FINAL PROJECT REVIEW

OF THE

COOPERATIVE AGREEMENTS ON

ALTERNATIVE RURAL DEVELOPMENT STRATEGIES

MICHIGAN STATE UNIVERSITY

AID/ta-CA-3 and DAN-1190-A-00-2069-00

1977-1984

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PREFACE

This report constitutes a final external review of the Alternative Rural Development Stategies project carried out by Michigan State University between 1977 and 1984 under two cooperative agreements with AID. The review has three purposes: 1) to describe the evolution of the Strategies project; 2) to assess the extent to which knowledge generation and knowledge dissemination occurred as a result of the project; and 3) to consider what the project suggests about the performance and utility of the cooperative agreement mechanism for knowledge generation and diffusion.

The report is based on a thorough review of the written output of the Alternative Rural Development Strategies project and a site visit to Michigan State University in East Lansing, June 18-21, 1985. A list of individuals consulted appears in Appendix A. We are appreciative of the time, effort, and cooperation of the professional and support staff at Michigan State University in facilitating this review. Carl Eicher, Michael Weber, and Janet Munn of MSU and Thomas Mehen of AID were especially generous in sharing insights and suggestions with us and were refreshingly candid about the trials and tribulations experienced in the project, particularly in its early years.

CONTENTS

EXECUTIVE SUMMARY AND RECOMMENDATONS

The Alternative Rural Development Strategies project was a well-managed and productive cooperative agreement. A number of significant achievements can be credited to it. The project brought together a core group of experienced professionals in rural development and also established an on-going working relationship with a large number of academic consultants. It proved to be responsive to the concerns of AID/Washington and its field missions. Strategies is responsible for producing influential state-of-the-art papers and monographs. In particular, the project produced materials of practical utility for field researchers and practitioners and legitimized important themes and methodologies for rural development research. Moreover, it trained a large number of students in development work, many of them from developing countries. These activities have been important in building new capacity for research, analysis, and rural development problem-solving as well as for generating social science knowledge and diffusing it widely for use in academic and applied situations. The project is notable for the "multiplier effects" of its knowledge generation and dissemination efforts.

The experiece of the Strategies project indicates that the cooperative agreement mechanism can be productive in responding to AID needs, producing quality research, providing technical assistance, building human and institutional capacity in international development, and disseminating ideas about approaches to development problems. The history of the project suggests that AID investments in cooperative agreements can provide important dividends when they:

- fit into a broad and long-term commitment to international development at a university;
- coincide with an existing research and technical assistance commitment of a department or institute within a university;
- are staffed by individuals who are familiar with AID structures, procedures, needs, and projects.
- are supported by project officers in Washington who have substantive commitment to their research focus and who are familiar with both AID and university administrative practices.
- proceed in an atmosphere of reasonable tolerance for the differing institutional needs and perspectives of AID and the university.

It would be inequitable to suggest that cooperative agreements should be restricted to institutions that can demonstrate the characteristics mentioned above. Nevertheless, it is important to emphasize that the particular institutional context within which a cooperative agreement is carried out does have important ramifications for how a project develops over time. In the design of future cooperative agreements, AID should consider how characteristics of particular institutions will affect the overall performance of a project. The Agency should assess such things as an institution's ability to work productively with "soft" money, the adaptability of its professional career system to project work, and its prior experience with AID. In some cases, special efforts may be needed to ensure that cooperators have an opportunity to "learn the ropes" of collaborating with AID and that they introduce policies and practices enabling them to respond effectively to AID needs.

In addition to its institutional context, the management strategies pursued in the MSU cooperative agreement were important for the evolution of a productive relationship between AID and the university. Project management: 1) attempted to concentrate its resources in a few countries; 2) maintained highly qualified core staff while drawing in large numbers of other individuals for specific assignments; 3) used the lessons of experience to chart new directions for research; 4) emphasized activities in which universities have comparative advantage; 5) encouraged quality research products and disseminated them broadly; 6) exerted considerable energy in creating a supportive environment for the project and in maintaining its visibility; 7) placed high priority on being responsive to AID needs; and 8) employed a skilled administrative assistant who had developed expertise in AID and university structures, regulations, and procedures. These practices should be adopted by managers of all cooperative agreements.

Among the other lessons that can be extracted from the Strategies project are those that indicate: 1) how AID and the universities can cooperate more effectively; 2) how reasonable expectations about the trials and tribulations of the relationship can be maintained; 3) how recurrent problems can be minimized; and 4) how multiplier effects can be encouraged in knowledge generation and dissemination. In the design of future cooperative agreements within AID, the following recommendations should be considered.

Cooperating Effectively

The structures, schedules, and timeframes of universities can make it difficult for them to work effectively with "soft" funding or to respond in timely fashion to AID needs. The example of the Strategies project suggests that universities can be more responsive to AID needs when the cooperative agreement mechanism is structured to take their institution building and maintenance needs into consideration. Among the alternatives for AID consideration are the following:

- AID should consider developing more university-based projects with a term of at least five years.

- AID should consider funding particular projects for a period of eight to ten years with a "retainer" that allows universities to maintain core and support staff and make advance commitments to graduate students.

- AID should consider university-based projects with a rolling five year plan in which planning for year six is initiated in year two, year seven in year three, etc.

In return for enabling the universities to operate more securely with "soft" money, AID should expect the universities to develop incentive systems for faculty and student involvement in development work and to structure staff commitments so that qualified individuals can be more readily available for mission-related work abroad on short notice. For their part, universities must be entrepreneurial in attracting funding for international projects so that they can expand and maintain expertise in the field of development. Among the alternatives that universities should consider are the following:

- Universities should consider alternative institutional arrangements such as an institute model with a separate career system that can combine multidisciplinarity, responsiveness to short-term mission needs, and commitment to research and teaching through formal links to the university.

- Universities should diversify their portfolios of projects and funding sources so that they can build up their capacity in development and remain flexible in responding to changing development agency priorities.

Developing Reasonable Expectations

AID and the universities have different objectives in entering into cooperative agreements and they have different institutional needs to satisfy through them. Cooperative agreements should be entered into with a set of reasonable expectations about what is feasible and what tensions and problems are likely to arise in the relationship. The history of the Strategies project suggests that among reasonable expectations about the relationship are the following:

- It should be expected that the first year of a project may entail considerable start-up costs that will cause delays, lack of focus or direction, or misunderstandings. These problems frequently emerge because of delays in hiring staff, appointing an AID project officer, negotiating more specifically the focus of the agreement, finding missions interested in the project, learing and setting up administrative systems, and learning to live together amicably.

- It should be expected that personnel changes will occur in AID and that as a result, priorities will change, even abruptly. Universities can adapt to these changes, but both AID and the cooperators should expect to experience some floundering around, renewed negotiations, and frustrations until a mutually agreed-upon focus is determined. Universities should develop long-term research agendas that are broad enough to survive changes in priorities. At the same time, AID must remain aware of the sunken costs of commitments to particular areas of study and the frustrations that are generated by changing priorities and that can make amicable relations difficult.

- Broadly defined subject areas can lead to significant payoffs in terms of knowledge building and dissemination. They can be particularly fruitful in terms of the flexibility they provide to pursue unexpected avenues of inquiry that emerge in the course of research. However, when the terms of reference are broadly defined, the start-up period is likely to be longer than when very specific projects are implemented. AID and the cooperators should develop reasonable tolerance for the initial lack of focus when broadly defined projects have considerable promise for future payoffs.

- Academics are generally research oriented; field missions tend to emphasize immediate needs for practical assistance in project design, implementation, and evaluation. It is reasonable to expect tension within a cooperative agreement over this issue. AID and cooperators should discuss individual activities in terms of the comparative advantage of universities and consulting firms. Nevertheless, universities involved in cooperative agreements should expect to do a certain amount of short-term consulting and should staff their projects accordingly.

- While universities and AID can apply reasonable standards of judgement about which activities they should pursue, it is reasonable to expect that some "dry holes" are probably inevitable. At best, they should be mined for the lessons they can provide about future activities.

Minimizing Recurrent Problems

The Strategies project makes clear that a number of problems tend to recur within the life of a particular project. These often relate to the frequency of personnel and priority change in AID, reporting requirements, and the appropriateness of the products of university research for AID. The Strategies project review indicates that there are ways of minimizing a number of recurrent problems that tend to develop. In the design of future cooperative agreements, mutual accommodation

between AID and the universities can be increased if the following recommendations are adopted:

- Project officers should be assigned for a minimum of two to three years to monitor the same project.
- Project officers should be familiar not only with the AID administrative system but also with the modes of operation of universities.
- Project officers should have considerable knowledge about the subject matter of the project they oversee for AID and commitment to pursue knowledge generation and dissemination in that subject.
- Travel to the university and to project activities abroad should be facilitated for project officers.
- Project staff at the university should develop expertise in AID procedures, requirements, and administrative systems. An administrative assistant experienced in the management of AID-funded projects should be hired; alternatively, considerable time and effort should be devoted to training an administrative assistant for work with AID.
- AID and cooperators should clarify and stabilize reporting requirements.
- Project staff should recognize AID's need for visible products of research and should keep the Agency informed of important findings from on-going research projects.
- Project staff should seek to ensure that bureaus and missions are familiar with the objectives and capabilities of the project. Attendance at regional meetings of mission directors and program officers is one cost-effective mechanism through which this can occur.

Encouraging Multiplier Effects

The Strategies project indicates the large number of ways in which knowledge is generated and disseminated under a cooperative agreement arrangement. Many such activities have beneficial multiplier effects in terms of their influence on the theory and practice of development policies, programs, and projects. AID should seek to encourage the multiplier effects of cooperative agreement activities. The experience of the Strategies project indicates that to increase returns on its investment in the knowledge generation and dissemination potential of cooperative agreements, AID should adopt the following practices:

- AID should stress the importance of knowledge generation and dissemination efforts that have large multiplier effects. The experience of the Strategies project indicates that in the design of new cooperative agreements, AID should emphasize the following activities: 1) training graduate students, both American and foreign; 2) involving more than one cooperative agreement in the same research or technical assistance project; 3) encouraging the involvement of AID officials in mid-career or degree programs in the universities; 4) using cooperator staff as trainers in AID workshops and presenters at AID meetings and conferences; 5) funding ample dissemination of important research results; and 6) funding cooperators to attend professional meetings, conferences, and seminars where their presence can have significant impact on proceedings.

- AID should recognize the importance of write-up time for academic specialists and for synthesizing the results of research projects. Contractual arrangements should incorporate funding and time for this period of writing and reflection.

- Evaluations of projects designed for research and technical assistance should consider the multiplier effects of the work undertaken as well as the concrete work products that are produced.

- AID project monitors should pay particular attention to screening research and technical assistance opportunities that emerge from missions in order to discourage work that has a high probability of resulting in "dry holes."

- The Strategies project developed a ratio of core funding to mission add-on funding of roughly 1:1. Mission add-ons are an effective way of involving university based researchers in the field and in providing them access to "real world" aspects of development project design and management. The 1:1 ratio appeared to be an effective means for encouraging university commitment to field related work and for ensuring that senior level professionals would spend substantial amounts of time in the field. This ratio might serve as a goal for similar types of cooperative agreements.

Universities should also consider ways to expand the multiplier effects of their knowledge generation and dissemination efforts. Review of the Strategies project indicates that among the practices they should adopt are the following:

- Universities should emphasize the involvement of graduate students in their research projects and should facilitate the incorporation of AID officials in mid-career and degree programs.

- Universities should be active in bringing new people into their research efforts to complement the work of core staff.

