TRAINING, NETWORKING AND TECHNICAL ASSISTANCE

THE PRODUCT AND PROCESS OF THE FARMING SYSTEMS SUPPORT PROJECT

1982-1987

FSSP

CONTENTS

A final report of the Farming Systems Support Project

A cooperative agreement between the University of Florida and the United States Agency for International Development

The support entity base of the FSSP consisted of 21 universities and four consulting firms.

University of Arizona
University of Arkansas
Colorado State University
Cornell University
University of Florida
University of Hawaii
University of Illinois
Iowa State University
Kansas State University
University of Kentucky
Lincoln University
Michigan State University
University of Minnesota
University of Missouri (Columbia)
Tuskegee University
North Carolina State University
Southern Illinois University
Pennsylvania State University
Virginia State University
Virginia Polytechnic Institute and State University
Washingnton State University
Agriculture Development Consultants, Inc.
Development Alternatives, Inc.
Research Triangle Institute
Winrock International Institute for Agricultural Developrnent

Cooperative Agreement No.
Dan-4099-A-00-2083-00
Project No.: 936-4099

INTRODUCTION

The Farming Systems Support Project (FSSP) was put in place by USAID's Bureau for Science and Technology (S&T) between late 1981 and mid-1982 to strengthen the technical and human resource capabilities of the large number of farming systems research and extension (FSR/E) projects that USAID was funding throughout the world at that time.

As such, the FSSP was designed as a worldwide field support project which was to respond to bilateral FSR/E project needs and to provide leadership in developing methodological consensus among USAID FSR/E projects. In its original design, the FSSP was to strengthen USAID's FSR/E efforts through technical assistance, training, networking, and state-of-the-art research activities.

This final report of the Farming Systems Support Project (FSSP) differs from other end-of-project reports for USAID contracts. But then, the FSSP was unlike previous USAID projects in many ways. It was not a research project with specified research objectives to pursue and achieve. Rather, it was a project conceived to take shape according to the interests and needs of its numerous potential clients. It evolved to meet the conditions of a new approach to conducting research and extension, one that became more clearly defined as the project matured. The FSSP was directly responsible for a number of activities that shaped the definition of FSR/E, but it was also a collaborator and facilitator, a partner with many other projects, programs, institutions, and individuals who also played crucial roles in shaping the approach. FSSP is perhaps best viewed as a project of process and people, rather than specified achievements. To construct a final report requires telling the story of the project and people involved. This final report is just that, a story, written by several people and consisting of many parts. It is not meant to be all inclusive, but rather to give a sense to the interested reader of what the project was about, what happened during its life, the problems it faced, and the general outcome of its efforts.■

THE FSSP EVOLUTION

By the time the cooperative agreement was signed between the University of Florida and USAID in September 1982, initial competition for leadership of the project had been replaced by a desire for collaboration in what was to become the FSSP support entity network. This support entity network emerged with a memorandum of agreement, an advisory council, a technical committee and numerous support functions.

Chris Andrew
Director, FSSP 1982-1987

Many people wanted to be involved in the network. The support entities expected to be strengthened programmatically because of involvements with the project. Each participating institution identified a program leader, an administrative coordinator and program associates to facilitate institutional affiliation with FSSP and to coalesce their own respective programs. Resources through departments, centers and programs at these institutions were committed to strengthening the U.S. domestic capacity to provide support to AID farming systems activities through the FSSP. Financial gain was not an anticipated benefit of participation in FSSP. This attitude provided the basis for establishing a unique network among U.S. universities for international work, profoundly different then any previously developed.

Each of the participating institutions identified within its ranks faculty or staff dedicated to committing themselves and some of their time to learning about and then delivering the technical assistance and training activities necessary to support FSR/E efforts in conjunction with and under the leadership of the FSSP. These individuals or program associates numbered over 540 and 90% of them came from the university community of collaborators. The remainder were independent consultants from all over the world with the appropriate experience and credentials to offer to the support and development of FSR/E.

While the purpose of the project was to deliver technical assistance, training, and network development to the third world, particularly in Africa, one of the important results of its organization and collaborative activity was the development and strengthening of a support capability of the FSSP Network as a support system for USAID. The FSSP Network collectively developed its own identity, mission and methodology to support FSR/E. The network, although now informal, is ready for more than what was envisaged to support the FSSP. It has the potential to alter the way in which U.S. agricultural research and extension institutions support the international development of agriculture. FSSP was merely a starting point.

Early work in the FSSP was facilitated by well-qualified management on the part of the Science and Technology Bureau, Agriculture, USAID. The attitude was facilitative and flexible, allowing rapid emergence of mission-level programming and diagnostic work to determine project direction. Since the FSSP began without the mandated direction of the CRSPs, bilateral contracts and other technical support activities, the FSSP's collaborative management approach was essential in order to serve the intent of its cooperative agreement. Given both the diagnostic and design orientation of early demands on the project, as well as the need to move immediately into the field, collaborative management from the lead entity drew its advisory support through the support entities and the Agency.

The FSSP Advisory Council

Following the 1982 FSSP Annual Meeting an Advisory Council began its role as an advisory body and sounding board for policy to the FSSP director on behalf of the support entity network. It began with provisional status until specific policies and procedures could be established for the Council to function. Policies, procedures and membership on the Advisory Council were confirmed at the FSSP Annual Meeting in 1983.

The Council was composed of three members representative of the support entities within the FSSP and mandated to represent their collective interests. FSSP was particularly fortunate, and benefited immeasurably in having individuals on the Advisory Council throughout the life of the project who were sincerely committed to their task. The Council exercised diplomacy in fairly and judiciously representing the interests of the support entity network, and in providing guidance and direction to project management. Among several contributions, the Council assisted in drawing up the base Memorandum of Agreement including articles for support entity participation, took responsibility for chairing the FSSP annual meeting, met quarterly with project management and the director in administrative and program issues, gave guidance to the technical committee structure, membership and mandate and represented FSSP before various meetings, particularly within USAID Washington.

The FSSP's three-member advisory council was sufficiently small to take quick action and was able to do so readily with the cooperative direction provided by the USAID/S&T project manager and the FSSP director and core staff at the University of Florida. The functional agreement was that each of the three major actors (project manager, director's office, advisory council) had a specific role to play and that overlap or turf issues would be minimized based upon defined responsibilities.

1. The project manager agreed to manage USAID relations, provide leadership and training to the core staff in establishing mission level linkages, and to oversee contract office interactions to meet USAID mission demands. The project manager also took responsiibility for developing and maintaining linkages with regional bureaus relative to project planning and general collaboration.
2. The project director and core staff were responsible primarily for bringing the program and support dimension to bear on USAID needs at the mission level. Particular emphasis was on the substantive- and content-oriented issues of FSR/E and the linkage issues associated with involving varied university and complementary resources with problem solving needs of FSR/E projects.
3. The Advisory Council's responsibility was a sounding board and a source of information for structuring the support entity network to provide sustained collaboration with a mission orientation

to serve USAID needs. The council advised in the establishment of the technical committee, working groups, and various programming aspects that emerged from those two activities to provide leadership for the process of synthesis, consensus and growth in the area of methodology of FSR/E.

The FSSP Technical Committee

Established as the only standing committee of the FSSP, the Technical Committee's responsibility was to serve as a technical resource base and to address technical support needs of the project. Its role was also to ensure that common goals were served in the overall FSSP program and that the integrity of the farming systems approach to research and extension was maintained in project undertakings and activities. Creation and oversight of various ad hoc committees and task groups to further the knowledge base in various methodological and technical areas was also a function of the Technical Committee.

The Committee was representative of both a range of disciplines and broad support entity representation to ensure a multidisciplinary capability and inter-institutional relations.

This set of major organizational accomplishments was achieved between January and October 1983. The structure was fully functional by October 1984 and the impact of FSSP on FSR/E consensus and thought was felt in various parts of the world. Linkage of the Technical Committee to regional networks further strengthened peer associations and agreement about FSR/E methodologies. The Technical Committee was strengthened in 1985 and 1986 by the addition of representatives from the regions of Asia, Africa and Latin America. From this base, participation by numerous program associates (or faculty) within the support entity structure, especially in the development and review of training materials, further intensified a synthesis-to-consensus process. The consensus building was free and open bringing wide ranging dimensions into focus. The process recognized and accepted varied forms of on-farm research and extension methodology necessary for unique biophysical and socioeconomic environments.

When USAID programming for farming systems shifted away from worldwide support efforts to emphasis on West Africa, both the FSSP management and the various support entities had something to learn about potential networking and training development in that region. Lack of training materials and people geared to presentations in French and varied degrees of research capability, among other constraints, were networking challenges. Adaptive work by excellent people in collaboration with national entities and USAID missions, stimulated program emergence much more rapidly than most people anticipated. It was not as rapid, however, as others desired in terms of establishing commodity networks in the region.

An important West African regional network did emerge. Participants in several regional activities identified the need for emphasis on mixed crop and livestock systems. To that end, FSSP resources, in collaboration with those from international donors and the International Livestock Center for Africa (ILCA), established a network of interested research and extension scientists (West Africa Integrated Livestock Network) that can perform effectively in the future if support is sustained until the overall program reaches maturity. Deliberate action and patience has paid off with careful identification of African leaders to participate in the network. Patience is required because these individuals are busy in their respective national programs and cannot give undivided attention to regional networks. It is recognized that regional participation will provide valuable input to the collaborating scientists. Likewise, direction for such an organization must come from national participants or a long-term sustained effort cannot be achieved. To that end steering committees and leaders were drawn from nationals, which slowed the process but made it more secure. While productive workshops and considerable interest have emerged, it is now that the process can begin to bear fruit in terms of long-term research contributions and cooperation. This process however, requires continued support to become fully self-sustained. Financial support through USAID as well as from other government development agencies such as those of Germany and Canada, is greatly appreciated by the network and may lead to a viable long-term organization.

Numerous other interactions could be mentioned where collaborative efforts, direct involvement and backstop by FSSP support entities have been exemplary. Collaboration relative to programming for Asia was outstanding, yet no funding emerged to support an Asian program. That collaboration and cooperation remains as a particularly capable source for support to USAID should the Agency decide to use it.

A caution is in order as we consider the future for the U.S. Farming Systems Network. A trust has been established within the support entity system. It is unique and sometimes delicate. Misuse of biodata, for example, can injure the trust. Selection of one support entity over others to perform a task of pervasive importance without collaboration and communication

Colorado State University was one of the first to cement its farming systems relationship with the FSSP with the signing of a Memorandum of Agreement. Acting on behalf of their respective institutions are (l-r): H. L. Popenoe, Director of International Programs, University of Florida; C. O. Andrew, Director of Farming Systems Support Project; and J. Meiman, Director of International Programs, Colorado State University.

relative to that selection process can injure the collaborative relationship. With considerable care, a relationship that focuses on multidisciplinary involvements in FSR/E has definitely been established which outlives FSSP regardless of the funding horizon. This unique resource, if nurtured, can provide a support base to USAID and others over a long period of time. To maintain interest within this support base only minor financial investments are necessary. To ignore the base, however, will send a signal to those who have given unselfishly of their institutional and personal resources to the program.

It is impossible to say what the absolute dollar match by USAID missions, other donors, support entities, IARCs and national programs was to FSSP activity. The project stimulated the mobilization of many human and information resources at minimal cost to the project but often at substantial cost to collaborating entities. Yet, FSSP was criticized at times because mission buy-ins were not of a level competitive with other projects in USAID. The project was managed so that administrative and bureaucratic maneuvers were minimized, including exchange of funds. In many cases this removed the need for handling funds through extra contract offices and agents or eliminated the need for international money exchanges and transfers. The goal was to manage the funds as close to the client activity as possible.

