a.m. Since there were enough translators (SRMU staff) around, each team member left with a translator and one or more farmers for sparring interviews. Farmers seemed eager to be interviewed, especially their barangay captain whose rapid-fire Waray left the translator behind.

After brief introductions, team members proceeded to the upland farms of the cooperators, passing through the farmers' community. The areas farmed are mainly hillsides of different slopes and aspects. The major cropping pattern being tried is the ipil-ipil based system with peanut, mungbean, camote or rice and gabi planted between double contour strips of ipil-ipil. This cropping pattern appears promising and will be compared with the

existing practice of rice-rice or rice-corn.

After farm visits, the team had lunch at about 1:30 p.m. in Basey and converged again at about 3:00 p.m. at the SLSU office where a dialogue with the staff took place. For the first time in three site visits, the issue of extension became one of the major issue discussed. The SLSU at Basey may soon come out with an upland technology for extension; however, the technology has not been tested over different conditions and the mechanism for disseminating it has not yet been developed. Other issues taken up were risk and uncertainties in technology adoption, experimental research design, participatory approach, farming system concepts, organizational integration, institutional linkages, especially with VISCA.

A major research result was the outstanding performance of peanut, variety BPI-P6, under zero tillage.

The meeting ended at 5:00 p.m. and the team returned to Tacloban at 6:00 p.m. After an hour rest, a team meeting was held in Sam's room until 8:30 p.m.

SUNDAY, MAY 5: TEAM ANALYSIS. The team met after breakfast at the hotel restaurant. It was agreed that each team member must have a copy of the issues checklist for site visits. The checklist then contained (later expanded) 16 points. The list was not to limit members to pursue other areas of concern at the sites.

On the basis of the team's previous three site visits, each member organized his general observations and impressions according to the points on the issues checklist. It was agreed that the team meet again at 7:00 p.m. in Sam's room to discuss and synthesize results.

After breakfast, some members went to BTC while others worked at the hotel. At four o'clock, we had a break. After dinner, the team met in Sam's room to discuss our observations related to the 16 points, but only the first 4 points were covered due to lengthy discussions. The meeting ended at 9:30 p.m.

MONDAY, MAY 6 (HOLIDAY): VISIT TO VISCA. Leaving Tacloban at 6:00 a.m., the team reached Villaba at 9:15 a.m. The SLSU Site is located in barangay Cagnocot sitio Barangbang 1 and 2. The predominant crops are corn, coconut, and peanut. Sitios Barangbang 1 and 2 are hilly and the predominant vegetation is cogon. Cropping is being done on hillsides with a slope of 80%.

The SLSU staff gave a briefing on their site activities.

Site Leader, Panfilo Cobre, introduced his staff:

Panfilo Cobre	-	Site Leader
Abraham Pasaylo-on	-	Researcher
Danilo Amabao	-	Economist
Cines Pielago	-	Eco. Research II (Livestock)
Isabelo Adlawan	-	Research Aide
Roberto Aranez	-	Research Aide
Ernesto Luja	-	Research Aide
Rodolfo Aya-ay	-	Site Clerk

There are 12 cooperators in Villaba, all living in one community. Existing farmer cropping practices consist of corn-corn, corn-rice, corn-peanut, corn-sweet potato. Corn is the staple food. The intervention being tried involves change in variety of corn, intercropping corn and peanut and the planting of upland rice. More significantly, these cropping patterns are done in between double strips of ipil-ipil planted along the contour across the slope.

The ipil-ipil based cropping system has been accepted by cooperators and non-cooperators who are now asking ipil-ipil seeds. According to Panfilo, the only constraint to trial expansion is lack of seeds. During the briefing a heavy rain came which lasted for more than one hour catching everybody off-guard. This delayed the planned schedule of visits to farmers' farm because the way became sticky and slippery. Luckily, the farmer-cooperaters were in the office and so interviews with them took place there.

Lunch was served at the site, after which team members and staff spread out to different farmers' farms. The ipil-ipil strip technology on the hillsides, although not yet perfect relative to erosion control, appears ready for piloting in a wider area to address factors or variables not present locally. Seeds or planting material is a major constraint. Sam and Doyle interviewed farmers about fertilizer use, toured around the rim of the small valley in which the project is working, looked at evidence of erosion control by the ipil-ipil strips, looked at erosion in other plots, and discussed other possible crops for testing with the SMIU staff members. The visit to Villaba ended at 5:00 p.m.