- In their research work, universities should encourage interaction among professional staff to discuss important consistencies and anomalies in research findings, debate differences in perspectives and methodologies, and consider important unanswered questions that emerge in the course of research.

- Universities should present the results of their research in a variety of formats to reach different audiences. Their dissemination efforts should regularly include brief executive summaries of longer publications. These should be sent to interested people and institutions as a matter of routine. In addition, brief "press release" type information about project work should be sent to high-level officials in AID/Washington and elsewhere.

- Universities should seek opportunities to collaborate with other cooperators in research and technical assistance. They should also seek opportunities to interact frequently with AID staff in Washington and abroad.

- Universities should encourage project staff to devote time to producing work that is suitable for peer-reviewed academic journals and books. This is the "final step" in disseminating research results and should be emphasized as a measure of the quality of work produced.

Conclusions

The cooperative agreement mechanism itself cannot guarantee that diverse AID and university needs will be met or that high quality research and technical assistance will be forthcoming. However, the Strategies project indicates that it has considerable potential as an instrument for building a long-term, productive relationship between AID and the universities. The cooperative agreement mechanism can result in very positive benefits to both, especially when reasonable expectations exist about the tensions and problems that can occur and there is commitment to resolving such issues as they arise. AID and the universities can adopt measures and practices to increase the payoffs to investments in knowledge generation and dissemination and to improve the functioning of cooperative agreement projects. They should do so. They should also continue to appreciate the valuable--albeit imperfect--relationship that can be forged between AID and the universities through the cooperative agreement mechanism.

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I. INTRODUCTION

The Alternative Rural Development Strategies project was initiated on September 21, 1977 through a cooperative agreement established between AID and Michigan State University (AID/ta-CA-3). The purpose of the project, as indicated in the Basic Memorandum of Agreement, was to "enhance the ability of LDC institutions and AID Missions to develop and implement national and regional rural development strategies, policies, and programs that promote increased productivity, income, and welfare of the rural poor." The project, initially scheduled to end in 1981, was first extended to 1982 and then incorporated into a new cooperative agreement for the period 1982 to 1984 (DAN-1190-A-00-2069-00). Over the period of the two agreements, the project provided research and technical assistance for a total of $1,686,973 in core funding and $1,346,982 in twenty-seven amendments for specific mission add-ons.

The Strategies project was one of the first cooperative agreements established between AID and U.S. universities. In the mid 1970s, AID developed this mechanism to increase access to the universities' research and knowledge generating capacities because it was believed they could be systematically applied to the solution of complex social, economic, administrative, and technological problems in the developing world. In addition, AID sought to make highly trained experts in specific subjects available to its field missions for technical assistance. For their part, the universities welcomed the opportunity to develop and pursue long-term research agendas in developing countries and to become engaged in the solution of important development problems. The cooperative agreement mechanism has been used in a number of ways in the ensuing years to meet a variety of AID and university objectives and it has demonstrated its capacity to generate quality research and advance the state-of-the-art in development (see Cohen, Grindle, and Thomas, 1983).

In the case of the Strategies project at Michigan State University, AID invested in a particular research and technical assistance focus, but also in a longer-term process of knowledge generation, capacity building, and dissemination. In fact, the project was so much a part of a longer-term commitment to international development at MSU that its accomplishments are difficult to separate out from accomplishments of prior, coterminous, and succeeding activities at the university. Although "messy" from the perspective of project evaluation, this situation generated important payoffs to AID and the university. This report will explore the implications of that investment for the process of knowledge generation and dissemination and reflect on the ways in which universties contribute most effectively to international development through research and technical assistance relationships with AID.

II. EVOLUTION OF A PROJECT

A. The Context

The Strategies project was initiated at a university that had a long-established commitment to international development. From the early 1950s, MSU was involved in agricultural research and extension activities abroad. An important institutional effort was initiated in 1957, when an internal report recommended that MSU develop a position of leadership in teaching, research, and institution building in developing countries. The report provided substantive direction for President John Hanna's commitment to developing areas and was instrumental in the creation of the position of Dean for International Programs.

Institution building was a major focus of MSU's international activities in the 1960s. One of the university's early projects was its collaboration with the University of London in the establishment of the University of Nigeria; between 1960 and 1966, 85 MSU faculty members from a variety of disciplines were attached to the new institution, usually for two year assignments. When the Biafran War made continued work in Nigeria impossible in 1966, MSU faculty returned to East Lansing, having experienced first-hand the complexity and frustrations of the development process. In terms of its own institution building process, separate centers for Asian, African, and Latin American Studies were established in East Lansing in the early 1960s, as well as a Center for International Programs and an Institute for International Agriculture. A large number of students from developing countries were enrolled at the university and, over time, a significant library collection was organized around a thematic focus on development issues. The university also gradually introduced incentives to encourage faculty and students to devote themselves to the study of major development issues.

Within this broad context, the Department of Agricultural Economics—where the Strategies project was centered—accumulated important experience in development-related work. Department members played key roles in helping establish the University of Nigeria and encouraging it to adopt a technical and practical orientation toward education. In 1965 and 1966, they helped establish the Economic Development Institute there. In the late 1960s, faculty in the department became engaged in research on rural employment in Africa. Then, with assistance from the Ford Foundation and AID, the Africa Rural Employment Network was established in 1970 as a means of encouraging communication among researchers and particularly for increasing links among African scholars. Also in 1970, the department received a 211-d grant from AID to strengthen graduate training, research, and technical assistance in international development.

As part of its research portfolio focusing on Africa, the Department of Agricultural Economics initiated an AID-funded investigation of rural employment problems in the early 1970s, which included the important research on off-farm employment by Carl Leidholm and Enyinna Chuta. Concern about

drought in West Africa then encouraged a broader research agenda for the Sahel region. As part of this concern, the department—again with AID funding—initiated the Sahel Documentation Center in 1975 to collect and disseminate research on rural development in the region. A master's level program for Sahelian students was introduced in 1976. Continued interest in the issue of off-farm employment led to a data collection project on poor rural households. Extensive research on integrated rural development was carried out in Eastern Upper Volta between 1976 and 1980.

The department also developed experience in Latin America, particularly in the area of agricultural marketing. Between 1966 and 1974, members of the department were involved in the Latin American Market Planning Network that included seven countries in the region, among them Colombia, Bolivia, Brazil, and Costa Rica. The department's interest in institution building was pursued through work with the Ministry of Education in Brazil between 1975 and 1980, in a project to develop a curriculum appropriate to the study of agriculture at the university level. In Asia, members of the department were involved in the Comila Rural Development project in East Pakistan and later with a large sector simulation study in Korea.

These experiences were important for the Alternative Rural Development Strategies project. First, it meant that members of the Department of Agricultural Economics had served abroad and had developed expertise in small farmer production and marketing systems; they also had considerable exposure to the practical problems of data collection and management in developing countries. By 1977, then, there existed a corps of experienced professionals in rural development within the department. These individuals defined their intellectual commitments and career goals in terms of the application of social science knowledge to the problems of development. Second, prior experience meant that professional staff was intimately knowledgeable about the problems of development in several countries and regions. The staff had also developed extensive networks with researchers and practitioners concerned about similar issues and countries and who shared common experiences.

Third, individual faculty members and the department as a whole had already developed a long-term relationship with AID. They knew its personnel, interests, procedures, and needs in the field of rural development and they had worked intimately in the process of project development and evaluation with the Agency. From the early 1970s, the department had developed a large portfolio of AID projects. When the Strategies project was initiated, the department was then involved in five major AID contracts (over $100,000) and six minor ones (under $100,000). While the project was being carried out, eight other projects of varying size were initiated with AID. The relationship with AID encouraged both parties to discuss and agree upon the broadly defined subject area that initially characterized the Strategies project and also encouraged a constructive response on the part of MSU when the research agenda for the project was altered significantly in 1978 and 1979 (see section II-C). Past association meant that AID officials were willing to "trust" MSU professionals with a broad research agenda, while MSU was

oriented toward "weathering the storm" of changing AID priorities and personalities.

Fourth, the long experience with development work had encouraged the Department of Agricultural Economics to develop incentives for overseas work for its faculty members and students. In contrast to practice in many universities, for example, junior faculty members did not risk being forgotten in salary review and promotion processes if they accepted a long-term assignment overseas or became heavily involved in shorter-term work abroad. The department developed salary and promotion practices that gave ample consideration to work in the field, that acknowledged the importance of the reports and papers written for missions and departmental series, that involved project managers in the review of professionals assigned abroad, and that encouraged those with a domestic U.S. focus to accept occasional short-term assignments in developing areas. By the 1980s, it had become accepted practice for the department chairperson to visit personnel assigned abroad annually in order to maintain contact with the careers and experiences of those absent from East Lansing for significant periods. Over a period of years, the department's involvement with projects abroad encouraged it to hire and promote individuals with interest in development issues, an approach shied away from by many departments because of the insecurity associated with "soft" money projects. By the mid 1980s, the department had filled 12-14 full-time equivalent positions for work in development; these positions were distributed among tenure and non-tenure track professionals at the level of full professor, associate professor, and assistant professor. A large cadre of graduate students was also involved in development work.

In summary, there were good reasons to expect that the Alternative Rural Development Strategies project would result in significant returns on AID's investment. The investment was making available to the Agency a history of institutional, departmental, and individual commitment to work in international development and experience in responding to the needs of AID. Those involved in initiating the cooperative agreement in AID and at MSU knew each other well, and for AID there was the initial assurance of a proven track record and a strong institutional base. The Department of Agricultural Economics was therefore a logical place for one of the first cooperative agreements between AID and a university.

B. Initiation of the Project

The Alternative Rural Development Strategies project was initiated as a result of discussions between AID and MSU about the context within which rural development projects are carried out. The agricultural economists at MSU considered the integrated rural development projects that emerged in the 1970s to be successors to earlier national strategies for rural development, such as the community development strategy of the 1950s and 1960s. They were concerned to explore the historical record of major rural development experiences—China, India, and Tanzania were of particular interest—in order to gain insight into the lessons that could be applied to

integrated rural development. With knowledge of the historical experience, they reasoned, rural development experts could help design more effective programs and projects. The project paper made the link between national strategies for rural development and the experience of particular programs and projects. Broadly conceived, then, the project was concerned with the political economy within which rural development projects unfold.

These ideas, largely initiated at MSU, found a receptive audience in the Development Support Bureau of AID (the predecessor to the Bureau for Science and Technology), which at that time was experimenting with a new arrangement for contracting with universities for knowledge generation and technical assistanace. For its part, AID thought MSU professionals would be useful to the missions in conceptualizing and writing Country Development Strategy Statements (CDSS), project papers, and similar work. The agreement obligated $469,000 in core funding for the four-year project, an amount that was eventually expanded to $1,201,973 through amendments to the core amount. Mission add-ons totaled $841,000 over the life of the first agreement. As originally designed, the project promised state-of-the-art papers, three regional conferences to present and review a major state-of-the-art paper, four detailed case studies of rural development strategies in selected countries, workshops to review the case studies, consulting with missions and developing country governments, applied research, and the dissemination of knowledge through a variety of mechanisms—publications, seminars, networks, and a South-South dialogue. The Strategies project was to provide for three person-years of work annually on these outputs and the project team was put together with Carl Eicher (project manager), Akhter Hameed Khan, and Benedict Stavis—the presence of the latter two made possible by the cooperative agreement. Kann, who had been a visiting scholar at MSU under a Ford Foundation grant in 1958, was expected to provide intellectual vision to the project and to produce important insignts into the Indian experience in rural development. Stavis, a political scientist, was to provide intellectual guidance about the Chinese experience in rural development.

