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O F P E P

ON-FARM PRODUCTIVITY ENHANCEMENT PROGRAM

USAID Cooperative Agreement
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FINAL OFPEP REPORT

Winrock International Institute for Agricultural Development

in Cooperation with

Center for PVO/University Collaboration in Development
Agricultural Cooperation Development International

April 1999

Winrock International

Working with people to build a better world increasing agricultural productivity and rural employment while protecting the environment

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April 20, 1999

Ms Sallie Jones, Chief, Matching Grants
USAID
BHR/PVC, 7th Floor
Ronald Reagan Building
Washington, DC 20523

Dear Sallie

I am very pleased to forward to you OFPEP's final report As you will see, this report provides a comprehensive overview of the program achievements during the six years of implementation, as well as some specific details regarding the activities and results of the sixth and final year

Overall, we, at Winrock, as well as our program partners (especially the PVO/University Center), trust and believe that the program has achieved its main objectives, and will have sustainable impact among the regions and communities which participated We also believe that the program paved the way for an expansion of the paradigm and a strengthening of the approach used, through a variety of new initiatives, already or soon-to-be funded by USAID or other donor agencies

We also believe that the success of the program is due, in great part, to your personal leadership and constant support On behalf of Winrock and our implementing partners, I very sincerely thank you for the very constructive role you have played throughout the six years

We hope that you will enjoy reading this report and will be glad to provide additional information, if necessary

With best regards

Sincerely,

Pierre P Antoine
Director, OFPEP

cc Mary Lou Surgi, PVO/University Center
(with personal thanks for preparing most of this report)
Richard Cobb, Winrock International
Henk Knipscheer, Winrock International
Lead Agencies
OFPEP country teams

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Foreword: Layout of the Final Report

In the 6 years of OFPEP an extensive amount of information has been gathered The first five Annual Reports have provided a certain level of detail as to activities undertaken in the various countries Each report's Appendix provides additional information referred to in the body of the report However, there is still more information provided in the many training reports, curricula, consultancy reports, evaluation, technical studies, etc which were conducted in each country Many of these are listed in the Appendix of this report, List of OFPEP Publications

In this Final Report you will find the following, the Executive Summary and Overall Management Sections that present the broad strokes of the program and its achievement In the section on Country Reports you will encounter a Summary Report highlighting the OFPEP experience in each country This is followed by a new Section that presents OFPEP through the eyes of its farmers, partners, and staff in the field There you can appreciate the human impact of the OFPEP approach In Section V you can read what others have to say about OFPEP – the outside consultants and evaluators who reviewed various aspects of the program Finally, there is the Financial Report, followed by the Appendix

We hope that you will appreciate this look back at OFPEP, and encourage you to refer to previous reports and other documents for more in-depth information

Acknowledgments

Over the years, the OFPEP program has been privileged to have many fine and dedicated men and women working on the ground, in the field, for long hours, and in sometimes difficult situations, to meet the demands generated by the urgency of its mission and the personal nature of its approach We want to express our deep appreciation for them and for their families and counterparts for their efforts, without which, obviously there would have been no Final Report And we apologize in advance if we have, inadvertently, left anyone off the list

We also want to remember our colleagues who passed away during the course of the program, never forgetting their efforts on behalf of their fellow countrymen and women

Senegal
Mamadou Ba
Mamadou Dian Diallo
Amadou Diouf
Alphonse Faye
Mamadou Jalaane Faye
Aissastou Keita-Daffe
Baba Lo
Aefa Fatimata Ndoye
Tom Osborn
Simon Pierre Sarr
Gisele Sylla
Lisa Washington-Sow
Sarah Workman

The Gambia
Assan
Alhaji Bah
Burana Danjo
Steve Gronski
Alikali Jowara
Dwade Jowara
Rose Maruru
Diane Nell
Lamin Sanneh

Ethiopia
Alemayehu Abate
Asrat Asfaw
Kibre Dawit
Bezu Demelash
Abebe Girma
Eyasu Mekonnen

Uganda
William Bagonza
Benjamin Ekoot
Cissy Katunze
Nathan Koteki
Beatrice N Luzobe
Adeline R Muheebwa
Alex Mukiibi
Julian Nyachwo
Frances Oching
Ezra Okoth
Miriam Pido-Olanya

Kenya
Henry Agalo
David Agutu
Celestina Asena
Beatrice Lumadede
Mackinus Masingu
Rose Okelo
Easter Okech
Erick Omondi
Mark Omondi
Nelson Omondi
Moses Onim
Henry Ouko
Rose Sigar
Caroline Sikuku
Didimus Cheloti
Alice Ombogo

I. Executive Summary

This sixth and final report of the On-Farm Productivity Enhancement Program reviews and charts the achievements of OFPEP over the September 29, 1992 to December 31, 1998 period The original funding period for OFPEP from USAID was September 1992 through September 1997 However, in May 1997, USAID extended the program, albeit with reduced funding, through December 1998

More than 11 years ago (in 1987), the Winrock Institute for International Agricultural Development launched an innovative project, the On-farm Seed Project (OFSP), in Senegal and The Gambia Its goal was to improve the nutrition, income, and well-being of smallholder farmers by helping them (1) to gain access to good seeds of basic food crops, (2) to produce, select and store better quality seeds for their own fields, and (3) to strengthen seed distribution networks To this end, Winrock obtained the cooperation of the Center for PVO/University Collaboration in Development (PVO/University Center) and the seed program unit at Mississippi State University Principal financial support came as a matching grant from the U S Agency for International Development office for Private and Voluntary Cooperation (USAID/PVC)

The success of these efforts, along with lessons learned in the initial 5-year experience, led Winrock and the PVO/University Center in 1992 to broaden the focus of the program to include, in addition to seeds, an emphasis on soil fertility, and crop and soil management This new program, again principally supported by USAID, was renamed the On-farm Productivity Enhancement Program (OFPEP), a title considered broad enough to cover a range of potential yield-increasing interventions It added as partners Save the Children (SCF) for implementation in The Gambia and Agricultural Cooperative Development International (ACDI) for implementation in Uganda In the middle of its third year, operations in the Gambia were halted because of the withdrawal of support of the U S Government to The Gambia At this time the program began limited operations in Ethiopia and expanded its programs in Uganda and Kenya In its sixth and final year, OFPEP continued to operate in Senegal and Kenya with reduced funding, and focused its attention on gender-related activities in Uganda, and ceased operating as OFPEP in Ethiopia where its activities were continued with other funding

Other donors, government agencies, and research institutions also have becoming increasingly interested in the OFPEP approach and model The Senegal USAID mission, for instance, made local project funds available to OFPEP for activities in agroforestry and soil management beginning in 1993 The International Fund for Agricultural Development (IFAD), in 1996, awarded a major grant to the West Africa Rice Development Association (WARDA) and Winrock to study the past or potential impact of the OFPEP approach on rice production in Senegal, The Gambia, Côte d'Ivoire, and Nigeria Other projects undertaken by Winrock or its partners based on this approach have been funded in countries such as Guinea, Côte d'Ivoire, Ethiopia, Kenya, Uganda, Mali, Tanzania, Malawi, Mozambique, the Philippines, and Indonesia

Private sector support and participation in OFPEP was also highly visible The Food Industry Crusade Against Hunger (FICAH) provided additional support to OFPEP in Kenya, particularly enabling the program to incorporate extension work on dual-purpose goats This has contributed to the achievement of program goals relating to nutrition, income, and soil fertility

Since 1994, Monsanto has provided funds and in-kind support for a herbicide option in Senegal, prompted by local demand This program has expanded and has led to major Monsanto support of an OFPEP type program in Indonesia The McKnight Foundation has supported farm extension work through the African Women's Leadership in Agriculture and Environment Program (AWLAE)

Basic Tenets of the OFPEP Approach and Strategy

Participatory and demand-driven the on-farm interventions are based on information farmers and partners gather during participatory rural appraisals on issues such as problems and constraints (i e , poorly adapted varieties, low nutrient levels in the soil, erosion) and in areas where assistance from the program is welcomed and sought Thus farmers are real partners, not just observers, in the activities designed and demonstrated at the farm level

Collaborative almost all activities are implemented through and with international or national, locally-based, non-government organizations (NGOs), international Private Voluntary Organizations (PVOs), community-based organizations (CBOs), farmer associations, national and international agricultural research institutions, the U S Peace Corps, and local public extension services

Incremental proposed improvements or adoption of new technology options are not drastic and take into account the reality of smallholder conditions, labor availability, and other socioeconomic contexts

The OFPEP Model

Millions of smallholder farmers, especially in sub-Saharan Africa, experience food shortages during part of each year These farmers, a majority of them women, often live in places not readily reached by roads and mass media They generally lack access to improved seeds, fertilizers and other inputs, as well as technical assistance and training, either because these inputs are unavailable, or because they lack the cash or credit to buy them, and priority has not, historically, been given to smallholders

This lack of access to improved seeds often prevents the results of agricultural research and technology improvements from reaching the majority of small farmers These results are often integrated or "packaged" to work with new seed varieties Yet small farmers' persistent lack of access to improved seeds and the research results they represent remains Coupled with decreases in yields and declining soil fertility evident in many developing countries, especially in Africa, millions of subsistence farmers are in extreme peril

The OFPEP model of collaboration and partnering has proven to be highly effective in bringing about important changes in the way knowledge is created and shared, and in building relationships between the public and private sectors OFPEP is collaborative at the management level, as well as in the field, where small technical teams work with networks of local and international organizations and other groups These use a participatory approach through which farmers learn about new technologies and select and use those they find appropriate This form of collaboration mirrors the basic roles played by the two main program implementers at the coordinating level Winrock International is the main source of agricultural expertise and overall program direction and guidance, with the PVO/University Center specializing in collaboration and participation as components of successful approaches to development projects These complementary roles were defined in the original proposal with Winrock being the overall lead agency for technical implementation (product) and the Center, providing staff and resources in communication, linkages, and information-sharing/networking (process) Coordination of field implementation, in turn, is the responsibility of lead agencies nominated for each country This flexible management system allows both Winrock and the Center to assume roles and assign responsibilities as needs arise and to coordinate closely with all partners

The principal beneficiaries for OFPEP are the smallholder farm families whose food supply has been increased, incomes raised, and prospects for a more prosperous future established These benefits trace to the technical knowledge and understanding gained with respect to crops, seeds, agronomic practices, soil management, and environmental protection, but also to the changes participation brings about in their attitudes, appreciation of democratic approaches, and respect for preserving their environment for the future Other beneficiaries included (a) urban residents who gain access to a wider range and more reliable sources of foods at reasonable prices, (b) research scientists and extension specialists who gain confidence in the technologies with which they work and more realistic attitudes about farmers and their circumstances, (c) policy makers who realize how more reliable crop yields and food availability contributes to social and democratic stability and economic growth, and (d) private sector buyers and sellers who find active clients among smallholder farmers

With OFPEP coming to a close, a review of factors critical to its success and the capture of lessons learned is vital to the successful implementation of a follow-on program to enhance food security, Partnerships and Economic Growth Through NGOs (PEG/NGO)

We have identified four Keys to OFPEP's success

√ *Participation and Collaboration*

Programs that are planned, designed, and implemented with little or no input from end-users have often failed With this in mind, OFPEP has worked hard to involve local communities, NGOs, CBOs and government agencies in all phases of the project cycle – from site selection and deciding what problems to work on, to evaluation With the help of this network of collaborators, OFPEP has effectively reached farming communities at the grassroots level and helped improve their agricultural practices and productive capacity This has been accomplished through the provision of appropriate extension services, improved farming techniques, and seed production and soil fertility training workshops OFPEP experience underscores the lesson that active community participation in program activities is essential for building local capacities to help establish solid foundations that can sustain project achievements

The program could not have been successful without the active involvement of the research community – those national and international research centers and universities where agricultural problems are examined, new technologies are developed and tested, and improved seed varieties are born Scientists and researchers from each nation's agricultural research centers share their expertise, germplasm, and ideas with farmers and OFPEP staff and partners They, in turn, have learned a great deal from the wealth of knowledge held by smallholder farmers, and about how their technologies can succeed, fail, or be adapted under widely varying conditions

We have learned through collaboration that NGOs, CBOs, and local groups

- can perform the critical first step of introducing new and improved technology to farmers
- are able to diffuse technologies throughout the country or even regionally
- add to the sustainability of the approach as well as the successful adaptation of the technologies
- respond well to training that helps them strengthen links with local sources of information and resources
- must be helped to systematically collect, analyze and report data regarding constraints, results, and impacts
- need guidance on working effectively with the private sector

We have learned that research institutions

- are not always mandated to extend/diffuse the technologies they develop
- are eager to work with organizations with grassroots operations to diffuse technologies
- are appreciative of the feedback from farmers and partner organizations
- are central to an efficient agricultural development program strategy

√ *Understanding Gender Roles*

The rural household in Africa is made up of many members, each with specific roles assigned to them by generations of tradition, culture, and norms An understanding of these different roles is crucial in increasing the productive capacity of the farm unit When new technologies are introduced, the burden sometimes weighs more heavily on some family members than others because of these gender roles At the same time, the benefits of increased yields and income may still be distributed according to traditional gender patterns, regardless of whose labor and resources account for the increase A thorough analysis of these patterns has enabled OFPEP staff, partners, and farmers gain the understanding required to develop appropriate strategies to ensure that the access and control of resources is distributed more equitably

Estimates by the World Food Organization and FAO show that women provide up to 80% of the labor required to produce food consumed in developing countries They are the main providers of food, fuel, and water and are the primary caretakers of their families Yet they are essentially voiceless in the process of formulating agricultural policies To help women become more active stakeholders, OFPEP has formed collaborative partnerships with community-based women's groups, provided training and technical assistance services, introduced appropriate technology options to reduce women's farm and household workload, and encouraged them to become more involved in the program

We have learned that men and women smallholder farmers

- know how to recognize a good technology
- know his/her socioeconomic context and inherent constraints better than anyone else
- need access to credit and labor-saving technologies
- welcome assistance to access information on new technologies
- can be entrepreneurial if there are well-identified incentives
- give priority to risk averse strategies
- are efficient diffusers of technologies
- are willing to reassign gender roles when appropriate

√ *Appropriate Technologies and Techniques*

A number of factors have combined to cause the drastic decline of agricultural production per capita experienced in Africa in recent decades high population growth, climatic changes highlighted by reduced rainfall, deforestation, and rapid increases in the rate of consumption and use of the natural resource base Removal of subsidies on agricultural inputs and curtailment of agro-parastatal organization and national extension services have further added to declining productivity This is the context in which OFPEP has worked

By combining a participatory and incremental approach to change, OFPEP has been able to introduce a variety of technologies to smallholder farmers that have been adopted by numbers of farmers far greater than those directly connected to the program The rate of diffusion of the technologies is governed by cultural and traditional patterns from site to site In some countries, the technologies have been carried

many hundred of miles from the program site by NGO partners who have connections far greater than those of OFPEP

√ ***Focus on Food Security and Cash Generation***

Assisting smallholders to intensify production may have several beneficial effects besides improving yields and enhancing the food security of the family In addition to generating income for the farmers themselves, it may increase the local food supply, lower production costs and, as a result, lower the cost of food to consumers Increasing a farmer's income also may contribute to a partial re-investment of funds for purchasing inputs such as fertilizers and herbicides, investing in natural resource management or soil conservation activities, hiring additional labor, and creating new market opportunities This has been confirmed by the farmers themselves in participatory evaluations See Chapter IV – In their own words, through their own eyes

For example, in one sample of OFPEP farmers, they reported that 54% of their total crop production was being used for home consumption, 27% was saved for seed, and 19% of the crop sold for cash A small portion of this cash is then reinvested in agriculture through the purchase of pesticides, fertilizer, and hired labor

Program Impact

We believe, and numerous internal and external evaluations have borne this out, that the OFPEP program has had an extremely positive impact, not only on the many hundreds of thousands of farmers it has reached over the past 6 years, but also on the many organizations and institutions with which it had worked At the same time, it is extremely difficult to quantify this impact given the enormous numbers of individuals and groups concerned, the widely varying crops and activities undertaken, not to mention the gamut of agro-ecologies within which OFPEP farmers operate Nonetheless, we can cite numerous specific impacts on both the individual farmer and collaborating partner levels

Impact on Farmers

- Increased production of basic food crops has shortened or eliminated the "hungry season" in many households, e g increased yields resulting in 3-4 months or more of additional food supply
- Increased production has in many cases resulted in increased income which is then spent on household needs, children's health care and education, and re-invested back into agriculture
- Prestige of women as agricultural producers increased, gender sensitization has encouraged awareness of the importance of girls' education
- The introduction of fuel-efficient stoves in Uganda has resulted in documented savings in labor and cash, not to mention their positive impact on the environment
- New crops have been introduced in some areas, and ideas have changed regarding the cultural and economic significance of certain crops, notably soybeans in East Africa and rice in Senegal
- Increased awareness of gender issues and marked changes in some traditional male-female roles e g , weeding, processing cassava, land preparation, rice production
- Farmers produce seed for sale to other farmers as well as to the private and sectors
- Farmers learned to identify production and food security problems and how to address these obstacles and ways to train other farmers
- Farmers have increased confidence to pursue relationships with private and public sectors