Careful study of the overall record indicates that mission fund matches come from bilateral contractors both in the field and at the home institution. It is impossible to identify the extent to which these matches augmented the resource base of the FSSP. Nevertheless, the multiplier effects were considerable and numerous hours were "freely" contributed to activities such as work groups, task forces, training unit development teams, symposia, councils and technical committees – where no federal monies have been expended. The States, their universities, their offices of International Agricultural Programs, their departments and their faculties viewed FSSP as a worthwhile investment. The attitude in delivering such support has been positive and conducive to an active and productive multidisciplinary and multi-institutional core of program associates. Most of the FSSP Program Associates did not know each other in 1982, but now, largely as a result of the FSSP, function intensively as colleagues across many disciplinary and institutional boundaries. This may well be one of the most important and long-lasting achievements of the FSSP. It would be incorrect to say that the FSSP institutionalized FSR/E within the 25 cooperating support entities. Yet the essence of the FSSP goes well beyond apparent contributions. The FSSP provided a mechanism for faculty members with interest in farming systems to collaborate as well as communicate with practitioners from around the world. It did not provide an institutional network per se, but a network of faculty and professionals belonging to an important institutional resource base. FSR/E, it must be remembered, is methodology, not an institutional construct. The institutional dimensions enjoyed by FSSP resulted from the strength of the participating institutions and the various parent entities affiliated with those institutions, (such as the Land Grant Association and AUSUDIAP, the professional societies of agronomy, agricultural economics, and others), along with a host of other inter-institutional mechanisms. Somehow the right ingredients formed within the FSSP to provide for a unique congruity of thoughts and practices in the support network to achieve support for FSR/E based USAID programs and FSR/E programs of other donors. The United States Agency for International Development can take considerable credit for initiating a project that stimulated this unprecedented collaboration. Future support efforts in USAID and through the donor community will surely benefit from the FSSP experience.

THE REGIONAL EFFORT

The FSSP cooperative agreement assigned fifty percent of project activities to support USAID mission programs in Africa. Remaining project support was to be divided between Asia and Latin America. FSSP assigned a core staff person to be responsible for each region. By the end of 1983, an FSSP regional strategy had evolved that included pro-active support and development of activities in Africa with direct core staff involvement, a response strategy to Latin America that drew largely upon Latin American institutions and FSR/E specialists and minimized FSSP core staff involvement, and a reactive stance toward support for FSR/E in Asia.

Susan Poats
Associate Director, FSSP 1983-1987

Given the relative maturity of Asian FSR/E activities and the strengths of the various national, regional, and international institutions already providing support for FSR/E in the region at the time of FSSP initiation, fewer immediate requests for FSSP involvement were anticipated and the project was essentially "on hold" with regard to Asia for the first year and a half. Core staff time concentrated on building support entity capabilities to provide technical services and support to USAID missions and on developing materials for technical assistance and training.

While this strategy was consistent with USAID needs as perceived in Washington, it did not reflect the (then) current demands for FSR/E support activities from projects and practitioners in the field. A cable announcing the types of support services that could be accessed by USAID missions from the FSSP, sent out shortly after the project began, generated numerous requests for activities from Latin America, and some from Asia, but virtually none from Africa. The few African requests came from projects already established in East and Southern Africa, but there were none from West Africa, the region where USAID Washington wanted FSSP to target 50 percent of its effort. The uneven regional response probably reflected the longer historical development of FSR/E in Latin America and Asia, as well as the simple fact that requests for support activities were more likely to come from older existing projects and programs that knew what FSR/E was and could articulate an appropriate request. Apart from Senegal and Nigeria, and to a lesser extent in Mali, FSR/E efforts were just being initiated in the region when the FSSP began. Several USAID projects were in early planning or design stages, but it was too early for requests for support. Existing agricultural development projects were not designed to include FSR/E and it would take time for the participants to learn about the approach before requests could be generated. From the FSSP management viewpoint, this was not necessarily a problem because the project had the resources to conduct activities in the Latin American and Asian regions and draw upon and apply these experiences while working with newer projects and programs in Africa. In essence, the situation offered the opportunity to facilitate inter-regional networking and collaboration which would result in better FSR/E work and the generation of useful training and technical assistance materials.

However, by 1984, USAID programming for farming systems had shifted away from worldwide support efforts to an emphasis on Africa, and in particular, West and Central Africa. USAID's regional program in East and Southern Africa decided to extend and expand the funding of the CIMMYT on-farm research program in order to provide sufficient FSR/E support to USAID FSR/E projects in the region. FSSP was instructed to curtail activities in Asia and Latin America while channeling all pro-active support to West and Central Africa. The project was also encouraged to limit direct support and interaction with East and Southern Africa and instead collaborate with CIMMYT-directed efforts.

At the same time, indications of impending budget cuts in the Science and Technology Bureau were becoming stronger. Following the 1984 FSSP annual meeting, project management was informed a cut in the budget of up to 25% might be necessary, resulting in drastic curtailment of regional activities, especially outside West and Central Africa. Then in early 1985, the possibility of budget cuts was dispelled in a session at USAID reviewing the 1985 workplan, and regional planning of delivery activities continued, though programming for Asia and Latin America was somewhat limited. FSSP moved ahead with planning for activities scheduled in the three regions and began preparations for the mid-term evaluation set for June 1985.

Optimism for continuing worldwide activities was shortlived as it became apparent that workplan and budget approval was premature. The FSSP budget was cut by over 1 million dollars (14% of the total but about 35% of the funds scheduled to complete the project) in 1985 before the mid-term evaluation took place. Despite the cut, USAID called for the project to make plans to place a core staff person in the West and Central African region for the remaining two years of the project. This idea had been proposed by FSSP during its first year in order to enhance the pro-active development of activities in the region. At the time, USAID Washington, and the Africa Bureau in particular, did not support the idea. FSSP had proposed modeling such an effort on the successful CIMMYT program in East and Southern Africa, but recognized that success of such a venture would require long-term committment to the position and to backstopping by the project team in Florida.

Though the FSSP had been designed as a ten-year effort, only the first five were budgeted. It was the consensus of FSSP core and outside FSR/E advisors that the project had insufficient resources and time to launch an efficient and sustainable regionally located office, and that project monies and time would be better placed in support activities and the development of FSR/E materials for technical assistance and training. For USAID to revive the idea of a regional staff member halfway through the project, following a substantial budget cut, and with very little indication that a second phase of the project would be forthcoming was not well thought out.

The report from the mid-term evaluation, conducted in June 1985 and received by FSSP in October, confirmed a focus on West and Central Africa and stipulated that

activities in other regions should be conducted on a buy-in basis only. This, plus other evaluation recommendations, combined with the substantial budget cut again for 1986, greatly influenced programming for the remainder of the project. The proposal for a regionally based core staff person was dropped, all activity in Asia and Latin America on project funding was completely eliminated, and activities in West and Central Africa were confined to two specific networking activities and the planning and delivery of two regional training courses. Core staffing of the FSSP was shifted to reflect the changes in regional focus and by mid-1985, two core staff had left the project and were not replaced. Beginning in 1987, activity even in Africa was conducted largely on a buy-in basis and the project began to wind down as the year ended. No support for a second phase was forthcoming. The regional activities, summarized in the table below, reflect the overall manner in which regional efforts built up during the first three years of the project and decreased significantly in the last two.

In retrospect, had the regional program of the FSSP not been cut back in 1985, activities in Latin America and Asia would have continued to expand and would have involved a larger number of the FSSP support entities with capabilities and experience in these regions. Nearly all of the work would have been on a buy-in basis with some core funding necessary for management. The focus on West and Central Africa did serve to greatly expand FSR/E efforts in that region. As projects matured or were designed to include FSSP support demands, resultant activities improved yet the move to a buy-in basis did not allow the FSSP to function properly as a support project. Buy-ins from missions were for specific activities, such as a training course, an evaluation, or a project design effort. Buy-ins did not and could not cover core management development, or synthesis activity, and did not serve well any of the regional or inter-regional networking areas of the project. Without these overall support mechanisms, the project could only function much as any other private or university contractor does on an individual country level basis.

Regional Activities Conducted by the FSSP 1983-1987*

	Africa	Latin American	Asia
1983	17	13	1
1984	23	1	4
1985	18	9	8
1986	7	3**	0
1987	6***	0	0

*Tabulated from FSSP Annual Reports 1983-1986 and 1987 trip reports.

**All three activities were funded on a buy-in basis by USAID missions.

***Only two activities were funded by FSSP, the rest were mission buy-ins or supported by other international organizations.

AFRICA

FSSP activities in West and Central Africa were organized around the four project areas of training, networking, technical assistance, and state-of-the-art or synthesis of FSR/E experience and were designed to meet the following seven objectives drawn from the cooperative agreement for the project:

1. To develop the proficiency and capability of West and Central African scientists to conduct FSR/E within their national programs of agricultural research and development.
2. To support ongoing FSR/E programs and projects with FSR/E technical assistance, both short-term and long-term as requested.
3. To facilitate the documentation of FSR/E results in West and Central Africa and the exchange of such information among researchers and administrators at both the national and international levels.
4. To create and support media for face-to-face exchanges of FSR/E experiences and results among West African researchers and administrators, and between West Central Africans and the international researcher administrator community.
5. To build and support linkages between and among FSSP and other donor-assisted FSR/E activities in West and Central Africa.
6. To encourage and support growth in the synthesis of FSR/E experiences in West and Central Africa.
7. To facilitate the coordination of FSR/E activities in the region.

Training and networking were the areas in the African program where FSSP achieved its best results, however, the start-up and initial activities in each area were difficult. Looking first at training, USAID Washington sent out a cable in early 1983 to all of the USAID missions in West and Central Africa inviting them to nominate participants for an FSSP orientation workshop to be held later during that year. The workshop objective was to provide USAID mission representatives and selected participants from host countries with an overview of the FSR/E philosophy, approach, and methods. The USAID mission in Burkina Faso agreed to host the workshop.

Burkina Workshop Lessons

Two problems were immediately evident in trying to set up a training workshop for West Africa. First, since the FSSP had just gotten underway, proposed training materials to be developed during the life of the project were only in the planning stage. Few other materials were available; only a couple of institutions were beginning to systematically conduct training courses in on-farm research methods, and of the limited materials available, virtually nothing had been translated from English to French. FSSP had conducted its first FSR/E orientation workshop in June 1983. It was essentially a condensed version of a semester-long course taught at the University of Florida. While it met an immediate need to familiarize faculty and administrators with the basic concepts of FSR/E as they were recognized at the time, it was not a polished training course. As a way of initially filling the training materials gap, FSSP put together several slide sets describing FSR/E methods and a notebook of selected readings. Rather than waiting for more polished materials, FSSP decided to rapidly translate a selection of these to use in immediate workshops where French materials were necessary and as better materials became available, these would be incorported into future courses.

The second problem was that all missions in the West and Central region had been invited to send participants to the workshop. By mid-July, sixteen missions had responded and projected participants numbered over 50 including both English and French speakers. In consultation with outside training advisors, FSSP decided the number of people was too large and proposed to split the activity into two or three orientation workshops, by language so that translaton would not be necessary and better direct interaction of participants could be fostered. Since Burkina Faso was the location of the first workshop, it would be held in French, and the second would be in English. If enough participants responded, a third workshop would be held in French. French workshops would be divided between Sahelian country participants and "humid tropics" participants.