The early months of the project involved considerable start-up costs as the project team grappled with defining its research agenda, exploring possibilities for case study research, and discovering unanticipated difficulties in turning a broad topic into a significant state-of-the-art paper. After a year of effort, the planned identification of applied research countries had not materialized. A conference on Extension Delivery Systems was held in Washington, D.C. in June of 1978, but plans for three other conferences were scrapped when the initial state-of-the-art paper was not produced. Consultancies did not reach the level projected, although a roster of consultants was delivered to AID. A work plan, produced in March 1978, was not approved by AID and there were considerable differences of opinion about the contents of an appropriate research agenda. At the same time, however, work was undertaken on three papers that were later published as part of MSU's Rural Development Series and that were important for indicating the initial intellectual orientation of the project. Significantly, these

papers have been influential in the discussion of the political economy of rural development since that time (see Kahn, 1978; Stavis, 1979b; Holdcroft, 1978). Overall, this early period can be characterized as one of searching about for a concrete research focus, grappling with the problems of pursuing multidisciplinary work, and attempting to meet the expectations generated by the initial scope of work.

C. Crisis and Reconceptualization

Before the project could proceed further with its idea of exploring a series of alternative national strategies and their impact on projects and programs, the leadership of the Office of Rural Development changed and the new office director, oriented toward the needs of field missions for consultancies and technical assistance, insisted that the Strategies project define a new, more specific research agenda. At the same time, outside consultants were excluded from participating in CDSS exercizes by AID. The period from mid 1978 through 1979 is therefore characterized by considerable disorientation and disillusion among project participants. Many became heavily involved in meeting mission needs for assistance in developing project papers and PIDs. Akhter Hameed Kahn, who had served as an important intellectual mentor for the project, was less interested in such activities and preferred to concentrate his efforts on analyzing the Indian community development experience.

Between consultancies, project staff sought to develop a research agenda that would be acceptable to the new orientation of the Office of Rural Development. Discussions among the staff and with AID eventually led to the identification of three specific foci for MSU's research and technical assistance: 1) the impact of alternative rural institutions and modes of production on efficiency and equity; 2) alternative production, consumption, and nutrition linkages; and 3) alternative marketing systems. These issues, presented to AID in January 1979, were altered in subsequent months. By mid 1979, project documentation indicates the beginning of a consistent focus on: 1) small farmer production systems and farming systems research; 2) rural marketing and its relationship to production; and 3) data collection and management techniques.

While it is difficult to draw direct parallels between this new agenda and the initial conceptualization of the project, these three issue areas were related to long-term concerns of professionals in the Department of Agricultural Economics and reflected the concern of AID missions for technical assistance in the design and management of integrated rural development programs. The new agenda also documents the weakening of the historical and multidisciplinary nature of the original project. Through the new focus, MSU adapted to changing priorities within AID and, by remolding what was initially a very broadly defined project, was able to "save" the project. Project monitors in Washington were important actors in easing the transition between the two phases of the project.

In spite of the energy and time devoted to defining the new agenda in 1978 and 1979, the project delivered a total of sixteen person months of consultancies, published four major reports, and carried on with efforts to identify and undertake applied research projects in Haiti, Jamaica, Thailand, and Cameroon. New personnel were added to the project at the same time, increasing the commitment of core staff to its success.

D. Consolidation of a New Focus

The next important phase of the project, from 1980 to 1982, marks the consolidation of the new research focus, particularly around the topics of farming and marketing systems in rural development. It is during this period that MSU emerged as a leader in the application of farming systems research in developing countries and made consistent progress in demonstrating the relationships among production, consumption, and marketing. The state-of-the-art papers and other publications that made the orientation and methodologies of a systems approach to small farmer agriculture widely accessible to researchers and practitioners were notable accomplishments of this period (see especially Gilbert, Norman, and Winch, 1980; Norman, 1980; Riley and Weber, 1979). Gradually, project staff was able to move beyond its heavy involvement in specific consultancies for helping with PPs and PIDs ("firefighting" assignments) and to provide more substantive help through longer-term technical assistance and applied field research. Activities in Cameroon and Thailand are particularly indicative of this more satisfying relationship to the missions. Two workshops were held in Washington, D.C. in 1980 to discuss the farming systems approach.

By the early 1980s, the Strategies project had developed a consistent research focus and identity and was becoming significantly involved in applied research and technical assistance activities; a smoother working relationship with the Office of Rural Development was emerging, due in large part to the facilitating activities of AID project officers and the accommodating style of MSU's project staff. Core funding was raised significantly to cover increased demand for project services and in 1981 the project was extended for an additional year. In this period, the work on farming and marketing systems was leading the project team to become increasingly interested in problems and technologies of data collection and management for rural development. This interest acquired the focus of cost-effective means to collect data for project design, management, and evaluation. In time, interest coalesced around the potential of microcomputers in rural development data management. In recent years, MSU has made significant contributions in the development, application, and assessment of microcomputer technologies (see especially Weber, Pease, Vincent, Crawford, and Stilwell, 1983).

E. Continuity and Computers

The Alternative Rural Development Strategies project was renewed through a cooperative agreement to cover the period 1982-1984. The renewal attests to mission demand for the services of the project

staff, the practical utility of the work being done by the MSU team, and AID's interest in the increased attention being given to data collection and management with microcomputers. The last two years of the project are therefore characterized by a continuation of work on farming and marketing systems, now integrated more fully with work on microcomputers.

This period also witnessed the emergence of a different form of multidisciplinarity in the project, one in which economists and agricultural economists worked more closely with physical and biological scientists. The work with microcomputers can be credited with the impetus given to this new cross-disciplinary collaboration. Project staff also became more concerned with integrating farm and non-farm activities within the concept of farming systems research. In addition, a large number of publications reflecting on-going research interests reached fruition during this period. Finally, these years were significant for the gradual emergence of unease with the utility of farm level research and project development without greater concern for the institutional and macropolicy environments within which they occur. That is, project staff became increasingly aware that while small farmer production and marketing systems could be understood through research, and data collection and management could be made more cost-effective, these activities could not contribute effectively to rural change unless broader institutional and policy issues were addressed.

F. Aftermath

In a sense, then, the Alternative Rural Development Strategies project had come full circle. It was initiated out of a concern for the broad policy (strategy) context within which rural development projects and programs were pursued; it proceeded to focus more specifically on the project and farm household; and it then reaffirmed the need to understand farmer behavior and projects in a broader environment of policy and institutions. AID and other donor agencies were making the same intellectual pilgrimage at this time and it is not entirely surprising that the Strategies team was eager to undertake a new project for AID, the Africa Food Security Policy project. This new activity focused on the policy and institution building concerns that both MSU and AID had come to feel were lacking in the Strategies project. The intellectual concerns of Strategies have not been abandoned, however, and research continues in the three areas that came to characterize the project. In mid 1985, the perspective of the former project team is that micro-level work must include concern about the macropolicy environment at the same time that policy and institution building work must be based on a solid foundation of micro-level understanding.

G. Managing Project Evolution

The Strategies project involved a process of intellectual development and field-oriented assistance that built upon and added to a broader institutional concern about rural development at MSU. Learning occurred among project staff, within the department, within the university, and within AID; these lessons became evident in a changing

portfolio of project activities. Throughout the project, a number of consistent management strategies were followed that gave this process coherence. The following management practices were particularly important for the evolution of a productive relationship with AID:

- Project management chose to concentrate its resources in detailed study of a few countries rather than more superficial but broader research in a larger number. Apparently, this reflected the belief that MSU could make the most effective contributions to knowledge building through such in-depth work.

- Project management sought to establish and maintain an experienced core staff and draw in other experienced individuals to serve on particular subprojects. Good examples of this are the contracting of David Norman of Kansas State University and of James Riddell of the University of Wisconsin. This overall staffing strategy was important in keeping highly qualified individuals available for the project, while at the same time maintaining enough flexibility to respond to changing conditions, research concerns, and donor strategies.

- Whether by design or circumstance, project management applied the lessons of prior work to charting new directions for research. This is clear in the development of interest in microcomputers and in the move from a micro to a macro focus.

- Project management was consistently concerned about the comparative advantage of universities in development work. The staff was frequently skeptical about its contributions in short-term consultancies ("that's what consulting firms are for") and more concerned about the quality of long-term research efforts and opportunities for institution building ("if we don't leave something behind, we haven't accomplished much").

- MSU project management stressed the importance of producing high quality publications from its research experience and disseminating them as broadly as possible to diverse audiences. Until 1982, important published papers were regularly sent to an international mailing list of over 1500 people and institutions; for budgetary reasons, since 1982 publications have been announced through an annual mailing to the same list. Copies are currently sold to those who reside in the U.S. AID and individuals and institutions in developing countries receive free copies. A generous policy was followed in responding to requests for publications and, in the case of some large orders, authorization was given to reproduce the publication. As a result, 200 to 400 copies of each working paper were distributed, while as many as 4,000 of some of the "best selling" Rural Development or International Development Papers were distributed.

— Project management devoted considerable time and effort to maintaining a supportive environment for the project. Within the Department of Agricultural Economics, encouraging international work among faculty and graduate students and in making such undertakings fit within normal review procedures for salary and promotion decisions was emphasized. Within the university, keeping the international focus of the department and the research of the project visible were important goals, as was supporting the involvement of faculty, administration, and graduate students in international programs throughout the institution.

-- Responsiveness to AID and "rolling with the punches," where required, appeared also to be important strategies for ensuring that the project fit within a longer-term relationship to AID. Project officers in Washington who were familiar with the individuals and institutions involved and who had intellectual commitment to and understanding of project objectives were central to making the cooperative agreement as cooperative as it was.

-- The project was well served by a skilled and efficient administrative assistant who was highly knowledgeable about AID and MSU procedures and regulations. Many routine aspects of cooperative agreement management were delegated to her with assurance that they would be accomplished as required and that appropriate records would be kept. In addition, she provided continuity among a variety of on-going AID-funded projects and attentive backstopping for project staff in the field.

These strategies for managing the project did not emerge automatically; they did not obviate tensions and occasional misunderstanding between AID and the cooperator nor ensure a consistent intellectual focus for the knowledge building and dissemination accomplished under the project. They did, however, increase the capacity of the project to benefit from its own experience, to remain flexible in the face of changing demands, to maintain highly qualified individuals associated with the project, and to increase the amount of training in development that could be provided by MSU.

III. PROJECT OUTPUTS AND IMPACTS

A. Measuring Outputs and Impacts

A wide range of activities pursued under the project contributed to its intellectual output and increased the quantity and quality of human capital engaged in development-related activities. These are often difficult products to document, however, due to the cumulative nature of most knowledge building processes, the problematic nature of attribution when a specific project brackets only part of a longer-term research effort, the inability to keep complete records of

wide-ranging outputs, and the difficulty of capturing the multiplier effects of knowledge generation and dissemination. Some of the diverse ways in which the MSU project contributed to knowledge generation and dissemination are considered below. In all cases, the specific product is probably less important than its multiplier effect in adding broadly to intellectual and institutional capacities in the field of rural development.

1. Major Papers

The major papers produced through the Strategies project are reviewed substantively in the next section of this report (see III.B). Fully cataloguing the major papers that can be attributed to the work carried out under the project is difficult because of the lag time between the work done and the publication of the results in various forms for distinct audiences; for example, documenting important experiences of the project is continuing in 1985, even while the project formally ended in 1984. Nevertheless, the project can be officially credited with the production of four major papers that appeared in MSU's Rural Development Papers Series and three in the International Development Papers Series. These papers have all been subjected to a process of internal and external peer review.