- Farmers and farmer groups admit that they now have more options and greater control over decision processes that affect their daily lives
- A crisis created by the epidemic of cassava mosaic virus was averted by the quick action of OFEPP and its partners in the quick dissemination of disease-resistant varieties of cassava in both Uganda and Kenya

This impact has been achieved because the farmers, in great numbers, have adapted or adopted a wide range of improvements proposed by OFPEP One of the most important of these is the planting of improved varieties in association with changes in agronomic practices In some cases, up to 90% of farmers have chosen to use the new varieties and to properly select and store seeds from these crops to insure sustainable improvements in yield This minor change frees farmers from the uncertainties of the private or state sectors in the critical area of having a timely supply of viable, high producing seeds

Other soil fertility enhancing technologies such as the use of both organic and inorganic manures have been widely accepted However, the high costs (cash as well as labor) and inadequate supply of many soil amendments in most areas continues to be a constraint Our partners continue to work to address these and related constraints The adoption of soil conserving structures has been a slower process given their high labor requirements, uncertain land tenure of farmers – particularly women – in many cases, and occasional lack of implements for their construction But it is encouraging to note that as many as 49% of those surveyed at one site are building/maintaining such structures on their lands

It is nearly impossible to quantify overall the increase in yields that have been achieved with OFPEP when we consider that we have worked with over 50 different seed varieties with 100's of thousands of farmers in hundreds of communities in five countries Nonetheless, figures indicate consistent increases in yields frequently range from about 25% to more than 200% depending on crops and growing conditions Of course there are important variables controlling yields, that are far beyond OFPEP and the farmer's control, e g , particularly the changing weather patterns

OFPEP by the numbers

- At least 135,000 farmers in five countries have benefited from training sessions formal and informal, at demo sites, and occasionally in classrooms during the 1992-1998 period About half of them are women
- Almost 7,000 lead farmers and NGO/CBO/extension staff (40% women) were trained as trainers to further extend the OFPEP approach and technologies and to reach more farmers They, in turn, have trained over 100,000 other farmers
- More than 6,000 demonstration sites have been set up to allow farmers to compare alternative technologies to each other and to their traditional practices
- With conservative estimates made in the OFPEP countries (no figure available for The Gambia), we know that well over 50,000 hectares are presently under cultivation using one or more OFPEP-introduced technologies

Impact on Partners

- Local organizations from small groups of women farmers to organized community-based organizations demonstrate increased capacity to address obstacles to production, to organize collaborative work, and to mobilize resources
- Strong links have been forged with research and technical institutions in all four countries, thus facilitating two-way communication between institutions and farmers

- NGOs and other community organizations have improved capacities to plan, organize and provide training, participation in OFPEP increased their prestige and in some cases, facilitated their successful networking in search of additional funding sources
- Research institutions gained access to farmers and their problems as well as opportunities to test research at the smallholder level
- Government extension workers have experienced new, more effective ways to work with farmers
- The OFPEP approach has been adopted by such diverse entities as the Ministry of Agriculture in Kenya to the Sasakawa 2000 project in Uganda
- A new generation of extension workers, particularly in Kenya, have had the opportunity to work directly with OFPEP, observing and practicing its principles at a time in their education when they are forming their ideas on how farmer's can best be helped
- Participation in OFPEP activities has helped managers and members of partner organizations to move into community leadership positions, including, in Uganda, elected offices dealing with production and the environment
- OFPEP-type approaches have spread to programs and projects in other countries including Mali, Tanzania, Guinea, Côte d'Ivoire, Burkina Faso, Mozambique, Malawi, Nigeria, India, Bangladesh, Philippines, and Indonesia both through Winrock's efforts and as a result of the wide distribution of the OFPEP newsletter and other outreach efforts

OFPEP by the numbers

One hundred forty-three development organizations, farmer's associations, research institutions and government agencies worked with OFPEP staff and farmers Of these, more than 70 are local NGOs and indigenous CBOs who have formed working links to the research, technical, and extension institutions These linkages operate in both directions between the institutions and farmers, and offer opportunities to test and validate research results aimed at improving production and strengthening program sustainability

Lessons Learned

OFPEP's experience since 1987 with these on-farm approaches to development in West and East Africa have taught the following important lessons to respect in designing and implementing programs to help smallholder farmers move from meager subsistence into the market economics of their countries and regions

- Intense and continuing participation of farmers – both women and men – in problem identification, program planning, activity implementation, and evaluation is essential
- Informed and strong participation and leadership of local non-government and community-based organizations is necessary to complement and supplement the work of public agencies
- Committed and on-going participation of public and private sector agencies in agricultural and community policy, research, education, extension, and supply and marketing roles is critical
- Increased and continuous support of national programs of agricultural research is needed to complement and supplement the work of international agricultural research centers, and to address locale-specific problems that farmers encounter
- Special attention must be paid to agricultural products that can generate revenues (regular cash flow), with increased emphasis on agricultural commodities that offer the best income opportunities for smallholders, particularly women This will mean continued emphasis on cereals as well as traditional and non-traditional food crops with a high market potential (This is the focus of the PEG/NGO program being implemented by a consortium headed by Winrock over the coming 5 years in Senegal, Mali, Indonesia and Guinea)

- OFPEP helps fill a void associated with major institutional obstacles to food production and security in Africa such as service delivery gaps in government programs, weak or nonexistent linkages between agricultural research institutions and farmers who should be principal beneficiaries from research, and opportunities for researchers to test interventions with enhanced smallholder input
- Renewed and sustained awareness of the need to be competitive, given the increased globalization of trade and cheap imports, will require adequate policies, available credit, and ready market facilities
- A well-focused and managed program can achieve a high level of collaboration and trust Pooling resources from committed partners enables organizations working on similar problems to achieve excellent results with the least duplication of effort
- Initial skepticism on the part of some small farmers and NGOs toward working with the private sector can be overcome through mutual understanding and concrete experiences of mutual benefit

II. Overall Organization, Management, Staffing

A. Winrock International

Program Leadership

Throughout the 6 years of OFPEP, Winrock provided the overall technical, administrative, and financial leadership to the program It coordinated implementation of activities with the subcontractors and the various in-country partners, and maintained close liaison with USAID/BHR/PVC OFPEP's main funding agency, and other supporting donors

The OFPEP director, Dr Pierre Antoine, assumed the leadership role on behalf of Winrock He made several visits to country sites each year, focusing during each visit on the administrative/financial aspects of the program, as well as on program design and implementation He also spent considerable time lobbying on behalf of OFPEP, spreading the message regarding OFPEP's approach, and looking into ways to obtain additional financial support from other donors, and linking with those agencies

As a result, as the program evolved, other donors expressed their interest in the OFPEP concept, and provided funds to strengthen or expand the program in specific countries or regions For instance, Monsanto and FICAH awarded four consecutive grants to Winrock to strengthen OFPEP in Senegal and Kenya, respectively, USDA awarded a 2-year (renewable) grant to expand OFPEP in Senegal and initiate a similar program in Mali and Côte d'Ivoire, starting in 1997, the major beneficiaries being females and female associations, in Ethiopia, the USAID mission funded a 5-year, $4 5 million project focusing on the training and capacity building of female or female associations, including a major component for the continuation of OFPEP (1997-2002), IFAD, through the WARDA research institute, funded a 3-year project to support the diffusion of rice technologies in Senegal, The Gambia, and Côte d'Ivoire, and do research on the effectiveness of the OFPEP approach

Dr Moses Onim, East Africa OFPEP coordinator, provided countless inputs and recommendations for program design and implementation in Kenya, Uganda, and Ethiopia, and was an effective link with partner organizations and other funding agencies, especially FICAH, local USAID missions, and COOPIBO, a small Belgian NGO/donor based in Uganda

In Senegal, Mr Alphonse Faye, team leader, provided equally important leadership for the program, and facilitated implementation of complementary activities funded by IFAD and Monsanto

Program Support, Coordination with Partners

Winrock maintained close cooperation with the PVO/University Center for daily coordination of the program, especially the monitoring and evaluation, planning, and reporting components That cooperation culminated in the joint organization of the Dakar workshop in December 1998, that was attended by Winrock program staff from nine countries and also by the USAID/BHR/PVC director of the program, Ms Sallie Jones, and her assistant, Ms Mary Liakos

Daily support and administrative coordination of OFPEP was efficiently provided by Ms Johnnie Frueauff throughout the 6 years In 1998, Ms Lana Pyburn also joined the program She will have the main administrative responsibility for OFPEP's follow-up phases Dr Frank Byrnes, a senior associate of Winrock, also provided invaluable advice to OFPEP through the years, especially in regard to diagnostic tools, interpretation of data, the design of the final evaluation, and the program of the Dakar workshop

The program director, his assistants and colleagues, and the PVO/University Center kept regular communication channels wide open with the three subcontractors which had the responsibility of lead agency in a specific country Save the Children in The Gambia (1992-1995), ACDI/VOCA in Uganda (1992-1997), and PACT in Ethiopia (1997-1998) In Senegal, Winrock was the in-country lead agency throughout the program In Kenya and Ethiopia, Winrock developed informal arrangements with Lagrotech (1994-1998) and the African Village Academy (1995-1997), respectively, to ensure an efficient implementation of the program

B. PVO/University Center

Program Coordination

As a core member of the OFPEP consortium, the Center for PVO/University Collaboration in Development (the Center) through its Program Coordinator, Ms Mary Lou Surgi, has provided overall coordination and information dissemination about project activities Ms Surgi has provided technical assistance in program planning, training materials development, and project monitoring and evaluation She has conducted periodic monitoring of field activities, coordinated the provision of technical assistance through a network of the Center members, recruited consultants and has been responsible for overseeing the OFPEP newsletter and other publications She also coordinated administrative and financial management support for the Center staff and technical consultants In May 1997, Ms Surgi was a member of the Final Evaluation team for OFPEP Ms Surgi has also been responsible for the overall production of the Annual and Final Reports based on the individual reports produced in each country

Information Dissemination

Also at the Center, the Information/Communication Specialist, Mr Rashid Hussein, produced the OFPEP newsletter, "Of Soils and Seeds" and was responsible for the production of other OFPEP-related materials such as the OFPEP brochures, the photo-documents *Through Farmer's Eye* – in English and French, teaching materials for the field such as the *Guides Pratiques* also produced in both in English and in French Mr Hussein has also handled requests for technical information and has supplied other documents of interest to project partners and helped to identify sources of technical information upon request from the field

Technical Input

Over the life of OFPEP, two PVO/University Center staff were based in Senegal and/or the Gambia as Process and Linkages Specialists Dr Sarah Workman, an agroforestry specialist assisted OFPEP partners in the areas of resource and needs assessment and baseline data collection, monitoring and evaluation, forming linkages with government and nongovernment institutions, and the dissemination of information about project processes and results She also provided technical assistance in agroforestry and biological nitrogen fixation to partners in both Senegal and the Gambia She was replaced in 1995 by Ms Lisa Washington-Sow, a socio-economist Ms Washington-Sow worked closely with partners in developing training materials for use in the field, and coordinated the production of the *Through Farmers Eyes* photo document for Senegal as well as the *Guides Pratiques* She was also active in several inter-agency groups in Senegal that advised the AID mission in its reorganization efforts, and was a member of a team that assisted NGOs under consideration for AID grants to undergo a self-evaluation exercise to identify their needs for institutional strengthening

In addition to its permanent staff, the Center was also able to recruit highly qualified specialists to contribute their expertise to the program More than 25 consultants made important contributions to OFPEP over the 6 years of the program with the majority of these being local experts OFPEP was able to

successfully leverage resources by recruiting Ph D students, and other professionals to work on an in-kind basis to further strengthen the collaborative aspect of the program It was also successful in using students from both U S and African universities in its research and evaluation activities

Training Support

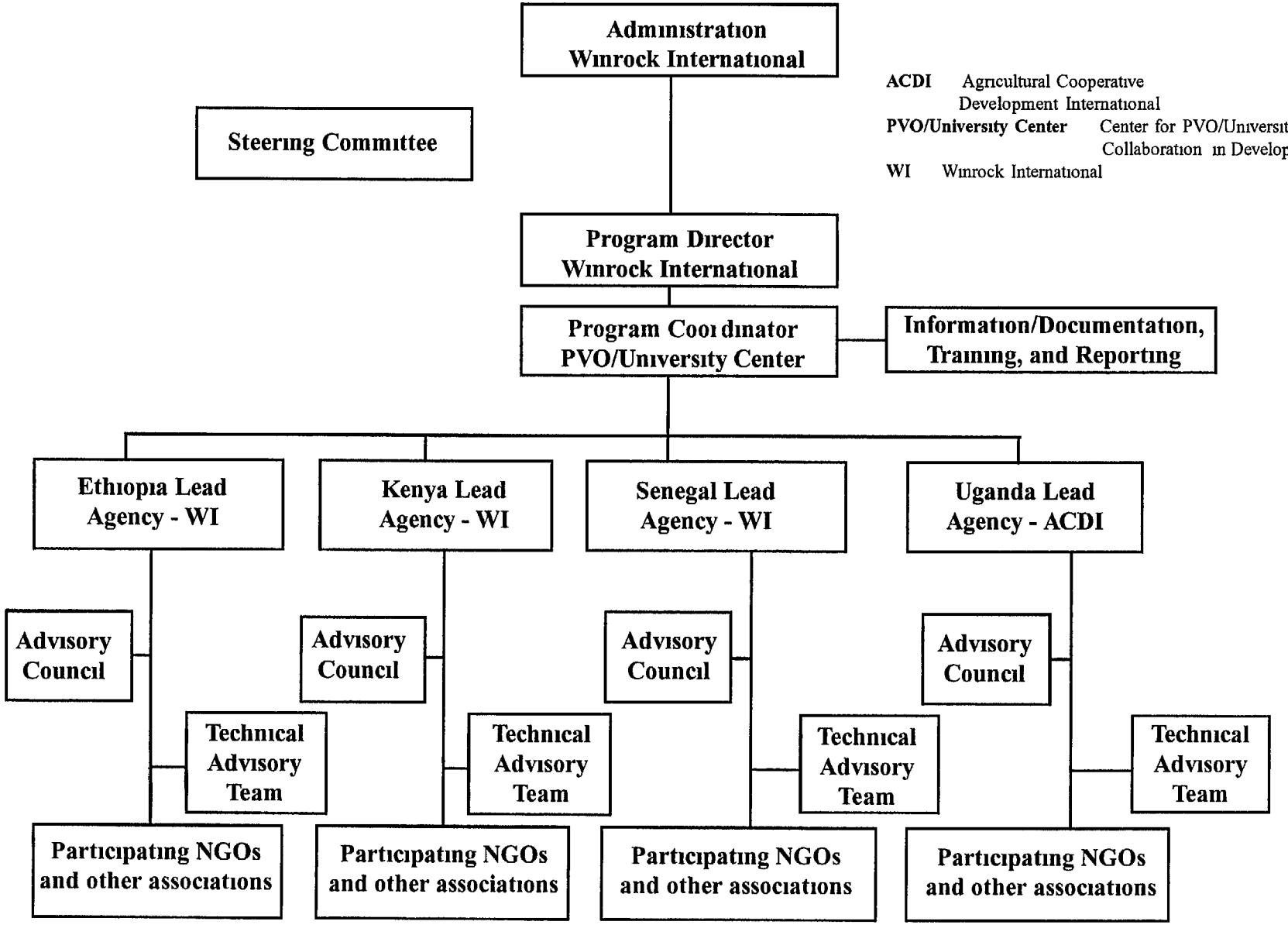
The PVO/University Center was able to provide substantial financial and technical support for several major training activities for both staff and partners over the life of OFPEP After a needs assessment was conducted by the Center at the all-OFPEP workshop held in Kisumu, it was able to organize workshops lasting from 3 days to 2 weeks on such topics as Methods of Conducting Participatory Rural Appraisals, Gender Analysis, Monitoring and Evaluation and introduction to computers

Other Personnel Support (Match) Dr Robert Gurevich, Executive Secretary of the Center, and Mr Ralph Montee, Program Director for the Center, provide programmatic backup and administrative support

C. Lead Organizations and Charts

The roles and responsibilities of implementing institutions of OFPEP are presented on the following page (**Figure 1**) Details regarding in-country organization and management will be covered under each country report