A planning visit to Ouagadougou in August, which coincided with a coup d'etat and change in government, set the date for the workshop in October, immediately following a conference on FSR/E organized by SAFGRAD, IRAT, and ICRISAT. FSSP greatly benefitted from the help of the conference organizers who allowed the FSSP workshop to "piggyback" several activities, in particular a field trip to visit on-farm trials being conducted as part of the SAFGRAD Farming Systems Unit under a Purdue/USAID contract.

A report on the workshop (Poats 1983) describes the planning, content, participants, outcome, and evaluation of the workshop. The workshop was not a resounding success, especially in the eyes

of the three workshop coordinators (S. Poats, L. Fresco, and S. Franzel). Participants evaluations on the whole were far more positive and provided numerous insightful comments and suggestions for improving the content and organization of the workshop for future delivery. From the view of FSSP, the major problems of the workshop were:

- insufficient planning time (3 months) especially in light of a first-time event.
- lack of control over the selection of participants: USAID missions selected the participants who ranged from extension technicians to Ph.D. researchers. FSSP did not know in advance, except from Togo, exactly who the participants were until they arrived. Additionally, missions sent more people than agreed upon resulting in 38 participants, too many for an effective interactive workshop format.
- lack of trainer preparation time; the three trainers had not worked together before and met in Ouagadougou just before the workshop. They did not have sufficient time to plan how they would operate as a training team.
- inadequate materials; FSSP's decision to use intermediate materials as a stopgap, though necessary, was probably unwise and left the impression of inappropriate content or lack of quality to the methodology of FSR/E.

Workshop participants noted these problems but highlighted the fact that, as one stated, "everyone I spoke to came out of there with something positive in hand... ." Another paticipant stated "...it is not possible to rest indifferent to the experience we acquired during the Ouagadougou workshop, which was for us more than just a view of production systems. The lessons we learned, you can be sure, will take their place in our various research programs within the strategy for rural development."

FSSP spent a good deal of time reviewing the outcome of the Burkina Faso workshop with the intent of deriving lessons for the development of future training activities. In many respects, the workshop provided an excellent testing and development experience from which the FSSP training strategy was derived. Like an on-farm experiment, the workshop taught the project that many preconceived notions were inappropriate and that training needed more planning and hands-on involvement of participants. The Burkina experience lead to the establishment of several training principles for the project which became hallmarks of the training program. These included: programming training team development; a four- to six-month planning horizon for any course; emphasis on training materials development and professional translation; learning objectives format; emphasis on experiential training activities; continuous evaluation and redesign in response to participant needs; provision of logistical support personnel; and, the screening and selection of participants.

Experience Improves Program: Examples from The Gambia

The rest of the training program in Africa was much more successful from the view of the trainers, participant evaluations, and in terms of testing and developing new training materials. Training activities were of two types: those fully organized by the FSSP and those in which FSSP played a supporting or collaborating role. The former included training courses in Gambia, Mali and Niger. The experiences in each country were quite different and demonstrated both the flexibility of the project as well as its maturation over time.

FSSP interaction with Gambian FSR/E practitioners was facilitated by exceptionally good working relationships with the local USAID mission and its agricultural officers and two sequential USAID contract teams, the Mixed Farming Project (Colorado State University/CID) and the Gambia Agricultural Research and Development Project (University of Wisconsin). Three courses were held in Gambia: the second regional orientation workshop (March 1984), a one-week course on the design and analysis of on-farm trials (May 1985), and a three-week regional FSR/E methods course (April 1986).

The second regional orientation workshop benefitted greatly from the experiences gained in Burkina Faso. A number of factors contributed to the success of this workshop. Holding it in English made the task much easier for FSSP trainers. It was far easier to communicate many of the complex ideas of FSR/E and to direct and manipulate discussion while dealing in one's own first language. It also facilitated the use of improved training materials, that were not yet translated to French. Sufficient time was allocated to planning the workshop and two of the three trainers conducted the planning visit in-country. Further planning and trainer team-building took place before the workshop. Advance planning and leadtime allowed for better screening and selection of participants with more homogeneous backgrounds and interests in FSR/E and its application. Advance planning also facilitated workshop logistics. Adding two additional days to the workshop allowed better, more timely coverage of the workshop objectives. An emphasis on small group activities and a two-day informal survey exercise created a practical "hands-on" atmosphere. Finally, a number of the presentations during the workshop were made by participants with specific experiences relevant to the content of the workshop. This expanded the experience base of the trainer team and contributed to the "ownership" and "investment" in the

Team exercises play an important role in FSR/E training. At the 1984 FSSP regional training workshop in the Gambia, teams were formed to conduct sondeos in the vicinity of Madina Umfally.

workshop on the part of the participants.

The second course, held in Gambia in May 1985, lasted a week and focused on the design and analysis of on-farm trials. It was not regional but designed for Gambian participants, was co-sponsored with the USAID mission and the GARD project, and was organized as a follow-up in content to the orientation workshop. The workshop also served to test the newly developed set of FSSP training materials on the design of on-farm trials and several of the principle authors of the materials were there to conduct the course as co-trainers (J. Caldwell, D. Galt, and F. Poey).

The success of this course led to the selection of Gambia for a third training course in April 1986. This three-week FSR/E methods course represented the culmination of the training program. The complete set of training materials was used and the three areas of diagnosis, design, and analysis were covered. Participant evaluations and trainer assessment revealed that though the materials were well-received and the course was a success, there was still room for improvement, especially in the materials on the analysis of on-farm trials and the design of training activities on analysis (Caldwell, Walecka, and Taylor 1986). These topics became a major part of the focus for the overall FSSP training program. As a model for conducting further FSR/E methods training in the region, the course proved that the combination of diagnosis and design in one training activity was an improvement over conducting them separately, but that analysis might be better covered separately, or perhaps only in an introductory fashion with the other two areas. Trainers recommended that analysis skills would likely be better handled as a session following practical field experience over a season with on-farm trials. Such a format would have the additional benefit of using actual diagnosis/design from analysis as is used in CIMMYT-sponsored training courses held at the University of Zimbabwe. FSSP, on the recommendation from many persons working in West Africa, had combined the three areas in order to eliminate the need to bring trainers together twice during the same year, which was perceived as both an expensive undertaking, not only in terms of funding but also in the limited time of scarce FSR/E practitioners. A compromise training recommendation for the future is to cover the introduction to analysis in regional training courses, such as those conducted by FSSP, but to handle the detailed learning and practice of analytical tools on a country or project basis in conjunction with actual on-farm research efforts. Had the FSSP been continued in a second phase, this would have been the guiding strategy for the training program.

Training for Trainers–FSSP held a training of trainers course at Iowa State University in June 1984 (Norem and Abbott, 1984). Though not directed specifically at the African Program, the course benefitted the program in two important ways. First, it produced a cadre of trainers with a common training background who could be called upon by the project to plan and deliver training activities for the FSSP. Second, it provided valuable new skills for the trainers in terms of planning training events and in specific experiential training tools, both of which served to improve subsequent training activities in Africa.

Other highlights from the course were: 1) the use of a case study to provide experience in using gender analysis in the design of on-farm experiments, 2) the involvement of Gambian researchers in the planning and delivery of the course, 3) the involvement of a farming systems extension specialist from the Philippines as a resource person for one week of the course (which had the added benefit of inter-regional networking), 4) the use of an IPM specialist as a resource person during the first week of the course focusing on diagnosis, and 5) ongoing monitoring and evaluation of the course segments which facilitated assessment of what was or was not working well and indicated where changes in the training agenda could be made to improve the course.

LATIN AMERICA

The FSSP strategy for Latin America (and the Caribbean) was not a proactive one, but rather one of organizing and maintaining capability for responding to requests from USAID Missions. At the outset, demand for project technical services and training in this region was significant. In practice, FSSP involved as many Latin American scientists and researchers as possible with experience in farming systems to implement training and technical assistance programs. FSSP core staff involvement was held to a minimum in favor of strengthening program activity in Africa. There was, however, active participation in the regional effort by members of the Technical Committee and through program associates of the support entity network. The strategy proved to be an effective one.

Multiple Benefits

Requests for FSSP services were received for project design, project evaluations, training, technical assistance, workshops, rapid reconnaissance surveys, and program reviews. An important contribution to the entire FSSP effort emerged from these activities in the Latin American region: they served as a base for program and materials development for the worldwide project. For example, in April and May, 1983, FSSP fielded a technical assistance team composed of Bob Hart (Winrock International), Bob Waugh (consultant), W. W. McPherson (University of Florida), and included several CARDI staff members representing Eastern Caribbean territories, to complete a project design effort. The team report, which served as the basis of a Project Paper to address opportunities in research, extension and institutional areas concerned with a farming systems approach, was submitted to USAID/Barbados in May. Equally important, and as a result of this team effort, Dr. Hart prepared strategy materials to be used as overall FSSP guidelines for future teachnical assistance project design teams.

Other benefits accrued from FSSP's involvement in Latin America, specifically through a strong collaboration with CIMMYT. A good example of this collaboration is the cumulative activity in Paraguay, where an initial review of the USAID Small Farm Technology Project in 1983 led to the provision of training and technical assistance over a four-year period, resulting in the integration of research and extension in the establishment of an on-farm research effort geared toward technology development and testing. This collaborative effort and sequential provision of technical services served as a model for potential activities in other countries of the region.

The sequence of activity in Paraguay began in June, 1983 when Federico Poey (AGRIDEC), Juan Carlos Martinez (CIMMYT) and Ramiro Ortiz (ICTA) provided FSSP's review of the USAID Small Farm Technology Project, which was focused primarily on extension. Their goal was to suggest alternatives appropriate for the final stages of the project. Following this review USAID/Paraguay requested a one-week training course to orient decision-makers to the FSR/E approach as part of a broader scheme to integrate research and extension using the approach. This course was accomplished in December, presented in Spanish by Sergio Ruano (PRECODEPA), Federico Poey (AGRIDEC), and Edgardo Moscardi (CIMMYT). A more extensive methods course was scheduled for practitioners working with the Small Farm Technology Project, and delivered over a three-week period in January and February in 1984. This course, led by Federico Poey (AGRIDEC), Rene Velazquez (AGRIDEC), Mario Ozaeta (ICTA) and Glen Sappie (University of Florida), dealt with all stages of the FSR/E process and involved an actual

FSSP training and technical assistance in Latin America and the Caribbean, 1983-1986, by country or institution.

Project Design	Evaluation/ Review	Training/ Workshops	Technical Assistance	Sondeos/ Workplans
1983 CARDI	1983 Paraguay	1983 Paraguay	1983 Dominican Republic	1983 Honduras
				1984 Dominican Republic
1983 Peru	1983 CIAT	1983 Dominican Republic	1983 Ecuador	
1984 Dominican Republic	1984 Honduras	1983 Honduras	1983 Peru	
	1984 Peru	1983 Honduras	1984 WAND (Eastern Caribbean)	
	1985 CATIE	1984 Paraguay I	1984 Haiti	
	1986 Haiti	1984 Paraguay II	1984 Jaimaica	
		1984 Guatemala	1985 Honduras	
		1984 INSORMIL	1985 Dominican Republic	
		1985 Honduras I	1985 CATIE	
		1985 Honduras II	1985 Paraguay	
		1985 Jamaica	1986 Paraguay	
			1986 Ecuador	

survey, or sondeo, out of which research hypotheses and a work plan for the year were developed. The work plan was subsequently implemented and the following year, in April and May of 1985, an FSSP team went to Paraguay to consult for three-weeks on the computerized interpretation of research and extension data from the project. In between these two activities, FSSP conducted a three-week training workshop on FSR/E methodology in livestock production for the Paraguayan Extension Service (SEAG). The workshop focused on viable research alternatives in beef, poultry and dairy.

