

AGENCY FOR INTERNATIONAL DEVELOPMENT WASHINGTON, D. C. 20523 BIBLIOGRAPHIC INPUT SHEET	FOR AID USE ONLY
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1. SUBJECT CLASSIFICATION	A. PRIMARY Social Science
	B. SECONDARY Development Planning

2. TITLE AND SUBTITLE Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects-Summary

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4. DOCUMENT DATE May 1975	5. NUMBER OF PAGES 62p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS Development Alternative Inc. 1823 Jefferson Place N.W. Washington, D.C. 20036
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8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)

Executive Summary

9. ABSTRACT

Volume III of "Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects", comprises an executive summary of the study. It contains highlights of the report and a summary of findings and their implications for A.I. Among findings: Acquisition of knowledge about local circumstances, and the process of involving the small farmer, take time, and A.I.D. sometimes is constrained as regards to time allocated to the project. "Educated" outsiders and short-term consultants can be helpful in certain circumstances, but they are no substitute for an information exchange between the small farmer and the operating project staff. Some projects fail to define clearly what behavioral changes by small farmers are required for successful project completion. Collection of information which guides adjustments in project implementation is required, but that will not save a project which is locked into a rigid and poorly designed format.

10. CONTROL NUMBER PN-AAB-361	11. PRICE OF DOCUMENT
12. DESCRIPTORS Subsistence Agriculture, Africa, Latin America, Development Projects, Economics, Social-Cultural	13. PROJECT NUMBER
	14. CONTRACT NUMBER AID/CM/ta-C-73-41
	15. TYPE OF DOCUMENT

**STRATEGIES FOR SMALL FARMER DEVELOPMENT:
AN EMPIRICAL STUDY OF
RURAL DEVELOPMENT PROJECTS**

EXECUTIVE SUMMARY

FINAL REPORT

**A Report Prepared for the
Agency for International Development
under Contract No. AID/CM/ta-C-73-41
May 1975**

**DEVELOPMENT ALTERNATIVES, INC.
1823 Jefferson Place, N.W.
Washington, D.C. 20036**

**STRATEGIES FOR SMALL FARMER DEVELOPMENT:
AN EMPIRICAL STUDY
OF RURAL DEVELOPMENT PROJECTS**

EXECUTIVE SUMMARY

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May 1975

STRATEGIES FOR SMALL FARMER DEVELOPMENT: AN EMPIRICAL STUDY OF RURAL DEVELOPMENT PROJECTS

This study contains three separately bound documents as listed below.

VOLUME I

Contained in this volume are the following chapters:

- I. Research and Focus
- II. Project Success
- III. Local Action
- IV. Project Components for Small Farmer Development
- V. Summary of Findings and Their Implications for AID and Other Major Donors

- Appendix One: Methodology
Appendix Two: Information Systems to Support Rural Development Projects
Appendix Three: Implication of the Findings for Future Research

VOLUME II

This volume is comprised of 36 write-ups of the projects studied, a complement to the analysis in Volume I.

EXECUTIVE SUMMARY

Sections in this volume include the following:

- Highlights of the Report
- Summary of Findings and Their Implications for AID
- Annex A: Projects Included in the Study

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HIGHLIGHTS OF THE REPORT

OVERVIEW

This study was contracted to help the Agency for International Development (AID) improve the design and implementation of projects to assist small farmers -- i.e., farmers engaged in subsistence agriculture.

The work involved a detailed examination of 36 rural development projects sponsored by various institutions operating in 11 African and Latin American countries. In all, 81 local sites in the field were visited for the purpose of collecting information.

The primary findings are that to maximize the chances for project success, the small farmer should be involved in the decision-making process and should also be persuaded to make a resource commitment to the project. The study also includes the description of a *process* for project development and implementation which leads to the involvement and resource commitment of small farmers. The process forces one to make allowance for local economic and social/cultural factors that impede project success.

PROJECT SUCCESS

Projects were scored on the basis of four distinct components of success:

- The project's income to cost ratio;
- The acquisition of agricultural knowledge by small farmers;
- The increase in self-help capabilities as a result of project activities; and
- The chances of project benefits to small farmers becoming self-sustaining.

The scores on these components were then summed to provide an overall success score for each project. Subsequently, a large number of possible success determinants were selected

and examined. Quantitative analysis showed that, when weighed together, small farmer involvement in project decision-making and his resource commitment to the project accounted for nearly 50 percent of the differences in success scores of the projects.

The policy implications of these findings are straightforward: every effort should be made to foster small farmer involvement and resource commitments to projects in the early phases. The small farmers' involvement should complement (and ultimately replace) the work of the project's outside staff. The resource commitments (labor and cash) should complement (and ultimately render unnecessary) resources from outside sources.

LOCAL ACTION

Local action was the term used to define small farmer involvement and resource commitment. We found local action significantly increased as a result of the following:

- An effective two-way communication between small farmers and project staff;
- Functioning local organizations controlled in large part by small farmers themselves; and
- Crop-specific (as distinct from general) extension advice offered.

An analysis of the components of local action revealed that small farmers will become involved in development projects if presented with the opportunity for meaningful cooperation -- sharing in decision-making responsibility, testing new technology and spreading new knowledge as paraprofessionals.

Small farmers committed more resources, proportionately, than did larger, wealthier farmers. Literacy, land tenure and involvement in decision-making were positive influences on resource commitment; the size of the subsidy for adoption of new practices and the provision of social services in early project stages both appeared to have a negative effect on resource commitment.

Regarding the adoption of a new technology, our work suggests the small farmer will take advantage of a good idea, when "good idea" is defined to allow for constraints such as risks (i.e., chances of loss) and his assessment of the costs of taking such risks.

PROCESS OF DESIGN -- GATHERING CRITICAL INFORMATION ON LOCAL CONDITIONS

The most successful projects were either those that started by acquiring a knowledge of the local area prior to initiation or those that structured the project on the basis of a simple idea and developed this knowledge base during the initial project stages.

Primary collection requirements during the process of project design are:

- Data on existing agricultural production practices and sociocultural patterns in the area to determine what behavior changes are required for a project to achieve its objectives and how they might be obtained;
- Data on the income, land and power structure of the local area and the existing local organizational capabilities to determine if special means are required to reach small farmers and the most effective mechanisms for doing so; and
- Data on the capability of local institutions to provide the project components deemed necessary for success.

Data collection can best be accomplished by rural development specialists assisted by local staff using small sample surveys and open-ended interviews. This effort should be supplemented by measurement of the inputs and outputs for critical crops so that the profitability and variance of existing agricultural practices can be accurately assessed.

Provision should be made for persons serving as data collectors for the design phase to be integrated into the project staff. Discussions initiated by these collectors with local leaders and farmers can form the basis for an ongoing, two-way communications system.

Little value was found in large-sample, census-like surveys, either for project design or as baseline data for use in measuring project success.

PROCESS OF IMPLEMENTATION

The first requirement of an implementation process is the recognition that revisions in project design are desirable and constitute attempts to improve overall success and not proof of design inadequacy.

One necessary input into the revision of project activities is a two-way communications system which allows project staff to obtain a feedback from small farmers on basic directions and operations.

This system should be incorporated into project plans and initiated in the implementation phase. Such a system should provide monitoring, evaluation and diagnostic functions to improve project performance. It is particularly vital to gain a clear understanding of who (i.e., large or small farmers) is receiving project benefits. This can be accomplished through the development and use of an indicator system with low-level project staff and participants themselves as primary data sources. Indicator systems require customization for each project; they should be cooperatively designed by project staff, participants and professional information specialists.