OFPEP Management and Organizational Chart



III. Country Reports

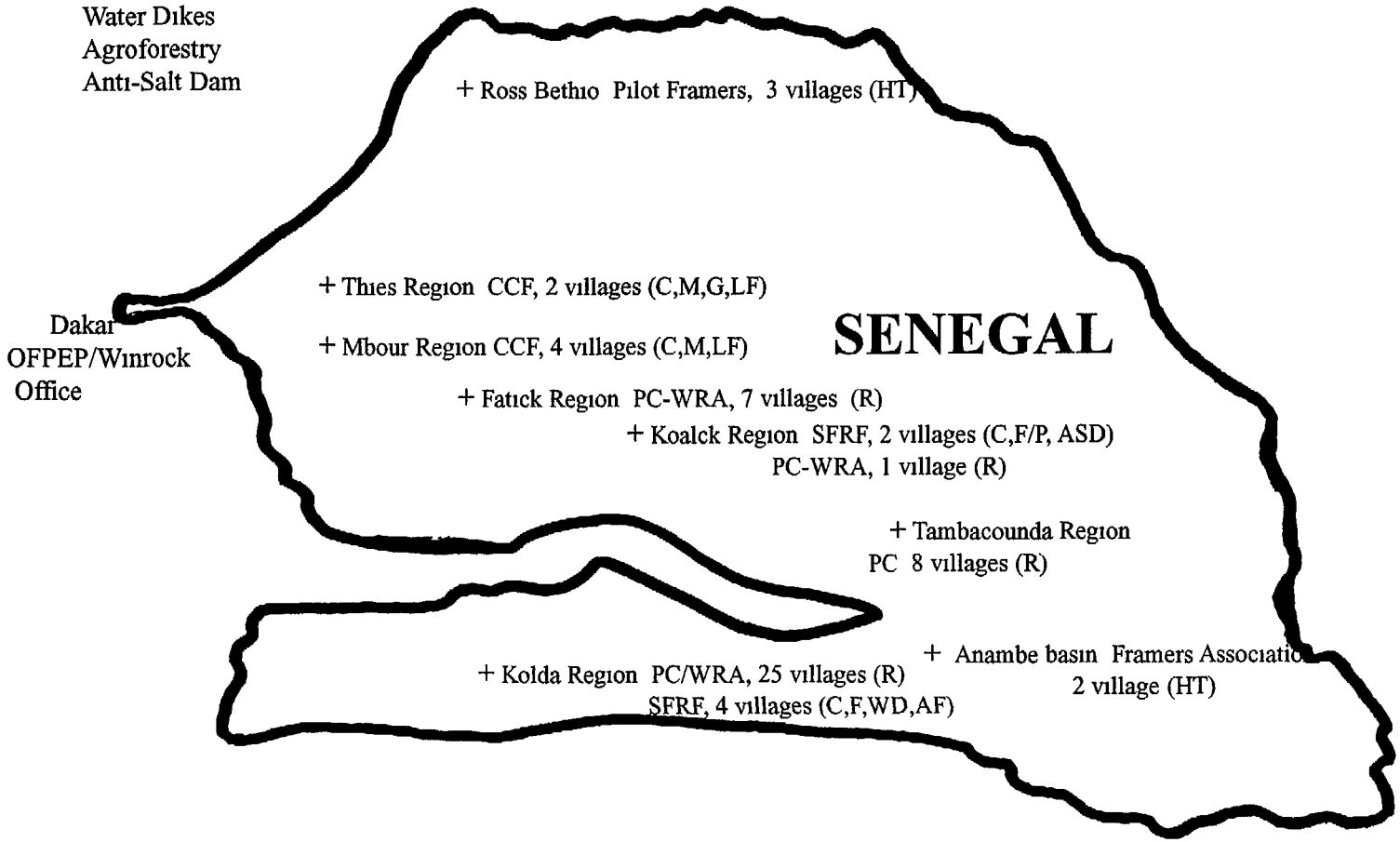
A. Senegal
B. Uganda
C. Kenya
D. Ethiopia
E. The Gambia

A. Senegal - Country Report

OFPEP-Senegal Activity Sites

Legend

PC/WRA	Peace Corps/Womem's Rice Association
CCF	Christian Children's Fund
SFRF	Soil Fertility for the Rice Fields
HT	Herbicide Trials
C	Composting
M	Improved Millet
G	Improved Groundnuts
F/P	Fertilizer and Phosphate Trails
D	Water Dikes
AF	Agroforestry
ASD	Anti-Salt Dam



IRC

1 Overview of Senegal OFPEP

When OFPEP took over from the On-Farm Seed Program in 1992, the country was only 50% self-sufficient in food production and women were assuming an increasingly significant role as providers for their families A number of factors combine to explain the drastic decline of per capita agricultural production experienced in Senegal in recent decades high population growth, climatic changes highlighted by reduced rainfall, deforestation, and rapid increases in the rate of consumption and use of the natural resource base Where animal husbandry is practiced with agriculture, competition for land, vegetation and water exacerbate the declining availability of these natural resources, although the animal manure contributes to the organic matter in the soil

In 1994, the devaluation of the CFA and the liberalization policies of the Senegalese government effectively ended the state monopoly on rice Government subsidies on agricultural inputs and fertilizers were removed, and activities of agro-parastatal organizations were dismantled or drastically curtailed Moreover, good quality seed was often unavailable, and the increase in the price of imported inputs such as fertilizer and equipment were not matched by an increase in producer prices This caused a decline in the use of these inputs, further reducing production

Faced with this context, OFPEP/Senegal intervened by extending improved seed varieties and technologies to enable farmers to protect and restore soil fertility and subsequently to increase their production and incomes

In contrast to activities in other OFPEP countries, OFPEP/Senegal did not target a specific district or region of the country Rather, it addressed the widely varying needs of its partners and farmers in the far reaches of the country with tailor-made programs to meet the existing social, cultural, and agricultural realities OFPEP/Senegal intervention zone covered 6 regions, 11 departments, and 134 villages

2. Highlighting the Achievements of Six Years of OFPEP in Senegal

a Addressing seeds and soils needs of farmer organizations affiliated with the Christian Children's Fund (CCF) in the regions of Thiès and Mbour

The CCF zones are located in the western corner of the Peanut Basin The increase in population over the past decade, competition with herders for existing land, and questions about land tenure are all factors that have forced farmers to abandon the traditional fallow rotation system As a result, farmers have experienced a sharp decline in crop production due to the mining of soil nutrients in addition to wind and water erosion The OFPEP baseline study conducted in the area found that in order to replace the lost nutrients, both organic and inorganic fertilizers needed to be added The study further found that the CCF zone had the conditions, practices, and available labor required to introduce a program on composting

Compost

Over the past 6 years, 548 farmers in six villages were trained in making compost, with a total of 349 demonstration plots When farmers applied the compost to their fields planted with traditional millet varieties, the increase in yields ranged from 76 to 207 %, the average increase being 106 %

A study on the return on financial profitability has shown that each monetary unit invested for compost making and in the use of improved seeds will yield 4 03% return if you consider opportunity costs These

costs include the material and labor used that did not require out of pocket expenses If you don't include these costs, the return is 22 05%

Live fencing/cassava
Another technology introduced by OFPEP to combat declining soil fertility is the live fencing of cassava fields This coupling of measures to reduce soil erosion with a cash crop not only allowed farmers to increase their income by an average of $ 163, but it also protected and/or recovered plots of land which can now be used for millet or peanut cultivation The live fencing has also contributed to the preservation of the ecosystem through improvement of the vegetative cover On average, each farmer has arrived at the following results natural regeneration of 32 trees, and the planting of 21 trees In the past 4 years, 483 farmers have been trained in this technique through on-farm demonstrations More than 350 hectares are now protected in this manner, and this technology has taken on a life of its own, spreading to many neighboring villages

Improved millet
NRBAR (Natural Resources Based on Agricultural Research) found that the improved millet varieties yielded from 155 to 577% more than the traditional varieties

When OFPEP began working in these 6 CCF villages, only 20 % of the farmers were using improved seeds The improved millet variety Souna 3 has now been extended to nearly all farmers in the CCF zone In several of the villages, farmers adopted this variety to the point of abandoning completely their traditional varieties In fact, an OFPEP study in the region found that before OFPEP intervention, the situation was marked by a deficit in cereals varying between 260 and 860 kg per year, which corresponds to consumption requirements ranging from 1 5 to 5 months With OFPEP intervention, the availability of cereals at the household level increased anywhere from 37 to 46%, depending on the initial income level of the family The greatest proportional increase was found among the poorest grouping of families Therefore, the deficit in cereals has been reduced to 0 5 and 1 5 months for some households Better still, some households were able to ensure cereal security and moreover to obtain a surplus

For example, in Diokhar, one of the most productive villages in the CCF zone, farmers Waly Thiaw and Mamadou Gning each produced enough Souna 3 millet to cover their household needs for 1 year plus 1 month This surplus allows them to market some of their production to generate cash so that they can settle other such debts as school fees and clothing

Using improved seed, particularly when combined with a composting program, permitted more farmers each year to significantly increase their production However, reduced rainfall and other climatic changes are challenges that even OFPEP cannot address According to one farmer in Baback, "I have had to plant groundnuts four times already and each time they died because of insufficient rainfall Now I will have to find seeds and try again, praying for rain "

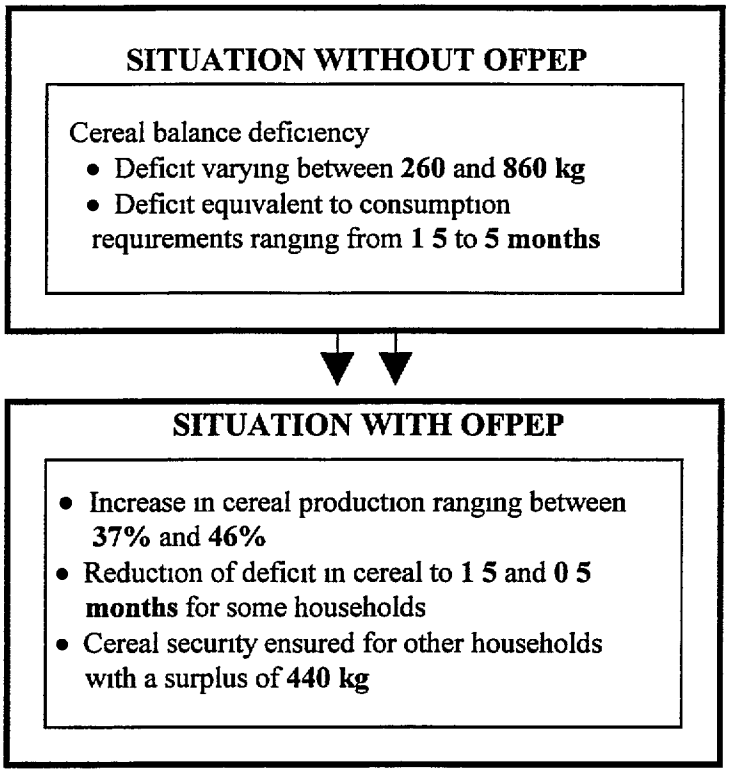


Figure 2 OFPEP impacts on cereal balances of rural households

Benefits for women

During a gender analysis exercise in May 1997, women in the CCF zone reported the following benefits from their association with OFPEP

- They appreciate having a compost pit near the compound in which to put the household waste They used to dump waste in the open or burn it Disposal into the pits has promoted hygiene in the village while increasing the amount of organic matter for the pits
- Women don't have to sell their belongings to feed the family due to increase in the millet yields produced by their husbands
- Some of the extra millet can be sold to obtain other condiments for the household
- Live fencing and improved millet save the time of women and men and provide additional food for the entire family

Adoption and diffusion

The data in **Table 1** show a spreading effect of the improved varieties from the 4 Community-Based Organizations (CBOs) to 25 neighboring villages, and corresponds to a diffusion rate of 1 to 5

Table 1 Number of farmers using improved millet seed, combined with compost

CBO	Number of villages	Number of farmers disaggregate by gender			Total seed distributed in kg
		Men	Women	Total	
Fandene	6	55	9	64	208
Baback	1	124	0	124	640
Ndollor	4	71	4	75	510
Thiadiaye	14	55	9	64	74
Total	**25**	**305**	**22**	**327**	**1432**

This high ratio of diffusion is due to the following factors

Suitability of the improved millet varieties to the local agronomic conditions The three varieties used which are Souna 3 (85-95 days to maturity), IBV 8001 and IBV 8004 (75-85 days to maturity) were developed by the ISRA millet team in collaboration with INSORMIL Among other characteristics the varieties are earlier and more disease resistant than the traditional millets They have the potential to yield 2000 kg/ha under favorable climatic and high input conditions whereas local varieties produce 300-500 kg under drought conditions and no inputs

Working with local communities Traditional groups are an important aspect of African culture and are represented in the working area of OFPEP through CBOs These traditional groups are stable and, according to Suzanne GANON (1995), there are no other groups on either a village or multivillage base that compare to these traditional groups in term of their responsiveness in meeting the needs of their members and their longevity in the village

The first adopters of the technologies promoted by OFPEP are selected by the members of the CBOs and not by OFPEP technicians These farmers serve as models for other members of the village group They organize demonstration sites with the help of the village-based extension agents Members of the CBO are encouraged to visit the sites and to discuss what they see This traditional group thus facilitates the adoption of the OFPEP technologies in the village and by relaying the extension messages delivered to the wider village and surrounding communities

The impact of OFPEP on these traditional groups seems (based on the diffusion and adoption in rates) to be highly positive, and the technologies introduced are sustainable once they are firmly in the hands of the farmer since no further outside support is necessary

Improved millet seed multiplication system

In 1997, the rainfall was particularly deficient and irregular Poor grain harvest or total crop failure resulted in some areas The availability of good seed for the following season constituted a problem To resolve it, OFPEP initiated a new cycle of seed production In 41 villages, 60 hectares were used to produce the first generation of certified seeds and 72 growers were selected An amount of 300 kg of breeder seeds of Souna 3 was distributed to the growers Due to the high proportion of "shibras," the main contaminant of millet, recommendations were made to the farmers to make use of the "mass selection technique " Despite the reduced area selected for seed collection and the limited number of fields chosen, a quantity of 1,085 kg of first generation certified seeds was collected from growers These seeds are being used to produce the second generation of certified seeds for the 1999 season

b Improving rice production with new rice varieties and a soil fertility program with Women's Rice Associations and the Peace Corps

OFPEP and the Peace Corps have been partners since the On-Farm Seed Project Together, they worked with Women's Rice Associations in the Kolda, Nioro, Foundiougne and Tambacounda regions of Senegal The Mandinka and Pulaar tribes that predominate in these traditional areas cultivate rice exclusively for home consumption where it would otherwise be characterized as a marginal crop in comparison to crops such as peanuts and millet Nonetheless, rice cultivation has traditional significance, and OFPEP has made important improvements in its production practices The principal constraints to rice farmers are poor quality seed and agronomic practices Coupled with this are poor agro-ecological conditions such as iron toxicity and salt intrusion, and poor soil fertility, water management, and rainfall

During Year 5, Women obtained yields ranging up to 1,225 kg/ha on demoplots, compared to traditional practices that allowed them to produce only 0-560 kg/ha. In Kolda in Year 6, with another new variety (DJ8-341) the increase in yield averaged 44 tons per ha over the traditional variety

OFPEP successfully introduced three improved rice varieties (DJ-12-519, Rock 5, and IRAT 10) along with associated changes in agronomic practices (nursery preparation, transplanting, and direct seeding or row planting) Up to and including the current season, OFPEP has trained 123 Peace Corps Volunteers in these practices and supplied them with the improved seeds Each of these volunteers trained from 5-10 female farmers in each of 2-5 villages per year In addition, OFPEP trained another 1,767 farmers directly

A total of 1,767 demonstration sites have been established in the past 6 years for farmer training Experience suggests that for a demonstration to be successful it must be similar to what farmers are already doing, require comparable or less labor than prior practices, and provide a noticeable yield increase (at least 20%) Yield increases for the varieties introduced by OFPEP range from 20 to 50% over traditional varieties and practices Even more importantly, the early maturing varieties introduced by OFPEP mature before the rains end This characteristic provides food during the "hungry season" before the harvest when food is in short supply

The popularization of improved varieties was meant to increase their accessibility to farmers while popularizing simple and accessible production techniques in a context of low input rice cultivation This was seriously jeopardized during the 1997 agricultural campaign by a 3 to 6 week drought, depending on the regions, which particularly hindered the performance of the IRAT-10 variety This situation was particularly drastic in the department of Tambacounda and the North of Fatick region where the IRAT-10 variety had a low performance due to the combined effects of seeds of poor quality and non compliance with the optimal dates for weeding

Real efforts were made to improve the data collection system through the development of volunteer's technical knowledge so that they can provide better feedback to our partners These efforts should be maintained in order to set up a basis for the assessment of the varieties in minimum conditions of input use and utilization rate of improved varieties on farm