FSSP technical assistance and training concluded in Paraguay in 1986, with the expiration of the USAID mission's two-year buy-in, which had included the fielding of a technical consultant for nearly that full time period in addition to the major initiatives cited above. Collaboration with CIMMYT was important in these exercises as CIMMYT had been working with research in the country and FSSP had worked initially with extension. At the conclusion of FSSP's involvement with the effort in Paraguay, the technology development and testing process was established and well underway within the research and extension structure.

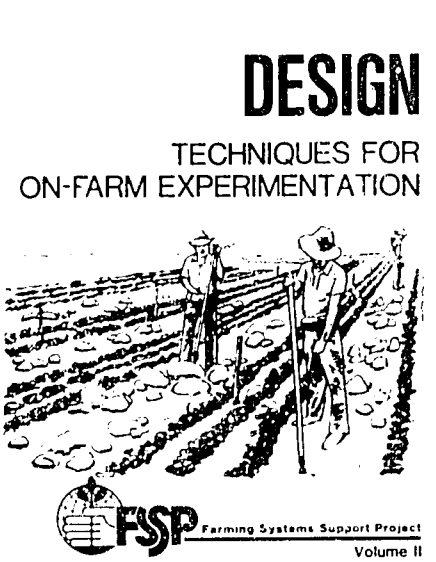
With CIMMYT's presence in the region and following FSSP's strategy of employing personnel from within the region in its activities, the project contributed to an evolution of farming systems in the region, serviced predominantly from within. Much of the training and technical assistance has spun-off to the private sector or to indiginous institutions which have increased their capacity to provide support as needed to the methodology being implemented. Major project activity that contributed to this process is indicated in the table above. ■

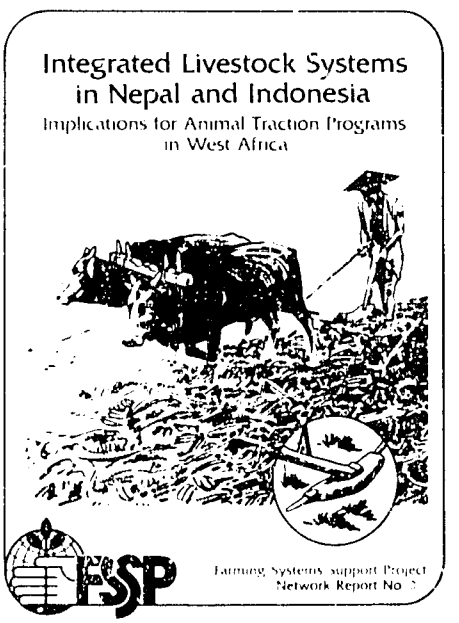
ASIA AND THE NEAR EAST

FSSP strategy toward Asia and the Near East was one of maintaining a reactive stance toward support for USAID Missions in these regions. Formal project initiatives there were minimal until early in 1984, when an Asia FSR *ad hoc* Strategy Advisory Committee agreed to serve in an advisory capacity to the FSSP core staff on Asia issues. By mid-July a cable outlining the FSR capabilities of the FSSP network in broad terms was sent to all Asian Missions by Wendell Morse (USAID/S&T) and Charles Antholt (USAID/Asia Bureau). The cable included the mechanisms to initiate requests for FSSP services, and indicated that the FSSP was prepared to conduct initial, exploratory visits to Missions and relevant host-country institutions in the region, at Mission request. In response to Mission requests, FSSP delegates met with Mission staffs in the Philippines, Indonesia and Thailand. In addition, at Mission request, the FSSP network provided technical assistance to Sri Lanka by backstopping a FSR workshop there.

At the 1984 FSSP Annual Meetings the Asia FSR *ad hoc* Advisory Committee was expanded from six to thirteen individuals, representing ten support entities and USAID/Washington. The Committee's status was formally recognized and it became known as the Near East and Asian Advisory Committee (NEAAC). Various recommendations were made by the Committee for FSSP participation in Asia and the Near East, but minimally for the project to: 1) become familiar with FSR in the region so as to understand some of its complexities; and 2) be able to help develop a strategy to allow the use of Asian FSR experts to backstop both other Asian FSR field teams and African FSR activities

But the enthusiasm evident at the FSSP Annual Meetings received minimal project support as the focus of FSSP efforts was directed toward Africa, and technical service delivery to Asia and the Near East was substantially curtailed. Project activity





Left: Strengthening of FSSP's support base, including methodological input into the development of training materials, was a significant contribution of activity in Latin America. Right: FSSP supported the establishment of linkages between the Asian Rice Farming Systems Network and the West African Integrated Livestock Network.

in these regions consisted mainly of closing out on prior committments, primarily in the Philippines. A request for assistance to the Philippine Ministry of Agriculture and Food to investigate the farming systems approach for their training needs was met with an FSSP assessment of the local, individual and institutional training capabilities, and recommendations were made for developing a farming systems training model.

Also in the Philippines, FSSP core staff attended the Second Annual Southeast Asian Universities Network (SUAN) meetings, where considerable interest was generated in the FSSP training units, and FSSP was invited to participate in a workshop at Khon Kaen University in Thailand on Rapid Rural Appraisal. Later in the year the Asian Farming Systems Monitoring Tour/Workshop was held at IRRI, where the training materials developed by the FSSP were presented. IRRI staff reviewed the materials and provided feedback to the FSSP, offering constructive recommendations. FSSP also sent representatives to participate in the Second Crop-Livestock Research Systems Tour in Nepal and Indonesia. The objective of that participation was to observe relevant implications for animal traction programs in West Africa, to build a linkage between Asian and West African livestock research.

Three other Asian countries were visited during 1985. The first was an exploratory visit to the Asian Vegetable Research and Development Center (AVRDC) in Taiwan. The second, a follow-up visit to Thailand to meet with the staff members from the Farming Systems Research Institute, CIMMYT, Khon Kaen University, the North Eastern Research and Development Project (Thailand) and the FSSP. Discussion centered around the means to continue coordination efforts between the various participating institutions, organizations and projects. The final Asian visit was to Mainland China to participate in the International Multiple Cropping Conference.

No other project activity occured directly in the Asia/Near East sphere after 1985. Regional affiliation remained through a representative from Khon Kaen University serving on the FSSP Technical Committee, and through the FSSP Near East and Asia Advisory Committee. NEAAC members remained an untapped resource, committed to the value of the Asian and Near East experiences, both for the FSSP network and for project activity in West Africa.■

TRAINING

A major orientation of the FSSP was toward training. Throughout the years of the project a continual assessment of training materials and delivery of training courses assured the success of training objectives of the FSSP. Training assessment, development and delivery provided an integrated growth process within the FSSP Training Strategy. None of these elements was mutually exclusive.

Lisette Walecka
Farming Systems Associate, FSSP 1983-1987

The FSSP developed a series of slide/tape Training Modules to cover all of the methodological steps of the FSR/E approach. This series, which initially used Latin American examples, was available for the first FSSP Domestic FSR/E Workshops held in June and July of 1983.

Although the slide modules provided general information, as anticipated, it was evident through their use in the domestic workshops that they would not suffice for the total training effort and that other approaches, as well as specific changes to the slide modules, would be needed. Other geographical examples were incorporated and the modules were translated into both Spanish and French based on experience in several overseas short-term training activities. Fifteen slide tape modules (in English, French, and Spanish) varying in length from 12 to 45 minutes, were produced and are available for use in training. They are intended for use as supplementary materials that can provide the basis for further discussions of specific topics. More than 600 sets were produced for distribution involving more than 40,000 slides.

The slide/tape modules have been, and continue to be used in many training environments. Many have been adapted to specific areas by the user's substitution of locational and culturally relevant slides. The series included:

TMS 101 Technical Overview of FSR/E
TMS 102 Introduction to Farming Systems Research/ Development
TMS 201 Introduction to Economic Characteristics
TMS 202 Economic Characteristics of Small Scale Farms
TMS 203 The Small Scale Family Farm as a System
TMS 204 Land Tenure in Upper Volta
TMS 301 Defining Recommendation Domains
TMS 302 Initial Characterization: The Rapid Survey or SONDEO
TMS 401 Designing Alternative Solutions–Jutiapa, Guatemala
TMS 402 Designing Alternative Solutions–Zapotitan, El Salvador
TMS 403 Designing Alternative Solutions–North Florida FSR/E
TMS 405 Women and Cassava Production in Zaire
TMS 406 ILCA Highlands Animal Traction–Ethiopia
TMS 501 Design and Analysis of On-Farm Trials
Int'l Pr. The Land Grant System and the University of Florida

Applying Lessons Learned to Develop Training Materials

FSSP's early development and delivery of shortcourse training in FSR/E preceeded the existence of adequate training materials and served to diagnose training material needs. The experiences gained through the first workshops led to simultaneous and complementary efforts to provide training materials as well as courses. The initial materials were series of slide-tape modules and a book of readings in FSR/E which contained both background and required readings for the Farming Systems Research and Extension Methods course offered at the University of Florida. It became obvious that an effective shortcourse training program could neither depend merely on condensing a university level degree course into a shorter period of time nor depend solely on the slide tape modules or a book of readings to provide the foundation for the shortcourses. Short-term training is an interactive process. Unique materials and training techniques were needed to help trainers facilitate active sharing of knowledge and greater experiential learning through participatory activities. Some needs were unique to FSR/E training relative to other subject matter areas where short courses were the delivery mode.

Enter the concept of the training unit. The FSSP wanted a way to synthesize available information and to package it in easy-to-use training materials that provided for participatory learning. Providing a wide selection of topics in such a way that trainers would be able to plan and present courses tailored to their specific audience was also a major consideration. The training unit was conceived as a flexible resource to help trainers to provide course participants with basic background in a specific topic relative to FSR/E and present the material in a participatory fashion. Early in their development they were likened to a menu from which one could choose a complete meal yet supplement the selection with local materials and cases in preparation for a training course. It was not expected that everything that was included in the menu would be used at once, but rather that enough was provided to allow for a variety of choices to fit a variety of needs.

From conceptualization to implementation, the development of training units has been a collaborative effort drawing from a variety of institutions worldwide and depending on individual expertise in many areas of FSR/E and the field of training. Resource people were drawn from national programs, international research centers, and the university community. After identifying the need, step one in the development process was to determine the fundamental topics of FSR/E which should be included in the project. This was accomplished through an open discussion and planning session held in August, 1984. Next, the writing of the text and development of learning activities was accomplished by more than twenty individuals working in four groups during a week-long workshop held in February, 1985. The workshop produced three units: Diagnosis; Agronomic Experimental Design and Analysis; and Management and Administration. In the following month the units were edited for technical soundness and consistency as well as for style of presentation.

The first versions of the training units, which were tested in shortcourses held in Jamaica, The Gambia, and the University of Florida respectively, consisted of a series of sub-units, each of which provided specific learning objectives, definitions, keypoints, a short text, and suggested training activities on a specific topic. Recommendations were made for revising the initial materials based on experience in the workshops as well as other review sessions. Between October, 1985 and February, 1986 specific recommendations were addressed. Revisions ranged from basic packaging to the focus of specific content. The "units" became volumes and the "sub-units" became units. Volume I, Diagnosis in FSR/E consisted of

nine units, and Volume II, Techniques for Design and Analysis of On-Farm Experimentation, consisted of six units following the revisions. Presentation was simplified and efforts were made to avoid use of jargon. The emphasized focus was on presenting material in such a way that it would help practitioners to make better decisions in planning their research.

The two volume set of FSR/E training units was published in English and French and distributed to selected national programs and institutions engaged in FSR/E. They can also be purchased from: Media Marketing, P.O. Box 926, Gainesville, Florida 32602 (904-376-3207).