Except for Sam and Doyle, the team visited Leyte National Agricultural College. LNAC had prepared their guest house in anticipation of the team's overnight stay as orginally planned. The team had to apologize for not being able to stay overnight due to tight schedule the next day. Officials met included the college principal (their superintendent was in Baguio) and two of

his staff. LVAC has an area of 90 hectares and a student population of about 700 including high school and college. It offers a 4-year B.S.A. program with major in agronomy and animal husbandry. The campus is on flat land surrounded by mountainous hills. Its nearby hillsides are covered with ipil-ipil in contrast to the bare cultivated areas on the upper portion and further away terrain.

The college could serve as a catalyst for development of the hilly areas, but there is no evidence of this at present. Its relationship with the FSDP-EV is non-existent and both institutions could not effect a formal linkage.

Sam and Doyle interviewed the previous owner of the project lands.

On the way to ViSCA, the team had dinner in Ormoc City and arrived at ViSCA at 9:10 p.m. The team was billeted in FSDP guest house. Everybody was tired and so it was agreed not to meet. At 11:00 p.m. power was cut, to be resumed at 7:00 a.m. the next day. This is the regular schedule of power supply at ViSCA, prompting some team members to comment that this will be a constraint of the team's work.

TUESDAY, MAY 7: VISIT TO MATALOM.

Since Matalom is only two-hour drive from ViSCA, the team left at 6:00 a.m., had breakfast at Dato, and arrived at Matalom at 8:45 a.m. The site staff were around to meet the team and a briefing was immediately started. Joventino Germano, the Site Leader, introduced his staff:

Joventino Germano	-	Site Leader
Rogelio Agaton	-	Researcher
Ruthlyn Peque	-	Economist
Artemio Almorato	-	Livestock
Lolita Pajulio	-	Clerk
Juanita Salar	-	Research Aide
Floscado Palen	-	Research Aide
Margarita Refuela	-	Laborer
Cecilia Salvatierra	-	HT (Part Time)

According to the Site Leader, the first year activities included varietal trials of peanut, soybean, corn, mungbean, upland rice, sweet potato, and tillage study. This was changed to cropping pattern research the next year in order to make their work directly related to the farmers' problem of low productivity. This year, 1985, they would again change their study to "problem-oriented" approach--referring to the strongly acidic soil in one of the two barangays. The cropping trials

were: 1. corn and peanut - corn and sweet potato; 2. corn and peanut - corn and mung; 3. upland rice - corn and peanut.

Trials (1) and (2) were conducted at barangay Alta Vista with 6 cooperators and (3) in barangay San Salvador. The two brangays contrast in soil and topography. San Salvador has red, acidic soil and flat land while Alta Vista is calcareous highland where cultivation is taking place at slopes of close to 100%.

After briefing and a usual question-hour the team split up in pairs and fanned out to individual farmer cooperators and non-cooperators. At 1:00 p.m. some of the team had lunch in the town and went back to work at 2:00 p.m. Interviews were finished at 4:30 p.m. The team and the SPIU staff reconvened again for a debriefing meeting at the office. Topics discussed included research design, liming trials, alternative cropping trials, back-up research, the differences in agroecosystems between Altavista and San Salvador. The meeting ended at 6:00 p.m.

The team drove back to ViSCA, arriving at 8:00 p.m. After supper the team rested and decided to meet at 8:00 a.m. the next day after breakfast.

WEDNESDAY, MAY 8. After breaktast the team planned for the meeting in the afternoon with the ViSCA Technical Group. One team member observed that as more sites are visited the team seemed to be more agressive and the trend of questioning to site staff seemed combatant at times, thus putting the site staff members in a state of stress. The observation was shared by others, but it was pointed out that this could not be avoided at times when the point being pursued became more exciting.

The rest of the morning was spent writing notes and synthesizing findings. The team ate lunch at the guest house at noon.

A meeting with ViSCA Technical Group took place at the PCDP-EV Office after lunch. TG members present were:

Rogelio Jaime	-	Extension
Lecnila Parrilla	-	Economics
Delor Alcober	-	Rural Sociology
Alice Co	-	Training
Roque de Pedro, Jr.	-	Agricultural Engineering
Zosimo dela Rosa	-	Seed Production
Sergio Abit	-	Asst. Coordinator of the Project and Agronomist
Oscar Rosas	-	Livestock

Tully Cornick - Sociology, Consultant

Serg Abit explained the project function of the TC as a technology generating unit to back-up on-site farm trials. Research is mostly on-campus, but is now moving to the sites. Each member of the TC told the Evaluation Team the approximate percentage of their working time spent in the project, time officially allotted, actual tasks, sites assigned, problems, and current projects. In general, most have one or more courses to teach during each regular semester.