New techniques save time
Row planting, which is the recommended farming practice for direct-seeded rice, helps women to save time later in weeding The time saved is put to other productive activities A study in 1997 found the amount of person days per ha of rice cultivated in the traditional manner was between 131 and 151 When using the on-line seeding technique, the person days required drops to 80, a saving of least 60%

Impact on women
The farmers have also found the new varieties and practices to be cost-effective No major additional investments are required, with the bulk of the work being carried out by family members The savings in time are being used to produce other crops and participate in other income generating activities

OFPEP adapted to the shifting gender balance in the rice-growing areas in recent years as more men begin to cultivate rice, particularly in the regions of Foundiougne and Kolda This shift came in the aftermath of the devaluation of the CFA when farmers began to experience price increases and sought alternative food strategies Observations during monitoring, and discussions with farmers and PCVs, corroborated the results of a gender analysis of the rice program in 1995 in indicating that men's participation in rice cultivation did not adversely affect women Since then, PCVs are encouraging interested men to participate in demonstrations

Some difficulties in popularizing certain techniques
Some volunteers had difficulties in popularizing certain cultural practices such as manual row cropping or use of grain drill, optimum weeding date in case a single weeding session has to be conducted, and use of compost or manure in the nursery gardens Analysis showed that this mainly involved first year volunteers who have some weaknesses regarding languages, because second year volunteers generally have no problem in popularizing the techniques

c Improved seed varieties for upland crops with Peace Corps and ISRA

During the 1998 rainy season, OFPEP with the collaboration of Peace Corps and ISRA, introduced improved seed varieties of corn (Synthetic C, JDB), millet (Souna 3, IBV-8001, IBV-8004), sorghum (CE 145-66, CE 180-33, F2-20) and cowpea (Melakh, Fourrager, Bambey 21) These varieties were introduced into 64 villages 506 demonstration plots were set up and 54 Peace Corps Volunteers assisted the farmers

d Problems of soil fertility, seeds and weeds in rice growing areas addressed

After working with the women rice growers for several years, it became evident that a serious constraint to further increases in production and using new land for rice cultivation was related to soil fertility According to one study, the permanent use of these lands without adding organic or mineral fertilizers, or a fallow period, has caused them to lose their natural fertility potential The lack of flooding and the lowering of the water table have greatly affected these rice fields Finally, striga and other weeds such as *Oryza barthii, Oryza longistaminata Cyperus esculentus* etc have also resulted in decreased fertility Weed infestation is one of the biggest problems of rice cultivation particularly in the Senegal River Valley (Saint-Louis region) and in Kolda region In Nioro (Kaolack region), the principal constraints to rice cultivation in the Gambian river basin are the salt intrusion and acid accumulation resulting from decreased rainfall

OFPEP began a program to address these issues in 1995 Since then, 554 women and men have received training in improved farming practices that include making compost for rice fields, using animal manure, applying Round-up for weed control, building dikes for water retention, and application of inorganic fertilizers such as NPK, urea, and phosphogypsum 39 trainers (lead farmers) were prepared to continue this training in the community A total of 298 demonstrations involving 157 women and 49 men were held on the above practices, and by 1998 almost 50 ha of rice fields were reclaimed using these techniques Considering that the average farmer only cultivates ¼ ha, this activity affected at least 200 households

Organic fertilization with compost
The dosage recommended is 2 t/ha, homogeneously sprayed on the rice field However, this dosage and the recommended spraying techniques are not always respected due to various constraints Yet, this did not prevent them from obtaining some satisfactory results in their demonstration plots

In Nematoba village in Kolda, the average rice yield obtained in the plots where compost was used is 4 7 T/ha compared to 2 1 t/ha on the other plots, that is a 2 6 t/ha increase in absolute value and 55% in relative value On the contrary, in the other villages (Lingueto, Temento Samba, Ibrahima Nima), the average yield was 2 6 t/ha in the plots where compost had been used Figures are not available regarding the other plots, but if the average yield obtained in that area – it varies from 800 to 1000 kg/ha – is compared with the one achieved thanks to compost application, it shows a significant improvement of the yield levels

In 1998, five sample farmers from each of four villages in the Kolda region produced 3 5 m^3 of compost to apply to 3,175 m^2 of rice fields However, most farmers still prefer to use their limited supply of compost on their income-producing vegetable plots

In the area of Nioro, the average rice yield obtained by the farmers of the village of Ndiayene Poste in composted plots is 4 1 tons/ha whereas the regular average yields vary from 500 to 1200 kg/ha

Farmers are now convinced of compost utility A total of 49 compost pits were built, 15 of them by women Even farmers in neighboring villages of OFPEP sites have begun to adopt composting

Soil salinity and toxicity control with phosphogypsum
Demonstrations were carried out with phosphogypsum in order to show its efficiency in the control of rice field salinity and its consequences (acidity and iron toxicity) Thanks to its high CaO content, phosphogypsum can decrease soil acidity and favor better crop development

In Soukouto, the average rice yield in the plots amended with phosphogypsum is 2 1 T/ha compared to 1 4 T/ha in the pilot plots, that is a 0 7 T/ha increase in absolute value and 33 % in relative value In Ndiayene Poste, depending on whether phosphogypsum has been used or not, the average yields are respectively 4 6 t/ha and 2 4 t/ha, which means a 2 4 T/ha increase in absolute value and 52 % in relative value

In 1998, demonstrations were conducted in order to compare the use of local seeds (T1 treatment), improved seeds (T2), local seeds + phosphogypsum (T3) and improved seeds + phosphogypsum (T4) The financial analysis of results of demonstration plots shows that the use of local seeds combined with phosphogypsum is the most profitable technology for farmers

Weed control with Glyphosate
In 1998, Round-up demonstrations were carried out in farmers' fields in Kaolack and Saint-Louis regions Through the results, Round-up efficacy against the most resistant weeds like *Oriza longistaminata* (savage rice) was proved An average yield increase of 36% is recorded with T2 (Round-up) comparatively to T1 (farmer's practices others herbicides, manual weeding) Likewise, Round-up demonstrations conducted on corn and eggplant cultivation in Anambe zone gave satisfying results With a dose of 16 sachets/ha of Round-up, the yield increase rates vary from 22 to 30% However, financial analysis shows that while the utilization of Round-up allows an increase in rice production by reducing the weed pressure, the cost is high

Building of anti-salt dikes, water retention dikes and stony cordons
Since 1996, OFPEP together with ENDA (Environment-Development-Action in the Third World) has demonstrated the building of anti-salt and water retention dikes The first protect the rice fields from salt seeping into the water table and permit farmers to recuperate fields that have been abandoned due to accumulation of salt The second are constructed around the fields to retain water

In 1998, five lead farmers in each of four villages constructed dikes around the plots to protect 1 6 ha of rice fields

Likewise in 1998, with the collaboration of the Kolda Rural Forestry Project (PFRK), OFPEP demonstrated the construction of stony cordons These cordons halt rill erosion and consequently stop sand accumulation in rice fields To facilitate the construction of such dikes and cordons, tools such as wheelbarrows, shovels, spades and hoes were given to the villages of Ndiayene Poste and Soukoto (in Kaolack region), and Ibrahima Nima, Lingueto, Temento Samba and Nemataba Manding (in Kolda region) On the whole, the results were encouraging 44,646 meters of water retention dikes for 14 291 ha, were built, along with 416 meters of anti-salt dikes and 7 stony cordons measuring 35 meters

Impact on women's social position
A three to five-fold increase in yields on lands where soil fertility has been enhanced not only adds to the food security of these families, but greatly enhances the position of women in these traditional cultures

Mrs Maye Diallo of Ndiayane Post village is a rice farmer, mother and wife in a household of 9 people Thanks to her work with the soil fertility for the rice fields program on trials with NPK, she had the highest production of rice in her women's rice association She produced 450 kg with the technology and 330 kg without. This increased production equals about two more months of rice for her family Because much of women's status in the family and village is based on how much rice she brings to the household, Mrs Diallo's prestige has risen because of her success

Shift in gender roles
A shift in gender roles is also taking place Activities involving soil amendments in the rice fields have increased men's participation in rice cultivation Men made an important contribution to the construction of anti-salt dikes, making up 148 of the 268 people working on the dam

Composting was another area in which men took great interest Compost produced by men is used on their upland crops This has positive effects on the women's lowland rice fields by reducing soil erosion and sand intrusion onto their fields And even though women have little access to additional land besides their rice fields, they are not letting that fact, or a shortage of labor, prevent them from digging and using compost pits

e Controlling weed infestation, one of the most notable constraints to rice cultivation

Confirmation of glyphosate efficiency through research station trials and demonstrations in farmers' fields
Rice cultivation in the irrigated areas of Senegal has not been as widespread as research and development agencies had expected One of the most commonly cited reasons for this is the presence of many species of persistent annual and perennial weeds, which significantly lowers production To address this problem, OFPEP began conducting herbicide trials with glyphosate in dry granule formula (Round-up dry) in the Anambe and Saint-Louis regions in 1993 Sponsored by Monsanto and conducted in collaboration with ISRA (Senegalese Institute of Agricultural Research), these trials were to assess the actual gains in productivity with its use, time/cost saved in weeding, the cost to farmers, and their acceptance of the

practice The trials with Round-up dry resulted in an increase in irrigated rice production of 1,271 kg/ha in northern Senegal (Saint-Louis), and 336 kg/ha in Anambe Studies have also shown that the product saves farmers in northern Senegal about $ 6 00/ha in labor costs Having obtained favorable results in the first season, the program has been extended to different farmers each year and finally, the product has been placed on the market in both areas OFPEP continues to emphasize the training of potential users and monitors its performance in the fields

Yield increases averaged about 27% in both regions for the first three seasons, accompanied by a decrease in manual labor requirements of 30 3%

Following the research station trials and demonstrations conducted by OFPEP in the framework of the Winrock/MONSANTO convention, it was found advantageous for the farmers to use the Round-up dry for the control of wild self-propagating weeds before cultivation of the infested plots

Adoption and extension of glyphosate

A total of 198 farmers were trained in the use of the new technology, and they are committed to provide training to other farmers in their villages and associations Women were active in the demonstrations and in year 6, they made up 37% of program participants

Round-up is appreciated by farmers because of it efficiency against all weeds, even *Oryza longistamina* which is particularly difficult to combat Farmers raised two major constraints the high cost and the non-availability in their district In Saint-Louis region, farmers have a difficulty in pre-irrigating their rice fields early in order to permit the development of weeds and then to apply Round up Lack of sufficient water at the proper time was a serious constraint

f Training – a big part of what OFPEP was all about

Adoption of innovation

OFPEP focused to a great extent on awareness building as well as training Part of its success was due to its approach, which enabled it to strengthen the ability of farmers to use their own knowledge and powers of observation to improve productivity in specific crop situations and under differing cultural practices and environmental conditions The adoption of an innovation is the process by which a particular farmer is exposed to, considers, and finally rejects or accepts the practice of particular innovation The first step toward adoption of a proposed innovation is to become aware that it exists Awareness was achieved in OFPEP partly through training

Most of the training conducted through collaborators of OFPEP/Senegal was hands-on practical training, initiated by request after farmers saw the OFPEP-introduced technologies with family, friends or neighbors Monitored demonstration plots were the fruits of this training Local leaders and extension workers monitored the demonstration plots with the farmers and discussed the progress of the plots These monitoring visits and discussions were reinforced by periodic OFPEP staff follow-up visits to the plots Each activity was evaluated with participating farmers to review how activities progressed and to assess the farmer's level of satisfaction

Over the years OFPEP/Senegal and its partners have built up a force of trained NGO/CBO staff and lead farmers who will continue to multiply and diffuse the successful technologies introduced to them by OFPEP The strategy was to train those who can train others

As a result, in year 6 they directly trained 904 farmers, 31 farmers associations, 45 trainers/lead farmers, and 75 Peace Corps Volunteers

Peace Corps training takes many forms

Each year, OFPEP conducted in-service training sessions for Peace Corps Volunteers These sessions provided important orientation for the volunteers and facilitate the collaboration between Peace Corps and OFPEP Peace Corps Volunteers usually have little agricultural background, and if they do, it is often not relevant to the West African situation For this reason, during the training sessions, cultural practices and descriptions of the improved varieties in the program were discussed The training sessions also served to teach them the importance of understanding their client and their complex situations before they can effectively promote changes The table below shows the number of Peace Corps Volunteers trained per year by OFPEP

Table 2 Number of Peace Corps Volunteers trained by OFPEP

Regions	Number of Peace Corps Volunteers Trained						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	**Total**
Kolda	5	8	6	4	15	17	**55**
Fatick	9	9	5	4	7	22	**56**
Tambacounda	2	3	3	6	6	18	**38**
Kaolack	4	3	3	0	0	12	**22**
Thies	0	0	0	0	0	6	**6**
Total	**20**	**23**	**17**	**14**	**28**	**75**	**177**

By the end of the sixth year, OFPEP trained a total of 177 Peace Corps Volunteers In year 6, due to the new program of extension of improved varieties for upland crops, more Peace Corps Volunteers were trained compared to the preceding years

Each of these volunteers was in charge of training 5 to 10 farmers in about two to five villages per year The table below gives the number of farmers trained annually by OFPEP with Peace Corps programs

Table 3 Number of farmers trained by OFPEP/Peace Corps

Regions	Number of farmers trained						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	**Total**
Kolda	244	210	104	114	62	72	**806**
Fatick	43	49	31	39	54	180	**396**
Tambacounda	31	31	52	62	68	293	**537**
Kaolack	133	136	150	0	0	65	**484**
Thies	0	0	0	0	0	50	**50**
Total	**451**	**426**	**337**	**215**	**184**	**660**	**2,273**

A total of 2,273 farmers were directly trained during the 6 years These farmers were used as trainers of their neighbors Studies have found that the diffusion ratio for these farmers is 1 3 in their own village and 1 5 for farmers in neighboring villages Thus, the number of women farmers who directly or indirectly benefited from OFPEP/Peace Corps' interventions approaches 100,000 In regions with a total population of around 600,000, this is a significant number

The annual Peace Corps rice summits were also sponsored in part by OFPEP They permitted Peace Corps Volunteers to share their experiences and provided a good opportunity for them to improve their dexterity in facilitating farmer-managed demonstration plots In addition to the basic training information, OFPEP

staff provided guidelines on the maintenance of the quality of rice seed Sustainability of this practice was a concern due to the widespread diffusion of the improved varieties

Group exchange visits were sponsored by OFPEP One of these was a youth exchange worked out with Peace Corps Volunteers in sustainable agriculture which enabled cross visits for youth to experience the diversity of ecosystems in their own country

OFPEP also supported every year a Field Day initiated by the farmers themselves to let other farmers know about the success of their weed control program Numerous rice farmers, representatives from NGOs, government research and extension agencies, and farmer's associations from the Senegal River Valley in northern Senegal attended the day long celebration

Training with Christian Children's Fund
Training sessions were organized for the eight village extension agents who in turn worked directly with farmers This allowed the project's efforts to have a multiplier effect Farmers were then trained as trainers of other farmers Training sessions included inter-village visits to demonstrate compost and soil conservation activities There were many exchanges of ideas between farmers coming from different villages

Training materials produced improved seed selection, cassava cultivation, composting
OFPEP/Senegal produced a set of training guides or "guides pratiques" These guides addressed three of the major technical areas in OFPEP/Senegal and targeted the field extension agents who worked with farmers

g OFPEP was nothing without its partners

The small staff of OFPEP/Senegal could not hope to have achieved all that it has without the collaboration of its many partners

Peace Corps -- OFPEP's oldest collaborator
As discussed above, strong relationships were built over the years between OFPEP/Senegal and two exogenous organizations the Peace Corps and the Christian Children's Fund In both instances, farmers' associations grew stronger and more capable because of these three-way partnerships This can only insure the sustainability of the group and the approach and technologies promoted by OFPEP In fact, this assertion was proven It was Women's Rice Associations who had "graduated" from OFPEP and the Peace Corps who contacted OFPEP for help in addressing their soil fertility problems and who then became the direct partners of OFPEP in the soil fertility program In addition, the informal contacts that these groups have with similar groups in other villages facilitated the diffusion of new technologies outside the original project zone Benefits from this program are being sustained and extended by the permanence of these women's rice associations

CBOs working through Christian Children's Fund
This collaboration with farmers groups and six Community-Based Organizations (CBOs) was strengthened over the past 6 years The CBOs played an important role in diffusion of technologies proposed by OFPEP and represented a real link between end-users and OFPEP in term of

- training of trainers and farmers,
- implementation and monitoring of activities,
- outreach and diffusion of technologies