Both the slide tape modules and the training units have provided an ongoing mechanism for further development of training materials and for synthesis and consensus in the evolution of the FSR/E approach. Users and developers are encouraged to partition, supplement copy and generally manipulate the materials for best use. Slides and scripts can be altered in the modules as continued use over the four years since inception of the FSSP will attest. The training units are a "mix and match" basis for adapting training techniques and FSR/E methodologies to the process of technology adaptation and development where client participation with the on-farm focus is considered essential. Feedback from users of the materials is emphasized as a mode for further expansion of the training base through both improvements in methodological and pedagogical experiences. Cases and examples are emphasized as valuable feedback.

The second revision of the training units was completed in December, 1987. Based on comments from users and reviewers, a number of changes were implemented. A greater focus on simplified presentation guided the revisions. Sections of planning for evaluation criteria and a framework for integrative analysis were included. The series now includes three volumes: I Diagnosis in FSR/E, II Design Techniques for On-Farm Experimentation, and III Analysis and Interpretation of On-Farm Experimentation.

TRAINING MATERIALS DEVELOPMENT PROCESS EVOLVES

The FSSP, faced with addressing how existing knowledge in the identified priority areas established for training unit development could be captured, synthesized, and presented efficiently and effectively, planned an intensive workshop. The goal of the workshop was not only to produce training units, but to provide a basic framework for the development of training materials which would allow for the continuing development of such materials. The workshop brought together more than twenty-five experienced individuals and qualified FSR/E practitioners from a variety of disciplines, and geographical regions. These individuals were faced with the task of determining the necessary FSR/E content appropriate for each unit, writing basic outlines and texts, determining appropriate training techniques and describing those techniques in trainer's notes for a variety of activities.

Pre-workshop planning and preparation by all participants, as well as the input of training consultants throughout the process, were critical to the workshop's success. Follow-up work in terms of editing and organization was also required by designated technical editors and each training unit coordinator.

The facilitation of the workshop depended on focussing tasks and clearly defining requirements for the final product. Beyond the introduction and setting the stage for the week's activities, which is a critical part of any workshop, the week was divided into two phases: 1) Determine FSR/E Content and 2) Develop Activities Useful in Teaching the FSR/E Content.

Phase I concentrated on determining the FSR/E content that would be covered in each unit. A number of pre-workshop activities were requested of all workshop participants in order to minimize the amount of workshop time needed on this phase of development. Each participant was asked to prepare a preliminary outline and background text on their unit. The purpose of this was to encourage as much forethought and intra-group communication as possible before the workshop. The first two days of the workshop were dedicated to group meetings (intra and inter) to arrive at an outline and detailed overview of each unit. Because of the interrelated nature of the material it was necessary to ensure adequate meeting time between groups as well as within groups.

Phase II focused on the development and writing of specific training activities which would be useful for teaching some of the content previously determined. Topical areas addressed included the following:

FSR/E Concepts
- Philosophy, Objectives, Evolution
- Characteristics

FSR/E Skills
- Diagnosis
- Agronomic Experimental Design and Analysis
- Animal Production Experiments
- Socioeconomic Analysis
- Applied Statistics
- Management and Administration
- Evaluation

FSR/E Implementation
- Organizational Linkages
- Management and Administration
- Field Program Development and Implementation
- Policy Development
- Project Design
- Evaluation
- Needs Assessment

Besides the overall synthesis and consensus process underway relative to FSR/E methodology and the resulting training units, an important additional output was the process for developing training materials. The process included not only conceptual input from various disciplines and continuous input from professional training consultants, but an extensive review, revision, and testing effort. The resulting FSR/E training materials are now being used to contribute to agricultural development worldwide. This experience, while itself in continuous refinement, can be conveyed to national training programs and adapted to unique training needs and environments. Sometimes the process itself is also a product.

COURSE DELIVERY

FSSP courses and workshops varied greatly in length, topic, location and numbers of participants. FSSP led or made major contributions to workshops and shortcourses in 22 countries with a total of 616 participants.

Skills courses were developed to focus on all aspects of the FSR/E process, embracing the stages of diagnosis, design, analysis and institutionalization of FSR/E. These courses were tailored to each delivery setting. Specific courses in Management and Administration were also delivered.

"Custom" training was another activity of the FSSP. In response to demand from U.S. universities, bilateral contractors and national research programs, the FSSP endeavored to hand-tailor training activities for visitors to the University of Florida.

These training experiences can be roughly divided into two distinct classes: 1) Informal presentations and meetings which serve the purpose of generally orienting visitors to the concepts and methodology of the FSR/E approach; and 2) Intensive short-courses, with structured training activities, which introduce participants to the philosophy, perspective and methodology of FSR/E and prepare them to begin work within an FSR/E framework.

MSTAT (Michigan Statistics)

Through a grant from the FSSP to Michigan State University, significant advances were made in making microcomputers useful in farming systems

Part of the group working with the unit on Design of On-Farm Trials met with members of the Socioeconomic group to discuss the interrelationship of these two areas. (L to R) Don Osborne (USAID Washington), Frederico Poey (AGRIDEC), John Hammerton (CARDI), Lorna Butler (Washington State University), Dan Galt (FSSP), and Emanuel Acquah (University of Maryland).

research. MSTAT program developers adapted their statistical package to accommodate the design and analysis requirements for farming systems practitioners, and developed the revised MSTAT programs and manuals in English, Spanish and French. In addition, training materials were developed, and training courses were offered and delivered, to train farming systems researchers in the use of MSTAT.

An initial series of five workshops were held, the first in March, 1984 at Michigan State. Participants included 11 researchers from 6 countries, using both IBM and Apple computers, with instructions in both English and Spanish. The first in-country workshop was held at the Chitedze Agricultural Research Station in Malawi in May and June, 1984, in support of a USAID project there. The second in-country workshop was held at the Institute du Sahel in Bamako, Mali in December of that year. This workshop was conducted primarily in French, with some additional instruction in English. The third in-country MSTAT workshop was held in Senegal at the Institut Senegalais Agricole in January of 1985. Fifteen researchers attended the course, delivered in support of a USAID farming systems project in Senegal. The fifth workshop was conducted in September, 1985 at the International Rice Research Institute (IRRI), under partial funding from the FSSP grant, and involved 30 participants, including researchers from the People's Republic of China, IRRI, Kenya, Nigeria, and several Southeast Asian countries.

Michigan State has continued with its MSTAT training program worldwide using the materials developed through the support of the Farming Systems Support Project. MSTAT is currently being used by several thousand agricultural researchers throughout the world, including a growing cadre of researchers involved with farming systems projects. Several of the farming systems projects which have used MSTAT include: Senegal, Malawi, Ecuador, Pakistan, Mali, Swaziland, Botswana, Rwanda, Zimbabwe, Mexico, Philippines, Thailand, Burkina Faso, Tanzania, Gambia, Niger, Dominican Republic, Guatemala, Bolivia, Peru, Colombia, Honduras, Puerto Rico, Cameroon, Zambia, Sri Lanka, and Indonesia, just to name a few.

Many of the International Centers are also using MSTAT in their programs. These include IRRI, CIMMYT, CIP, CIAT, IITA, ICIPE, IFDC, AVRDC, ICRISAT and ICARDA. Several of the CRSPs' researchers are also using MSTAT. The positive multiplier effect initiated through FSSP support to MSTAT has been far-reaching.

PENN STATE/SWAZILAND PROJECT AND THE FSSP

Although the FSSP has conducted many types of short course training activities, the history of interactions between the FSSP and Pennsylvania State University's Swaziland Cropping Systems Research and Extension Training Project makes a good case to show the value of a continuing short course training program for those persons who will be field-level practitioners.

In late 1984, the FSSP was contacted by PSU regarding the possibility of providing FSR/E training for a Swazi participant who was about to return to Swaziland after completing his U.S. training. Dr. John Ayers, the Swaziland Project Manager, stated that "My basic concern is to get him an introduction to farming systems methodology so that when he returns to Swaziland,... he will take a holistic approach to his research". Additionally, it was important to provide returnees with the basics of the FSR/E methodology in order to better interact with their colleagues who had attended CIMMYT's FSR training series in Zimbabwe.

This modest effort, based on the one-week Domestic FSR/E workshops and held in February of 1985, was a fruitful one. The participant stated: "I think what I gained in that week was worth sitting in class for one-half of a quarter".

Within four months, another Swazi participant traveled to the University of Florida for two weeks; the first week was spent in an introductory short course to FSR/E and the second attending an intensive workshop dealing with "Agronomic Design and Analysis of On-Farm Trials". This participant stated: "My thinking regarding research and extension has undergone some drastic changes during this past two weeks".

In September of 1985 another group of participants arrived in Gainesville. This group, which consisted of two Swazi participants and one PSU faculty member, covered a much wider disciplinary spectrum than the previous participants. Included were biological science, training and communications, and extension specialists. The inter-disciplinary activities of the short course allowed much greater interpersonal learning experiences on the part of the participants. Additionally, discussions regarding research, recommendation and diffusion domains prompted one of the participants to comment: "The domain theory finally gives me a framework to not only develop appropriate technology but to do so in a manner which will help my extension colleagaues to disseminate it".

Another three-person group of Swazi participants visited the FSSP, in May of 1986, for a similar short course. This course elicited the following comments on the evaluation forms: "The published results on trials/research conducted in other areas makes to have confidence(sic) that the approach is workable. It is not a theoretical approach... The problem in question is considered in a wide range of aspects rather than a one-dimensional aspect which might overlook very important issues... Many thanks for the education

we received there in such a short time. It is more than a treasure... The Modified Stability Analysis and the Environmental Index represent breakthroughs in statistical analysis techniques and will allow the development of technologies that are appropriate to the real needs of farmers".

Most recently, two Swazi participants attended an FSR/E short course during January of 1987. This group represented the last of the participants associated with Phase I of the PSU/Swaziland Project. When asked about the FSR/E approach, one participant responded: "It is a weapon to prevent kingdom or 'empire building' among institutions in a country and prevents, to some extent, the antagonistic effects usually prevalent between or among disciplines in other countries (e.g. Research vs. Extension)".

While it is very gratifying to have glowing testimonials from the ten participants, this series of training activities has had more important programmatic aspects:

- Pennsylvania State University (a Support Entity in the FSSP) was able to provide a common basis for FSR/E training of participants throughout the project timeframe.
- The FSSP responded to provide support to an ongoing bi-lateral contract, as mandated in the Cooperative Agreement with USAID.
- The continuity of the short courses provides a commonality of experience for the Swazi participants when they return home to continue their work within the Ministry of Agriculture.
- The overall program strategy for the Swaziland/PSU Project has been enhanced and strengthened through the inclulsion of FSR/E training of persons who are now, or will soon be in a position to influence the institutions where they work. (Interestingly, the first Swazi FSR/E short course participant is Deputy Director within his division).
- The FSSP, through its resources and experiences, was able to "custom tailor" training activities in response to specific requirements.
- The FSSP/PSU/Swaziland activities point out the long-term benefits of training programs. It should be reiterated that these benefits may not be immediately visible, but will become apparent when a critical mass of trained personnel is reached.■

COMMUNICATING FSR/E WORLDWIDE

Publication of farming systems - related information was a role the FSSP assumed in support of the net work it represented and the clientele it served. Various documents generated through FSSP activities made a consistent contribution to the evolution of FSR/E methodology and served as the project's mechanism for both supporting and reporting various initiatives.