The MSU publications are notable for their orientation toward the field researcher and practitioner—the language used is clear and direct and the length and format of the papers is appropriate for those who wish to have ready access to ideas and methodologies for improving project design, implementation, and monitoring. The multiplier effect of the MSU work is therefore probably most evident in terms of its practical applications. Several of the papers exemplify this type of influence: one is used in AID training courses in Washington (Holdcroft, 1978) and another is credited with being an eye-opener for field researchers abroad (Norman, 1980).

2. Working Papers

When papers produced through the project were less polished or of narrower interest than the major papers discussed above, they were produced as working papers. They were submitted to a process of internal review within the department. Ten Rural Development Working Papers and thirteen International Development Working Papers are attributable to the project. Many of them have received wide circulation, such as the work on microcomputers which is in heavy demand by those wishing a practical and efficient introduction to the use of microcomputers in rural development (Weber, Pease, Vincent, Crawford, and Stilwell, 1983). Generally, authors circulate copies of their papers to those they believe would find them most interesting.

3. Mission-Related Working Papers

The Strategies project was involved in a number of significant research and design activities for individual missions during

which papers detailing findings and recommending courses of action were produced. Examples of this kind of knowledge building and dissemination were the papers prepared for missions in Thailand, Cameroon, and Haiti. Similarly, a recent International Development Working Paper reports on research in the Eastern Caribbean and lists seven mission-related reports for that activity alone (Hrapsky, Weber, and Riley, 1985). In many cases, Strategies staff participated in writing project papers and PIDs for the missions and contributed significantly to overall project designs. Good examples of this are the farming systems project designed for the mission in Zambia and the project paper for Caribbean Agricultural Training and Cooperation that developed an innovative approach to working through the private sector. No complete listing of mission-related papers exists and it is difficult to assess what impact many actually had on project design, implementation, and monitoring. Nevertheless, in many cases, their importance was notable and their multiplier effects were significant; through it AID and developing country officials became better able to design, implement, and monitor other projects.

4. Books and Journal Articles

Individuals involved in the Strategies project have published books, chapters in books, and articles in major journals that reflect the activities of the project. These publications are the major way in which the project influences the broadest academic community. Most of the books and articles do not appear on a comprehensive bibliography of the project's output, however, because many have been published after the individuals concerned have left the project. A good example of this are book chapters by Benedict Stavis (see Stavis, 1982; 1983), an article he wrote with two graduate students from MSU (see Stavis, Hoisington, and Meisner, 1981-2), and articles by David Campbell and James Riddell (see Campbell and Riddell, 1982; 1984), both of whom were involved in the work undertaken in Cameroon, where Campbell served as in-country project manager. Eicher (1984) and Holdcroft (1978) appear in Eicher and Staatz (1985) and Riley and Weber (1979) appears in Farris (1983). A full listing of this type of publication could only be assembled by collecting current curricula vitae from all those who were connected with the project during the course of its seven-year history. The multiplier effects of books and journal articles are substantial but unknowable—such publications inform researchers, are used in the classroom, and, as in the case of Carl Eicher's article in Foreign Affairs, can be influential in contributing to discussions of significant rural development problems among policy makers and opinion setters (see Eicher, 1982). Thus, they reach people far beyond those closely associated with AID or the donor community.

5. Dissertations and Theses

MSU has established an exemplary record of involving graduate students in its research work abroad. A number of dissertions can be directly attributed to the project. Among them are John Strauss' Ph.D. dissertation on rural household consumption in Sierra Leone, John

Holtzman's on cattle production and marketing in Cameroon, Steve Franzel's on farming systems research in Kenya, Ismael Ouedrogo's on marketing in Upper Volta, and Fenton Sands' on livestock marketing in Upper Volta. A similarly significant number of master's theses were produced with support from the Strategies project. In addition, eighteen Ph.D. dissertations and thirty masters' theses were produced under the guidance of core Strategies staff but not funded by the project (see Appendix B). The dissertations and theses are important because they often advance knowledge in a particular area. Just as significant, however, is the fact that they indicate the growth of human capital with expertise in the field of rural development, expertise that in most cases will produce its own multiplier effects in the future.

6. Seminars, Conferences, and Training Activities

One major conference was organized through the project. In 1978, a Conference on Alternative Extension Delivery Systems, organized by Tom Mehen and Benedict Stavis, was held in Washington, D.C. MSU and IRRI put considerable effort into organizing a major conference on the use of microcomputers; the conference was eventually held without MSU sponsorship but with the participation of two Strategies staff members. Over the course of the project and after it, core staff participated in a large number of seminars and conferences. Once again, a full list of this participation could not easily be produced, but good examples of this kind of knowledge dissemination are Michael Weber's participation in the National Research Council's panel meeting on microcomputers in May of 1984 and Carl Eicher's on Research Priorities in Sub-Saharan Africa held in Bellagio in February-March 1985. Core staff are also involved in disseminating knowledge through training and their expertise can be attributed, in part, to the Strategies project. A good example of this is Michael Weber's teaching in AID technical workshops on the subject of "Microcomputer Utilization in Agricultural and Rural Development Programs." In addition, project staff organized and participated in a wide variety of in-country meetings and conferences to present research findings and discuss their implications for projects and policies. Such activities are central to knowledge dissemination, but their impact is as difficult to document as is that of many other project outputs.

7. Training of Foreign Graduate Students

Each year, the Department of Agricultural Economics admits between 35 and 50 percent of its graduate students from developing countries. A number of those enrolling in the department have been identified through Strategies project work abroad. These students receive instruction from core staff, are encouraged to write their theses or dissertations on their own country experiences, and are provided with opportunities to do field research abroad through the international projects. The great majority of these individuals return to their own country after completing a degree program at MSU and many work in government or in international agencies. In their professional capacities, they have provided important links abroad for the MSU group.

The table below gives a partial indication of the broad impact of this training (see also Appendix C).

Partial Listing of Students from Developing Countries
Benefiting Directly or Indirectly from Strategies Project

Name Country	Degree	Year	Last Known Position
Jim Olakosi Nigeria	Ph.D.	1979	Ahmadu Bello U., Nigeria
Abdorazig Muhammed Sudan	Ph.D.	1979	Min.Ag., Sudan
Rapeepum Sektheera Thailand	Ph.D.	1979	World Bank
Thomas Eponou Ivory Coast	M.S.	1979	CERES, U. of Abidjan
Salisu Ingawa Nigeria	M.S.	1979	Ahmadu Bello U., Nigeria
Elsayed Zaki Sudan	Ph.D.	1980	V.M./Finance-Sudan
Edouard Topsoba Burkina Faso	Ph.D.	1981	Min.Ag., Burkina Faso
Pascal Fotzo* Cameroon	Ph.D.	1983	U. of the Cameroon
Ismael Ouedrogo* Burkina Faso	Ph.D.	1983	WARDA, Mali

*Held Graduate Assistantships under Strategies project.

8. Training of American Graduate Students

A large number of U.S. graduate students have studied rural development at the Department of Agricultural Economics at MSU and benefitted directly (supported financially) or indirectly (studied under core staff) from the Strategies project (see Appendix C). Many of them have pursued careers in international development. The following list suggests the broad influence of the project.

Partial Listing of American Students
Benefitting Directly or Indirectly from Strategies Project

Name	Degree	Year	Last Known Position
Larry Harrington	Ph.D.	1980	CIMMYT
John Strauss	Ph.D.	1981	Yale Growth Center
David Atwood	M.S.	1981	AID/S&T
John Holtzman	Ph.D.	1982	AID, Washington
Tom Zalla	Ph.D.	1982	Private Con., Kentucky
Steve Franzel	Ph.D.	1983	DAI
Fenton Sands	Ph.D.	1984	AID, Kampala
David Rohrbach	M.S.	1984	University of Zimbabwe
Larry Lev	Ph.D.	1984	Oregon S./Tanzania FSR Proj.
Merle Menegay	Ph.D.	1984	AID, Washington

Particularly important for graduate training has been the opportunity to be engaged in field research abroad under the Strategies project (Strauss, Atwood, Holtzman, Zalla, Lev, Franzel, and Sands). In addition, several AID officials have been trained as part of MSU's mid-career program and have also been exposed to the knowledge generated through the project. Dwight Steen (L.A.Bureau) and Robert Carey Coulter (Program Officer/Nicaragua) are two recent examples.

9. Networking

Most of the Strategies networking among researchers and practitioners was informal. Although by nature impossible to document, informal networking is extremely valuable as an aspect of knowledge generation and dissemination. For example, former faculty members at MSU

who were involved in the project now provide links to a number of international organizations. Tom Stilwell, formerly a visiting professor at MSU, made major contributions to the microcomputer work of the project and is now at ICARDA directing a large farming systems project in Tunisia. Lane Holdcroft wrote an influential paper for the project and then returned to AID. When current or former faculty or graduate students consult for international agencies—the World Bank and the international agricultural research centers, for example—there is also a multiplier effect to the knowledge generated and disseminated under the project. Core staff have developed and maintained extensive research contacts with institutions in developing countries. Carl Eicher's extensive work with the University of Zimbabwe, his informal links to SADCC (Southern Africa Development Coordination Conference) and the links to researchers in the Eastern Caribbean formed by Michael Weber, Alan Hrapsky, and Harold Riley are good examples of these relationships.

10. Links to Other Cooperative Agreements

One of the most productive activities of the Strategies project was a research effort in Thailand that brought together three cooperative agreements (Strategies/MSU, Off-Farm Employment/MSU, and Rural Financial Markets/Ohio State Univerity), enriching the work of all and resulting in mission-related work that was "greater than the sum of its parts" because of the collaboration involved. This experience increased the links among the cooperators, generated an environment of open collaboration, and probably saved considerable money that would have been spent on contracting outside consultants and additional administrative costs. It had the added advantage of increasing the familiarity of the cooperators with a broad spectrum of rural development issues. The Thai opportunity for collaboration emerged because of pre-existing friendships among individuals in the three cooperative agreements and the active facilitating role played by the project officers in Washington.

11. Methodologies and Technologies

A significant aspect of the Strategies project was the development and field testing of appropriate and cost-effective research methodologies for small farmer production and marketing systems (see especially Norman, 1980; Gilbert, Norman, and Winch, 1980). These "field trials" have proved important in refining and legitimizing methods of data collection and analysis that are particularly appropriate for developing countries. Capturing the influence of this work is clearly impossible, however, as the work accomplished has now become part and parcel of accepted field research methodology and training. Because of the interest generated in farming systems research, for example, AID is currently encouraging work on appropriate methodologies through a cooperative agreement with the University of Florida. Similarly, the influence of the Strategies project on computer software development that can be used effectively at the level of agricultural experimentation and extension systems is noteworthy. MSTAT (Microcomputer Program for the Design, Management, and Analysis of Agronomic Experiments), developed

jointly by MSU (Department of Crop and Soil Sciences and Agricultural Economics and the Institute of International Agriculture) and the Agricultural University of Norway (Department of Farm Crops), owes part of its genesis to the Strategies project and the important work of Thomas Stilwell and Michael Weber. MSTAT is particularly important for its interdisciplinary applications, another aspect of the multiplier effect.