In fact, the CBOs assigned their best qualified and dynamic members to serve as part-time village extension agents for OFPEP On the initiative of the CBOs themselves, OFPEP and CCF shared their salary costs They became the primary trainers, data collectors and liaison between the CBOs, CCF and OFPEP They also facilitated the production of a participatory impact evaluation through photography in which farmers made photographs of their interpretation of the impact of the OFPEP collaboration on their lives

ISRA (Senegalese Institute of Agricultural Research)
All OFPEP-introduced technologies were tested and confirmed locally by ISRA ISRA was always an active member of the OFPEP Advisory Council, and some of its best researchers, such as Aminata Badiane, Souleymane Diallo and Jean-Pierre Ndiaye were available, both formally and informally, for consultation and participation in OFPEP activities

NRBAR (Natural Resources Based on Agricultural Research)
This USAID-funded program provided both technical and financial resources to joint projects in natural resources management OFPEP was the recipient of several grants from the program over the years These grants enabled OFPEP to continue and strengthen its relationship with ISRA and other partners

ENSA (National Advanced Agriculture School)
OFPEP hosted several interns from ENSA This prestigious school benefited from its relationship with OFPEP and at the same time, the OFPEP approach was further diffused through such contacts as this

USAID (United States Agency for International Development)
OFPEP maintained a strong working relationship with the local USAID Mission OFPEP shared information about field activities, important visitors, studies being undertaken, etc Staff from USAID regularly participated in OFPEP Advisory Council meeting and OFPEP, as well, has taken part in important USAID meetings such as the re-engineering meetings of 1995

WV (World Vision)
OFPEP and WV collaborated from 1992-1995 on baseline studies for possible programs on compost and seed activities (improved cowpea and millet) The baseline studies for soil fertility improvements indicated that composting would not be feasible But the seeds activities took off well By the third season, WV farmers had not only significantly increased their production but they had also identified and sold their produce at profitable prices to markets in South Africa This was deemed a success story and grounds to "graduate" WV from the collaboration on seeds WV continued as a member of the Advisory Council and maintained contact with OFPEP throughout the life of the project, although no formal collaborative activities have been undertaken since then

COMI
COMI collaborated with groups of women rice growers in two villages for three seasons (1993-1995) on improved farming techniques and improved rice varieties In 1996 the Italian-sponsored NGO lost its institutional support and even though a local part-time staff maintained the office, they no longer had the capacity to follow-up on field activities and report back to OFPEP

Diapante
This French-Senegalese NGO became a part of OFPEP as a result of contacts with OFPEP Director, Pierre Antoine, and Chief of Africa Activities at Monsanto Corporation, Gerard Rass Diapante was a part of the collaborative herbicide trials with Roundup Dry in the Saint-Louis Region with ISRA/Saint-Louis for one dry season and one rainy season (1995-1996) Its role was to conduct outreach and communications to the different GIE involved

SODAGRI (Senegal Agricultural and Industrial Development Society)
In Anambe basin in 1998, many demonstrations were conducted in SODAGRI areas with the collaboration of farmers associations

PFRK (Kolda Rural Forestry Project)
In 1998, PFRK participated in the realization of stony cordons and reforestation providing watering material and forestry seeds

CERP (Polyvalent Rural Expansion Center), Environment Club
They contributed to the implementation of demonstration plots and the collection of monitoring data in Nioro and Foundiougne zones in 1998

WARDA (West Africa Rice Development Association)
WARDA was OFPEP's partner in Podor and Dagana zones in 1998 It participated in the identification of improved seeds and mineral fertilizer doses to extension according to the ecological zones

UJAK (Koyle Wirnde Young Farmers' Union)
In Podor, the program was implemented in 1998 in cooperation with UJAK, which participated in the selection of villages, the supply of certain agricultural inputs, the establishment of demonstration plots and the collection of monitoring data

FEPRODES (Federation of Groups and Associations of Women Producers in the Delta of Senegal)
FEPRODES was the main OFPEP collaborator in Dagana area in 1998 It played an important role in the choice of villages, the sensitization and the data collection

B. Uganda - Country Report

OFPEP/Uganda
Activity Sites

1. Overview of Uganda OFPEP

From October 1992 when it took off from where the Biological Nitrogen Fixation Project (BNFP) ended, OFPEP Uganda has focused its interventions on transferring proven technologies from research to smallholder farmers Mandated to increase production of food crops for food security, improved nutrition, and income, OFPEP concentrated on introducing improved seeds of basic food crops identified as priority crops by farmers themselves These higher-yielding, faster-maturing, drought and disease-tolerant varieties were introduced, along with measures to improve soil fertility through demonstrations on farmers' own fields The OFPEP participatory and collaborative model – which involves farmer groups and their CBOs/NGOs with the best of new research--has proven itself well in the past six years The proof is in the increased agricultural production, enhanced income, availability of crop surpluses to market, and quiet promotion of what some groups are calling "OFPEP democracy", and the impact it has had on other institutions and how they approach working with farmers-both men and women

2. Highlighting the Achievements of Six Years of OFPEP in Uganda

a Changes in year 6

The reduced funding to OFPEP in Year 6 resulted in a re-orientation of emphasis in Uganda and coincided fortuitously with a new program with the same goal FOSEM (Food Security and Marketing) is funded by USAID in Uganda and enveloped much of the original OFPEP team, approach, and districts into a local initiative to enhance food security This is a real testament to the impact that OFPEP has had in Uganda, not only with rural households, but with the dissemination of an approach that has proven successful far beyond initial expectations According to a FOSEM extension worker, "OFPEP remains a household name among the farmers, even after changing to a new program, farmers still find it easier to call it OFPEP "

It is not only new programs that have been spawned, but other institutions are adopting the OFPEP approach In Busia and Tororo district, the OFPEP method of demonstrating technologies has been adopted by all government extensionists and other NGOs like Sasakawa Global 2000 and Africa 2000 Network They recognize it as the most effective way of transferring technologies to farmers It should be remembered that at the beginning, OFPEP was criticized by certain staff of the Ministry of Agriculture for "confusing the farmers by demonstrating so many technologies " Now the Ministry is adopting the same approach as the most effective way to introduce change!

OFPEP continued its presence in Uganda with two staff, a Gender/Extension Specialist and one Gender Assistant They concentrated on following-up on the impact of the technologies in the areas of the original OFPEP groups, continuing to transfer technologies of improved stoves and use of soybeans, and ongoing sensitization on gender and food Security, environmental protection and teaching on basic nutrition The OFPEP-Gender program gained momentum during the sixth year with all its components being viewed as complementary to production activities The OFPEP Gender training program is unique among programs experienced by its collaborators

Despite the end of the OFPEP extension program, the production activities continued in the second rains of 1997 (beginning of the 6th year) throughout the targeted areas According to the former Extension Specialist of Mukono district, the communities now have built-in capacities as extension workers due to the many Training of Trainers sessions conducted by OFPEP and they continue to train and are in high demand It should be noted that throughout the 6th year both the OFPEP and FOSEM field staff continued

to work together, since they were working with the same collaborators, trainers and farmers The OFPEP family is still alive and well

b Improved seeds bring high yields

OFPEP farmers are averaging maize yields of up to 4 tons per/ha even in districts where the Ministry of Agriculture district offices report the average maize yield to be 2 tons/ha

The Kavule Women's Group in Busiki, Iganga grew rice for the first time in 1996, harvesting about 5 kg of paddy from 300 grams of upland rice seed provided by OFPEP By the first rains of 1997, they have harvested 100 kg of paddy

It is not only high yields under ideal conditions that are impressive, but the fact that most of OFPEP-introduced seeds are early-maturing and high-yielding even in times of drought so that farmers have been able to have reasonable harvests even under the most adverse conditions During the first season of 1997, which was hit by delayed and short rainfall, when farmers **not** using the improved varieties harvested 1/4 ton/ha or less, OFPEP farmers growing Longe 1 maize, harvested 1 tons/ha The story with other crops is similar OFPEP-introduced sorghum, soybeans and groundnuts are now eagerly sought by other farmers

The Buhenye CCF Project in Tororo district covering 7 villages with 355 households harvested an extra three months supply of sorghum after planting the OFPEP-introduced Seredo sorghum variety which is early maturing and drought resistant.

The Osukuru Young Farmers Group also had food for its members, stretching out their food supply for an extra three months Their "secret" was the improved OFPEP-introduced seeds for finger millet, sorghum and maize, and adoption of recommended agronomical practices such as row cropping which facilitated crop management.

Over the past 5 years, more than 39,000 farmers, half of them women, have been directly trained in the new seed varieties A further 28,000 farmers have learned indirectly about the seeds through observations at demonstration in their community or in the marketplace Now more than 41,000 hectares in the three districts have been planted with the new, higher yielding and more reliable varieties

Not only the improved seed varieties, but other techniques such as selecting for good seed while still in the field, and improved household storage methods have lead to 90% of OFPEP-trained farmers selecting and saving their own seeds for planting the next season This is highly significant for timely planting, particularly during these times of reduced rainfall Moreover, improved seeds from the Uganda Seeds Project are not easily obtainable in local markets, and the expense of finding them is considerable

Soil management
The results from soil fertility management interventions indicate equally exciting success stories

A farmer in Kidoko, Tororo planted 0 1 hectares of local maize fertilized only with animal manure and harvested 0 2 tons of maize, while her neighbor got nothing at all due to a combination of drought and severely depleted soil.

Even the more labor-intensive soil conservation techniques such as building trash lines along bunds, and agroforestry are beginning to be taken seriously By the end of Year 5, more than 6,000 farmers are using one or more soil conservation techniques This is 49% of the farmers trained in these techniques, and we

feel the percentage is quite acceptable given the long-range nature of these techniques as well as their demand for scarce labor

Due to the heavy rains at the end of 1997, there was erosion and poor drainage The farmers then realized the value of erosion control structures and have become more vigilant in constructing them

Farmers using one or more erosion control structures

At the end of 5 years	-	6,000
Additional in 6th year	-	300 (Mukono only)

c Cassava mosaic disaster

OFPEP is today recognized by the National Cassava Program and NGOs active in this field as being a significant player in mitigating the devastating effects of the ACM virus

An accomplishment worthy of special mention is the multiplication and wide distribution of the ACMV-tolerant cassava OFPEP became involved in cassava multiplication in response to a crisis wrought by the African Cassava Mosaic Virus (ACMV) epidemic This epidemic had wiped out cassava in Tororo district and many parts of Iganga district, and is now causing havoc in Mukono district as well In its final year, OFPEP trained 330 trainers in Mukono alone, bringing the total of farmers and other staff trained in the techniques of training others on rapid multiplication to more than 1,000 In turn, they have trained almost 40,000 individual farmers At the close of OFPEP/beginning of FOSEM there are some 734 hectares of ACMV-tolerant cassava that have been established When the Namulonge Agricultural and Animal Production Research Institute (NAARI) was not able to meet the high demand for planting materials of the improved varieties, OFPEP purchased them from private individual multipliers--many of whom were originally recipients of the planting material from OFPEP!

The most recent virus-resistant variety released by Namulonge has been introduced by OFPEP and its partners and 8 ha of mother gardens have been planted, though they are suffering during the recent drought

Mrs Ida Namirengo in Iganga received 200 2-node cuttings of NASE 2, a ACMV-tolerant cassava variety, in 1995 In addition to distributing cuttings to the 45 members of her group in 1997, she now has 1 5 acres of cassava for herself, and has sold cuttings sufficient to cover 7 acres! In her own words, "There is no hungry season for my family this year "

d OFPEP technologies know no borders

Diffusion and adoption

The continued use of a technology after a trial period is a strong indicator that the farmer is receiving tangible benefits from its adoption We wanted to know how many of the tens of thousands of farmers who had been trained by OFPEP staff or their partners were adopting one or more of the practices being introduced, not just one time, but for more than one year From information gathered during meetings with farmers, monitoring visits to communities, and reports of NGO/CBO collaborators, these adoption rates were determined as of January 1997

Technology	
New crop varieties	85 5%
On-farm seed technologies	79 2%
Soil fertility management practices	67 5%
Energy efficient stoves	12 2%

At the end of OFPEP's downsized presence in 1998, the rate of adoption of the energy efficient stoves had increased to 23% and soy utilisation to 115%

e Food security and cash generation

A randomly selected sample of OFPEP farmers in each of three districts, followed for 3 years, shows that 54% of the total crop production is used for home consumption, 27% is being saved for seed, and 19% of the crop is sold for cash

The cash generated by selling 19% of the crop is used in the following ways

Household necessities	**45%**
School fees	**18%**
Radios	**18%**
Building materials	**9%**
Other (*including pesticides, hired labor, clothing, medical expenses, etc*)	**10%**

These numbers in the left column are borne out in countless reports from individual farmers and partner organizations Many of them report that as a result of working with OFPEP, 50% of farmers have improved their food security situation by three months Abur CCF Project reports that several families have generated surpluses which are being sold to pay school fees, invest in petty trade and meet other household needs after their food stocks are secure The Sikhubira farmers' group realized US$385 which was distributed to members in dividends

After five years there was sufficient data to substantiate that increased yields are being obtained with OFPEP-introduced technologies, and how they are being converted into meeting not only food security needs, but other household needs We are now seeing how a small percentage of disposable income is being used to purchase inputs to further increase yields When a program reaches this level it is ready for the next stage by helping farmers increase crop production to the extent of becoming viable as commercial producers, accessing credit and acquiring higher levels of technology for adding value to their products

f Addressing gender concerns improves the lives of all

This was the major direct activity of OFPEP during the 6th year The gender activities were viewed as a perfect compliment to the production activities The OFPEP Gender staff trained the Gender Specialist for the new FOSEM project who has extended her knowledge to new groups, even outside the OFPEP areas

Trainers trained in Gender Sensitization

	Men	Women
5 years -	316	219
6th year -	106	148
	422	367 = 789

Women as % of trainers 46 50%

The gender sensitization sessions made OFPEP a pioneer in tackling gender issues related to production in the rural areas A positive change is reported towards unity, harmony and equal participation in the homes and on the farm It has encouraged girls' education, and women's participation in trainings

Slowly but surely, the energy conservation technologies are taking root in the OFPEP targeted communities as well

In Magamaga, Aida Namirengo was able to realize some income out of the fuelwood saved every week She was using 3 bundles instead of 7 and each bundle was going for Ushs 2,000 (USD 2), thus creating a weekly savings of US$8 It is these concrete benefits that are encouraging the spread of energy-efficient stoves, and putting those trained by OFPEP in these techniques in high demand

The soybean utilization campaign by OFPEP will never be forgotten by the farmers It has completely changed the trend of thinking of soya as solely a cash crop, it is now on the food crop list Households are utilizing soya in all forms despite the scarcity of seeds for planting

The gender issues component of OFPEP/Uganda complements extension by addressing some of the important factors which directly or indirectly influence agricultural production The issues which were identified as priorities for the gender staff were

- Gender and agriculture, where gender issues are related to productive activities and food security
- Conservation and management of critical resources such as the environment, fuel wood, and time
- Basic nutrition knowledge with an emphasis on soybean utilization

There have been significant results in respect to gender issues and household welfare Men and women both report that many activities on the farm and in the homes are now more equitably shared with pride and dignity The OFPEP staff believe their approach to gender has been successful because it emphasizes complementarity rather than confrontation

3. Highlights of Program Activities

a Demonstration plots

During the life of the project, OFPEP and its collaborators, including lead farmers have set up more than 325 demonstration plots, making a total of almost 780 plots since the inception of OFPEP In the past year alone 270 demo plots were established independently by farmers who had previously been trained by OFPEP Eight improved seed varieties and inorganic fertilizers are being demonstrated together this season with control plots of traditional varieties

From year 4, OFPEP began to demonstrate the judicious use of inorganic fertilizers such as NPK and DAP to supply the much needed nutrient phosphorus and to complement other soil fertility measures Not surprisingly, farmers, while impressed with the results, were concerned about the costs and the availability of such inputs This underscores the need for access to credit and better marketing systems for inputs as well as production As a first step to dealing with the growing problem of marketing surplus production, OFPEP connected the Investment in Developing Export Agriculture Project (IDEA), a USAID-funded program to improve agricultural marketing in Uganda, with many of its farmers who are already on the way to becoming commercial producers This practice is being continued by OFPEP's close relative, FOSEM

b The transfer of knowledge happens in many ways

OFPEP/Uganda carried out two types of training Training of Trainers (TOTs), and direct farmer training by OFPEP extension staff As lead farmers and staff from partner organizations became more experienced with the OFPEP approach, more TOTs were held and fewer direct farmer training sessions were undertaken by project staff This allowed them to concentrate on monitoring the results of the various groups and individuals, and freed-up time to explore new avenues for collaboration and to meet new technical challenges