A special concern during the implementation phase should be how to make project benefits self-sustaining after outside staff and funding have been withdrawn. While many projects deliver income benefits as long as subsidies continue, few are operated in such a manner that, over time, participants can assume payment for essential services from their earnings. This requires training programs which gradually substitute local participants or their families for outside experts and the development of a self-tax mechanism to recover essential expenses.

LARGE DONOR PROJECTS

Development projects receiving funds of over one million dollars scored poorly on success, local action and self-sufficiency. Major problems include:

- A time constraint caused both by a need on the part of the donor agencies to commit large sums of money and to show quick results;

- A knowledge constraint, originating from the belief of foreign and host country government staff members that small farmers have little to offer. We found that small farmers can be a basic data source on local constraints, behavior and risk;
- An assumption in project design that small farmers will change their behavior without an assessment of what changes (in terms of involvement and resource commitment) are required if the project is to achieve its objectives and of how they might be realized;
- The use of restrictive benefits measures such as cost-benefit ratios or repayment rates which narrow the focus of the project, instead of applying measures such as the increase in self-help capability, the acquisition of agricultural knowledge and progress towards making benefits independent of outside assistance.

SUMMARY OF FINDINGS AND THEIR IMPLICATIONS FOR AID

INTRODUCTION

The purpose of this study was to identify the key components for successful small farmer development projects. As part of this, we tried to determine the proper role for small farmers in these projects. In this extract we summarize our findings and their implications for AID and other major national and international donors.

We start with a brief statement of the nature of the study (Section A). This is followed by a summary of our findings concerning the key determinants of project success (Section B). A statement of our conclusions concerning the type and level of small farmer activity required is presented next (Section C). A brief summary of our findings concerning selected project components follows (Section D).

We then discuss a process for project design and implementation that our work indicates should be followed to maximize the chances for project success (Section E). From this we turn to the implications of our work for AID (in Section F). Here we examine the degree of success and local action in different projects in an attempt to identify the major shortcomings and possible solutions in AID's current and planned future activities.

SECTION A
STUDY DESIGN

This is primarily an empirical study. Our findings are based on a detailed examination of how 36 rural development projects operate in 11 African and Latin American countries.¹ To obtain the necessary data we made visits to 81 project and subproject locations. The information gathered on these visits was complemented by an extensive review of the literature on rural development. The work was carried out by four senior members of the firm's staff, all of whom have had experience working in developing countries.

We have not attempted to limit our study to a particular type of project. Rather, we have tried to include a wide range of project types in hopes of being able to draw conclusions that have general applicability. However, the reader is reminded that our conclusions are based primarily on the projects we studied in detail and we cannot claim these projects constitute a representative sample.

The study focused on what can be done to assist farmers who own or control enough land to provide a subsistence income

¹ Detailed project write-ups appear as Volume II of *Strategies for Small Farmer Development*. A summary listing of the projects reviewed is appended to the Executive Summary, page A-1.

for their families. While many of our conclusions may be relevant to efforts to assist landless laborers, it should be stressed that our conclusions affect them incidentally and that no attempt has been made to develop a specific set of recommendations that apply to them.

SECTION B
KEY DETERMINANTS OF PROJECT SUCCESS

Summary of Findings

Our methodology has been to develop measures of project success and their possible determinants. We have concluded that four dimensions of success are of primary importance:

1. An increase in the small farmer's income and its attendant costs;
2. An increase in the small farmer's agricultural knowledge;
3. An increase in the small farmer's self-help capability; and
4. A high probability that the benefits of the project will become self-sustaining.

Using both qualitative and quantitative modes of analysis, we drew conclusions from a list of about 25 possibilities concerning the key determinants of project success.¹ We found that overall success ratings were most affected by:

The *Local Action* taken by small farmers to complement outside development management and resources. By itself, this factor explained 49 percent of the variation in the overall success rankings.

¹ The 36 projects are scored on these dimensions and on overall success. See Table II-1, Volume I.

When the components of *Local Action* were examined, two proved to be most important in promoting overall success:

- Small farmer involvement in decision-making in the implementation phase of a development project;¹ and
- Small farmer resource commitment (labor and cash) to a development project.

Small farmer involvement in project decision-making and resource commitments also appeared important as determinants in each of our success criteria, providing firm evidence of the importance as well as the consistency of local action as a necessary ingredient in building successful projects.

These conclusions imply that project success is dependent upon a set of positive actions by small farmers:

- Their participation in project decision-making (which appears more significant in the implementation stage than in the design phase);
- Their willingness to contribute labor and money to the development effort.

Those development projects which took the time and effort necessary to build in an active and cooperating role for small farmers were significantly more successful than those projects

¹ As one might expect, there is a high correlation between involvement and our measure of the effective functioning of a two-way information system between staff and project participants.

which followed more traditional (externally-dominated) development approaches.

Of course, project success was also affected by a number of other factors. As might be guessed, the chances for project success are greater if one works with more progressive farmers as measured by per capita income and the percent of output sold for cash. Somewhat surprisingly, greater project success appeared to occur in projects located a considerable *distance from all-weather roads* and in projects where the *literacy rates* of participants were low. We believe this is a reflection of a deliberate decision by leaders of some of the most successful projects in the sample to work in remote areas and not the influence of these two factors as such.¹

Many factors thought to be important in project success did not turn out to be so in this analysis. *Cost per participant* was *not*, which suggested that large outlays spread over few people will not necessarily improve chances for success. The *degree of subsidization* offered for adoption of new technology was *not*, suggesting that small farmers will adopt new technologies without further incentive if it appears in their interest to do so. In addition, the growth rate in the number of project participants showed no relation to project success, thereby raising obvious questions concerning the frequent use of this

¹ While literacy did not appear necessary for project success, it was significant in bringing about a small farmer resource commitment.

measure as a success indicator. And finally, the quality of the physical environment did not appear to be of overriding importance, as successful projects were launched under good as well as poor farming conditions.

The policy implications of the analysis are clear. Project designers can most strongly influence potential success in rural development projects by deliberately working to generate various types of small farmer involvement and resource commitment to project activities.

SECTION C
KEY DETERMINANTS OF LOCAL ACTION

Summary of Findings

Having ascertained the overriding importance of small farmer involvement and resource commitment to project success, we then used qualitative and quantitative methods to study how these needed small farmer activities could be realized. We started by breaking local action into four component parts:

- Small farmer involvement in project decision-making during the design stage;
- Small farmer involvement in project decision-making during the implementation stage;
- Small farmer labor commitment to the development project; and
- Small farmer money commitment to the development project.

Through study of overall local action (the aggregate of the four components), three variables were found to be positively associated with the level of local action:

- The specificity of the agricultural information offered by the extension service;
- The importance of local organizations in the project; and
- An effective two-way communications flow between project participants and project management and staff.

The size of the subsidy offered to farmers by the project appeared to have a negative impact on the overall level of local action. Perhaps most importantly, the following variables did not appear to have a significant impact:

- Farm units per extension worker;
- Reasonable security over landholdings;
- Average size of farm in project;
- Past experience (good or bad) with development efforts;
- Provision of social services;
- Increase in agricultural knowledge generated by the project; and
- Percent change in farm family income resulting from the project.

When the involvement components of local action were examined individually, the most important variables were the existence of effective two-way communications systems and functioning local organizations or groups. The analysis showed that poor smallholders with less security over the land they farmed are more likely to become involved in decision-making during project design and implementation than are wealthier, larger farmers. This finding should signal the policymaker that small farmers will contribute if given an opportunity.