Steve Kearl
Editor, FSSP 1983-1987

A Networking Paper series, for example, provided a means for field practitioners to recount their experiences in pertinent areas such as project implementation problems, rapid rural appraisal, lessons learned from a decade of on-farm trial design, draught animal systems and farmer participation in FSR/E. Before the series was discontinued, 15 Networking Papers were issued, and distributed primarily in Africa:

FSSP Networking Papers

No. 1 Comparing Anglophone and Francophone Approaches to Farming Systems Research and Extension
by Louise Fresco

No. 2 Synopsis- The Mardi Maize On-Farm Research Programme 1984: Development of an On-Farm Research Programme with a Farming Systems Perspective
by C. E. Van Santen

No 3 Some Problems in the Implementation of Agricultural Research Projects with a Farming Systems Perspective
by David W. Norman

No. 4 Farm Trials with Madura Cattle: Supplements for Village Diets
by R. J. Petheram, Susento Prawirodigdo and Hardi Prasetyo

No. 5 Rapid Rural Appraisal, the Critical First Step in a Farming Systems Approach to Research
by James Beebe

No. 6 A Decade of On-Farm Research in Lowland Rice-Based Farming Systems: Some Lessons
by Richard A. Morris

No. 7 Adaptive Research & Pre-Extension Testing: The Case of Upland Rice in West Africa
by Pascal T. Fotzo, P. S .C. Spencer and A. S. Sandhu

No. 8 Impact of Cropping Systems Program at Sukcharna
by B. K. Singh and K. D. Sayre

No. 9 Recognizing Structural Constraints on Implementation of a Farming Systems Approach within a National Agricultural Program: Some Views from Thailand
by Craig L. Infanger

No. 10 A Methodology for Conducting Reconnaissance Surveys in Africa
by Timothy R. Frankenberger and John Lichte

No. 11 Introduction a L'Approche Recherche/Developpement des Systems de Production et a la Methode de Recherche en Milieu Paysan
by Pascal T. Fotzo

No. 12 The Process of On-Farm Trial Design: The Honduran Experience of 1978
by Daniel L. Galt

No. 13 Conducting On-Farm Research in FSR: Making a Good Idea Work
by Clive Lightfoot and Randolph Barker

No. 14 Draught Animal Power in Africa: Priorities for Development, Research and Liaison
by Paul Starkey

No. 15 Farmer Participation in Farming Systems Research
by Daniel L. Galt and S. B. Mathema

Network Reports

Other publications, such as task force reports and a series of Network Reports provided a synthesis and analysis of completed project activities. Four Network Reports, proceedings from major workshop activities, were published and distributed primarily in Africa:

No. 1 Animal Traction in a Farming System Perspective–proceedings of a FSSP workshop held in Kara, Togo, March, 1985, compiled by Susan V. Poats, John Lichte, James Oxley, Sandra L. Russo, and Paul H. Starkey.

No. 2 Livestock in a Mixed Farming Systems: Reserch Methods and Priorities–proceedings of a workshop held at the International Livestock Center for Africa (ILCA), Addis Ababa, Ethiopia, June, 1985. A collaborative effort of the FSSP, the University of Florida, and ILCA, proceedings were edited and produced by Steve Kearl.

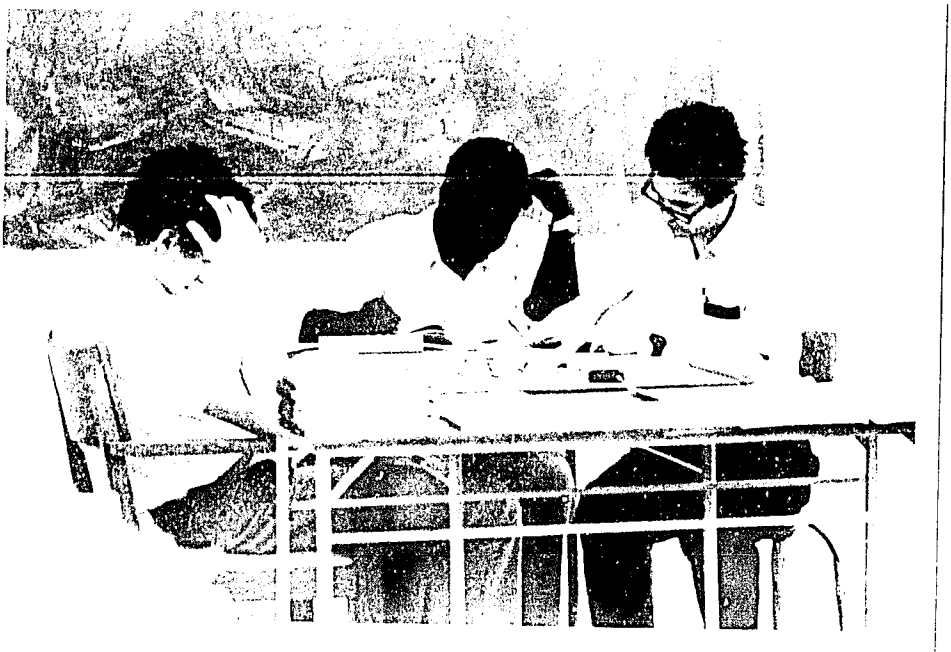
No. 3 Integrated Livestock Systems in Nepal and Indonesia: Implications for Animal Traction in West Africa–a report of the Second Crop-Livestock Research Monitoring Tour of Nepal and Indonesia organized by the International Rice Research Institute (IRRI), the Department of Agriculture of Nepal and the Ministry of Agriculture of Indonesia, prepared by Paul H. Starkey and Kossivi V. Apetofia.

No. 4 Rapport Du Stage Regional De L'FSR/E–a report on a regional FSR/E Methods Training Course conducted in French and held in Bamako, Mali in November, 1986. The report was prepared by Deifing Sissoko, Mimi Gadreau, and John Lichte.

FSSP Newsletter

Perhaps the most visible of FSSP publications was its newsletter, published quarterly in English, Spanish, and French, with a combined circulation of more than 5,000 subscribers worldwide. The FSSP Newsletter became established as an open forum for communicating innovative ideas and facilitating communication among farming systems practitioners in the field. Practitioner participation in the Newsletter provided content on the cutting edge of FSR/E methodology, as well as ongoing

FSSP publications and articles for the project's Newsletter were generated through project activities and by participation of field practitioners generally. Input from Duncan Boughton (left), Thomas Senghore (center) and John Caldwell (right) at a Gambia workshop was published in Network Reports and in the Newsletter.



discussion of issues related to diagnosis, design and analysis of on-farm experimentation. At the same time, the Newsletter supported various project interests and activities, through announcements of upcoming training courses, by publishing information related to the annual symposium, soliciting support for a bibliography of readings, and by noting the availability of other farming systems publications and materials of interest.

The FSSP Newsletter also canvassed its readership to ask field practitioners to identify the most pressing technical problems encountered by the project with which each practitioner was affiliated. More than 1,000 responses were generated through the newsletter survey, including 987 responses to the "problem" question. A random sample of 100 surveys was considered and a list of 14 general problem categories was developed. A summary of the 987 responses according to problem category is given below.

These data, along with survey response to a question asking practitioners what types of articles they would like to see published in the newsletter, gave general direction to the content of the FSSP Newsletter, and, in turn, assured that the Newsletter was serving its readership. Project management aso benefitted from these practitioner responses, as they confirmed field interest in various project initiatives, such as the need for FSR/E training, or the need to further address on-farm research methodology and statistical analysis. A more detailed breakdown of the major categories fo pressing technical problems follows:

Most Pressing Technical Problems	Responses	Percentage
1. Technical (bio-physical)	194	20.3
2. On-farm Research (methodology) and Statistical Analysis	161	16.8
3. Infrastructure	113	11.8
4. Personnel and Training	110	11.5
5. Institutions (Research/Extension	88	9.2
6. Farm Management	58	6.1
7. Regional Support	50	5.2
8. Livestock	45	4.7
9. Interdisciplinary Collaboration	41	4.3
10. Project Management	35	3.7
11. Technology	34	3.6
12. Natural Resources (Forestry)	29	3.0
13. Planning and Evaluation	23	2.4
14. Women in Agriculture	6	.6

Major Categories for Most Pressing Technical Problems

1. Technical (Bio-physical):
   - fertilizers/inputs
   - new varieties/germplasm
   - pest control
   - low yields
   - soil fertility
   - post-harvest considerations
2. On-Farm Research (Methodology) and Statistical Analysis, lack of:
   - standardized methodology for FSR
   - on-farm trial analysis techniques
   - economic and institutional statistical techniques
3. Infrastructure
   - marketing/prices
   - supply problems
   - transportation
   - policy
   - fuel and maintenance
   - financial support/disbursement
   - institutional linkages
   - rewards for interdisciplinary activities
4. Personnel and Training:
   - appropriate language skills
   - site-specific knowledge
   - trained in FSR/E methodology
   - awareness of small farmers and their problems
   - availability of FSR/E materials in the field
   - lack of reference materials and background information
5. Institutions (Research/Extension):
   - supervision
   - educational level of extension agents
   - research/extension linkages
   - technology transfer and dissemination techniques
   - sustainability of efforts/personnel
6. Farm Management:
   - labor
   - time
   - cash
   - land constraints
7. Regional Support:
   - financial/technical
   - local level
   - counterpart availability and/or expertise
8. Livestock:
   - traction
   - nutrition
   - integration of animal traction into the on-farm trial sequence
9. Interdisciplinary Collaboration:
   - communication
10. Project Management:
    - interface with counterparts
    - short- verus long-term goals
    - interface with donors/host governments
11. Technology:
    - appropriate technology
    - access to information regarding new technology
    - preservation of local technology
12. Natural Resources (Forestry):
    - water and rainfall variability
    - erosion
    - deforestation
13. Evaluation:
    - monitoring
    - documentation
    - measuring success
    - risk evaluation/analysis

FSSP's Newsletter Survey identified technical (bio-physical) constraints as one of the most pressing problems facing farmers and for FSR/E practitioners in their on-farm trials.

14. Women in Agriculture:
    gender issues/division of labor
    integration of entire farm families
    into FSR activities

Many of these constraints were addressed by the FSSP through its newsletter, in other project publications, through appointed task work groups, in networking and training activities, and through various other channels, such as the FSSP Advisory Council and Technical Committee. Not the least of these channels was through a documentation effort that included publication and distribution of a series of bibliographies of readings.

Bibliography of Readings

Two major efforts went forward in documentation. The first was a bibliographical listing published by Kansas State University including more than 2,000 entries, accompanied by an Africa-specific bibliography of 485 items selected from the main volume. Efforts on the bibliography continue today with the addition of another major collection of works.

All of the above bibliographic listings are available in the Kansas State University FSR/E documentation center. From that holding 1550 articles are in microfiche for "at cost" purchase by individuals or libraries desiring to establish an FSR/E reference facility of both published and ephemeral materials.

The second effort was coordinated through the Technical Committee of the FSSP, encompassing review and selection of items for inclusion in FSSP's Bibliography of Readings in Farming Systems. Three volumes were issued in Spanish and French and four volumes were issued in English to the entire FSSP mailing list of more than 5,000. More than 850 documents were reviewed in this process including hundreds contributed by farming systems practitioners worldwide and the balance selected from the Kansas State Bibliography. In the four resulting English volumes 419 documents were selected for annotation. The AID Document Information and Handling Facility (DIHF) will continue to handle requests for the FSSP Bibliographies and their contents beyond FSSP and into the future.