Another function of the TC is to provide technical support to the SMIUs directly or through project-financed on-campus research in farming systems. Each member of the TC explained how and the extent to which he or she provides technical support to its counterpart in the SMIU.

The meeting was adjourned at 4:00 p.m. Individual and sub-group meetings were to be continued on Friday. After the meeting the team paid a courtesy call to Samuel Go, the Officer-In-Charge of the Office of the College President.

In the evening the team went to a dinner at the residence of Tully Cornick, one of the Cornell Consultants. Tully and Amalia Cornick hosted by candlelight.

THURSDAY, MAY 9: VISIT TO DONTOG. The Donton SMIU was the last site visited. The team, reinforced by the return of Percy, left at 6:00 a.m. and arrived at 8:30 a.m. A briefing was given by SMIU team composed of:

Jesus Leyes	-	Site Leader
Francisco R. Isaga	-	Researcher
Bibian V. Balbarino	-	Economist
Jesus R. Borines	-	Livestock
Danilo Diapolet	-	Research Aide
Danilo Saludes	-	Research Aide
Bonifacia Iroya	-	Research Aide
Marvie Villarias	-	Research Aide
Emperatriz Diapolet	-	MIT

The site has 15 farmer-cooperators in four barangays: Buenavista, Bunga, Mahayahay, and Sampongon. Identified existing cropping pattern is corn-corn; corn-UF. The site team tested corn and peanut-mung and corn; and sweet potato-UF. The cropping patterns were tested in Sampongon and Buenavista. Abaca, however, was identified as the main focus of the SMIU although it is not dominant in the area. The project is engaged in abaca "rejuvenation" and "rehabilitation".

After briefing by Site Leader, the team spread out to 4 barangays to interview cooperators and non-cooperators and to see the abaca trial. Although coconut is a dominant crop, the revival of abaca seems to be a policy from the top. There were many cases in Sampongan and Mahayahay showing the compatibility of coconut, abaca, and other crops. Mahayahay multiple story cropping, observed by Percy and Sam, includes coconut, kerlang (gabi), cassava, abaca, cacao, coffee, banana, citrus, pineapple, romlon, camote, papaya, corn, and rice. Different land types and land usages were very interesting at Pontoc.

The team and SMIU staff converged again at 4:00 p.m. for debriefing. The meeting was finished at 5:00 p.m. Leaving immediately after the meeting, the team arrived at VISCA at about 8:00 p.m.

FRIDAY, MAY 10: SECTIONAL MEETING WITH VISCA GROUP. The morning meeting with VISCA Technical Group was a continuation of that one which started on Wednesday. The VISCA sub-groups were scheduled as follows:

8:15 a.m.	-	Crop Production Group Agronomy Horticulture Seed Production Agricultural Engineering
9:46 a.m.	-	Social Science Economist Sociologist Extension Training
11:15 a.m.	-	Livestock
2:00 p.m.	-	Cornell Consultants
4:00 p.m.	-	Individual Consultation

The above scheduling made the overall consultation process more manageable. Several issues were brought up in each specific group. Ike and Percy briefly visited the analytical laboratory of Soils/Agronomy Department in the afternoon. The laboratory is well equipped for routine soil and tissue analysis.

SATURDAY, MAY 11. Meeting with individual members of the Steering Committee from VISCA continued. Ike and Boyle met Dr. Abit in the morning and visited his agro-forestry experiments. It was brought to the attention of Dr. Abit that the microenvironment in which his experiments have been set up is different from the ones existing in the sites. He said the Technical Group's back-up research is now moving out of campus to the sites.

A meeting with Dr. Marianito Villanueva, Technical Director of FSEP-EV, ViSCA, took place in the latter's house. Dr. Villanueva said ViSCA is trying to improve its relation with MAF. He considered system of communication with CMUs and PEO to be a problem because of distance. The project is trying to get a 2-way radio communication system but the government does not want to give a permit. He thought the technical assistance given by the Cornell Consultant could be provided by ViSCA.