A review of the variables which influenced small farmer resource commitments of additional labor and money revealed again that poor small farmers are more likely to make greater

relative resource commitments than are larger, wealthier farmers. Our quantitative work suggests further that small farmer resource commitments would be higher if project planners focused on increasing rural functional literacy, improving land tenure security, offering crop-specific extension instruction and promoting small farmer involvement in project decision-making at the local level. Large subsidies for adoption or the provision of social services appeared to have a negative impact on the willingness of small farmers to make a resource commitment. Income increases, in absolute or percentage measures, did not bring forth larger commitments, suggesting the decision-making calculus for farmers near subsistence is complex and involves far more than the size of net income gains.

Detailed Analysis

While the determinants of local action discussed above are important, we carried out a more detailed examination to uncover the most vital factors influencing small farmer behavior. These included:

Small Farmer Perceptions and Behavior

A review of the literature as well as the projects studied revealed a set of local constraints, actual and perceived, which hinder the possibilities of behavior change by small farmers. While local cultural and social impediments may require modifications in project design, a key to predicting small farmer behavior is an understanding of his perception of the

risk involved in adopting a new technology. Both the probability and the size of loss enter into the small farmer's risk consideration, and these farmers have very strong and rational requirements for their crops to come in each year at or above the subsistence level. While new technology may significantly increase output and net income, the risks inevitably go up -- not only because of increased cash and labor commitments, but also because of the small farmer's increased dependence on alien institutions or individuals (input suppliers, extensionists, marketers) over which he has no control.

Local Involvement in Development Projects

Dividing projects into two phases -- identification/design and implementation -- we analyzed small farmer involvement. While we found that good ideas were often brought in from the outside before a project gets under way, small farmers can play a critical role in tailoring ideas to fit local conditions, act as experimenters by testing new technological packages and participate in decision-making at the subproject level regarding activities, priorities and mechanisms for implementation.

During the project implementation phase, small farmers can contribute to a dialogue on project activities and results, assume responsibility and control for subproject decision-making, continue to test new technology and share in the management of the project. Examination of our projects revealed

that a sharing of responsibilities between project and farmer was a superior arrangement to domination by either group in achieving project success. The use of small farmers as paraprofessionals was one cost-effective way to spread new technology. Training and other programs to meet local needs and effective communications systems were helpful in eliciting involvement, while accountability systems which allow local leadership to form, coalesce and change improved the provision of farmer (client) services and helped insure continued farmer involvement.

Small Farmer Resource Commitment

Small farmer involvement in decisions increased his willingness to make a commitment of increased labor or money to complement the project's activities -- i.e., a "shared" decision-structure between farmer and project staff increased farmer commitment. Other factors were also important. "Necessary" services of a development project -- technology, extension of agricultural knowledge, agricultural inputs, credit (in some instances) and marketing -- had to be there for the farmer to make a resource commitment and for a project to succeed. In circumstances of high risk, particularly when large upfront cash costs were involved, various risk-sharing plans were in place, ranging from crop insurance (which worked poorly in our sample) to input-provision/output-sharing arrangements (which showed promise in several projects).

Local Organizations

Small farmer-directed local organizations contributed importantly to the level of local action and project success.

These organizations performed the following functions:

- Provision of a vehicle through which farmers can share in decision-making;
- Assistance in developing a two-way communications system between project staff and farmers as well as among farmer participants themselves;
- Promotion and reinforcement of behavioral changes such as the adoption of new agricultural production practices;
- Facilitating the provision, integration, and administration of farmer services; and
- Mobilizing local resources for local infrastructure creation and maintenance.

SECTION D
PROJECT COMPONENTS

Developing Technological Packages for Small Farmers

For the projects we studied, most technological recommendations were developed in distant research stations under conditions which did not reflect an awareness of the small farmer's resource commitments, risk-perceptions or production preferences. The new practices being promoted -- even when locally tested -- did not reflect an active attempt to search out and incorporate the strengths of the traditional technology into the modern practices. Given these circumstances, it is understandable that many of the technological packages that the small farmer was urged to adopt were inadequate in at least one aspect. When the meaning of an *adequate technological package* is broadened to include the complementary prerequisites of capital, land, agricultural inputs and marketing services which must accompany a new technology, a large proportion of the externally-generated technological packages were found wanting.¹

Adaptive research was carried out in several projects, where outside recommendations for increased output were tested under local conditions. These efforts suggest that modern

¹ Out of 51 technological packages recommended by the 36 projects, 31 were found inadequate in one aspect or another.

agricultural technology needs to be "customized" for small farmer agricultural use. Only through development of increasingly specific recommendations which offer different trade-offs between yield-maximization/risk-minimization, within varying physical environments, can the best solution for a particular area be reached.

The "best" solution is a judgment determined through dialogue with the client involved -- the small farmer. The solution cannot be achieved without careful testing by these producers -- with the risks of experimentation subsidized by or shared with the project. With the exception of wetland rice projects, we did not observe an instance in which the "best" solution involved a complete displacement of old methods by new; rather, these solutions entailed a synthesis of parts of both.

Transferring Knowledge to Small Farmers

After examining extension techniques in projects grouped by profitability, we turned to knowledge acquisition (measured by major behavior changes in farm production practices) by the local population. The measures of success in the knowledge transfer/acquisition process were set against various extension services, methods, accountability and frequency of contact. Overall, traditional extension services -- delivered by area-based agricultural experts dealing with individual farmers -- were found to be the least effective mechanisms for transmitting

useful and used agricultural knowledge. On the positive side, our work suggests that the accountability of extension workers to the local population contributed significantly to the effectiveness of extension work. In addition, the case studies identify various innovative extension techniques which successfully transferred knowledge to small farmers, particularly when the technology being recommended was single crop-specific.

Small Farmer Credit

Not all successful projects required institutional credit as a part of development assistance. In some projects, particularly in Africa, farmers drew from their own cash resources to make the purchases necessary to complement new technology. In Latin America, although cash incomes are higher, it appears that small farmers believe they must make other essential purchases, and they often lack the cash or will not use their cash to buy needed inputs.

Group repayment responsibilities, with some exceptions, provided better repayment rates and other benefits than did programs in which farmers were individually responsible for repayment. However, the exceptions were striking and important for the design of credit programs. Two types of credit arrangements -- the use of local organizations (e.g., cooperatives) which served as credit intermediaries between large institutions and small farmers, and the use of group credit liability -- successfully generated a "commitment" to the project. With

such a commitment the local group, either the holders of credit funds or the combined borrowers, can exert pressure on non-payers, action which significantly affects the repayment rate.

From this we drew the following conclusions:

- Good credit program performance, measured by low administrative costs and high repayment rates, can be developed either through the use of an intermediary composed, at least in part, of small farmers or through the use of group repayment liability. This generates a "commitment to the project" which is more important than the institutional arrangements which structure the credit program.
- Credit-in-kind was found to be a useful method of risk-sharing, but the ability of the project to recover input costs depended upon the availability of alternative markets. When such markets were open, only a strong local organization was able to prevent diversion of the output from the project and credit default.

Interest Rates

There was a significantly positive correlation between the level of interest rates charged small farmers and:

- Repayment rates;
- Overall local action measure; and
- The use of credit intermediaries.

The conclusions to be drawn are that high interest rates do not appear to affect small farmers' willingness to borrow or ability to repay borrowed funds.

Seven of the most successful projects deliberately encouraged local savings by the use of high interest rates paid local lenders. This was accompanied by still higher interest rates charged to small farmer borrowers, adding further weight to the conclusion that high unsubsidized interest rates are a feature of good credit program design.