12. The Dry Hole Phenomenon

Every project faces the "dry hole" phenomenon--some investments of time and resources produce little or no return in spite of good intentions and hard work. The Strategies project had ample experience with this problem. For example, considerable effort was put into short-term consultancies with the Haiti mission only to discover that there wasn't enough basic support in the Ministry of Agriculture for the project that was designed. The developing country nationals commissioned to write FSR case studies for Thailand, the Philippines, and Indonesia who did not complete their asssignments led to a similar dry hole. The Cameroon experience was perhaps the most frustrating experience for the Strategies project because of the large amount of senior staff time put into the country and the potential it offered for longer-term applied research. A similar situation occurred later in Bolivia when the FSR project that the Strategies team was helping the mission design was aborted because of a coup. The losses caused by these dry holes are difficult to assess. At the very least they deprived staff of valuable time that could have been spent elsewhere more productively. The dry holes that occurred were also a source of frustration for the project staff, even through it was often able to generate important research findings from them.

B. What Knowledge Has Been Generated?

The Strategies project generated new knowledge in several areas important for AID's work in developing countries. The project also summarized and synthesized large bodies of knowledge and made them widely available to scholars and practitioners. The written output of the project falls into several general categories: 1) special studies of rural development; 2) farming systems research; 3) small farmer marketing systems; 4) Cameroon field studies; 5) African food system; and 6) data management and computers. In the following pages, specific attention is given to papers and reports in each of these categories; they are considered in rough chronological order to show the evolution of research in each category. Section III.B concludes with general comments about the nature and quality of the knowledge generated.

1. Special Studies of Rural Development

Three special studies to address major gaps in the rural development literature were identified in the Strategies work plan for September 1977-September 1978. The studies were to focus on: 1) alternative extension delivery systems; 2) analysis of rural socialist strategies in Africa; and 3) alternative rural development strategies in

India and China. Akhter Hameed Khan, Benjamin Stavis, Thomas Zalla, and several research assistants were given the reponsibility for these studies. In practice, the papers diverged somewhat from the original plan. Akhter Hameed Khan produced a major paper (Khan, 1978) summarizing ten decades or rural development experiences in India. Two working papers by Stavis, one on China's agricultural policy (Stavis, 1979a) and one on agricultural extension for small farmers (Stavis, 1979b) were also produced. Lane E. Holdcroft, on leave from AID at MSU, contributed a paper on the evolution of the community development approach to rural development (Holdcroft, 1978).

The Khan and Holdcroft papers present interesting contrasts. Both authors were heavily involved as practitioners of the subjects they reviewed—Khan as the father of the Comilla Project in Bangladesh and Holdcroft as an AID official supervising rural development projects. Both focus on India, but draw on other country experiences as well. Both papers are highly readable. Holdcroft follows a more academic style, systematically tracing the history of community development, and giving a more convincing analysis of lessons learned. Project officers and academics have found the paper helpful. Khan, on the other hand, ranges widely, tracing development strategies back to colonial roots, criticizing both home-grown (Ghandian) models as well as colonial imports. He hints at potential superiority in the Chinese development approach compared to India, but few real lessons can be gleaned from the paper other than that most rural development strategies have failed. Khan went back to Comilla at the end of his assignment and Holdcroft returned to AID but it is not known how their analyses affected their subsequent work. It is clear, however, that they correctly predicted the problems encountered in integrated rural development projects that were so popular among donors at the time.

The Stavis paper on China is quite different in style. Unlike Khan and Holdcroft, Stavis had strong academic credentials and had written widely on China before and after working at MSU. His paper is a carefully researched document on China's agricultural policies and their consequences and it correctly forecasts important changes. Nevertheless, the paper was undoubtedly a disappointment to AID—nowhere in its more than sixty pages does it discuss implications for the African countries importing some of the Chinese approaches to rural development, even though this was one of the objectives set for reviewing the Chinese experience.

The paper by Stavis on agricultural extension is more successful in meeting both AID and academic needs. It is a carefully researched and documented state-of-the-art paper drawing heavily on both developed and developing country experience and succinctly identifying the potential and limitations of agricultural extension. For the project officer, it provides implications for the design and implementaion of agricultural extension projects; for the academic audience, it provides a careful analytical review of the literature and synthesizes key points of convergence and divergence of perspectives on the topic.

Thus, of the first four papers produced by the Strategies project, two present material that appears to be of immediate interest to AID. Three of the four are carefully researched and documented and are primarily directed toward an academic readership. In contrast, the Khan paper is primarily important because of the person who wrote it rather than for the insights it provides to scholars or practitioners.

2. Farming Systems Research

Following the focus on special studies of rural development experience, the Strategies staff began a series of studies that eventually emerged as a more productive and useful area of inquiry. These studies focused on farming systems research (FSR), which was gaining considerable support among researchers at the time. As Carl Eicher noted in the preface to a paper by David Norman (Norman, 1980), MSU hoped to contribute to the debate "over whether FSR is a philosophy of research (farmer/researcher partnership) or whether it is unique and different from commodity and disciplinary research." Norman's paper made a useful contribution in defining a farming system, giving selected empirical results of FSR, and discussing problems of implementing the approach. It clearly reflected the author's years of experience in Nigeria in confronting the practical problems of research. As one of the early and most readable papers on FSR, it was distributed widely and translated into French and Spanish.

The second paper in the FSR series by Gilbert, Norman, and Winch (1980) is an important piece of research that has become one of the MSU "best sellers," with over 4,000 copies distributed in English and Spanish. This paper pulls together a large amount of written material as well as impressions and personal communications with practitioners in the field. It fleshes out the ideas summarized in the earlier Norman paper; provides empirical content drawn from several national, regional, and international research centers; and systemically discusses many factors that influence the success of FSR. It reflects the involvement of people with earlier MSU experience in that it incorporates concern for: 1) micro-macro linkages; 2) off-farm employment and labor use; 3) the complexity of African agriculture; and 4) comprehensive data collection and management.

Following these two conceptual papers, the Strategies project initiated what was intended to be a series of case studies discussing the application of FSR in natural research centers. Collinson (1982) completed a paper on the experience of CIMMYT in introducing FSR in several African countries and Galt et al. (1982) completed a paper describing FSR research in Honduras. Unfortunately, the case study research effort sputtered to a halt at that point because the planned papers on FSR in Thailand, the Philippines, and Indonesia were never completed by the national authors contracted to prepare them.

Individually, the four papers in the FSR series are useful; collectively, they should be part of any library on FSR. Nevertheless, the research enterprise might have produced a more effective joint

product if the authors had tried more systematically to integrate their work. For example, Collinson's prior work is cited frequently in the Gilbert, Norman, and Winch paper, but he fails to acknowledge their contributions in his own work. Similarly, he discusses the CIMMYT approach without reference to the other approaches surveyed by Gilbert, Norman, and Winch and makes no systematic attempt to support or refute the generalizations presented in the earlier paper. Likewise, the Galt et al. paper cites only Norman (1980) and presents a detailed case study of Honduras without a self-conscious effort to build upon the framework presented by Gilbert, Norman, and Winch or Norman. The papers offer recommendations about FSR in developing countries, but curiously, none of the papers explicitly takes note of those made in their colleagues' work. It appears, then, that the Strategies project provided a professional outlet for important work, but was unable to stimulate sufficient interacton among authors to sharpen the issues and clarify the differences among the recommendations presented. Of course, the research output may have been more integrated had the case studies of FSR in Thailand, the Philippines, and Indonesia been completed.

3. Small Farmer Marketing Systems

In 1979, the Strategies team began to publish a series of articles on agricultural marketing in developing countries. This is a traditional area of strength at MSU that dates from experience in the late 1960s and early 1970s in conducting marketing studies in several Latin American countries. Two of tne faculty involved in key roles in that earlier work, Harold Riley and James Shaffer, contributed to this Strategies series.

The first paper on marketing was an annotated bibliography (Riley and Weber, 1979). The second paper, by Riley and Weber (1979), has also appeared as a book chapter in Future Frontiers in Agricultural Marketing Research (Farris, 1983). In this work the authors argue that past descriptive studies in developing countries were "constrained by the relatively static, perfectly competitive marketing model of economics." They argue for a more dynamic food system framework, a perspective developed in their earlier Latin American research. The third paper, by Fox and Weber (1979), was delivered at the 17th International Conference of Agricultural Economists and makes a similar argument.

The fourth paper in this series is a report by Riley and Staatz (1981) on a workshop held at MSU sponsored by the Agricultural Development Council (A/D/C) concerning food system organizations in developing countries. The Strategies argument for a systems approach to research is prominent and considerable attention is given to A/D/C interest in building in-country capacities for training and research. The next paper, by Shaffer et al. (1983), reviews some recent developments in the marketing literature and is also heavily influenced by the earlier MSU experience in Latin America.

The major new development in marketing systems research began to emerge in 1984 and culminated in the paper by Hrapsky, Weber, and Riley

in 1985. The paper is a highly readable and comprehensive report, complete with maps, tables, diagrams, and photographs listing ten specific recommendations for USAID and regional authorities. It is important for two reasons. First, it is an example of the proposed systems approach used for a practical developing country marketing problem. Second, it clearly demonstrates the concern of Strategies staff for meeting AID needs and interests, while at the same time fulfilling the interests of faculty and students in an academic institution. The objective of the research reported was to provide USAID/Barbados with a diagnostic-prescriptive assessment of the mango commodity system in the Eastern Caribbean leading to possible improvements to increase intra-regional and extra-regional sales. The research procedure involved a series of regional case studies of farmers, shippers, exporters, traders, and retailers. Seven country working papers on selected topics were written to stimulate discussion with mission staff and local officials about mango production and marketing. At the conclusion of the research effort, a thirteen-page executive summary was prepared as an MSU Staff Paper and copies were sent directly to the USAID/Barbados director, calling his attention to the key recommendations for USAID action. This work represents a clear example of explicit research methodology, careful fieldwork, interaction with institutions that can react to the findings, and academic accomplishments. The results are likely to have been well received in the region; the work will acquire greater multiplier effects when the authors publish a peer-reviewed academically oriented article on the research.

4. Cameroon Field Studies

One of the first countries in which there was a clear possibility for the Strategies staff to carry out applied field research was Cameroon, where USAID was interested in developing a large integrated rural development project in the Mandara mountains in the northern part of the country, an area characterized by a poor natural resource base and acute poverty. This area was a "textbook case" for an integrated rural development project to help the poorest of the poor. A Strategies team first visited the region in September 1979 and a group of researchers was sent to the region in 1980 to begin detailed studies. In the course of the work, a total of eighteen country working papers were completed analyzing various problems of the region and presenting development alternatives.

Two major papers summarize the country papers and discuss the agricultural potential of the region. The first, by Holtzman, Staatz, and Weber (1980), applies a systems framework to the livestock production and marketing subsystem of the region. It contributes to MSU's marketing research by showing how informal interviews with key participants in an industry can supplement existing information for rapid assessment of problems and opportunities. Thus, its objective is as much methodological as prescriptive, although valuable insights into the livestock subsector are presented.

The paper by Zalla et al. (1981) summarizes the Cameroon studies that were conducted in order to identify potential interventions for

increasing agricultural and livestock production, income, and rural welfare during the following years. The general recommendation is for a four-year project to carry out applied FSR in the region and strengthen the capacity of the agricultural and livestock extension system. As a result of the Cameroon work by Strategies staff, considerable progress was made in the design of such a project. Unexpectedly, the entire effort was abandoned when a new USAID mission director decided to shift mission priorities away from integrated rural development projects to the promotion of agricultural growth projects in the more favored agricultural regions and to basic agricultural institution building projects. This was unfortunate for the Strategies project because it terminated a potential long term applied research opportunity in the country. It was unfortunate for AID because few projects are developed with as much research background as this one and few have as much monitoring, evaluation, and applied research support during implementaion as the Strategies team was prepared to supply.