Documents contained in the **Bibliography of Readings in Farming Systems** remain free to USAID employees, USAID contractors overseas, and USAID-sponsored organizations overseas, either in microfiche or in paper copy. Universities, research centers, government offices, and other institutions located in developing countries are eligible to receive free microfiche copies of up to five titles per bibliography (paper copies may be purchased at the stated price). All other institutions and individuals may purchase microfiche and/or paper copies of the documents. Complete sets of the bibliographies (Volume 1, 2, 3, and 4 in English or Volume 1, 2, and 3 in either French or Spanish), are also available in microfiche. For more information (cost, shipping, and handling) contact:

AID/DIHF/FSR
7222 47th Street
Chevy Chase, Maryland 20815
USA

FARMING SYSTEMS SYMPOSIUM

An Annual Farming Systems Symposium has been held since 1981, when it was conceived of and initiated by Kansas State University, supported primarily through the University's Title XII Strengtening Grant. Hosted by the University of Kansas through 1986, the Symposium has provided a mechanism to bring together between 250 and 350 farming systems practitioners and other interested reseachers on a regular basis.

Recognizing the complementarity of the Symposium with its mandate and purpose, FSSP provided additional support to the Symposium in the ensuing years. The overall focus of the Symposium has been on FSR E as a process of small farm development with annual themes of emphasis on various aspects of the methodology.

Themes of the Farming Systems Symposium held at Kansas State University included:

1981 Small Farms in a Changing World: Prospects for the Eighties
1982 Farming Systems in the Field
1983 Animals in the Farming System
1984 Farming Systems Research and Extension: Implementation and Monitoring
1985 Farming Systems Research and Extension: Management and Methodology
1986 Farming Systems Research and Extension: Food and Feed

Beginning in 1987, and for a three-year term, hosting of the Symposium shifted to the University of Arkansas, with the collaborative support of Winrock International. Under this leadership the thematic approach has been retained in providing direction to an overall focus on farming systems research and extension. Organizers at the University of Arkansas outlined a progressive sequence for the Symposium that would explore the state of knowledge about farming systems, information and communications systems, and the impact of FSR E:

1987 How Systems Work
1988 Contributions of FSR E Towards Sustainable Agricultural Systems
1989 State of Knowledge about the Impact of FSR E

The Symposium has been particularly successful in providing opportunities for researchers, field practitioners and others involved in farming systems work to share their interests and concerns. It has created an opportunity for an exchange of methodological views, and given FSR E methodology recognition as an important agricultural development strategy.

A keynote address, panel discussions, plenary and concurrent sessions on various sub-themes, and published proceedings have been an integral part of each Symposium. In addition, pre- and post-symposium working group sessions, special meetings, and related training have been an attendant part of the annual event. Not the least of these has been the FSSP Annual Meetings.

FSSP Annual Meetings

Although the first FSSP Annual Meetings (1982) were not held in conjunction with the Farming Systems Symposium, their character and operational structure was set by precedent for post-symposium activity in the coming years. Those first meetings could be characterized as being organizational and formative. They dealt with a spectrum of needs and capabilities surrounding the newly awarded cooperative agreement, exploring the potential for the FSSP and attempting a distillation of resources and interests of the 18 universities, 4 private institutions, and USAID interests in attendance.

Work groups were organized to address three priority areas: administrative; training and networking; and technical assistance and state-of-the-arts. Work groups were also formed to address project priorities for 1983 and beyond, to develop an implementation plan for 1983, to identify task group needs, and to examine program interface and integration. Each group reported their considerations and findings in plenary sessions. This format, of including working sessions as an integral part of the FSSP Annual Meetings, is one that became firmly established.

In conjunction with the Farming Systems Symposium, the FSSP Annual Meetings followed the Symposium program for the next five years. These meetings were open to all Symposium participants, but were generally attended by the Administrative Coordinators and Program Leaders of the support entities, along with the members of the Advisory Council, Technical Committee, USAID representatives, and the core staff of the FSSP. By linking the project's Annual Meetings with the Symposium there was a built-in opportunity for various task and work groups of the FSSP to meet during the week, including meetings of the Advisory Council and the Technical Committee.

Meeting agendas included brief reports from the FSSP core staff on training, technical assistance, networking and communication initiatives of the project, support entity reports on their various activities, and reports from the Technical Committee and Advisory Council. Beyond those reports the Annual Meetings quickly shifted into committees, working groups, and task force meetings to address priority issues. These were actually mini-workshops to provide an opportunity for dialogue on points identified for emphasis by the FSSP core and support entity representatives. Summary comments and recommendations generated through these sessions were used in policy, planning and implementation discussions by the Advisory Council, the Technical Committee, and the FSSP core. As appropriate, recommendations often led to program development and program delivery guidelines.

In 1983 Annual Meeting work areas included: training; animal systems; research extension; technical assistance; family systems; management, administration and policy; and state-of-the-arts. In 1984 working sessions were divided into: FSSP interactions; project design and evaluation; campus training; management, administration and institutionalization; faculty development; learning training; FSR/E bilateral contracts; and on-farm research. In 1985 agronomic and livestock work groups met concurrently, and working sessions were held to address evaluation, network linkages, technical issues, and to explore the pros and cons of an FSR Association. The last of the

working sessions of the FSSP Annual Meetings took place in 1986. Four specific areas were identified where input could feed into FSSP development efforts: livestock systems; economic analysis; management of research/extension institutions; and state-of-the-art research and extension concerns in farming systems. With project termination at the close of 1987, no working sessions were held in conjunction with the FSSP Annual Meetings that year.

Support entilty participation in the FSSP Annual Meetings over the years was exceptional; vigorous participation made the meetings into working and productive sessions. The product was not only a better understanding of issues and a synthesis of the knowledge and experience of many people, but a support entity contribution to project activities, input into task force reports and input into the project planning process.

FSR/E Network Forms

Following the 1987 Farming Systems Symposium and FSSP Annual Meetings an Open Network Forum was held to explore the possibility of forming a FSR/E Network and to consider technical issues, networking, communications and other concerns related to the future of farming systems research and extension. There were 62 participants at the Forum, representing 35 different organizations.

An FSR/E Network was formed during the course of this Forum, and legitimized through consensus of those present. A number of objectives were identified for the Network, including: facilitating communication between/among project field staff and home staff; development and transfer of information and skills; and synthesis of information.

A Steering Committee was selected to assume ledership for the Network in an organizational capacity for one year. The Committee was charged with responsibility for conceptualizing and developing short-term and long-term strategies on behalf of the FSR/E Network and in support of its objectives. It was also charged with reporting its progress back to the Network at the 1988 Farming Systems Symposium, making recommendations for an organizational and management structure for the Network, and making recommendations to USAID for the Agency's continued support to farming systems research and extension vis a vis the FSR/E Network.

On behalf of the 25 FSSP support entities and the University of Florida, Dr. K. R. Tefertiller, vice president for agricultural affairs, University of Florida, presents a plaque to Kansas State University and Dr. Vernon Larson for commitment to FSR/E including initiating and hosting the annual symposium and developing an FSR/E documentation center for world-wide use.

USAID Provides Transitional Support

One specific FSR/E Network Steering Committee initiative has received support from USAID/S&T, a study, "Identification of Results of Farming Systems Research and Extension Activities". The study reviews, analyzes, and documents the results of a number of farming systems research and extension projects which have been implemented worldwide. From this study a synthesis report analyzes the factors that affect sustainability of FSR/E within national agricultural research and extension systems.

Other Related Activity Supported by USAID

Two other important studies have been underwritten by USAID that coincide with the termination of the FSSP. One that contributes to the knowledge and understanding of the Agency's farming systems research and extension projects is "A Synthesis of USAID Experience: Farming Systems Research and Extension". It was commissioned through the Bureau for Program and Policy Coordination's Center for Development Information and Evaluation (PPC/CDIE). By reviewing USAID's experience with FSR/E, the study contributes to the ongoing discussion in the Agency about the potential of the FSR/E approach and what the nature and level of Agency support to FSR/E should be.

The second study, commissioned through CHEMONICS INTERNATIONAL, was also intended to stimulate discussion regarding the future direction and focus of USAID efforts and other donors to support work in farming systems research and development. Titled "Possible Future Directions of Farming Systems Research and Extension: A Concept Paper" the study was put together as a companion piece to accompany and complement FSSP's final evaluation. Of particular interest to the FSR/E Network is contained in a section on "Priorities for Future USAID Support of Farming Systems", which identifies posssible mechanisms for future support and considers some priorities of future farming systems activities.

POSTSCRIPT: FROM CONCEPT TO PRACTICE

The FSSP was let competitively as a cooperative agreement. This procurement vehicle was selected as the optimal procurement instrument because it best allowed for: ongoing planning for project activities (a "rolling design") with USAID participation during project implementation, flexibility in accessing from among numerous collaborating entities the limited and scattered FSR/E expertise that would be drawn on to deliver project assistance; and strengthening among the recipient and collaborators of their capacities to respond to FSR/E program and project needs of USAID.

Wendell Morse
USAID Project Manager, FSSP 1983-1985

Both the setting within USAID when the FSSP was let and the organizational requirements of the project were somewhat unique. The factors directly and significantly conditioned both FSSP implementation and the perception of its performance.

The FSSP was a worldwide support project funded principally by the Office of Agriculture within USAID's Bureau for Science and Technology (S&T/AGR). USAID project management during early implementation stages was shared in the S&T Bureau by the S&T/AGR and the Office of Rural Development (S&T/RD). By nature of the cooperative agreement, these two offices shared project management responsibilities with the University of Florida.

USAID stipulated for the FSSP that a university would be selected to lead the project, but that this university would access FSR/E expertise from among a network of collaborators that would be formed by the lead university after signing of the cooperative agreement. Despite this requirement for collaboration, the lead university remained solely responsible and accountable for project implementation and performance. The uniqueness of the USAID setting and organizational requirements of the FSSP conditioned its implementation.

Worldwide Support Project

As a USAID worldwide support project, the FSSP was to deliver program assistance to all USAID geographic regions. During the early stages of project planning, the Africa Region was to receive priority attention. That is, 50 percent of project resources were to be allocated to Africa. In reality, this meant that 50 percent of project resources would be available to the West and Central Africa countries serviced by the USAID Regional Economic Development and Services Office (REDSO/WA) located in Abidjan, Ivory Coast. FSSP was to focus on this region as the Bureau for Africa had funded with CIMMYT an FSR/E support project for USAID countries in East and Southern Africa. It was originally intended that the FSSP would assume support responsibility for USAID-sponsored FSR/E projects in East and Southern Africa roughly two years after FSSP start-up. However, this never occurred as the Bureau for Africa extended the CIMMYT support project. Thus, the FSSP undertook few support activities in East and Southern Africa. These were usually programmed in conjunction with CIMMYT.

In January, at a 1983 S&T Bureau leadership meeting, surprise was expressed at the worldwide support nature of the FSSP, describing a perception of the FSSP as an "Africa only" project. This leadership perception was at variance with the S&T Bureau approved project paper and negotiated cooperative agreement which defined the project scope of work in a contractual sense. In this January, 1983 meeting, S&T Bureau leadership expressed for the first time firm interest in restricting the scope of the project by eliminating services to the Latin America-Caribbean and Asia/Near East regions.

The FSSP was the last of the mission support projects funded by the S&T Bureau just prior to its turning its attention to research projects in late 1982. This refocus reflected realignment in central bureau interests when USAID's central bureau changed from the Developrnent Support Bureau to the Bureau for Science and Technology.

Both the misunderstanding of the project scope (worldwide vs. West and Central Africa) and its nature (support rather than research) placed the FSSP at a disadvantage in the S&T Bureau. It simply was not viewed as favorably as the research projects with which it competed for Bureau attention and resources in an atmosphere of ever shrinking budgets.