The case studies also supported the hypothesis that high interest rates serve as a screening device which restricts project benefits to small farmers and eliminates larger farmers who can draw upon cheaper credit elsewhere. Because of the very great difficulty in obtaining distributional data on project beneficiaries, this hypothesis could not be tested with any rigor.

Finally, there is a qualitative argument for the offering of concessionary interest rates, not to the small farmer, but to small farmer organizations. Most international assistance organizations lend to Third World countries at rates that are far below what small farmers, who clearly need credit, are willing to pay. In lieu of making these low rates available directly to small farmers, we suggest that the low-cost credit be offered directly to local intermediaries and that small farmers be offered the credit by the intermediaries at significantly higher rates. The resulting spread will allow the local organization to pay for extension, management and marketing services in the early years when adoption of new technology is slowly evolving.

Many projects with external credit utilize the repayment rate as a proxy for overall project success. This concept was examined, found wanting and rejected. The repayment rate is an aggregate of a number of possible explanations for non-repayment -- some technological, some biological, some problems of human motivation. For the credit programs in the projects surveyed -- including external development credit, locally generated savings and loan association credit, and upfront input credit -- the repayment rate was a function of:

- The past history of the local participants in similar development or government projects;
- The utilization of credit intermediaries to dispense and collect small farmer loans;
- The initiation of a savings component within the project;
- Group rather than individual credit liability; and
- Compulsory marketing through an organization established by the project.

SECTION E

A PROCESS FOR PROJECT DESIGN AND IMPLEMENTATION

Introduction

Our analytical work documented the need for small farmer involvement and resource commitment to a development project. Clearly, involvement and the willingness to make a resource commitment are only *necessary* conditions for project success. *Sufficient* conditions require that the following objectives be met, either by the project or other institutions:

- An adequate technological package;
- Needed agricultural inputs are delivered on time;
- Extension services are adequate; and
- There are favorable markets for the agricultural produce and a means of getting it to market.

All of these factors are important and interrelated. Unfortunately, it is impossible to specify precisely *what* is needed, *when* it should be provided and by *whom* without a detailed knowledge of local conditions.

The purpose of this section is to specify a process which, if followed, will properly allow for the particular circumstances that exist in every location. The process will maximize the chances that the proper amount of local action will be generated

and that the project will succeed.

Determining the Design Requirements

Our study suggests that the most successful projects are those which have attempted to gain a knowledge of the local area prior to project initiation or have structured the project in such a way as to start with a simple idea and to develop this required knowledge base during the initial project stages. Essential data requirements include the following:

1. Data to understand and overcome the constraints imposed on small farmers by the local environment;
2. Data to insure that project components are adequate or to determine alternative ways of providing the needed services and knowledge; and
3. Data to determine project focus and organizational capabilities within an area so that small farmers receive the benefits of project activities.

These are discussed below, along with our conclusions regarding their significance in project design.

1. Understanding Small Farmer Constraints

An understanding of small farmer constraints will enable project designers to determine whether a new technology is suited to small farmers and what it will take to gain its adoption. To make these determinations, designers must first examine the farmer's existing production patterns and identify the physical,

social/cultural and political factors that influence his decision-making. After ascertaining the farmer's current activities and the pressures on him, the designer or planner must determine the changes required in behavior and resource commitment by small farmers if project activities are to be successful.

The gap between present small farmer behavior and what is required by the project may be significant, entailing changes in agricultural practices, in the commitment of family labor, funds and land, and in patterns of cooperation and accountability. Whether a farmer will make these changes will depend on his perception of risk -- which should be the primary consideration when planners study how to bridge the gap between present and anticipated behavior. Through an active dialogue with local participants, it should be possible to identify the major impediments in making the changes called for by new technology. Once identified, it is the responsibility of designers to insure that the project is designed in a way to provide the farmer with the motivation necessary to overcome the constraints to change.

This discussion identifies one of the basic shortcomings of much of the past design work: the failure of planners to define the behavior changes required by small farmers. Instead, it has been assumed that these changes will be forthcoming if all other project components are in place. Rather

than make this "assumption", we would argue that the starting point in building a project design should be the determination of the requirements for small farmer behavioral change and the development -- with farmer involvement -- of the elements necessary to effect these changes.

2. *Determining Project Components*

A second set of data is needed to determine what services and knowledge must be provided, either by the project or by other institutions in the area. A study should be made as to the adequacy of the following:

1. Agricultural research and the development of technological packages suitable for small farmers;
2. Mechanisms for transferring agricultural knowledge to small farmers;
3. Provision of agricultural inputs (land, labor and supplies);
4. Small farmer credit; and
5. Marketing services.

3. *Determining Project Focus and the Capabilities of Local Organizations*

Third, data are needed to determine the size and location of the population to be covered (focus) and the local mechanisms through which the project can most effectively be implemented.

Project focus assumes particular significance if the objective is to reach small farmers. In areas with a relatively equitable distribution of land, income and power, broadly-based development efforts are possible. On the other hand, if there is a high degree of disparity among landholdings, wealth and power, a telescoping (narrowing) of project activities or focus on a defined portion of the population is necessary to limit participation to small farmers. Because distributional patterns are not always readily apparent, project designers must research the local environment.

In either case, local organization can assist in the implementation of the project. In the projects we studied, the presence of a local organizational structure contributed significantly to generating local action and to improving chances for project success. Many of our most successful projects either created new organizations or worked through existing groups in an intensive attempt to involve all farmers in a specific locality. This was most effective in areas where land and wealth were relatively equally distributed. In areas where this was not the case, projects generally attracted the larger, more progressive farmers unless special efforts were made to get smaller farmers as project participants.

A design team must first identify the existing patterns of organization in the project area. Except in very unusual circumstances, there will be leadership, communications and

combined efforts in some undertakings. Even if not formally recognized, these groupings may serve as a useful vehicle for project cooperation. Our analysis has shown that the distribution of power within the local area is most important as a determinant of whether existing local organizations can be incorporated into development projects, or whether new organizations can be formed without special screening provisions. In 19 of our projects, small farmers alone lived in the local areas served by the project; in 17 of the projects, large and small farmers coexisted.¹ In the latter case, special measures are necessary to insure that project benefits are not channeled directly or indirectly to the already wealthy.² Examples of such measures include:

- Restricting membership to a landholding size which excludes the large farmer;
- Increasing the cost of services (including credit) until large farmers find lower cost alternatives; and
- Putting an upper limit on the levels of services (including credit) one can draw so they are appropriate only for the amount of land a small farmer could maintain.

If a project area has a local organization which meets or can be convinced to meet the above requirements, then the

¹ We used comparative landholdings to distinguish large and small farmers (see Table I-11, Volume I, page 25.)

² It should be stressed that wealth is not the only index of a significant social stratification calling for particular attention. We found tribal and religious groupings that also called for special allowances.

project can use positive incentives to help strengthen its internal management, leadership and coverage of potential project beneficiaries. This can take place through training, temporary subsidies, the use of the organization for distribution of inputs, marketing assistance and extension services. Local organizations may also be able to perform certain added functions -- e.g., credit and extension services to small farmers. This approach has been successful in the Directed Agricultural Production Credit Program in Latin America.¹

If there are no viable local organizations to carry out the tasks mentioned above, then projects have two alternatives. *First*, local promoters can be involved in building local organizations.² A *second* approach is to encourage formation of local institutions at later stages of project development, using the incentives of the project to foster such organizations.³ One useful method may be the use of credit, extended through groups rather than through individuals, to build local associations which may over time turn into more formal local institutions.⁴

¹ See the CREDICOOP write-up, p. K-12, Volume II.