5. African Food System

In addition to the Cameroon research, a number of field studies on various topics were conducted in Africa with links to the Strategies project. Some were initiated because of MSU's otner AID projects in countries such as Upper Volta and Sierra Leone and they are frequently oriented toward improved understanding of the behavior and constraints on farm households. Two studies report on research in Sierra Leone--a paper on nutrition by Kolasa (1979) and a study by Strauss (1983) on determinants of food consumption and production. Kolasa's review of several surveys concludes that the nutritional status of children and pregnant women is the most important proolem. Nutritional problems are greater in rural areas than in urban areas, and little change in nutritional status has occurred in the last 20 years. The availability of calories is identified as the key issue for nutrition programs.

Strauss attempts to show how government policy affects food consumption and production, arguing that policies affect rural households as both producers and consumers. A multi-commodity household-firm econometric model is specified and estimated. The results show that representative low income households need significant income increases in order to obtain the recommended 1,900 calories per capita per day. The impact of government policies on nutrition varies by commodity affected, income level of the rural household, and reliance on the market.

The next study in this group was reported by Crawford (1982) and focuses on traditional farming systems in Northern Nigeria. The objective of the study is to simulate a farm household system that integrates production, consumption, and investment activities. Experiments were developed to study the extent to which resource limitations, family structure, and variation in crop yields, investment returns, and consumption affect growth. Some of the data used were collected by Norman, so the research reflects a strong FSR orientation. The author argues that formal household modelling can make an important

contribution to understanding farmer behavior and is preferable to the quicker, more informal analysis often proposed as part of thr FSR approach.

Two studies supported by the Strategies project were conducted in Upper Volta. Both studies utilize data collected through the "cost route" method employed by MSU in several international projects. A paper by Tapsoba (1982) evaluates formal and informal credit systems. It reveals that several deficiencies in the formal credit system resulted in untimely credit delivery to the farmers. The technical and economic effects of medium-term credit for animal traction contributed to serious cash flow problems for farmers who adopted the technology. Loan repayment rates were low and falling. The issue of animal traction, a technology given considerable emphasis by donors in the Sahelian states, is also addressed by Barrett et al. (1982). This study identifies several technical, economic, and institutional factors that sharply reduced the benefits of the animal traction program. The authors argue that future programs involving animal traction in West Africa should adopt a ten- to twenty-year time horizon and a commitment to a field-level FSR program in order to tailor the crop and equipment package to local circumstances.

The rest of the studies included in the category of African food system studies are attributable to the Strategies project manager, Carl Eicher. His work builds on field studies supported by Strategies and other MSU projects, but goes far beyond them to span his many years of professional work in Africa. A comprehensive literature review (Eicher and Baker, 1982) of some 1500 items published since 1970 concerns agricultural development research in Sub-Saharan Africa. This publication is part of a broad literature review of agricultural research commissioned by the American Association of Agricultural Economists. The review documents the excessive macro orientation of much of the research and the need for more studies with a micro, village, FSR, and rural nonfarm employment focus, all of which characterize much of the MSU work during the past decade and a half. More emphasis is also urged for food policy research.

Eicher and Baker note that the central cause of rural poverty in Africa is that "60-80 percent of the labor force produces food at very low levels of productivity" (p. 258). Eicher stresses this point further in his Foreign Affairs article on Africa's food crisis (Eicher, 1982), in which he notes the alarming deterioration in food production in many countries in the face of a steady increase in population. His prescriptions include food security policies and strategies, long-term investment programs, technology generation within Africa, and a reduction in excessive co-financing of projects. Because this article was published in nontechnical lanaguage in a journal with a circulation of 95,000, it has had an impact on policymakers and public opinion far beyond that of most work by agricultural economists.

The most recent work by Eicher was completed in 1985 to assist the World Bank in setting research priorities for Africa. This paper draws

upon the literature review (Eicher and Baker, 1982) and stresses some common themes of the Strategies work: a need for greater emphasis on FSR and local research to develop appropriate agricultural production technology; greater attention to improving human capital and institution building; development of a good data base; improved food security and policy; and a longer time span in the commitments made by donors.

6. Data Management and Microcomputers

One of the concerns noted in much of the MSU work in recent years is the need for careful data collection designed for use in studies of small farmer production and marketing in developing countries. The Strategies and other MSU projects have involved sizeable data collection efforts that produced management and analysis problems, debates over alternatives, and experiments with computer hardware and software to facilitate processing in developing countries. This work sharply expanded under the second Strategies cooperative agreement, which emphasized cost-effective techniques for data collection and analysis and which resulted in pioneering work with microcomputer use in developing countries.

One of the first publications under the Strategies project in this area was the paper by Hatch (1980) describing a method used in Bolivia to collect farm management information from illiterate farmers with questionnaires written with graphics and symbols. This paper was followed by the Lynch (1980) study in Sierra Leone analyzing differences in household expenditure estimates resulting from frequency and reference period of interview.

Major efforts at MSU in the application of microcomputers and programmable calculators in developing countries resulted in a conference in East Lansing of fifty professionals with interest and/or experience in the field. The participants presented experiences on practical issues and discussed state-of-the-art information. The proceedings are effectively summarized in Weber et al. (1983). This report includes information on alternative approaches to data processing, hardware and software issues, and institutional and training concerns. Selected conference papers are included in the report.

The Strategies project produced and distributed nine additional working papers on related topics. Three of these are annotated bibliographies about software (Stilwell, 1983; Kelly et al., 1983; Stilwell and Smith, 1984) and one is an annotated bibliography on microcomputer periodicals (Stilwell, 1983). Two papers concern the TI-59 Programmable Calculator--one by Hepp (1983) on instructional aids and the other by Morris and Weber (1983) on programs for marketing and price analysis. Another paper provides guidelines for selection of microcomputer hardware (Wolf, 1983) and two others analyze microcomputer statistical packages (Pease et al., 1984; Stilwell, 1984). These publications are undoubtedly useful for technicians and administrators in developing countries who are required to make decisions about microcomputers but who do not have access to good information.

Efforts have been made in two areas to make available software specifically suited to developing country application. Crawford et al. (1984) provide a SuperCalc template for benefit/cost analysis and Weber has worked with faculty in other departments and universities to develop MSTAT, a program to assist with organization and analysis of agronomic field trials. The program helps design the trials, organize the field work, and conduct statistical and economic analysis of the results. The experience gained in microcomputers in developing countries is summarized by Harsh and Weber (1984) in a paper presented at a symposium cosponsored by the National Research Council. The paper raises important questions about the components of computer-based information systems for developing countries, including hardware, software, supporting data bases, end user's analytical ability, and support systems.

7. Assessment of the Knowledge Generated

A number of general observations can be made about the research output of the Strategies project. First, the quantity of the written work is impressive. Second, the Strategies project benefited from research being conducted by MSU in other international projects, as these undoubtedly benefited from Strategies output. Third, while the project sought to reach several audiences, the stongest orientation was toward decision makers, donors (especially AID), and practitioners working in the field in applied research and development activities. Fourth, the work was produced by a large number of people, including MSU faculty and students and paid and unpaid consultants. Fifth, the collaborative nature of the work conducted is reflected in the multiple authorship of many papers. Several of the authors are part of an on-going MSU network of researchers working on similar topics. Sixth, MSU has invested great effort in developing its own peer-reviewed publication series covering international development issues. This may have meant that some authors were able to find an outlet for work that otherwise might not have been published.

Seventh, some publications are clearly intended to be timely and will be fairly quickly replaced by fast moving new developments in the field (for example, much of the work on microcomputers), while other publications will be standard references for some time to come (for example, Gilbert, Norman, and Winch, 1980; Eicher and Baker, 1982; Eicher and Staatz, 1984). Eighth, great efforts were made to conduct research and prepare reports to respond to AID at the same time that academic needs were met. Ninth, some key publications were translated in French and Spanish. For example, the Eicher and Baker literature review was translated into French by the IDRC and is now being distributed free in Africa. Tenth, there is a considerable lag between the time research is undertaken and the appearance of the publications resulting from it. This suggests that the impact of the Strategies project will continue to be belt in the future.

In a research enterprise as large as this one, there are bound to be weaknesses. In their review of the research output of several cooperative agreements, Cohen, Grindle, and Thomas (1983), suggest that

the Strategies project needed to give greater attention to the explicit statement of theses, the full description of sample selection, and the search for more generalizable tools in FSR. In addition, as we noted above, interaction among researchers may not have been well enough developed so that competing ideas and recommendations could be throughly debated and points of agreement and disagreement identified. Second, because the project involved its staff in so many activities, some issues were left unresolved. For example, it would be useful to know the extent to which the informal interview techniques used in the livestock subsystem study in Cameroon (Holtzman, Staatz, and Weber, 1980) supports or detracts from the general systems approach proposed for small farmer marketing studies. Likewise, Crawford (1982) argues for the benefits obtained from formal farm household modelling, while some parts of the FSR approach argue for the cost-effectiveness of more informal research techniques. Similarly, there is extensive demand in FSR for highly detailed data collection, but it was the well-known staff limitations of African institutions and the problems of data analysis that stimulated the work on microcomputers. Clearer recommendations are required about the trade-off between what should be done to obtain solid research results in contrast to what can be done with current research and information system capabilities in many developing countries. A related question is the extent to which a highly sophisticated FSR methodology should be employed to benefit a few farmers, rather than a less complex system that can be expanded to benefit more farmers.

The Strategies publication record is comparatively weak in terms of peer-reviewed journal articles and books. Clearly, demands placed on the staff to produce practical work for AID limited its ability to spend the time required to go the next step in the publication process. However, unless MSU can find a way to resolve this problem, some of the valuable insights learned in its international work will not be made available to wider academic audiences, the work will not undergo the strong peer review that it merits, and MSU faculty and students will not gain strong professional visibility. The Eicher Foreign Affairs article fulfilled these goals in excellent fashion, but more is required.

The Strategies project failed in its original objective to synthesize rural development strategies and prepare a state-of-the-art paper for dissemination. This apparent failure, however, reflects some naivete on the part of both AID and MSU in thinking that such tasks were really feasible in the first place. Numerous books have been written on rural development in India and China and the literature is vast on countries such as Tanzania, Brazil, South Korea, and Taiwan. But even in these well documented cases, it is difficult to get consensus among experts about the nature of important rural development experiments. It was too much to expect that "conclusive" case studies could be written (especially by authors untested in their relations with MSU) and a useful state-of-the-art paper prepared that would provide guidance to AID.

C. Impact on Projects and Policies

It is difficult to assess the impact that any cooperative agreement has on projects or policies in developing countries. However, there are two areas in which the impact of the Strategies project is clear. The first is the influence on specific project design of the careful research and interaction typical of the MSU approach. Thus, the Cameroon Mandara Mountain project would have been conditioned by the MSU research if it had been developed and implemented. If the Barbados mission goes forward with some type of mango project, it will benefit greatly from the MSU analysis. The other area of undeniable influence is the work that was done on agricultural development in Africa. It will be hard for both donors and national governments to pursue strategies in the future without taking note of the carefully researched and documented arguments presented by Eicher and his colleagues.

In terms of its influence on FSR, the Strategies project clearly provided MSU with a position of leadership. Now, some of that leadership has passed to the University of Florida's AID-financed FSR project. Hopefully, MSU will continue to be linked to that work so that its experiences will be utilized in the resolution of some serious outstanding issues in the implementation of FSR systems in developing countries.