The staff at OFPEP/Uganda use a variety of techniques to learn from and share information with farmers and other partners One active form of learning takes place during TOTs and farmer training around demo sites This visual, interactive method of learning is complemented by the use of written materials to be used as reference guides by trained trainers and lead farmers The 9 crop production guides and 3 gender training manuals produced in English are translated into local languages during the training sessions

Some of the training curricula topics developed by OFPEP

Seeds varieties, selection and storage
Soil management
Agronomic practices
Gender and nutrition
Cassava multiplication
Demoplot establishment
Extension skills

Crop production guides produced by OFPEP staff

Maize	Soybean	Seed production
Beans	Groundnuts	Water conservation
Upland rice	Finger millet	
Sorghum		

Gender training manuals produced by OFPEP staff

- Use of Critical Resources Environment, Energy, and Time Achieving More with Less
- Gender and Food Security
- Nutrition and Soybean Utilization Towards Higher Food Security

Staff also receive training

OFPEP/Uganda staff, along with many of their partners, attended the training sponsored by the PVO/University Center in February 1997 on Participatory Rural Appraisal tools The staff has since used the PRA tools learned in the workshop to conduct baseline surveys in Kamuli and Masindi districts They also benefited from other OFPEP workshops on monitoring and evaluation, basic computer skills, and gender analysis

The staff also attended workshops and seminars organized by various NGOs and development agencies The Export Policy Analysis Unit (EPAU), COOPIBO-Uganda and the National Agricultural Research Organization (NARO) have each organized various workshops on food security, research-to-farmer linkages and cassava multiplication, to which OFPEP staff were invited Other important trainings sponsored by Africa 2000/UNDP, the Lareinstein Institute, and AUPWAE (Association of Uganda Professional Women in Agriculture and Environment) were attended by OFPEP staff Invitations to such seminars enhance the credibility of OFPEP and enabled it to spread its participatory approach as an effective model for the way agricultural technologies are developed and transferred

Field days
Another training method that has been used to great effect by OFPEP is the Farmers Field Day The farmers of several communities convene at one model demonstration site and the lead farmers go through each technology or intervention with them This serves as a review session and consolidation of knowledge by the farmers and enables the OFPEP extensionist to answer any questions that the lead farmers may not be able to handle

c Building networks through collaboration and partnerships

Collaboration and linkages have been formed at essentially two levels the research institutes, development organizations, and universities etc , that are sources of technologies and resources, and the NGOs, CBOs and farmer groups The latter provide opportunities for farmers to evaluate a variety of technologies which, through discussion with researchers and extensionists, they can decide to try in order to alleviate certain problems OFPEP/Uganda has been gratified at the cooperation it has received from the various agricultural research centers in Uganda The improved seed varieties, rhizobia, disease-resistant cassava, and many other technologies that are now being enthusiastically adopted by farmers, were generously offered by research scientists after discussions with OFPEP staff and farmers

OFPEP/Uganda partners

CBOs	92
Local NGOs	24
Universities/Research Institutions	5
International PVOs	4
Farmers Associations	4
Government Agencies	4

NGOs also provide technologies needed in OFPEP communities The Ugandan NGO, The Joint Energy and Environment Project (JEEP), has been a valuable source of appropriate technology for the energy efficient stoves that are proving so popular

An especially beneficial relationship is one that has developed between one of OFPEP's partners, MTEA, and the Ujima Network - a major Ugandan exporter This commercial outfit has provided training in quality control and bookkeeping to a store manager from the NGO and assisted farmers to focus on quality control Participating farmers receive prices for their goods about 10% better than on the local market and are able to better plan their production

An international NGO from Belgium, COOPIBO, has adopted some of OFPEP's NGOs and CBOs as partners and funded them to carry out multiplication of ACMV-tolerant cassavas COOPIBO-Uganda spent more than $15,000 on this collaboration

Government extension
The extension staff of the Ministry of Agriculture at the districts have also acquired rhizobia and new seeds from OFPEP staff to use in their work The increased contacts with both farmers and researchers that they have gained from their association with OFPEP has enabled them to be of more service to their communities, and to reach districts where OFPEP did not work It is encouraging that OFPEP technologies have spread in such a diffuse manner, but it does make it difficult to reach an overall conclusion as to the magnitude of effects that OFPEP has had on local agricultural production

As already mentioned above, staff from the Department of Agriculture at the district level attend OFPEP meetings and trainings and are often joint facilitators Reciprocally, OFPEP shares the results of its demonstrations and soil analyses with these government departments

Networks
OFPEP has brought research institutions, NGOs/CBOs, and extension agencies together in several fora to foster networking among them for mutual benefit Efforts are also being made to link the NGOs/CBOs directly to research because the planned goal is that they become self-confident and self-motivated enough to access technologies from research on their own so that when OFPEP phases out as a formal program, they will be able to continue to work in a similar way for their farmers

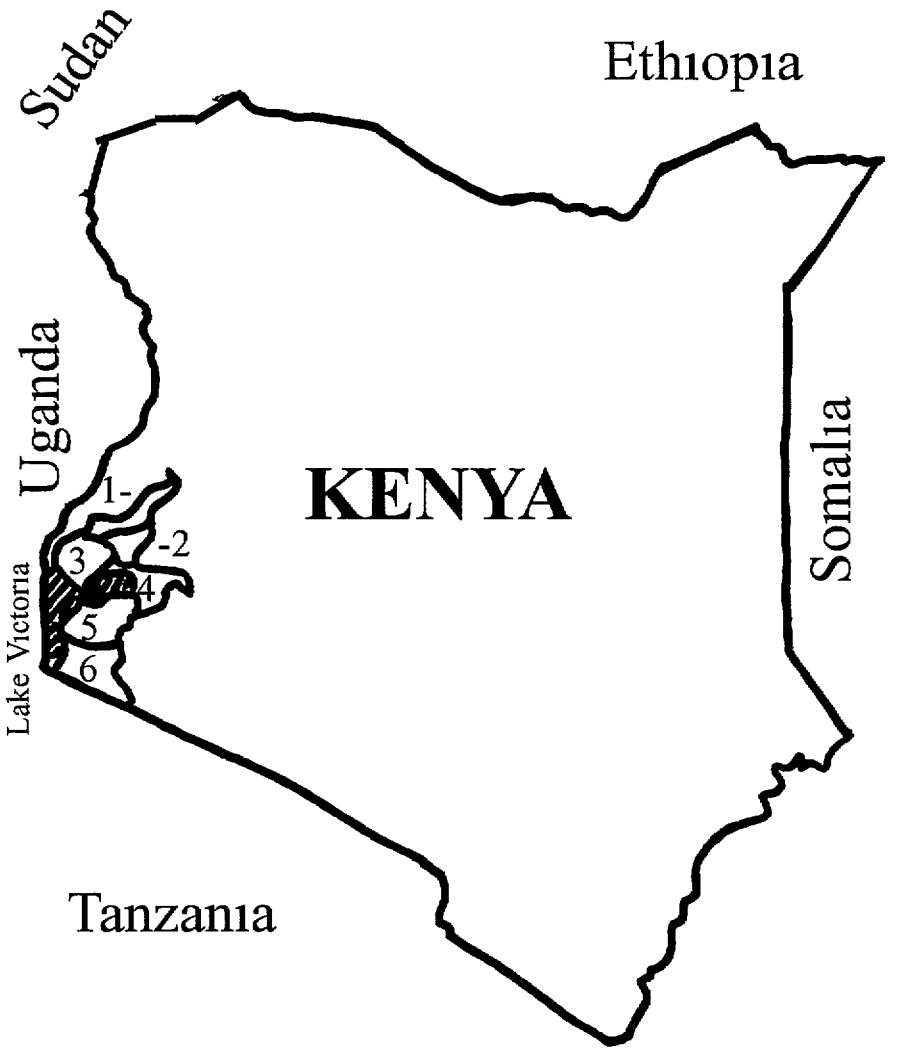
Another kind of diffusion
The Participatory Rural Appraisal (PRA) approach which OFPEP uses to identify farmers' problems and possible solutions is now applied by some farmers' groups to address other social welfare problems in their communities They call it the "OFPEP democracy," and it extends to the elected office as well See Chapter IV for the story of an Ugandan farmer elected to public office because of her active role in the community and with OFPEP

Final evaluation
The result of the final evaluation carried out in May 1997 was an extension of OFPEP for 18 more months, albeit with reduced funding All of OFPEP's staff and partners were pleased to have this external team confirm the results that they have been experiencing at close hand

Collaboration study
As part of a larger study on the effectiveness of the collaboration model employed by OFPEP, Dr Nyaga Mwaniki, a U S -based Kenyan anthropologist, gathered data from staff and farmers from OFPEP partner organizations, collected written questionnaires, and held one focus group session with participants The findings are available from any OFPEP office

C. Kenya - Country Report

OFPEP/Kenya
Activity Sites



1= Kakamega
2= Vihiga
3= Siaya
4= Kisumu
5= Homa Bay
6= Migori

1. Overview of Kenya OFPEP

1998 was the fourth full year that OFPEP supported activities in Kenya as a secondary site for the OFPEP program, albeit with more limited funding than in previous years During this time, progress continued to be made in increasing the number of farmers reached, the number of collaborating organizations, and the land area under cultivation with OFPEP-introduced crops and/or technologies The advances detailed below can be explained by the increased awareness of OFPEP's activities and the impressive results that have been realized by participating communities, prompting more farmers to participate at demonstration trainings

The number of *farmers* trained by OFPEP has increased by 26% over last year, while the number of *trainers* trained has gone up over 160% during the same period The multiplier effect of farmers that will be trained by these new trainers will undoubtedly have significant effects over the coming years This also is a key factor in the long-term sustainability of farmer-to-farmer exchange and learning, an important goal of OFPEP

As might be expected from the increase in exposure to more farmers, the land area under cultivation using one or more new technologies has increased to almost 1,100 hectares One of the crops with the highest adoption rate continues to be the maize variety, Maseno Double Cobber (MDC)

Another successful crop introduced by OFPEP is the soybean (Nam 1) An additional 15% more women were trained in the use of soybeans to improve their families' diet in the past year, and this may account in part for the 98% increase in adoption of this improved soybean variety as a food crop This represents a nearly five-fold increase in land planted in Nam 1 since OFPEP introduced it 4 years ago In a soya adoption survey done during the last year of OFPEP, it was found that 61 farmers trained in soya utilization had trained another 1,241 farmers!

When comparing the yields of improved varieties introduced by OFPEP with the yields of traditional ones, it was found that production was substantially increased anywhere from 22 to 238% This alone would be a reason enough for farmers to adopt the new varieties, but there are other reasons Up until this point, seed supplies in local markets were low Local seed varieties were unreliable due to poor seed selection and storage practices Beans, for example, were consumed long before the following planting season because they are the first to mature, coinciding with the hungry season This contributed to the problem of seed availability in the markets The OFPEP-introduced high yielding varieties have made it possible for farmers to save some seeds for planting Moreover, those are seeds of better quality and higher yield potential

Technologies relating to improved varieties of seeds, improved seed selection and storage methods continue to have a relatively higher adoption rate than the soil management technologies introduced by OFPEP This is primarily due to the high labor demand of most soil conservation techniques, and high costs and unavailability of inorganic fertilizers Women farmers are beginning to adopt the compost-making aspects of soil management for its immediate impact, but not the soil conservation techniques because of their uncertain land tenure situation

These figures are consistent with the findings of the participatory impact assessment conducted by students and faculty from U S and Kenyan universities in the spring of 1997 An analysis of this study reveals that various technologies introduced by OFPEP have been well received by farmers Following OFPEP demonstration plots and training sessions, about 70% of the survey respondents have been exposed to all the technology categories that were designed for the main target crops These categories were (a) seed

activities, (b) soil enhancement and management, and (c) soil fertility improvement The majority of the farmers interviewed tried the technologies in anticipation of increased yields (90%), improved food security (71%), improved soil fertility (56%) and early crop maturity (56%) However, the high cost of farm inputs, particularly inorganic fertilizers and the non-availability of some technologies (e g , inoculant) remain as the major deterrent factors to the technology trial and adoption process and identification of these bottlenecks should act as a spur to policy makers to increase farmers' access to direct credit facilities for the purchase of farm inputs

The technologies introduced by OFPEP and its partners can be judged successful as measured by observed rates of adoption A number of factors--age, education, gender, farm size and off-farm employment--appear to have influenced the adoption of OFPEP technology in the five districts of Western Kenya Due to different receiving environments, the intensity of technology adoption in the study area varied considerably Across all districts, about 64% of all the respondents in Homabay, Migori and Siaya adopted all three technology categories The adoption rates for Vihiga and Kisumu were merely 34 6% and 48 3%, respectively Given that the new technologies were introduced in 1994 and the evaluation study was conducted in early 1997, it is likely that many farmers have not fully adopted them Possible factors constraining technology adoption, especially in Vihiga and Kisumu, include small farm size, insufficient follow-up by farm extensionists, and prior exposure to other technologies (e g , goat program) competing for the same resources There is an urgent need for continued technical assistance, especially follow-up extension services, that would target the recipients for a longer period of time This will give farmers who have been slow to respond to the program more time to integrate new practices

From the respondents' broad consensus, household welfare has improved as a result of increased household income, improved food security, elevated nutritional status and ability to meet educational expenses Another measure of the impact the technologies are making on farmers' welfare is in terms of improved skills and capacity to acquire materials for domestic use Unfortunately, these welfare gains were acquired at the cost of increased workloads, particularly for women, during peak labor periods This problem is critical in monogamous households, which experience a shortage of adult male labor Policy makers should pay more attention to women who need better access to resources and more services to raise their productivity Where applicable, ox and tractor power should be applied to take some of the drudgery out of farm work This will attract more men to farming and retain them on the farm Women also need such resources as well as education and skills training to be better farmers, to reduce their vulnerability to cultural norms, technological and economic change, and to enhance their employment options

In informal interviews, farmers indicate that improvements in their living standards are due to the following actions of OFPEP

- Being offered a variety of choices in important crops such as beans
- Having access to early maturing varieties that enable them to deal with uncertain weather conditions
- Being introduced to a broad spectrum of soil fertility improving techniques from use of compost, manure, and inoculant to inorganic fertilizers
- Being able to plant small quantities of soybeans and knowing how to process them to improve the nutrient quality of their meals
- Enhancing yields of improved and traditional crops through the use of animal manures

2. Highlights of Program Activities in Year 6

In Kenya, more than 80% of the population live and work in the rural areas where subsistence agriculture is the prime activity and a major source of food supply for the entire country OFPEP staff and farmers in Western Kenya analyzed the factors affecting food production with a soil survey and PRA tool – t he Problem Priority Ranking – to identify where OFPEP could have the most impact

The following were identified as being major factors affecting food production

- Population pressure Kenya's population has been increasing at an alarming rate, one of the highest in the world The majority of smallholder farmers, and OFPEP's target population, work land holdings averaging 4 acres for an average household size of 6 8 people
- Lack of inputs (cost and availability) and technical know-how, and limited access to inputs of improved seeds and commercial fertilizer
- Lack of credit facilities to purchase inputs such as improved seeds and fertilizers
- Weather, and unreliable rainfall
- Poor soils, lacking in phosphorus
- Seeds, low viability of seeds bought in markets, only 30% of farmers use commercially produced seeds
- Poor agronomic practices, incorrect spacing, lack of correct application of fertilizers, few agricultural extension staff from the government

New factors that were identified by farmers in the last year of OFPEP were

- Crop diseases and pests such as termites and root rot
- Gender imbalance in agricultural activities
- The effect of some traditions that adversely impacted agricultural activities such as time spent away from agricultural activities during funeral periods

a Demonstration plots – sites for learning

In its final year, which included the short rains of 1997 and long rains of 1998, a total of 167 sites were established within the OFPEP working zones This increase in the number of sites is attributed to the decentralization of OFPEP extension staff to each district and to new partners There were on-farm demonstrations of cereals (various varieties of sorghum and maize) and legumes (different varieties of beans, including a new climbing bean, groundnuts and soybeans), and of a variety of soil fertility practices including use of manure, compost, and inorganic fertilizers

Summary table of demonstration sites established in years 5 and 6

District	Number of Sites				
	SR 1996	LR 1997	SR1997	LR1998	TOTAL
Kisumu	4	14	10	15	43
Homabay	6	20	--	30	56
Siaya	17	14	22	65	118
Vihiga	6	12	5	20*	43
TOTAL	33	60	37	130	260

SR=short rains, LR=long rains ***demonstrations on climber beans**

Farmers gather around the demonstration plots for training and to exchange ideas on the progress and results at each site Since these demonstrations are established by farmer groups at their own selected sites, group members and others from the community regularly access the demo sites Over the 4 years of OFPEP in Kenya, a total of 4,130 farmers (1,821 men and 2,309 women) were trained around such demo sites These on-site trainings have been extremely beneficial to women farmers, especially those who would not have been able to attend residential training The demos therefore become classrooms and teaching laboratories for the farmers and the surrounding communities