² See the DESEC project write-up, p. G-2, Volume II, for a description of a successful local organizer.

³ The Cáqueza project in Colombia encountered difficulty in launching local organizations. Hence, the project began with an individual focus, and over time (without much encouragement from project staff) small farmers requested and participated in the formation of an input center and marketing cooperative. See the Cáqueza Project write-up, p. H-2, Volume II.

⁴ See the Nigeria Tobacco Company, p. F-13, Puebla, p. J-2, and Plan Maize, p. J-17, Volume II, for discussions of credit groups.

Our data did not allow a detailed analysis of other key questions concerning local organization (the optimum size, regional groupings, etc.). However, it was clear from those cases examined that ideally the local institution should be locally controlled (perhaps with outside technical assistance) and that most of its members should know one another personally. If there is a need for an affiliation with higher-level groupings, these should be accountable to local organizations through direct or indirect contacts with local participants. In some cases this has led to non-subsidized purchasing and marketing units, not only for income benefits, but to increase the bargaining positions and self-help capabilities of small farmers. For project success, however, it is the local organization, at the lowest geographic level of the project, which is most important in generating local involvement and resource commitment to a development project.

AID and other international donors have placed a high priority on institution-building in the past. However, institution-building should not be viewed as an end in itself. Rather, the focus should be on whether existing small farmer organizations can be used or new ones are needed as a means to equip small farmers with the wherewithall to help themselves. With the understanding that local organizations can be vital to project success, the strengthening or creation of such institutions can be integrated into the other necessary phases of the design and implementation process.

A Process for Project Design

Collecting the Necessary Data

Much of the knowledge necessary for meeting the three sets of data requirements described above resides with the local population. A systematic and cost-effective method of extracting this knowledge and making it available to project planners is a requirement particularly for large, multi-dimensional projects. Experience with various collection systems suggests that professional rural development specialists, assisted by local staff members, can effectively collect data from small farmers. Working through one crop cycle or agricultural season, they can obtain the necessary information on social/cultural and agricultural production patterns.

Using small sample surveys and open-ended interviews, professionals can elicit the views of leaders and influential farmers on constraints to change as well as their reactions to the introduction of the development project. Discussion with local residents about current production patterns should be supplemented by measurement of the inputs and outputs for critical crops so that the profitability and risks associated with existing agricultural practices can be accurately assessed. To insure that the data will be used, data collectors should be incorporated in either the project leadership structure or at a minimum in the planning and evaluation unit. Much of the understanding gained from the collection effort will be

reposited mainly in their minds.

This type of data collection may entail nine months of field work. However, it is more efficient and yields more operational insights than the commonly used survey. In projects reviewed, we found little value in large-sample, census-like surveys, either for project design or as baseline data for use in later attempts to measure project success.

Using Data Collection to Ease Project Implementation

While data collectors are tracking the agricultural production cycle and determining the local social/cultural dynamics, they can simultaneously be identifying local leaders and organizations which would be most useful during project implementation. By establishing a good system of contacts with these leaders and groups, data collectors can begin to build a two-way communications system for channeling information from the project to participants as well as channeling participant reaction and ideas on project activities to the project.

Data collectors must pay particular attention to existing patterns of landholdings, income and power distribution if the project is to focus successfully on small farmers and be effectively integrated into the local institutional setting. As mentioned above, information should be gathered on the existing organizational arrangements at the local level to assess

the need for special mechanisms for restricting project benefits to the intended project participants. These arrangements will vary from village to village and will in all probability necessitate modifications in project approach, according to village-specific circumstances.

Both the building of the two-way communications system and the need for a continuing assessment of local circumstances that affect operating procedures provide two more reasons for integrating the original data collectors into the project staff.

Alternative Design Processes

Not all projects require nine months of collection effort before implementation can commence. If the project is to be a reiterative research effort (whose goal is to obtain the information necessary to develop improved recommendations for increased agricultural production and income), the project can begin with little more than the active cooperation of local participants. Various projects have successfully started with a base of one simple activity -- e.g., the distribution of fertilizer -- when there was reason to believe that the activity would benefit small farmers. Through this activity, information on the local area can be gathered and subsequently applied to the design of other project programs.

A Process for Project Implementation

Introduction: The Need for Flexibility

Few projects can survive a rigid blueprint which fixes at the time of implementation the development approaches, priorities and mechanisms for achieving success. Most projects scoring high on success experienced at least one major revision after the project determined that the original plan was not working. This flexibility is critical, particularly if the technology is uncertain or if the local constraints facing small farmers are not well known. The first requirement for an implementation process is the recognition that revisions in project planning are *desirable* and can constitute attempts to increase the chances of project success.

Obtaining Small Farmer Involvement and Resource Commitment

We have found that small farmer involvement and resource commitment are key determinants of project success. This local action can be significantly advanced if project staff view small farmers as a vital and knowledgeable resource to be tapped and share with them information collection and decision-making responsibilities in project implementation. To this end, communication links should be established in the

design stage between data collectors and local leadership and organizations.

As small farmer perceptions and priorities (as they relate to project activities) are being fed into the project staff through such an information network, project activities must simultaneously be monitored. Data should indicate progress on all component parts of the project, including the "proving" of the recommended technology and its adaptation to local circumstances, use of extension methods to spread new agricultural knowledge, adequate provision of agricultural inputs, credit and credit repayment programs and marketing outlets. This data collection requirement and the data necessary to determine if the project is accomplishing its goals (and if, in fact, its goals will benefit small farmers) calls for an ongoing information system.

*Ongoing Information Systems in Support of Rural Development Projects*¹

An information system to provide ongoing data should be a part of the project beginning with the implementation phase. Such a system should include *monitoring, evaluation and diagnostic* services to improve project performance. It is particularly important to determine the incidence of project benefits. This can be accomplished through the development and use

¹ This is a very brief summary of a detailed analysis of ongoing information systems presented in Appendix Two.

of an indicator system with low-level staff collectors and project participants as primary data sources. Indicator systems require customization for each project; they should be cooperatively designed by project staff, participants and professional information specialists.

The size and sophistication of this system should depend on project complexity and scale; the system's sophistication should not exceed the capabilities of project staff to collect and analyze such data. From our review, we found that when no pressure or funds were being provided by the outside, the system was usually inadequate to meet the elementary needs of project staff. With outside funding and pressure, the results were frequently that a lot of data were being collected (sometimes at considerable expense) but little use was being made of the information.

Because they may not fully understand the reasons for an information system or how the results will be used, project staff and participants may not enthusiastically support data collection requests or promote the utilization of the data to influence policy decisions. The key is to convince potential collectors and users of the system that it will provide benefits rather than pose a threat. This is no easy task; however, it is easier to accomplish if the information system is developed in the early stage of the project design process.

Making Project Benefits Self-Sustaining

A special concern during the project implementation phase should be to make the benefit-generating activities of the project self-sustaining. Too often, we observed the "balloon effect," whereby the project steamed along so long as outside staff and funds were forthcoming but collapsed when they were withdrawn. We believe there are two avenues to making project benefits self-sustaining that should be pursued jointly. First, it may be possible to gradually reduce the cost of providing services by substituting local participants for expensive "outsiders". This calls for a training component so that at some specified time local leadership and capabilities can be developed and employed by the project. The time frame may be longer than one generation, as small farmers do not overnight turn into expert business managers; however, there are cases where gradual substitution of newly-trained and educated farmers, or members of their families, has significantly reduced the requirement for development assistance.