Other team members interviewed other members of Steering Committee. Sam talked with Tully Cornick and Romeo Lares. Percy went to Batalom and Basey for site revisitation.

In the afternoon, the Evaluation Team returned to Tacloban City.

SUNDAY, MAY 12. The team met briefly after breakfast in the hotel to plan out the contents of the report. Team members then started work on different sections of te report. In the evening the team met again to discuss the specific points in the check list. The meeting ended at 12:00 mid-night.

MONDAY, MAY 13. Team and individual analysis of the findings and draft writing continued at the PEO. In the afternoon, Percy, Peng, and David, went to interview the Provincial Agricultural Officer (PAO) in his office. In the evening, the team resumed in the hotel for further analysis and synthesis of the findings until 1:30 a.m.

TUESDAY, MAY 14. Draft writing and analysis continued from 7:00 a.m. The manager of RIARS in Abuyog, Engr. Danilo P. Palang, visited the Team at the PEO to brief the latter about the activities of RIARS in Region 8. He said his RIARS is involved at present in technology verification and evaluation on farmers' fields. They are also engaged in cropping pattern studies and now are piloting the double cropping of rice in rainfed lowlands. He supports the idea of merging RIARS and FSEP-EV even before the project ends in 1986. He said there will be no problem for Site Leaders and Site Researchers because these staff were once extension workers at DAE.

In the afternoon, Dr. Agapito Tauro, Assistant Regional Director for Crops, MAF, came to the PEO. He explained his support of the proposed merger between FSEP and RIARS. After the meeting the Team resumed analysis and synthesis work until 12:30 midnight (or later) interupted only by a break for dinner.

WEDNESDAY, MAY 15: WRITING AND PRESENTATION OF FINDINGS. A scheduled meeting with the staff of FSEP and others to present findings of the Evaluation Team started at 2:00 p.m. at the

Conference Room of MAF Region 8. Present were the Regional Director, the two Assistant Regional Directors, PEC Director and his staff, ViSCA Technical Group, Cornell Consultants, Site Research Management Unit (SRMU) staff, RIARS staff, Station Superintendents and other MAF staff. The meeting ended at 6:00 p.m.

Percy opened the presentation by describing the evaluation methodology used in evaluation which revolved around the nine points in the Terms of Reference and the very expanded list of points developed by the team. The order of presentation and the topics covered were as follows:

(1)	Introduction and Methodology	- Percy
(2)	Researchand DevelopmentStrategy	- Ikeda David
(3)	Program Implementation	- Doyle
(4)	Program Research	- Sam
(5)	Program Organization	- Dong
(6)	Follow-on Activities	- Percy
(7)	Open Forum	

During the open forum, Nitoy Villanueva confirmed the Team findings that the project back-up research approach had been "top to bottom"; but recently there has been a shift in emphasis towards a "bottom up" approach. In the conceptualization of proposals, SRMUs and former cooperators are now taking part in problem identification. He also commented that the communication link between PEC and ViSCA is not as weak as mentioned by one of the presenters and indicated that in the proposed merger of PSDD-EV and RIARS, ViSCA should be a technical break-up of RIARS but not under RIARS.

Regarding integrating PSDD and RIARS, Director Ayeso said that, in principle, integration had been approved as early as two years ago.

Asst. Director Orias asked whether local government officials were also interviewed by the Team. He said he raised the question because the government policy is to involve local officials in any development project in the area.

The PEC Director commented that it appeared that the Team's research recommendation seemed sophisticated and perhaps not within local capability. The Team assured him that the suggestions are not for sophistication and that changes in research methods are meant to improve their informal exploratory and formal experimental approaches.

In response to suggestions related to the administrati··· responsibilities of the Cornell Social Scientist, Director Ayeso

asked what kind of administrative assistance is needed.

Dr. Romeo Raros commented that the 8-points of the project evaluation TOR were not the same as those prepared by the Project for AID. He asked why the subject of technical consultancy was not mentioned in the presentation. The Team answered that the subject of consultancy would be considered in the report.

Other comments from the floor concerned the time allocation of ViSCA technical group, the concept of participatory approach, seed production, and others.

At the end of the meeting, Percy said all comments from the floor would be considered in the preparation of the final report.