A remaining uncertainty is in the area of microcomputer applications. The Strategies project made pioneering advances in the field and Weber and his colleagues are in an excellent position to continue their experiments and to serve as a clearing house for information in the fast-changing field. Unfortunately, this work is threatened by a lack of funding.

IV. ASSESSMENT AND RECOMMENDATIONS

The Strategies project suggests a number of important lessons that can be useful in developing other cooperative relationships between universities and AID. These lessons, extracted from the overall experience of the project, involve efforts by both AID and the universities to increase their capacity to cooperate effectively, develop reasonable expectations about the trials and tribulations of working together cooperatively, minimize recurrent problems, and enhance the multiplier effects of knowledge generation and dissemination.

A. Cooperating Effectively

For the universities, the cooperative agreement mechanism has been an important means of institution building. Moreover, it has frequently enhanced the reputation of individuals, departments, and institutions as centers of expertise and excellence in the study of particular issues. However, much as they have benefited from the infusion of AID funding, universities often stop short of committing themselves and their faculties fully to the cooperative arrangement because of their concerns about "soft" money. Building up an experienced

staff, acquiring suitable office space, and freeing faculty from teaching responsibilities is viewed as risky by university administrators who are concerned about who will pay for the professors, staff, and office space at the end of a three- or four-year contract. The financial and career commitments that universities make to faculty and graduate students do not generally coincide with the timeframes of major grant arrangements like the cooperative agreements. Hiring and firing to coincide with particular projects is difficult because of the scarcity of well-qualified people and because it can create difficult problems of morale among those with no long-term future in a university.

The Strategies project at MSU is an important example of the conditions under which universities and departments are encouraged to build up capacity to respond to the diverse needs of AID. Strategies, because it was part of a large portfolio of similarly funded efforts, was effective in helping the university and the department resolve some of the tension between full commitment to AID's needs and concern over their own institutional future. Because MSU is a large university with large departments, it was able to diversify its portfolio of projects and funders and thereby minimize the risks of having all its eggs in one basket. There were benefits to AID in this arrangement. For example, long experience with attracting "soft" money encouraged the Department of Agricultural Economics to develop incentives for faculty and staff to become involved in development work and eventually to "risk" the creation of three additional tenured positions in international development. The history of involvement with AID and other development agencies also increased the expertise available to the Strategies project and in turn created an important multiplier effect for it.

The MSU experience suggests that there are externalities for AID to invest in a series of projects with the same institution or department. However, acknowledging these externalities can reduce the competitiveness of alternative universities and institutions and increase the tendency toward "old boy" relationships between AID and particular universities. Similarly, university size should not be a criterion for excluding smaller institutions from competing for AID-funded projects. Instead, it is more productive to consider how the cooperative agreement mechanism itself can help resolve the institution building dilemma faced by universities of varying experience and size. For example, for AID to capture the greatest commitment and best intellectual capital available for its projects, it must make longer-term commitments to universities for the pursuit of research and technical assistance. Some alternatives to be considered are:

- AID should consider developing more university-based projects with a term of at least five years.

- AID should consider funding particular projects for a period of eight to ten years with a "retainer" that allows universities to maintain core and support staff and make advance commitments to graduate students. The retainer would be allocated to specific project activities and would be

supplemented by shorter-term funding for specific research or technical assistance not included in the retainer.

- AID should consider university-based projects with a rolling five year plan in which planning for year six is initiated in year two, year seven in year three, etc.

- Universities should consider alternative institutional arrangements such as an institute model with a separate career system that can combine multidisciplinarity, responsiveness to short-term mission needs, and commitment to research and teaching through formal links to the university. The Harvard Institute for International Development provides one model of such an organization. MSU's Institute for International Agriculture, although it does not have a separate career system, provides another model.

- Universities should diversify their portfolios of projects and funding sources so that they can build up their capacity in development and remain flexible in responding to changing development agency priorities.

In return for enabling the universities to be operate more securely with "soft" money, AID should expect the universities to develop incentive systems for encouraging faculty and student involvement in development work and to structure staff commitments so that qualified individuals can be more readily available for mission-related work abroad on short notice.

B. Developing Reasonable Expectations

The Strategies Project, like other cooperative agreements, experienced its share of delays, snafus, dry holes, floundering, and frustrations. Many of these problems are probably inevitable in project-related work. These experiences, however, highlight the issue of reasonable expectations about how universities and AID cooperate with each other. This in turn can help in the design of subsequent relationships. Among the lessons that can be extracted from the MSU experience are the following:

- It should be expected that the first year of a project may entail considerable start-up costs that will cause delays, lack of focus or direction, or misunderstandings. These problems frequently emerge because of delays in hiring staff, appointing an AID project officer, negotiating more specifically the focus of the agreement, finding missions interested in the project, learning and setting up administrative systems, and learning to live together amicably.

- From the perspective of the university, AID personnel and priorities in Washington and overseas change with unsettling frequency. While the cooperators are clearly interested in

seeing AID develop more stability in its staffing and policy direction, there is little they can do to bring this about. A reasonable expectation is that personnel changes will occur and as a result, priorities will change, even abruptly. Universities can adapt to these changes, but both AID and the cooperators should expect to experience some floundering around, renewed negotiations, and frustrations until a mutually agreed-upon focus is determined. Universities should develop long-term research agendas that are broad enough to survive changes in priorities. At the same time, AID must remain aware of the sunken costs of commitments to particular areas of study and the frustrations that are generated by changing priorities and that can make amicable relations difficult.

— Broadly defined subject areas can lead to significant payoffs in terms of knowledge building and dissemination. They can be particularly fruitful in terms of the flexibility they provide to pursue unexpected avenues of inquiry that emerge in the course of research. However, when the terms of reference are broadly defined, the start-up period is likely to be longer than when very specific projects are implemented. AID and the cooperators should develop reasonable tolerance for the initial lack of focus when broadly defined projects have considerable promise for future payoffs.

— Academics are generally research oriented; field missions tend to emphasize immediate needs for practical assistance in project design, implementation, and evaluation. It is reasonable to expect tension within a cooperative agreement over this issue. AID and cooperators should discuss individual activities in terms of the comparative advantage of universities and consulting firms. For example, universities are most skilled at research and longer-term technical assistance, while many consulting firms are more adept and better organized for fielding immediate short-term needs for assistance in writing project papers, PIDs, and similar consultancies. Nevertheless, universities involved in cooperative agreements should expect to do a certain amount of short-term consulting and should staff their projects accordingly. To realize the universities' comparative advantage, AID should emphasize technical assistance in those countries where they are engaged in long-term work.

— It is reasonable to expect that a portion of the activities undertaken by the universities will result in dry holes. Mission directors change, developing country governments veto projects, researchers do not complete their assignments, and a number of other unanticipated events and circumstances can stymie project activities. While universities and AID can apply reasonable standards of judgement about which activities they should pursue, some dry holes are probably inevitable.

At best, they should be mined for the lessons they can provide about future activities.

C. Minimizing Recurrent Problems

For the cooperative agreement mechanism to be satisfactory from the perspective of AID, a university orientation supportive of the Agency's need for technical assistance—often on short notice—and a critical mass of expertise in specific subject areas are important. At the same time, AID is interested in advancing the state-of-the-art in specific fields of development. Among the frustrations that it experiences with universities are those associated with faculty schedules that do not permit responsiveness to mission needs for consulting and the "invisibility" of many of the results of investment in research.

From the perspective of the universities, among the most frequent criticisms associated with AID are the personnel changes in Washington that significantly alter priorities. For example, when asked to comment on what makes for a constructive relationship with AID, Strategies staff were unanimous in affirming the importance of continuity in Washington. Similarly, changing reporting requirements are a source of frustration, as are the different time horizons of the university and AID. In considering reforms, of course, it is important to remember that AID has its own "institutional imperatives" that result in the changes in personnel, priorities, and procedures. Especially at the current time when officials are expected to "achieve more with less," there are limits on how responsive they can be to the needs of the universities. At the same time, there are lessons to be learned from the generally cooperative relationship that developed between MSU and AID.

Overall, the Strategies project worked well for AID and MSU. Over a period of years, a constructive relationship was developed and maintained in part because the MSU team had long experience in working with AID and had a long-term perspective on its future involvement in development work. Equally important, however, was the fact that the project could count on officers in Washington who were intellectually committed to it and who had the flexibility to travel with the project team and become personally involved in its field work. In Washington, they were skilled at smoothing the relationship between AID and MSU and at marshalling necessary agreements, paperwork, and negotiations through the administrative system. At MSU, the project could count on the valuable efforts of an administrative assistant who was thoroughly familiar with AID procedures and regulations and who was skilled at facilitating paperwork and maintaining appropriate records. On the basis of this MSU/AID experience, a series of recommendations about mutual accommodation can be made.

— Project officers should be assigned for a minimum of two to three years to monitor the same projects.

— Project officers should be familiar not only with the AID administrative system but also with the modes of operation of universities.

- Project officers should have considerable knowledge about the subject matter of the project they oversee for AID and commitment to pursue knowledge generation and dissemination in that subject.

- Travel to the university and to project activities abroad should be facilitated for project officers.

- Project staff at the university should develop expertise in AID procedures, requirements, and administrative systems. An administrative assistant experienced in the management of AID-funded projects should be hired; alternatively, considerable time and effort should be devoted to training an administrative assistant for work with AID. A skilled assistant is essential to ensuring the most productive use of project staff time and expertise.

- AID and cooperators should clarify and stabilize reporting requirements.

- Project staff should recognize AID's need for visible products of research and should keep the Agency informed of important findings from on-going research projects.

- Project staff should seek to ensure that bureaus and missions are familiar with the objectives and capabilities of the project. Attendance at regional meetings of mission directors and program officers is one cost-effective mechanism through which this can occur.

D. Creating Multiplier Effects in Knowledge Generation and Dissemination

The Strategies project demonstrates the importance of applied research in furthering state-of-the-art discussions and debates on critical issues in food and agriculture in the third world. It also indicates the unexpected payoffs to broadly defined research topics in which there is room to develop new areas of inquiry when they emerge in the course of work pursued on other topics. Perhaps most importantly, the Strategies project demonstrates the variety of ways in which new knowledge is generated and disseminated and how multiplier effects result from serious investment in research efforts by universities with expertise in particular areas of development. Both AID and the universities can adopt measures to increase the returns on investments in knowledge generation and dissemination.

To increase its returns on the investment in the knowledge generation and dissemination capacities of the cooperative agreement mechanism, AID should consider ways to encourage the multiplier effects that have been noted in the Strategies project. Among the lessons that can be extracted from this experience are the following:

- AID should stress the importance of knowledge generation and dissemination efforts that have large multiplier effects. In the design of future cooperative agreements, the Agency should emphasize: 1) training graduate students, both American and foreign; 2) involving more than one cooperative agreement in the same research or technical assistance project; 3) encouraging the involvement of AID officials in mid-career or degree programs in the universities; 4) using cooperator staff as trainers in AID workshops and presenters at AID meetings and conferences; 5) funding ample dissemination of important research results; and 6) funding cooperators to attend professional meetings, conferences, and seminars where their presence can have significant impact on proceedings.

- AID should recognize the importance of write-up time for academic specialists and for synthesizing the results of research projects. Generating knowledge requires time for reflection, discussion, and analysis. Researchers need time at the end of a project to write up major results and develop new avenues of inquiry. Contractual arrangements should incorporate funding and time for this period of writing and reflection.