The second component in the move to self-sufficiency is a vehicle where the project can recapture some of the income benefits of the project. This generally is handled by a local organization which provides services to its constituents and charges for those services as the participants receive income benefits. Although a local organization may require

subsidies in early years, at some point in time it should be able to meet the expenses involved in providing extension, credit, inputs and marketing services, and charge participants for benefits received. This requirement in the process of implementation is one further argument for the utilization of local organizations as an integral feature of development projects.

SECTION F
IMPLICATIONS FOR AID AND OTHER MAJOR DONORS

In the above sections, we have identified critical factors and attempted to delineate a process which, if followed, will maximize the chances for project success. The purpose of this section is to be more pointed in terms of how this process relates to current AID (and other major foreign donor) approaches to project development and implementation. As an introduction, the following tables present an overview of the role of foreign donors in the projects we studied.

In this context, it is instructive to compare the performance of projects that have had a large dose of foreign government (national or international) funding in the early years of operation, with other projects. Table 1 presents details on how projects ranked on three of our measures -- Overall Success, Overall Local Action, and the Prospects of Becoming Self-Sufficient -- as well as the source and level of financing for each project

¹ For purposes here, three projects are excluded from Table 1. Two of these are the Agricultural Enterprise Promotion Program (PPEA) in Ecuador and the IBRD Agricultural Development Project in The Gambia, were irrigated rice projects. They were excluded because in our sample, we found that irrigated rice projects worked regardless of the process used in project design and implementation. The National Community Development Service (NCDS) in Bolivia was dropped because the large AID loan was extended many years after the project had been started and developed its own process for successful expansion.

TABLE 1 - SELECTED MEASURES FOR RURAL DEVELOPMENT PROJECTS WITH SOURCE AND TYPE OF FOREIGN DONOR ASSISTANCE

	Overall Success Score ¹	Overall Local Action Score ²	Prospects of Becoming Self-Sustaining Score ³	Sources of Foreign Funds	Government Projects Receiving more than \$1 Million in Grants or Loans from Public National or International Donors in First few Years of Project Operation
Uboma/Nigeria	1.854	1.650	1.435	Private Commercial	No
Tiv Bams/Nigeria	1.784	4.432	.727	None	No
IBRD/ADP/The Gambia	1.158	1.650	1.199	IBRD	Yes ⁵
DESEC/Bolivia	1.034	3.011	.963	Private Organization	No
PPEA/Ecuador	.983	-2.269	.727	AID	Yes ⁵
NTC/Nigeria	.969	2.601	1.671	Private Commercial	No
CREDICOOP/Paraguay	.659	1.776	1.435	AID	No
Biriwa/Ghana	.575	2.016	1.435	German Government	No
CHIRPP/The Gambia	.384	-1.052	-.924	Chinese (Taiwanese) Government	No
ARMDF/Nigeria	.327	-.412	.020	None	No
KTDA/Kenya	.316	4.107	.963	IBRD, CDC, Private Commercial	No
Lirhembe/Kenya	.306	3.527	.727	Private Charitable	No
Puebla/Mexico	.299	.270	-.216	Private Foundation	No
ASAR/Bolivia	.277	4.165	.256	Private Organization	No
NCDS/Bolivia	.043	1.536	.256	AID	Yes ⁵
Plan Maize/Mexico	-.029	1.344	-.452	None	No
ZTPP/Nigeria	-.050	-1.730	.727	Private Commercial, FAO	No
CAH/Paraguay	-.118	-1.594	-.216	None	No
CGPD/The Gambia	-.142	-2.204	.727	None	No
FECOAC/Ecuador	-.211	-.786	.020	AID	No
MRTC/Kenya	-.258	-.614	.020	Private Charitable	No
CSC/Ghana	-.299	-.478	-.688	Private Charitable	No
GG/FAO/Ghana	-.397	-1.120	-.452	FAO	No
Cáqueza/Colombia	-.419	-1.811	-.924	Canadian Government, AID	No
MVS/The Gambia	-.471	.064	-.924	Private Charitable	No
Vicos/Peru	-.769	-.234	-1.160	Private Foundation	No
MFC/The Gambia	-.800	-1.772	-.924	None	No
Denu/Ghana	-.852	-3.651	-.452	None	No
Tetu/Kenya	-.857	-1.973	-.924	None	No
Leribe/Lesotho	-.896	-.647	-1.396	FAO/UNDP	Yes
Cauca/Colombia	-1.058	-2.567	-1.160	AID	No
GGAP/Ghana	-1.219	-3.045	-1.632	German Government	Yes
Vihiga/Kenya	-1.230	-3.643	-1.396	AID	Yes
Thaba Bosiu/Lesotho	N.A.	-3.718	-1.637	AID, IBRD	Yes
Futuro/Colombia	N.A.	3.229	1.435	Private Charitable	No
ORDEZA/Peru	N.A.	-.060	.727	AID	Yes
Average ⁴	.027	.000	.000		

¹ Source: Column 5 of Table II-1, Volume I.

² Source: Column 5 of Table III-1, Volume 1.

³ Source: Column 4 of Table II-1, Volume 1.

⁴ For projects where data are available.

⁵ Project excluded from statistical calculations for reasons discussed in text.

N.A. = Not Available

In Table 2, the scores for projects receiving considerable foreign public funding in the early years of operations are compared with other projects. For all three measures, the average scores of the projects receiving large amounts of foreign funding in early years were significantly lower than the average scores of the other projects.¹

TABLE 2 - A COMPARISON OF AVERAGE PROJECT SCORES

	<u>Overall Success Score²</u>	<u>Overall Local Action Score³</u>	<u>Prospects of Becoming Self-Sustaining Score⁴</u>
Government projects receiving more than \$1 million in grants or loans from foreign public donors in first few years of operation ¹	-1.115	-2.222	-1.066
All other projects	.076	.364	.112
Average of projects included in the above comparisons	-.043	-.028	-.066

¹ Source: Column 5 of Table 1. IBRD/ADP, PPEA and NCDS excluded for reasons discussed in the footnote on page 41.

² Source: Column 1 of Table 1. IBRD/ADP, PPEA and NCDS excluded for reasons discussed in the footnote on page 41.

³ Source: Column 2 of Table 1. IBRD/ADP, PPEA and NCDS excluded for reasons discussed in the footnote on page 41.

⁴ Source: Column 3 of Table 1. IBRD/ADP, PPEA and NCDS excluded for reasons discussed in the footnote on page 41.

¹ t-ratios for the differences in means between the two groupings were -2.72, -2.37, and -2.60 for success, local action, and the probability of becoming self-sustaining, respectively. All three t-ratios are significant at the five percent level.

In short, the government projects included in our sample that received considerable funding in the early years of operation do not appear to be turning out well. One possibility is that serious deficiencies exist in the current design and implementation processes of AID and other large donors. In the following paragraphs, we give some thoughts on these deficiencies and suggestions for improvement.

The Time Constraint

Past behavior of AID and other large donor agencies suggests that time is a more serious constraint than the lack of funds. As we have demonstrated, good project design calls for a considerable knowledge of local circumstances, both technological and social, both static and dynamic. We also indicated that in successful projects, the small farmer is involved and local organizations are either brought in or developed at various project stages. All of these -- the acquisition of knowledge on local circumstances, the involvement of small farmers and local organizations -- take time. AID appears constrained as regards time for at least two reasons.