THURSDAY, MAY 16. The Team met at 8:00 a.m. at the PDC to take up matters that arose from the meeting in L/F the day before and how they could be incorporated in the final report. The following points were discussed:

1) Technical Consultancy. The Cornell Social Science Technical Consultant is performing administrative work (for the two Cornell staff) such as following up vouchers, communicating with Cornell University, vehicle maintenance, preparing training courses, and report writing. Less time is spent on technical matters. One team member suggested that a local administrative assistant for the Cornell Group might help in reducing the administrative function of the Cornell Consultant.

The Team agreed to recommend: 1) that all foreign consultant must have local counterpart; 2) the subject of consultancies will be determined by the project because consultants have significant impacts on local staff and represent significant outlays of resources; 3) (in agreement with new project policy) that all consultancies must be for a duration of no less than 30 days.

2) Researchable topics. The group discussed to what extent would research areas be recommended or directions merely suggested and how topics for suggested research would be prioritized.

Late in the afternoon Eong Bolo left for Manila. The rest of the team members worked until 12:00 midnight or later.

FRIDAY, MAY 17. The team continued draft writing. Specific chapters assigned to individual members were passed on to the others for comment. Mr. E. Quisumbing visited PDC in the morning and had a brief interaction with some team members. He indicated that a special request for technical assistance from Cornell University are in three areas: a) diagnostic tools, b) project

impact assessment; and c) farmer participation.

At noon the team, ViSCA representatives, the PLO, BAF officials, Cornell consultants, and support staff had lunch. It was an opportunity for the team to say thank you to all who made our evaluation job less difficult and our stay in Tacloban, ViSCA, and site visits pleasant and fruitful.

In the afternoon the team was still drafting the report. It was hoped that the draft copy would be finished by 6:00 p.m. before several team members left for Manila at 7:10 p.m. The draft was not completed by departure time, but was finalized at UPLB by team members from Los Banos with the aid of last minute comments and concerns by the other members.

APPENDIX F: OBSERVATIONS AND SUGGESTIONS FOR EACH SITE SRMU

The evaluation team visited all sites and has prepared the following observations and suggestions for the consideration of the SRMUs. The suggestions should not be taken as official recommendations. Rather, this section takes the liberty of offering our substantive, site specific observations for both stimulation of thinking and encouragement of current new directions in site-level problem identification and solving. In the following sections, "Issues to Think About" are areas for which SRMU staff may already have sufficient information to reexamine the topic or for which some additional needed information might be gathered through additional exploratory research and informal observation. "Study Areas" are specific topics that could be addressed given current research resources and interests at the different sites.

JARC

ISSUES TO THINK ABOUT:

a) rotation and fallow dynamics;
b) representativeness of cooperators;
c) relevance of new technologies to broader farmer population.

STUDY AREAS:

a) factors affecting yield of peanut under coconut;
b) effects of cropping intensification under coconut on coconut yield;
d) shade tolerant perennials for planting under coconut;
e) fertilizer levels for P and K on peanut and mungo;
f) traditional versus legume based fallow;
g) introduced versus traditional corn;
h) gabi and cassava varietal trials.
i) access to land and tenure relationships;
j) off-farm employment;
k) management of pigs and chickens, particularly housing and nutritional issues;
l) possibility of introducing more goats or sheep;
m) possible use of biologics for disease control;
n) phosphorous fixation by Desmodium;
o) reaction of owners to planting of perennial crops by tenants or to an increase in livestock holdings by tenants;
p) copra drying and potential for increased efficiency;
q) cooperative groups for labor and carabao access;
r) management practices on close versus distant fields;

s) sex specific work roles;
t) problems in mungo establishment.

CARIARA

ISSUES TO THINK ABOUT:

a) the whole agroecosystem instead of just the upland areas;
b) functioning of the uplands as watershed versus as cropping area;
c) rotation and fallow dynamics;
d) the compatibility of the fixed cropping pattern with the existing farmer practices;
e) social-economic diversity and stratification;
f) who are target beneficiaries;
g) representativeness of the cooperators;
h) inheritors' rights to land use before receiving inheritance;
i) diversity of tenure arrangements and their relationship to kinship ties;
j) crop utilization patterns (market/consumption).

STUDY AREAS:

a) legumes in enhancing soil productivity;
b) pest and disease problems;
c) planting of perennials in the uplands;
d) possibility of home-garden improvements;
e) improved fallows;
f) status of the uplands (A and D, BFT, or BL);
g) systems of access to traction;
h) kinship and resources access;
i) problem of caraccows not producing milk if worked;
j) improved root crops for pig feeding;
k) improvements in pig and chicken management;
l) use of biologics for disease control;
m) labor hiring - money and sharing arrangements.