- Project evaluations should go beyond concern with the record of written output to assess a wide variety of ways in which knowledge is generated and disseminated. Evaluations of projects designed for research and technical assistance should consider the multiplier effects of the work undertaken as well as the concrete work products that are produced.

- AID project monitors should pay particular attention to screening research and technical assistance opportunities that emerge from missions in order to discourage work that has a high probability of resulting in "dry holes."

- The Strategies project developed a ratio of core funding to mission add-on funding of roughly 1:1. Mission add-ons are an effective way of involving university based researchers in the field and in providing them access to "real world" aspects of development project design and management. The 1:1 ratio appeared to be an effective means for encouraging university commitment to field related work and for ensuring that senior level professionals would spend substantial amounts of time in the field. This ratio might serve as a goal for similar types of cooperative agreements.

Universities should also consider ways to expand the multiplier effects of their knowledge generation and dissemination efforts. Review of the Strategies project indicates that among the practices they should consider are the following:

- Universities should emphasize the involvement of graduate students in their research projects and should facilitate the incorporation of AID officials in mid-career and degree programs.

- Universities should be active in bringing new people into their research efforts to complement the work of core staff.

- In their research work, universities should encourage interaction among professional staff to discuss important consistencies and anomalies in research findings, debate differences in perspectives and methodologies, and consider important unanswered questions that emerge in the course of research.

- Universities should present the results of their research in a variety of formats to reach different audiences. Their dissemination efforts should regularly include brief executive summaries of longer publications. These should be sent to interested people and institutions as a matter of routine. In addition, brief "press release" type information about project work should be sent to high-level officials in AID/Washington and elsewhere.

- Universities should seek opportunities to collaborate with other cooperators in research and technical assistance. They should also seek opportunities to interact frequently with AID staff in Washington and abroad.

- Universities should encourage project staff to devote time to producing work that is suitable for peer-reviewed academic journals and books. This is the "final step" in disseminating research results and should be emphasized as a measure of the quality of work produced.

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1983 Microcomputers and Programmable Calculators for Agricultural Research in Developing Countries. East Lansing, MI: MSU International Development Working Paper No. 5.

WOLF, Chris
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ZALLA, Tom, David J. Campbell, John Holtzman, Larry Lev, and David Trechter
1981 Agricultural Production Potential in the Mandara Mountains in Northern Cameroon. East Lansing, MI: MSU Rural Development Working Paper No. 18.

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Cooperative Agreement AID/ta-CA-3, Basic Memorandum of Agreement, September 21, 1977.

Cooperative Agreement DAN-1190-A-00-2069-00, August 26, 1982.

Project Evaluation Summary, March 1978

Project Review, September 17, 1980 (?).

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DS/RAD Management Review, 1981 (?).

Project Amendments, 1977 through 1984.

Miscellaneous Correspondence.

Michigan State University

Plan of Work September 1977-September 1978, March 22, 1978.

Major Issues and Plan of Work, November 1978.

A Statement in Support of a Request for Additional Tenure-System Faculty to Strengthen the Department of Agricultural Economics.

Scope of Work for Year 4 and the Extension Period, 1982 (?).

Alternative Rural Development Strategies Project, March 5, 1982.

Annual Work Plan, November 8, 1983.

Annual Work Plan, Food Security in Africa, December 1, 1984.

USAID Contracts, Grants and Cooperative Agreements.

Expired USAID Contracts, Grants and Cooperative Agreements

Travel: Domestic and International Listed by Year.

Agricultural Economics Report, Departmental Publications, 1982, 1983, 1984.

APPENDIX A

LIST OF INDIVIDUALS CONSULTED

Carl Eicher, Former Project Manager
Michael Weber, Former Project Manager
Thomas Mehen, Former Project Officer, AID
Janet Munn, Administrative Assistant for AID-funded projects
Larry Connor, Chair of the Department of Agricultural Economics
Lester Manderscheid, Associate Chair of the Department of Agricultural Economics and Director of Graduate Training
Warren Vincent, Professor, Department of Agricultural Economics, MSU
Rick Bernsten, Associate Professor, Department of Agricultural Economics, MSU
Donald Isleib, Associate Dean and Director of the Institute of International Agriculture.

APPENDIX B

USAID CONTRACTS, GRANTS AND COOPERATIVE AGREEMENTS

Department of Agricultural Economics
Michigan State University

Account Number	Title	Dollar Amount	Contract Number	Effective Date	Expiration Date
	Alternative Rural Development Strategies		AID/ta-CA-3		
71-2017	Core	$ 469,000		09/21/77	11/30/82
	Core (Amendment #4)	240,000		09/21/77	11/30/82
	Core (Amendment #6)	92,973		09/21/77	11/30/82
	Core (Amendment #8)	200,000		09/21/77	11/30/82
	Core (Amendment #18)	200,000		09/21/77	11/30/82
		$1,201,973			
71-2018	Cameroon (Amendment #7)	$ 356,326		09/21/77	11/30/82
	Cameroon (Amendment #11)	19,019		09/21/77	11/30/82
	Zambia (Amendment #9)	51,471		09/21/77	11/30/82
	Bolivia (Amendment #10)	32,544		09/21/77	11/30/82
	Zimbabwe (Amendment #13)	6,258		09/21/77	11/30/82
	Somalia (Amendment #15)	34,013		09/21/77	11/30/82
	Senegal (Amendment #16)	9,748		09/21/77	11/30/82
	Honduras (Amendment #17)	17,600		09/21/77	11/30/82
	Senegal (Amendment #20)	6,272		09/21/77	11/30/82

(Continued)

Account Number	Title	Dollar Amount	Contract Number	Effective Date	Expiration Date
	Alternative Rural Development Strategies - Continued		AID/ta-CA-3		
71-2018	Haiti (Amendment #21)	$ 5,369		09/21/77	11/30/82
	Francophone Africa (Amendment #22)	150,000		09/21/77	09/30/83
	Somalia and Saudi Arabia (Amendment #23)	14,922		09/21/77	11/30/82
	Barbados (Amendment #24)	13,100		09/21/77	11/30/82
	Eastern Caribbean (Amendment #25)	47,769		09/21/77	11/30/82
	Eastern Caribbean - CATCO (Amendment #26)	33,465		09/21/77	11/30/82
	Pakistan (Amendments #27 & #28)	13,429	+ 150,216 Rupees	09/21/77	11/30/82
	Upper Volta (Amendment #29)	30,000		09/21/77	11/30/82
		$ 841,358			
		$2,043,331			

USAID CONTRACTS, GRANTS AND COOPERATIVE AGREEMENTS

Department of Agricultural Economics
Michigan State University

Account Number	Title	Dollar Amount	Contract Number	Effective Date	Expiration Date
	Alternative Rural Development Strategies		AID DAN-1190-A-00-2069-00		
71-2038	Core	$ 450,000		09/01/82	10/31/84
71-2038	Core (Amendment #6)	35,000		09/01/82	10/31/84
		$ 485,000			
71-2039	Francophone (Amendment #1)	$ 150,000		09/29/82	09/30/85
	Francophone/Madagascar (Amendment #10)	8,775		04/27/84	09/30/85
		$ 158,775			
71-2040	Zimbabwe (Amendment #2)	$ 174,000		09/29/82	10/31/84
	Zimbabwe (Amendment #9)	108,714		09/30/83	10/31/84
	Zimbabwe/Grain Legume (Amendment #10)	46,340		05/01/84	10/31/84
		$ 329,054			
71-2042	Haiti (Amendment #3)	$ 10,219		10/22/82	11/30/82
71-2044	Barbados (Amendment #4)	$ 6,385		02//04/83	06/15/83
	Barbados (Amendment #5)	6,410		02/04/83	06/15/83
		$ 12,795			
71-2047	Zimbabwe/Hellyer (Amendment #8)	$ 5,000		09/28/83	08/31/84
		$1,000,843			

APPENDIX C

Students Who Completed M.S. or Ph.D. Degree at MSU By Year of Completion

Year	Students on Strategies Assistantship at Some Point During Their Stay		Students Completing M.S. or Ph.D. Research with Strategies Core Staff Orientation	
1977			Mark Newman	M.S.
1978			Helen Gunther	M.S.
1979	Peter Riley	M.S.	Jim Olakosi	Ph.D.
			Abdorazig E. Muhammed	Ph.D.
			Rapeepum Sektheera	Ph.D.
			Thomas Eponou	M.S.
	Steven C. Franzel	M.S.		
			Salisu A. Ingawa	M.S.
	Sarah G. Lynch	M.S.		
			Jean Pierre Rigoulet	M.S.
			Carlos A. da Silva	M.S.
			Hugo C. Alvarez Tolomas	M.S.
1980			Larry Harrington	Ph.D.
			Elsayed Zaki	Ph.D.
			Mamadou Diallo	M.S.
			Max Fernandez	M.S.
	Rita Laker-Ojok	M.S.		
	Ismael Ouedroogo	M.S.		
			Ibrahima Sene	M.S.
1981			Carlos A. M. Leite	Ph.D.
			Carlos A. B. da Silva	Ph.D.
	John Strauss	Ph.D.		
			Edouard K. Tapsoba	Ph.D.
	David Atwood	M.S.		
			Sri S. Ramaratnam	M.S.
			Bafotigui Sako	M.S.
			Marian Toure	M.S.
			Galdos Ugarte	M.S.
	Carlos Mi Vaccaro	M.S.		
1982			Haidari K.R. Amani	Ph.D.
	(In-Country Support)		Saroj Aungsumalin	Ph.D.
			Yacob Fisseha	Ph.D.
	John St. Holtzman	Ph.D.		
			Mulumba Kamuanga	Ph.D.
			Gaafor Borhim Mohammed	Ph.D.
	(In-Country Support)		Somsak Priebprom	Ph.D.
			William Paul Whelan	Ph.D.
	Tom Zalla (Strategies Staff)	Ph.D.		
			Hermimaldo Sousson Britz	M.S.

Year	Students on Strategies Assistantship at Some Point During Their Stay		Students Completing M.S. or Ph.D. Research with Strategies Core Staff Orientation	
	Larry Lev	M.S.	Jorge Lesmer	M.S.
			Sandy Maima	M.S.
			Lamini Ndong	M.S.
			Peter Ngategize	M.S.
			Howard K. Sigweli	M.S.
			Annette Sulaimana	M.S.
1983	James Boomgard (Consultant for Strategies)	Ph.D.		
	Pascal Fotzo	Ph.D.	Thomas Eponoa	Ph.D.
	Steve C. Franzel	Ph.D.		
			Salisu A. Ingawa	Ph.D.
	Ismael S. Ouedroogo	Ph.D.	Alimami M. Kargbo	Ph.D.
	Beverly Fleisher	M.S.		
	Michael Morris	M.S.	Mator Gaye	M.S.
			Allassane Sow	M.S.
1984	Fenton Sands	Ph.D.		
			Pamateba Diendere	M.S.
			Sekou Hebie	M.S.
			Valerie Kelly	M.S.
			Makan Makadji	M.S.
			David Rohrbach	M.S.
			Sugossi Traore	M.S.
	Larry Lev	Ph.D.		
1985	Merle Menegay (received support in 1984 only)	Ph.D.	Nick Minot	M.S.
	Amalia Rinaldi (will finish in 1985)	M.S.		
	Joe Thome (will finsih in 1985-- In Crop & Soil Sci.)	Ph.D.		
			Jim Pease (Anticipated, Fall 1985)	Ph.D.
	Beverly Fleisher (Anticipated, SS 1985)	Ph.D.		