Specific topics for these trainings included

- improved seed practices
- use of organic and inorganic fertilizers
- use of inoculant
- inoculant/fertilizer combination
- compost making and agronomic practices
- crop utilization emphasizing soybeans

b Why and how OFPEP Kenya works with women farmers

In Kenya, OFPEP has operated in the Luo and Luhya communities where culture assigns more food production responsibilities to women than to men At least 84% of the rural population are women who live and work on farms (African Farmer, 1994)

Women's groups were considered important community organizations to be targeted by OFPEP as potential partners In focus group meetings convened by OFPEP staff, women discussed their problems and ranked their in order of importance Agriculture related problems were listed and ranked separately Appropriate OFPEP interventions were proposed, debated among the group members, and demos and suitable trainings planned It became apparent that there were more problems than just those posed by agriculture Often, health related problems ranked the highest among problems facing women One of the problems that OFPEP was able to address directly was that of nutritional deficiency diseases The introduction of improved varieties of soybean and related agronomic practices, together with a training program on the utilization of soybean products at the household level, have made distinct contributions to the resolution of this health problem

Women are involved in training for various OFPEP technologies and also in the establishment of demonstration plots We must also point out that many of the women's groups have male members For example, an average of 29% of the members of women's groups in Siaya district were, in fact, men Given that the groups engage in agricultural activities, male membership is an advantage because, culturally, men make decisions on land use and can make land available for group work The men also help with the laborious tasks of land clearing and first land breaking for the women members of the group

Community groups, men included, are also trained by OFPEP on gender issues to create awareness and appreciation of the gender roles and issues and how these translate to development

During training and other group activities, women have had more opportunities to interact and share experiences and information For example, OFPEP field staff in Siaya have linked women with similar interests, but different talents, to exchange ideas This is how Mary Omondi from the Methodist Church, a talented artist and crafter, met Mary Aoko from CCF, who is good at sewing and tie-dyeing of fabrics OFPEP staff recognized the possibilities for collaboration and introduced the women Now they walk 8 km to meet so that they can share their skills and produce handicrafts for sale Although these are not

direct agricultural activities, the proceeds from the sale of their art works are used to buy agricultural inputs Both women are serious practicing farmers

c Other training activities Training of Trainers (TOT)

During its 4 years in Kenya, OFPEP provided a number of important training opportunities for its staff and partners Some of these were as follows

Gender Training for OFPEP staff and partners was held in February 1998 with participation from OFPEP staff in Uganda as well as the Winrock Gender Specialist based in Nairobi Over 75% of the participants rated the workshop as "very valuable" Gender plans of action were drawn up by the participants and it was hoped that they could meet again after a year's time to see what progress had been made in raising gender awareness

A two-week training on **Participatory Rapid Appraisal** (PRA) for staff and partners from OFPEP-Kenya and Uganda was organized by the PVO/University Center in February, 1997 in order to equip the OFPEP extension staff, collaborating NGO staff, and CBO representatives with the necessary PRA skills for their extension work Some of the PRA tools learned and practiced during the workshop were natural resource mapping, problem priority ranking, venn diagram, seasonal calendar, social map, wealth ranking, and transect walk Of the 24 participants, 6 were women

A follow-up to this training was held in September 1998 to bring the participants back together to assess how well they had been able to incorporate their new skills in PRA methods into their on-gong work

A study to assess the impact of OFPEP-Kenya was conducted in March 1997 This was a preliminary evaluation of the OFPEP-Kenya program before the final evaluation The study, **Factors Influencing Technology Adoption and the Impact of OFPEP on rural Communities in Western Kenya**, was sponsored by the PVO/University Center and the participants were Mr Jerry Bourne, Ms Elizabeth Downs and Prof Nyaga Mwaniki from Western Carolina University, U S A The participants from Kenya were Kenyan faculty and university students who were hired to carry out this survey They were John Byaruhanga, Head of Agricultural Economics, Maseno University, who assisted in the coordination of the study, Nehemiah Odongo, Enos Onyuka, Joseph Otura, Elijah Odhiambo, Victoria Oyier, Anne Ndinya, and Eunice Ogot The whole team was assisted in the survey by the OFPEP field staff Rose Sigar, Caroline Sikuku, Nelson Omondi, Eric Omondi and David Agutu A copy of the survey report is available on request

In May 1997, OFPEP-Kenya was visited during the **Final Program Evaluation** Members of the team visited Siaya district, Kisumu district, and Vihiga district The Final Evaluation Report is also available on request

As part of a larger study on the effectiveness of the collaboration model employed by OFPEP undertaken in 1997, Dr Nyaga Mwaniki, Professor of Anthropology at Western Carolina University, interviewed staff and farmers from 5 OFPEP partner organizations, collected written questionnaires, and held focus group sessions with participants The findings are available from any OFPEP office

A workshop was held December 15-17,1996 on Rapid Cassava Multiplication at the Jera Inn in Siaya district Workshop facilitators were E Okoth and N Koteki from OFPEP-Uganda, and Mr Ndolo from KARI-Kakamega The ACMV (African Cassava Mosaic Virus) which has destroyed the crop in neighboring Ugandan districts is now being seen on the Kenyan side of the border An average of 61 25% of the cassava crop in Siaya is already affected OFPEP-Kenya has introduced the ACMV-tolerant cassava

varieties, NASE 1 and NASE 2, which it obtained from OFPEP-Uganda and is distributing planting material to farmers throughout the OFPEP-Kenya districts

A training of trainers workshop was sponsored by the Ministry of Agriculture on soybean utilization and energy saving stoves Nov 4-5, 1996 The training was attended by extension staff from collaborating NGOs and OFPEP, who then held training sessions for four OFPEP groups in Siaya district, and one in Kisumu on the same topics

d Partnership is key to OFPEP's success

OFPEP has collaborated in its activities with several churches (such as the Methodist, C P K, and Catholic), farmer groups, youth groups, NGOs, PVOs, universities, international agricultural research centers, and government agencies Each year there has been an increase in the number of Community Based Organizations (CBOs) and NGOs working together with OFPEP This was due to the decentralization of OFPEP staff to various districts, making them more accessible to these organizations The total number of collaborators has increased steadily from 6 in its first year to more than 20 in its final year The breakdown of collaborators by districts is as follows

Vihiga district	Lagrotech, Hodi Women Group, ICRAF
Kisumu district	Lagrotech, Grail Center, MENR, Sigoti Agricultural College, ICRAF, Ministry of Education (MOE)
Siaya district	CARE - Kenya, CCF, SCODP, Churches, CISS, Lagrotech, FPAK (Family Planning Association of Kenya), the MOE, Anglican Church of Kenya and the Ministry of Agriculture, Livestock Development and Marketing (MOALDM) and various CBOs
Homabay/Migori	C-MAD, CARE-Kenya, MENR, PCV, MOE, and MOALDM

By collaborating with these organizations which are engaged in agricultural programs, OFPEP has been able to reach more farmers than it would have been able to reach on its own Thus, collaboration makes for optimum use of available resources Furthermore, the institutionalization of OFPEP activities by collaborators, e g , MOA, CCF, will ensure sustainability Activities such as the formation and management of community seed banks by the farmers can ensure the availability of quality seed in communities even after OFPEP leaves

Another aspect of collaboration is seen in the tie-ins to research institutions Because OFPEP is a technically oriented organization, it has attracted a number of serious students from various agricultural institutions for field placement In its final year, a Master's level student conducted research on cassava with OFPEP and 3 more students from Sigoti Agricultural College in Kisumu and 1 from Manor House Agricultural Centre joined the program The previous year 6 students from Sigoti Agricultural College were associated with OFPEP The students were mainly involved in field activities and assisting the extension staff We see this as further confirmation of the appropriateness and soundness of the OFPEP approach, and also as a way to influence the next generation of agricultural extension specialists

Collaborators have reported the following benefits from their association with OFPEP

- Their extension staff are better trained on a variety of seed and soil technologies
- Agricultural training institutions have found a valuable partner for field study for their students
- Research institutions have found new ways to interact with farmers and local groups through the soil and seed analyses they conduct for OFPEP

D. Ethiopia - Country Report

OFPEP/Ethiopia
Activity Sites

Legend
AVA = Africa Village Academy
ASE = Agri-Service Ethiopia
CCF = Christian Children's Fund

1. Overview of Ethiopia OFPEP

OFPEP implemented a full program in Ethiopia for only two cropping seasons – 1996 and 1997 Early in 1998 a Performance Assessment was conducted with farmers and partners to explore the level of understanding about and extent of technology diffusion accomplished in that very short period What follows is a review/summary of OFPEP's activities in Ethiopia from 1995-1997

a Background

Agriculture is the backbone of the Ethiopian economy This sector employs about 80% of the labor force, generates 60% of the commodity export earnings, and provides raw materials for 70% of the local agro-industries of the nation A large portion of the supply of agricultural goods (food, export, raw materials) is produced by smallholder farmers The development of the agricultural sector has to involve these more than 7 million farmers who carry the lion's share of agricultural production in Ethiopia

Current statistics indicate

- Population growth may reach close to 3%
- The nation is still in food deficit in major food crops
- Inorganic fertilizer use is limited to about 7 kg/ha
- Only 2% of the farmers have access to improved seeds
- A small fragment of the farming community receives effective agricultural extension services
- The nation is the center of origin and diversity for many cereal crops However, the full genetic potential of these germplasms is not well explored

The above statistics show that the level of improved technology reaching smallholder farmers is still rudimentary, lacking appropriate technological packages and skilled manpower, and using an ineffective approach and infrastructure To make matters worse, the scattered settlement of the smallholder farmers and existence of about 20 widely differing agro-ecological zones challenge agricultural development endeavors

b OFPEP/Ethiopia's participatory approach addresses these problems

The overall goal of OFPEP/Ethiopia was to reach farming communities at the grassroots level and improve their living conditions through the provision of appropriate agricultural extension services Through a Participatory Appraisal Approach, farmers were encouraged to identify local resources and problems and seek possible solutions

The activities of OFPEP/Ethiopia included

- Collecting baseline data using Participatory Rural Appraisal (PRA) techniques with farming communities with special emphasis on seed and soil fertility management
- Creating an environment for the farmers to evaluate indigenous technologies and find ways of improving the technologies Introduction of improved agricultural production techniques to enhance agricultural productivity
- Formal training workshops for farmer trainers and front line development workers on seed production and maintenance and soil fertility management

c Sustainability and replicability

OFPEP/Ethiopia realizes that sustainability of a technology depends on the availability of local resources, development of the human component, and social acceptability In order to ensure continuity of the introduced technologies, the program has

- Conducted participatory surveys involving the farmers, from appraisal of local resources and indigenous techniques to the evaluation of the intervention programs
- Included local seed resources and fertility improvement methods along with research packages for the farmers to choose according to their preferences, based on their own (farmers') criteria
- Involved extension agents of collaborating agencies in the whole process so that they can replicate OFPEP's activities and approaches when they are accepted by the farming communities
- Prepared training materials and trained extension agents of collaborating agencies on baseline data collection using participatory approaches Some of these trainees have already conducted baseline surveys on their own
- Trained trainer farmers and front line development agents of collaborating NGOs in seed technologies, soil fertility management, soil conservation, and gender issues in rural communities, etc

d What was accomplished

- A total of 81 farmers were trained in seed production and maintenance, irrigation, farm management, and improved agricultural methods

Female farmer trainees accounted for 21% of the participants

- Fifty-two field extension agents and supervisors were trained in seed production and maintenance, soil fertility and conservation management, gender issues in rural communities, and methods of conducting on-farm demonstrations

Female development agent trainees accounted for 35% of the participants

- In the first year of operation 36 demonstrations were established compared to 135 in the second season This data shows an increase of over 300% in the number of demonstrations and an accompanying increase of over 600% in the land area covered by demonstration plots
- Yield increases ranging from 200 to 500% over the traditional management practices were demonstrated
- The demonstration plots were used to train a total of over 1000 farmers In the first year of operation the proportion of female farmers to male was 14% However, OFPEP/Ethiopia placed emphasis on integrating women in the training activities and as a result improved the female participation rate to 25% by its second year This shows a 10% increase in female farmers involvement over the previous year
- OFPEP/Ethiopia collaborated with three NGOs in both its operational years The increase in the number of partner farmers' and demonstration plots indicates the demand-driven nature of the activities
- Annual activity reports summarizing the results of the demonstrations conducted at each collaborating NGO were prepared and distributed to the NGOs
- Training material on how to conduct participatory farmers' evaluation of introduced technologies was developed, discussed with development agents of the collaborating NGOs, and used in the field at all sites
- Soil analysis data of the demonstration plots was analyzed and interpreted Reports were prepared and shared with the collaborating NGOs
- Baseline surveys, using PRA techniques, were conducted by the PRA trainees with technical assistance from OFPEP staff

2 Highlights of Program Activities

a Partnerships and linkages Keys to OFPEP's success

OFPEP/Ethiopia worked with three NGOs in three different geographical areas The program also maintained strong associations with the various branches of the Institute of Agricultural Research, Ethiopian Seed Enterprise, International Livestock Research Institute, and others for information on seeds, soil, and farming systems research developments The staff of OFPEP Ethiopia extensively used the computer database of the International Livestock Research Institute for literature on soils, rock phosphate, and multi-purpose trees

b NGO partners

Christian Children's Fund (CCF)
The Christian Children's Fund (CCF) main mandate is improvement of nutrition of the communities in which it works OFPEP-Ethiopia collaborated with CCF with the understanding that it will assist CCF in achieving that objective Joint activities included

- Introduction of improved methods of soil fertility and conservation management with farmer participation
- Introduction of better performing seed varieties and demonstrations on farmers plots, and
- Provision of training to CCF extension agents

Agri-Service Ethiopia (ASE)
The objectives of collaborating with Agri-Service Ethiopia were to

- Increase food crop production to contribute to the food security of the farmers in the intervention area,
- Introduce new crops to improve crop diversity and provide drought-escaping capability to farmers, and
- Upgrade the skills of ASE's front line development agents through formal and informal training

Africa Village Academy (AVA)
The purpose of collaborating with AVA was to

- Alleviate on-farm problems faced by vegetable growers, and
- Increase production of the staple crops of area farmers through the provision of effective agricultural extension programs

c Technical assistance partners

Ethiopian Seed Enterprise (ESE)
The Ethiopian Seed Enterprise is the lead agency responsible for the maintenance, production, and distribution of certified seeds in the country Currently the agency carries stocks of improved varieties of wheat, teff, barley, haricot beans, maize, sorghum, and linseed OFPEP/Ethiopia obtains seeds of all cereal crops and haricot beans from the ESE

Institute of Agricultural Research (IAR)
The Institute is a dedicated research organ of the Government of Ethiopia It is the main breeding center for new and improved varieties, and does research on new and better farming practices suitable to each agro-climatic zone Realizing this, OFPEP/Ethiopia established working relationships with the various research stations of the Institute

National Soil Laboratory
Soils of our demonstration plots were analyzed by this facility Extensive technical assistance was provided on the data analysis and interpretation of the final data This government agency is responsible for analyzing, interpreting, and documenting chemical, biological, physical, and mineralogical data of soils, water, and plant tissue at a national level

Farm Africa
This is an NGO specializing in Farmers' Research Projects (FRP) which conducts basic research and distributes results through publications about the major crops and farming practices in southern Ethiopia

International Livestock Research Institute (ILRI)
OFPEP/Ethiopia made extensive use of ILRI's library and has received a copy of a computer database on Phosphate Rocks and Minerals in Africa ILRI provided OFPEP with seeds of legume forages adaptable to the highland area

d Training is a hallmark of the OFPEP approach

Training is one of the major components of the programs of OFPEP The training of front line agents of collaborating NGOs and trainer farmers is intended to enable them to carry out agricultural extension activities knowledgeably and effectively With this understanding, OFPEP/Ethiopia organized a series of training workshops

Participatory Rural Appraisal (PRA)

It was found that the collaborating NGOs, with the exception of one, did not have a systematic methodology of gathering baseline data concerning the community OFPEP organized a training workshop on PRA techniques for rural community surveys Several individuals representing collaborating NGOs, the Institute of Agricultural Research, and other NGOs, participated in the training conducted by OFPEP staff/experts

Asrat Asfaw of OFPEP/AVA was also the organizer and lead trainer for OFPEP staff and partners in Uganda and Kenya in February 1997

Training of Agricultural Development Agents

A formal training workshop covering the topics listed below was organized by OFPEP This workshop was formulated for the agricultural extension agents of the collaborating NGOs A total of 52 front line development agents participated in the training