BASIN

ISSUES TO THINK ABOUT:

a) sustainability of the technologies being developed;
b) compatibility of cropping pattern trials with farmer practices;
c) seed and planting materials quality control;
d) soil fertility and crop growth;
e) rotation and fallow dynamics;
f) kaingin/swidden/shifting agricultural practices in the uplands;
g) appropriateness of more intensive upland utilization interms

of farmers' farm/of-farm and upland/lowland labor allocations;
h) the possibility of more goats or sheep in the area.
i) relationships between tenure and intensity of management of lowland versus upland fields;
j) consumption patterns in relation to crops grown;
k) tenure arrangements in relation to kinship.

STUDY AREAS:

a) compatibility of camote and ipil-ipil hedgerows;
b) weed competition and gabi;
c) possibilities for vegetable production (for Tacloban);
d) improved fallows;
e) methods of soil erosion control;
f) status of the lands;
g) mix of income sources;
h) farmer allocations of time and resources (lowland/upland, migration to cities/other parts of the Philippines);
i) access to traction (carabao);
j) possibility of fresh water fishponds;
k) use of improved root crops for livestock feed;
l) improved management of pigs and chickens;
m) use of biologics for disease control;
n) crop rotation/fallow cycles;
o) effect of rice straw mulch on erosion rate.

VILLAVA

ISSUES TO THINK ABOUT:

a) specific factors contributing to local success of ipil-ipil technology;
b) wider applicability of the technology. (Consider that most farmers are CLT participants, soils are not overly acidic, farmers were familiar with native ipil-ipil, soil erosion is a problem.)
c) the diffusion process (especially as non-cooperators start to adopt);
d) improvements for coconut areas.

STUDY AREAS:

a) contour ditching, soil traps, mulching, green manuring, rhizobium injections;
b) ways of improving fallows;
c) perennial crops;
d) tobacco as a cash crop;
e) vegetable production;
f) other varieties of major crops--corn, camote, peanut,

cassava;
g) possibility of fresh water fishponds;
h) use of improved root crops for livestock feed;
i) improved management of pigs and chickens;
j) possibility of more goats or sheep in the area;
k) the use of biologics for disease control;
l) returns to ipil-ipil when used for livestock, sold, or as a fertilizer;
m) strip cropping versus intercropping corn and peanuts.

MATALOM

ISSUES TO THINK ABOUT:

a) the two major different agroecosystems represented by San Salvador and Altavista and the differences in response to program recommendations;
b) farmers' knowledge about their resources and relationships between this knowledge and their practices (to better tailor recommendations to specific local ecosystems);
c) land as a constraint;
d) ways you are helping your cooperators;
e) tenure arrangements and how relate to management practices;
f) rotation and fallow dynamics;
g) what can farmers do to get income is land is left fallow during the wet season.

STUDY AREAS:

a) improved fallows;
b) perennials tolerant of acid soils;
c) extent of low Ph soils in the area;
d) liming and the effects of liming on crop response to N-P-K;
e) use of improved root crops for livestock feed;
f) improved management of pigs and chickens;
g) possibility of more goats or sheep in the area;
h) biologics for disease control;
i) rice blast and UPL-Ri5;
j) crops for calcareous soils (Altavista);
k) substitute pig feed besides rice bran.

BOTTOC

ISSUES TO THINK ABOUT:

a) designation of the area as an abaca area needs to be reconsidered so that other locally appropriate areas of farming systems research and development could be investigated.

b) farmer knowledge related to the environmental diversity (to better understand strategy choices.
c) rotation and fallow dynamics
d) the close-by, previously forested area immediately above Mahayahay in terms of farmer use and a possible future ecosystemic problem;
e) alternative cash crops.

STUDY AREAS:

a) different land types and and land use patterns (to focus recommendations and recommendation domains;
b) relationship between kinship and resources access;
c) compare the experimental multi-story cropping plot to those of area farmers;
d) fallows improvement (legumes; Centrosema, Kudzo);
e) improved root crops as livestock feed;
f) freshwater fishponds;
g) improved pig and chicken management;
h) biologics for animal disease control;
i) spacing and competition trials for abaca and "karlang";
j) castor bean intercropping trial;
k) effects of coconut shading on abaca;
l) strip cropping versus intercropping peanuts and corn;
m) spacing of camote and intercropping cassava with camote.