The first is the pressure to get annually appropriated funds committed to projects and spent. This objective, which seems to stem largely from the fear that Congress will reduce AID appropriations in following years if this year's funds are not committed, often seems to be given higher priority than concerns over whether or not projects will be successful. The second time pressure, as counterproductive as the first, is

the apparently felt need to demonstrate quick and broadly significant results.¹ Our work suggests that with abundant resources, it is not difficult to produce immediate results,² but usually this is accomplished at the expense of small farmers and local institutions and frequently leads to project failures. It is done at the expense of small farmers in the sense that immediate effects are easier to achieve through work with the larger, more progressive farmers. It causes the demise of local institutions that cannot compete with heavily subsidized project activities. It often leads to ultimate project failure because implementers often must impose a new system on a local area rather than go through the time-consuming process of working with local people and their leaders. We have alluded to the balloon effect once before: it is appropriate; once the external money stops and the foreigners pull out, the system or network made possible by the external funding collapses.

The Knowledge Constraint

A second reason why the large national and international donors score poorly on success in the types of development projects we examined is the belief of foreign and host government

¹ Other major national and international donor agencies appear susceptible to these same pressures, although for different reasons. While the largest donors do not run the risk of having their funds cut off if they are not committed, there is a pressure to "recycle" funds, and regrettably, the capability to generate sound development projects severely constrains the amount of funding that can be used for this purpose.

² In recent years, this has frequently been accomplished by providing subsidized fertilizer through subsidized credit programs and often by means of a subsidized distribution network.

staff members that they know what is best for small farmers. Even more serious is their unwillingness to enter into a meaningful dialogue with small farmers concerning their problems and how the project might assist them. Particularly in Africa, where the foreign degree and foreign expert are treated with undue reverence, it is time to set aside the notion that "educated" outsiders (even those with excellent technical qualifications) know all the answers to problems of low rural productivity. This attitude is reinforced when short-term consultants are brought in to provide project design or implementation assistance. While these people can be helpful in certain circumstances, it has been our experience that they are not a substitute for an information exchange between small farmers and project staff that truly operates in both directions. When such exchanges have occurred, the outside experts have usually admitted that they learned as much as or more than did the farmers.

Assumptions Regarding Small Farmer Behavior Changes

Directly related to the knowledge constraint is the failure of projects to define clearly what behavioral changes by small farmers are required if project activities are to succeed. Desired behavior changes must be defined at the start of project design, rather than "assumed" in design work, as was the case in several large donor projects. In contrast,

some projects funded by private commercial firms carefully spelled out behavior change requirements and entered into a dialogue with farmers to determine barriers to making changes and how to overcome them. Specification of what types of farmer involvement and resource commitment are needed is fundamental if a project is to achieve its objectives.

Restrictive Benefit Measures

Most large rural development projects relied on highly restrictive benefit measures: some used cost/benefit ratios exclusively, others focused on cost per participant, and still others measured aggregate output for the area as a whole or assessed factors such as the repayment rates on loans extended. Frequently, such limited benefit measures become ends in themselves. They limit the project staff to seeking results prescribed by these indicators. More broadly defined success measures could provide the incentives needed to prod the project staff into thinking in terms of how a project might build self-help capabilities, increase agricultural knowledge and promote self-sufficiency as external funds are withdrawn. When these measures are introduced into project analysis, there is the possibility that more projects might begin to deliberately involve the local population in decision-making and resource commitment. Using at a minimum the success measures we have defined and evaluating AID projects by these measures would, we believe, constitute an improvement over present evaluation procedures.

The Need for Ongoing Information

Assuming that a project staff is committed to monitoring, evaluating and readjusting project approaches to improve results, there is also a need for a continuous flow of specified information, a system of analysis and a method of moving from recommendations of the planning and evaluation units into project revision. Insofar as we could determine, there are few if any ongoing information systems of this sort presently in operation. It is time AID made provision for experimentation with low-cost indicator systems; once the findings are in, provision should be made for such systems in all AID-sponsored projects -- information to support the daily operations of the project, as well as to track success and to recommend adjustments to existing approaches.

The Need for Flexibility

Information, good intentions and local action will not save a project locked into a rigid and poorly designed format. Flexibility is required, not to change overall objectives but to change approaches, organizational vehicles, methods of extension and adaptive research until solutions to problems are found which are proven and accepted by small farmers in the area. Because of the manner in which projects are funded, or perhaps more because of an internal dynamic which overtakes large projects with many foreign experts, it is difficult to change directions, even in failing projects.

We believe that if post-mortems were conducted, the inability to listen, to involve, to obtain resource commitments and to change project design would explain many of the shipwrecked development projects which have been initiated in the Third World.

Certainly, one clear message comes out of this that bears directly on AID and other donor project justification procedures. Far too much time and paper is devoted to detailing exactly how a project is going to operate throughout its lifetime. The detailed cost-benefit work on how each project component will operate turns out in retrospect to be meaningless. While it makes amusing ex-post reading, it frequently has the negative impact of freezing in a project design that simply has no chance of working.

The Most Valuable Message

One point comes out of our work that is of such importance as to warrant frequent repetition. The most valuable assistance a foreigner can give small farmers will rarely be large amounts of money for machinery or infrastructure development. Rather it is a plan, based on the realities of the small farmer's own situation, whereby he can move himself ahead without becoming dependent on outside foreign assistance.

General Conclusion

Our general conclusion, and indeed the one to which our research is addressed, is that getting the benefits of development to the small rural producer in a manner which can become self-sustaining will require fundamental changes in the project identification, design and implementation procedures of AID and other external assistance agencies. Projects have failed frequently in the past because of mistaken conceptions or inadequate information on the small farmer's priorities and the alternative mechanisms by which they might be realized. Regrettably, these are not things an outsider can uncover in the short time frame during which external assistance projects are usually generated. It calls for a detailed knowledge of the thinking processes and behavior of the small farmer and it requires the small farmers's trust; these things take time to develop.

Gone should be the initial ten-day, ten-man expert team that flies in, around and out of a country to identify projects consisting of more than ten million dollars. Gone should be the amazingly detailed 150-page reports which specify exactly the procedures and steps to be taken when the project is implemented. Gone should be the extremely long and detailed outside evaluation of projects based upon the inputs used, construction completed and money spent. In its place should be a healthy appreciation for the perceptions, interests and risk considerations of small farmers.

At this point, a fundamental question needs to be addressed given the constraints under which large donor agencies operate, is it reasonable to think they can carry through on the process we have outlined to design and implement projects for small farmers? This is not a question that can be answered at this point in time, for only now is there growing awareness that the traditional procedures are not adequate.

In recognition of the time, knowledge and procedural constraints under which large donor agencies operate, we offer several possible approaches that are consistent with the process we have outlined that these agencies might follow.

One possibility would be to take an "organic" approach to project development. This would involve identifying a very simple activity that would clearly be of assistance to small farmers.¹ The first year or two of the project (during implementation of the initial project objective) would be used to determine what might further be done to involve and benefit the small farmer. Although the approach calls for individual attention to the needs of each local area (to insure that relevant local constraints to the adoption of new technology are overcome), it does not prevent national or regional programs from being developed and implemented. For example, there is no *a priori* reason why this approach could not be attempted

¹ A warning note should be inserted here: our study suggests that this in itself is no easy task.

simultaneously in a number of separate geographic locations in a country, since it is the process by which project activities are designed and introduced at the local level which are critical to success rather than the number of localities being assisted by a small farmer development program.¹

A second possibility is to assume that large donor agencies, because of constraints imposed by operating procedures and external pressures, are unable to be effective directly in the design and implementation of projects in accordance with the patterns suggested by our findings. This would suggest that the attention of the donor agencies might better be focused on identifying or creating and supporting smaller institutions operating in developing countries that are in a better position to follow the process we have outlined, and in so doing, operate as intermediaries for the large donors. It may be that this will require as dramatic a change in the operations of large donor agencies as would be necessary for them to follow the process we have outlined directly. However, we see no choice other than these two alternatives, if large donors truly wish to help small farmers.