USAID Project Management

The FSSP was one of a small group of projects within the S&T Bureau which were to be jointly managed by two offices within the Bureau. The FSSP was funded, with the exception of $500,000 which was made available to the project through the Office of Rural Development (S&T/RD), by the Office of Agriculture (S&T/AGR). A project officer from S&T/AGR and a deputy project officer from S&T/RD were designated as the USAID partners in management of the FSSP with the University of Florida. As stipulated by the cooprative agreement, the S&T/AGR project officer was the USAID contact for the university leading the FSSP.

As with other projects jointly managed by S&T offices, this USAID arrangement proved difficult for the FSSP. The constant need within USAID to reconcile the often varying positions of the different offices holding project management staff frequently slowed FSSP implementation. Once a single USAID project officer was given authority to speak for USAID in the collaborative management of the project with the lead university, project management became more efficient.

Numerous Participants

FSSP project design required that a single lead university identify and establish working relationships with institutions with FSR/E expertise during the first year of

project implementation. This was a new approach to implementation of USAID projects. Heretofore, collaborators and their respective roles had been identified prior to letting of a USAID project. Bilateral and other central bureau projects, including the collaborative research support programs (CRSPs), all fit the pattern of known collaborators with identified responsibilities prior to signature of contracts with USAID. The FSSP broke new ground by completing institutional arrangements during the initial phases of project implementation, after signing of the cooperative agreement with the University of Florida. This is noteworthy in that it proved that a large number (25) of support entities from among universities and private sector firms could and would at significant costs to themselves, work together in implementation of a single project.

Project Procurement

During project design USAID recognized that farming systems capability in the United States was scattered among a number of entities including several Title XII universities, the U.S. Department of Agriculture and a few private institutions. Outside the United States, farming systems competence could be found in some of the international agricultural research centers and in a few of the national research institutions of other countries. The USAID challenge in designing the FSSP to meet its needs was both to assure that technical services would be accessed and delivered from this scattered resource base, and to broaden, strengthen and institutionalize this resource base to assist USAID in its farming systems program efforts in the future.

A cooperative agreement, an infrequently used procurement process, was selected as the one that would best lead to the successful accomplishment of the technical assistance and institution building objectives of the FSSP. The USAID project committee decided that a Title XII university could best lead the project.

The procurement process was initiated by USAID contacting Title XII universities to announce the project and to assess university interest and perceived capability to serve as the lead university under a cooperative agreement with USAID. USAID, at this time, also identified universities which held significant farming systems capacity and which wanted to contribute to the project, although not in a leadership role.

Universities interested in leading the project were asked to submit to USAID a statement of institutional management capability. Institutional qualifications in farming systems as related to the four project components (technical assistance, training, networking, and state-of-the-art research), institutional commitment to farming systems and international agricultural development, and qualifications of staff proposed for the project were criteria used by USAID to evaluate the statements of institutional management capability.

Fourteen universities expressed an interest in leading the FSSP. The USAID project committee selected six universities (Colorado State University, University of Florida, University of Illinois, University of Missouri, Michigan State University, and Purdue University) from among this group to meet with the project committee for the purpose of selecting the university best qualified to lead the project. Subsequent to these meetings, the University of Florida was selected to lead the FSSP.

A highlight of this procurement process was a general meeting held prior to selection by all six of the universities which were considered by USAID to lead the project. This meeting was important in that it established a nucleus of future collaborators in the project. Also, this initial consolidation of interest was a clear expression of intent to collaborate and dispelled USAID fears that by competing the project and choosing one university to lead it, others considered in the final stages of the selection process might not make their farming systems and other institutional capabilities available to the FSSP. In fact, two months prior to signing of the cooperative agreement with the University of Florida, this group of six universities had started to form the support entity network that was so important to effectiveness of the FSSP and the accomplishment of project objectives during implementation.

The structural framework described above was unique to the FSSP. Its existence as a field support project at a time when the S&T Bureau had shifted its emphasis to research activities, the misunderstanding within the S&T Bureau as to project scope (worldwide vs. West and Central Africa), the requirement to establish a network of collaborators after the beginning of project implementation, and the attempt within the S&T Bureau to jointly manage the FSSP brought significant challenges to both USAID and the University of Florida during project implementation.

Farming Systems: A Need for Consensus

The underlying justification within USAID for the FSSP was the need to provide technical assistance and human resource development support to the many bilateral projects which USAID was funding under the title of Farming Systems Research and Extension, or some close variation of this project title. USAID recognized in 1981 that the farming systems approach to agricultural research and extension carried varying definitions and that these varying definitions were reflected in the diverse implementation patterns of USAID projects, which by design were intended to be very similar.

This lack of consensus as to "what is FSR/E" was further compounded as contractors staffed field research projects with personnel who knew agricultural research well, but who knew the farming systems approach less well, if at all. USAID and host country officials became frustrated as "their" farming systems projects frequently assumed characteristics of commodity or discipline based research. They called for central support efforts that would help host country agricultural research institutions develop and deliver new agricultural technologies. It was this call for central support from a farming systems expertise base that led to the FSSP and the similar CIMMYT implemented support project in East and Southern Africa.

Therefore, the FSSP entered an arena (farming systems research and extension) which proposed added dimensions (extension and farmer involvement in the research process) to the more commonly practiced commodity or disciplinary approach to agricultural research. And, the FSSP began at a time when farming systems as an approach to agricultural research and extension was itself still being defined and learned among the agricultural research and extension communities in the United States and abroad.

The FSSP was handed considerable definitional and consensus building responsibility as it entered this arena. While its responsibility was focused on USAID-funded farming systems efforts, its mandate to access and strengthen farming systems capabilities on a worldwide basis thrust the project to center stage among U.S. universities, the U.S. Department of Agriculture, private institutions, international agricultural research centers and national research institutions in its worldwide leadership role in farming systems consensus building.

Early Project Implementation

During its first nine months, the FSSP faced three significant and noteworthy organizational and programmatic challenges which were related to:

1) the establishment of a network of collaborators
2) USAID response to a proposal from the International Institute of Tropical Agricultural (IITA); and
3) staffing the FSSP.

Network of Collaborators

The nucleus of a network of collaborating institutions was formed at the time of

lead university selection in July, 1982 as mentioned above. Prior to signing of the cooperative agreement, at the end of September, 1982, a second, larger meeting was held with universities and firms interested in affiliation with the FSSP. These two meetings demonstrated broadly based interest and support for the FSSP; all costs for these meetings were absorbed by the participants.

Subsequent meetings with collaborators during the first year of project implementation defined the support entity base for the FSSP. During the first year considerable project time was devoted to finalizing formal agreements between the University of Florida and the 25 support entities affiliated with the project.

IITA Proposal

During the summer of 1982, USAID (S&T Bureau) received a proposal from IITA requesting USAID support for IITA's farming systems program. The scope of the proposal, both in terms of budget and range of activities, exceeded the capacity of the FSSP even though the S&T Bureau proposed that USAID response to IITA be made through the FSSP and use FSSP resources.

It is noteworthy that University of Florida representatives, who were responsible for the FSSP, met at their own expense with USAID and IITA officials in August, 1982, to consider the IITA proposal prior to signing of the cooperative agreement for the FSSP. Officials at this meeting decided that a site visit to IITA by USAID and FSSP officials would ' · required during the fall of 1982 prior to further consideration by USAID and the FSSP of the IITA proposal. Subsequent to site visits to IITA in October and November, 1982, the S&T Bureau decided that USAID support for the IITA proposal was not appropriate through the FSSP. FSSP did, however, during the early months of 1983, provide roughly 5 person months of technical assistance to IITA for the purpose of designing an FSR/E training program.

Consideration of this IITA proposal was significant and noteworthy in that

a) prior to signing of the cooperative agreement, the University of Florida was asked by USAID to consider use of FSSP project resources;
b) evaluation of the IITA proposal consumed significant project resources during project start-up toward an end only marginally related to the purpose of the FSSP; and
c) during the very early months of the project, support to IITA diverted scarce technical assistance resources from activities more directly related to the purpose of the FSSP.

Project Staffing

Staffing of the FSSP was defined in the cooperative agreement. Project management (both University of Florida and S&T) agreed in the fall of 1982 that the core staff would be assembled at the University of Florida and consist of both University of Florida staff and staff seconded to the University of Florida by collaborating universities or firms for the purpose of FSSP implementation. During late 1982 several highly qualified candidates for core staff positions were identified from among the network of collaborating entities. However, the seconding of these people to the University of Florida was not possible because the arrangement was not acceptable to their parent institutions. Project management then considered two options for staffing the core group: a dispersed core staff; or recruitment for a University of Florida based core staff. In January, 1983 the recruitment option was chosen as the most beneficial way of staffing the FSSP. These events surrounding FSSP staffing are significant in that the seconding arrangement, had it been workable, would have been precedent setting and could have contributed significantly to solidifying the FSSP suport base

PROJECT PERSONNEL

Core Staff

Dr. Chris Andrew became Director of the FSSP at the inception of the USAID/University of Florida Cooperative Agreement, September, 1982.

Dr. Jim Jones joined the project in December, 1982 to provide coordination and leadership in training and Latin American programs.

Mr. Steve Kearl joined in April, 1983, as editor/communicator with responsibilities for the newsletter, support to the training program in the development of training modules and support to other communication and publication efforts.

Dr. Susan Poats joined the project in June, 1983, to coordinate network and related efforts including workshops, regional and sub-regional networks, and to provide leadership for African programs.

Dr. Ken McDermott joined the project in September, 1983, with responsibility for coordinating technical assistance program requests from USAID for the entire project and to serve as a Washington-based liaison.

Dr. Dan Galt also joined the project in September, 1983, to work closely with support entities in the supply of technical assistance and training teams and in coordinating Asian programs.

Ms. Lisette Walecka assumed coordinating responsibility for the development of training materials in 1984.

Other complementary support to the project was as follows:

Dr. Peter Hildebrand provided state-of-the-art, technical support and consultation for the FSR/E program in general and training in particular, through the development of training materials.

Dr. Robert Waugh consulted with the project regarding management and administration issues in FSR/E projects, both in technical assistance and training.

Mr. James Dean was responsible for the visitors program, support to development of training materials, reference facilities and network logistics within the United States.

Dr. Eugenio Martinez served as a Senior Counselor in Residence from 1984-1985.

USAID Project Management included:

Wendell Morse, Project Manager 1983-1985.

Ken Swanburg, Co-Project Manager 1983-1984.

Don Osburn, Project Manager 1985-1986.

Roberto Castro, Project Manager 1986-1987.

Members of the Advisory Council included:

1983	Wendell McKinsey University of Colorado
1983-84	James Meiman Colorado State University
1983-85	Larry Zuidema Cornell University
1984-86	Dale Harpstead Michigan State University
1985-87	Jean Kearns University of Arizona
1986-87	Ned Raun Winrock International
1987	Delane Welsch University of Minnesota

Representation on the Technical Committee included:

1984	Sam Johnson University of Illinois
1984	Robert McDowell Cornell University
1984-85	Bob Hart Winrock International
1984-85	Jim Henson Washington State University
1984-86	Cornelia Butler-Flora Kansas State University
1984-87	John Caldwell Virginia Polytechnic Institute
1985-87	Jim Oxley Colorado State University
1985-87	Dave Thursten Cornell University
1985-86	Mimi Gadreau University of Minnesota
1985-86	Pascal Fotzo Guatemala
1985-86	Terd C. Thailand
1987	Don Voth University of Arkansas
1987	Rick Bernsten
1984	Steve Franzel Development Alternatives, Inc.
1984	Ken Buhr University of Florida
1985-87	Michael Joshua Virginia State University