¹ Of course, this process does require high-caliber people -- both locals and outsiders -- and this can and does serve as a real bottleneck to the development and implementation of good projects.

ANNEX A

PROJECTS INCLUDED IN THE STUDY

	<u>Project</u>	<u>Type</u>	<u>Sponsor</u>
AFRICA			
<u>GAMBIA</u>			
B-2	Chinese Irrigated Rice Production Project, Upper River Division	Crop-specific	Taiwan
B-12	IBRD Agricultural Development Project, MacCarthy Island Division	Irrigated Rice Production, with component for designing an integrated agricultural development project	IBRD; government of The Gambia
B-22	Mixed Farming Centers (nationwide)	Farmer training and extension follow-up with the use of para-professional workers	Government of The Gambia
B-31	Mixed Vegetable Scheme, Western Division	Introduction of onion production and the creation of women's farmer associations	Government of The Gambia; Gambia Cooperative Union; Freedom from Hunger
B-40	Confectionary Groundnut Package Deal, Western Division	Crop-specific innovations through the cooperative movement	Gambia Cooperative Union; government of The Gambia
<u>GHANA</u>			
C-2	Christian Service Committee's Agricultural Program, Northern and Upper Regions	Introduction of simple technological innovations through agricultural stations	Christian Council of Gambia; World Council of Churches
C-15	Ghanaian-German Agricultural Project, Northern and Upper Regions	Fertilizer distribution evolving into an effort to help small farmers	West German government; government of Ghana
C-24	Ghanaian Government/FAO Fertilizer Use Project, Volta Region	Cooperative development, and the introduction of improved maize seed and fertilizer use	UNDP/FAO; government of Ghana

Page No.	Project	Type	Sponsor
GHANA (Cont'd)			
C-31	Biriwa Development Project, Cape Coast Area	Development of fishing village through commercial and community development activities	West German government; government of Ghana
C-38	Denu Shallots Project, Denu District, Volta Region	Short-term and medium-term credit for expanding shallot production	Local Cooperative; Agricultural Development Bank of Ghana
KENYA			
D-2	Vihiga Special Rural Development Program, Western Province	Integrated rural development program	USAID; government of Kenya
D-11	Tetu Special Rural Development Program, Central Province	Experimental agricultural extension project to reach less-progressive smallholders	University of Nairobi; government of Kenya
D-20	Lirhembe Multi-Service Cooperative, Western Province	Agricultural and social development project in a small geographic area initiated by local Member of Parliament	NOVIB, Dutch charity organization; government of Kenya
D-31	Kenya Tea Development Authority, Highland areas	Government-controlled commercial effort to expand production by small farmers	Government of Kenya; British Commonwealth Development Corporation; IBRD/IDA
D-43	Maasai Rural Training Centre Kajiado District	Improve cattle production practices, training of Maasai, and establishment of commercial activities	National Christian Council of Kenya

<u>Project</u>	<u>Type</u>	<u>Sponsor</u>
LESOTHO		
E-2 Thabu Bosiu Rural Development Project, Thaba Bosiu District	Intensive effort to improve agricultural production, rural infrastructure and conservation practice	IBRD/IDA; USAID; government of Lesotho
E-12 Leribe Pilot Agricultural Scheme, Leribe District	Experimental project to develop technological packages and approaches to improve agricultural production, for replication in other parts of Lesotho	UNDP/FAO; government of Lesotho
NIGERIA		
F-2 Abeokuta Rice and Maize Development Project, Western State	Introduction of improved inputs, including mechanization, through farmer groups	Western State and Federal Ministry of Agriculture; FAO and USAID in earlier stages
F-13 Nigerian Tobacco Company, Western State	Introduction of flue-curing through Farm Family Units	Nigerian Tobacco Company, British American Tobacco Company
F-23 Zaria Tomato Production Project, North Central State	Irrigated tomato production, introduced through farmer associations for commercial processing	North Central State Government; FAO; Cadbury, Ltd.
F-32 Tiv "Bams" and Farmers' Association, Benue Plateau State	Indigenous small farmer savings/credit program	None
F-42 Uboma, East Central State	Integrated rural development project	Shell-BP Nigeria; East Central State Government

<u>Annex No.</u>	<u>Project</u>	<u>Type</u>	<u>Sponsor</u>
LATIN AMERICA			
<u>BOLIVIA</u>			
G-2	DESEC, Center for Social and Economic Development (nationwide)	Promotion of rural base institutions and rural assistance agencies which sponsor income-generating projects by small farmers	MISERIOR (German Catholic Bishops); OXFAM; other private European donors; Inter-American Foundation
G-15	ASAR/ARADO Potato Production and Seed Improvement Project, Cochabamba	Promotion of yield-increasing potato technology on a risk-sharing basis with organized small farmers	Association of Artisan and Rural Services (ASAR), agency of DESEC; MISERIOR
G-24	National Community Development Service (NCDS) (nationwide)	Community development in the rural sector	National Community Development Service; government of Bolivia; USAID
<u>COLOMBIA</u>			
H-2	Cáqueza Project, ICA Rural Development, Eastern Cundinamarca	Pilot project to adapt high-yield crop technology to small farm requirements	Institute of Colombian Agriculture (ICA), USAID
H-17	ICA Rural Development Project for Northern Cauca, Valle de Cauca	Pilot project to adapt high-yield crop technology to small farm requirements	Institute of Colombian Agriculture (ICA); USAID
H-28	Futuro Para La Ninez (Futures for Children), Antioquia	Community development program promoting self-help projects which benefit children	Futuro Para La Ninez; government of Colombia (Ministry of Health)

<u>Project</u>	<u>Type</u>	<u>Sponsor</u>
<u>ECUADOR</u>		
I-2 Agricultural Enterprise Promotion Program (PPEA), Guayas Basin	Production and infrastructure development credit for agricultural cooperatives	Financial Funds Department, Central Bank; USAID; National Development Bank (BNF)
I-14 FECOAC Directed Agricultural Production Credit (nationwide)	Directed agricultural production credit to small farmers	FECOAC; Cooperative Bank; USAID
<u>MEXICO</u>		
J-2 Plan Puebla, State of Puebla	Pilot project to adapt modern corn technology to small farm requirements in dryland regions	International Maize and Wheat Improvement Center (CIMMYT); Rockefeller Foundation
J-17 Plan Maize, State of Mexico	High-yield corn production credit program	State of Mexico, Department of Agriculture and Livestock Development (DAGEM)
<u>PARAGUAY</u>		
K-2 CAH Associations of Agricultural Credit Users	Technical assistance, credit, and group marketing project with organized small farmers	Caja Agraria de Habilitacion (CAH); government of Paraguay
K-12 CREDICOOP Directed Agricultural Production Credit	Directed agricultural production credit to small farmers	CREDICOOP; CUNA; USAID
<u>PERU</u>		
L-2 The Community of Vicos, Department of Ancash	Community development and rural modernization via democratic institution-building in an indigenous society	Cornell University; Peruvian Indigenous Institute
L-14 ORDEZA/RDD, Rural Enterprise Development, Huaraz, Department of Ancash	Planning, construction and financing of income-generating projects in rural communities	Rural Development Division of the Peruvian Earthquake Relief Agency; government of Peru, USAID