Training of Farmers

OFPEP, together with the collaborating NGOs, organized a formal training of farmers who are expected to train other farmers at the development sites A total of 81 farmers were trained as trainers – 17 or 21% of the trainees were women

e Demonstrations seeing is believing

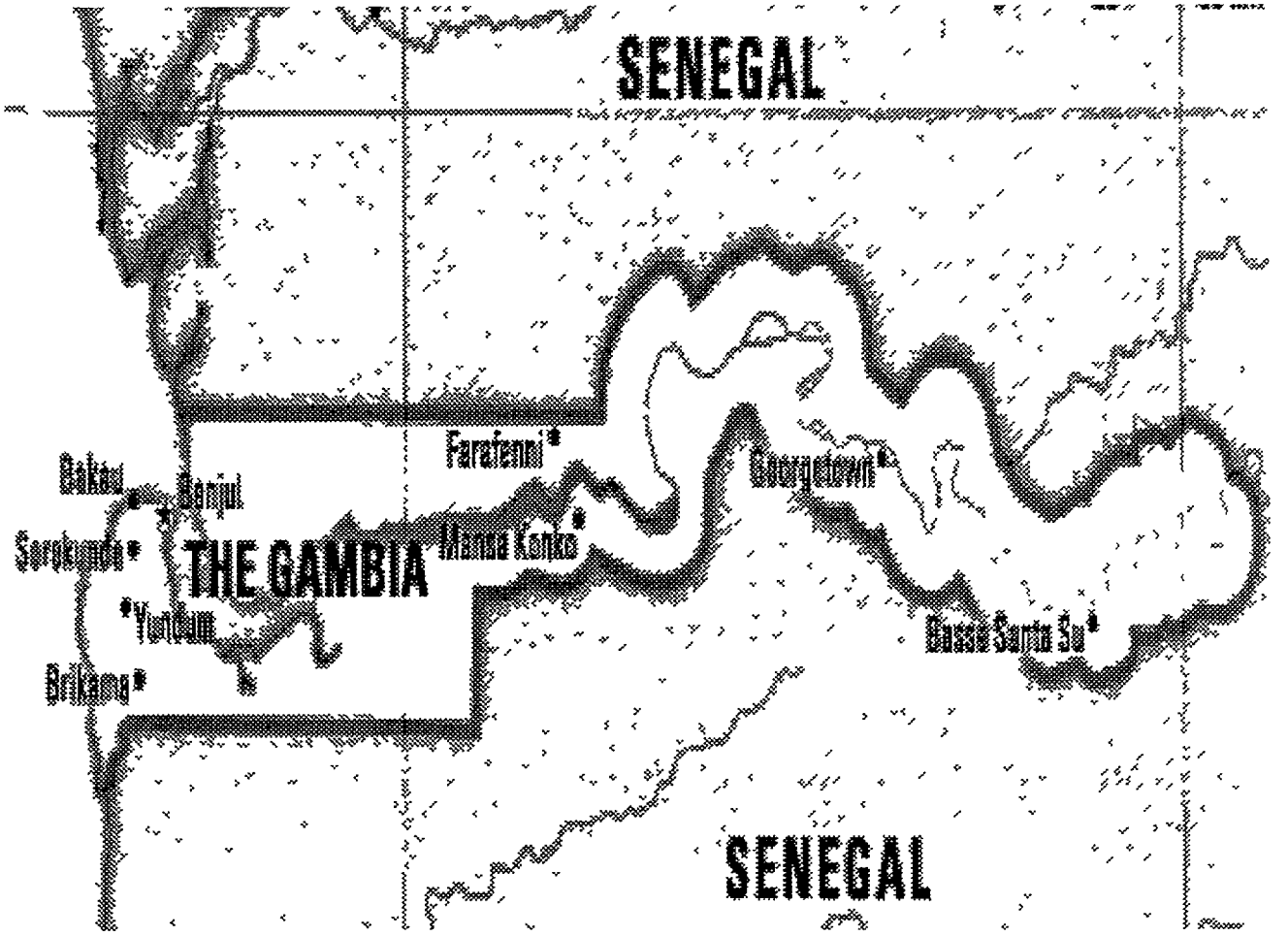
Demonstrations set up on partner farmer fields were the main means of introducing improved techniques of agricultural production A total of 171 demonstration plots covering a land area of 2 ha of land were organized with partner farmers and agricultural extension agents of collaborating NGOs within the 2 years of the existence of OFPEP/Ethiopia Farmers' responses and their assessments were gathered during the cropping season The results were convincing evidence to the project implementers of the NGO programs that OFPEP's approach was appreciated and liked by the smallholder farmers

The demonstration plots were spread as widely as possible to represent the vast geographic areas occupied by smallholder farmers Emphasis was given to proximity of the demonstration plots for easy access to farmers in each peasant association/village Demonstration plots were set up on the land of 150 partner farmers Comparison of the yearly activities shows an increase of over 300% in the number of partner farmers involved with OFPEP

Staff of OFPEP/Ethiopia, in association with the counterpart staff of the collaborating NGOs, gathered two levels of information in the field The first level involves farmers' perceptions of the introduced technologies through a participatory evaluation system The second level involves the collection of agronomic data (germination, disease and pest, yield, etc)

Representative farmers were selected based on village representation, gender, and social acceptance criteria Farmers closely examined the plots of separate treatments and individual plants from each plot Farmers discussed all aspects of the technologies including spacing, plant population, growth vigor, moisture stress tolerance, disease and pest resistance, and other morphological characteristics of the different varieties and fertility treatments which they feel are important for sustainable adoption

E. The Gambia - Country Report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1. Overview of The Gambia OFPEP

OFPEP operated in The Gambia from September 1992 until mid 1995 when USAID support was dropped because of internal political disruption following a coup d'etat However, we would still like to report the activities and achievements of the program there until that point

Save the Children Federation/USA (SCF/USA) The Gambia worked in the Agriculture and Natural Resource (ANR) sector for twelve years With a predominantly host country staff with years of experience working with rural communities, the programs of SCF/USA focused on strengthening the capacity of both government and community structures for delivery of services and resources to more people in a sustainable fashion During this time SCF made significant progress among rural villages that enabled them to sustain their development This in part was expanded during SCF involvement in the OFSP and then OFPEP

Farmers were continuing to have problems meeting their food production needs For example, rice harvests would sustain a family for only three months after which they would have to purchase rice The government institutions were limited in the support they were able to give farmers country wide, and neglected the North Bank Division, where SCF/USA is based, partially due to inaccessibility Though the OFSP helped farmers with improved varieties of seeds and planting techniques, infertile soils became the factor limiting increases in yields These soils were losing their ability to grow crops due to a variety of reasons These included deforestation or slash and burn methods, over-use of the same piece of land (soil exhaustion), salt intrusion, iron toxicity from high acid soils, the reduction of organic matter content from the yearly practice of burning off crop residues, and soil erosion Also, there was a lack of coordination and collaboration among the various development "actors" in the country, namely the government, local and international NGOs, and community groups

SCF/USA, and two of its partners conducted extensive PRAs in their working areas before beginning OFPEP activities The expressed needs of the communities appraised stated that their main concerns were with the loss of production due to environmental degradation, such as soil erosion, salt intrusion, iron toxicity, and pests and diseases With the excessive price of fertilizers and their limited availability, farmers and NGOs were looking for alternative ways to put life back in their soils Other NGOs found similar concerns through community discussions Specific problems in rice fields with salt intrusion and iron toxicity made it logical to target women farmers, but men were included to a certain extent since they have the control of important inputs such as animal traction and soil working implements

Local resources available to meet the above needs include the indigenous knowledge which has been passed on from generation to generation This inherited 'know how' has enabled the farmer to continue growing crops within the deteriorating conditions, though now this knowledge needs to be reinforced with sustainable lessons NGOs, local and international, were available to assist farmers, but often their capacities and capabilities are limited by their limited resources Therefore, there continues to be a need to support and supplement NGOs with the necessary skills and information to make their programs increasingly effective This assistance can enhance NGO capacities to extend and diffuse the appropriate agricultural technologies

2. Project Activities and Results

OFPEP/The Gambia worked with 11 collaborators

Peace Corps (PC)

Freedom From Hunger Campaign (FFHC)

Action Aid THE GAMBIA (AATG)

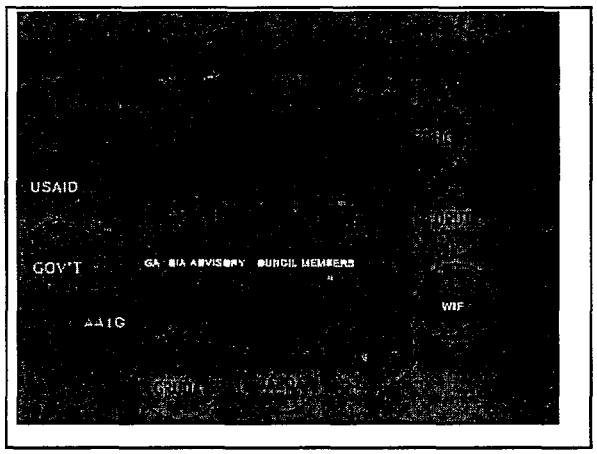
Association of Farmers, Educators, and Trainers (AFET)

Good Seed Mission (GSM)

SCF/USA

FORUT

People-In-Action (PIA)



Worldview International Foundation (WIF)

Gambia Rural Development Agency (GARDA)

Gambia Rural Development Agency (same name, different NGO - GRUDA)

Of these 11 collaborators, four are local NGOs (AFET, PIA, GARDA, and GRUDA) The former government had shown it's interest and had cooperated in the trainings on liming, rice production techniques, pest management, vegetable preservation, and has attended each of the Advisory Council meetings Included are Ministry of Agriculture and Natural Resources (MOA/NO), Director of Agricultural Communications Unit (ACU), Director of the Cereals Program (DAR), Pest Management Unit (PMU), National Environment Agency (NEA), Soil & Water Management Unit (SWMU), and Seed Technology Unit (STU)

In the first two years, project activities included

- The establishment of an Advisory Council with regular meetings,
- Field visits to preview project sites for activities that included pest management, composting, liming, cover crops,
- Monitoring of ongoing activities - Rhizobia demonstrations, compost pits, lime demonstrations, and green manure/cover crops,
- Trainings conducted for NGO extensionists and farmers covering composting and liming,
- Meetings held with individual NGOs to discuss strategy, impacts, and future activities

3. Progress Made and Problems Encountered

Despite the short duration of OFEPP in the Gambia, progress was made on several fronts The Advisory Council became a forum that created a place for the NGOs and Government agencies to come together to compare and share their experiences in a friendly and professional atmosphere Constructive exchanges of information sharing have taken place that have aided individual NGOs in their programs

The number of NGOs collaborating with OFPEP totaled 11 by the close of the project

In the area of composting, extension efforts on behalf of SCF/USA, FORUT, PIA, and AFET had increased the demand for trainings in the respective NGO work areas Trainings conducted with each of the NGOs are PIA - 1, AFET - 2, FORUT - 3 (with an additional 7 on their own), and SCF/USA participating in 3 Over 170 farmers and extension workers have received training Also a Composting Technique paper was prepared and distributed to the NGOs for reference

Problems have come in two forms organizational and material The different NGO collaborators represent a range of infrastructural and organizational capacities, and thus participate in the program at different levels

Compounding this challenge of assisting such a broad range of NGOs was the limited staff of OFPEP With only one full-time staff member (Food Production Specialist) and one Assistant Food Production Coordinator (working part-time on OFPEP while receiving no funding from OFPEP), the intensity and frequency of contacts with these NGOs was quite limited

	ACTIVITY	LOCATION	PARTNER
SOIL ACTIVITIES	Pigeon pea variety trials	Massembe	Good Seed Mission
	Anti-erosion dikes with grass	Bakindik Njawara	Peace Corps
	Rhizobium demonstrations	5 sites	Save the Children Peace Corps
	Liming demonstrations	Jokadu, Baddibu	Save the Children, FORUT, Soil & Water Mgmt Unit
	Compost training	various sites	PIA AFET FORUT Save the Children Peace Corps
SEED ACTIVITIES	Seed multiplication		
	rice, maize	Bakindik, Njawara	Save the Children
	velvet beans	Kerewan	Peace Corps, Good Seed Mission, Save the Children
	vetiver grass	Kerewan	Save the Children
	Seed orchard	Bakindik	Save the Children Peace Corps
SOILS & SEEDS	Agroforestry, tree seeds	various sites	Peace Corps
	Improved rice varieties, cultivation techniques, liming	Kerewan	Save the Children
	Pest management	various sites	Save the Children, Pest Management Unit, AFET

4. Training and Farmer Input

Training activities were conducted in four areas Composting, Liming, Pest Management, and Vegetable Preservation A total of 1,110 persons received training, 925 of those were women Five NGOs participated and three MOA Units assisted - Soil & Water Management Unit (SWMU), Pest Mgmt Unit (PMU), and Vegetable Preservation Unit (VPU)

Focus Group Discussions were carried out to obtain direct feedback from the farmers about the techniques they are applying to their fields These periodic reviews not only gave us responses to our efforts, but also bring to light new problems needing attention in the community

At the end of Year 2, seven Focus Group Discussions (FGDs) were carried out These were conducted by community development staff from SCF/USA in the villages of Tambana, Karan Taba, Kerewan, and Pallen, as follow up to the trainings held for FORUT, PIA, and SCF/USA The trainings covered three main topics - composting, liming, and the Rhizobia demonstrations The general responses by the discussion groups were favorable because they felt that the techniques and interventions being transferred addressed the problems and needs of their communities

FGD on liming "Before the liming, I used to watch my rice dying " This response came from a woman in Tambana Before the lime trainings took place, women would use manure to fight the problems of salt intrusion and iron toxicity, but they would see little effect from this "We use manure for salt problems but since then we are using lime " This observation shows that the women are still not properly informed as to the reasoning for liming This is due in part by the wrong message being taught to the women If women use lime to treat a salt affected area which has no iron toxicity problems, then they will be creating a new problem for themselves Such a response is helpful to OFPEP because it informs us of where our training message needs to be corrected and strengthened Another woman, after using lime, said, "In one of the areas (of my field) I have never harvested rice Now when I go to that site I am full of happiness " Another woman announced, "We will urge Gambian women to use lime, because there is a secret in it It is very beneficial " Such sentiments provide a statement on the sustainability of the program

FGD on Rhizobia demonstrations "The project taught us many things We never think of getting fertilizer from a tree The project told us that there are plant species that have nitrogen and this help's to fertilize the soil " There is an entire aspect of soil fertility that most farmers do not understand, that of BNF But the five farmers who had the rhizobia demonstrations have noted the change One said, "Where the nitrogen fixing trees are within the garden you can see the difference remarkably " And, "In the area where there are no nitrogen fixing trees the grass is not taller than the height of a chicken " These farmers state they would be willing to plant more nitrogen fixing trees on their farms and recommend "this program to be extended to Radio Gambia so that many people would know about it "

FGD on composting The reaction of the participants on composting was the strongest The farmers felt that this intervention can help them a great deal and the price is right One person said, "Compost is more cost effective, you don't have to buy anything " Another said, "Composting is more sustainable You don't spend any money " The use of the compost into farmers fields has just begun, but farmers say they "can easily identify the place we apply compost" by the change in the growth of their crop The main drawback they face is the lack of tools for digging pits "We find it difficult to dig in the dry season as our digging tools are small We need spades, pick axes, and carts for transportation of grasses and manure "

5. Activities Conducted in the Close-out Phase of OFPEP in The Gambia (Report October 1994 to March 1995)

During the final 6-month period from October 1994 to March 1995, OFPEP funding supported the following programs except F

A Field visits to soil conservation sites in Nyoro in Senegal and Jawara and Kerewan in Save the Children Federation impact area for Action Aid extension staff and F F H C extension adviser

B Focus Group Discussions (FGD) to know farmers' perception on and knowledge gained in liming, composting and Rhyzobia demonstration

C Organized joint sub-regional ANR conference bringing together farmers, NGOs and donors

D Program and training needs assessment with eleven collaborating NGOs with a view to expand and decentralize the implementation of OFPEP program

E Procured and distributed some technical equipment for effective program implementation

F Follow-up survey after the grant closure to determine the level of improved seed and technology adoption and ANR impact

G Procured and distributed 75 tons of lime for 1995 soil amendment and demonstration program

a Field visits to soil conservation programs

In October 1994, the extension adviser of FFHC and 12 people from Action Aid The Gambia visited Nyoro in Senegal to see conservation demonstrations by research and farmers This was followed by a 3 day visit to Njawara and Kerewan (SCF's conservation sites) The two visits exposed the extensionist to different techniques like hedgerows, rocklines, gully plugs, bunds dikes etc and different strategies used to implement the techniques The agencies expressed their satisfaction on the varieties of techniques they saw and learnt and that will help them improve their program planning

b Focus group discussions

Focus Group discussions were held to gather farmers' opinion on some of the technologies promoted i e liming, composting and Rhyzobia inoculation On composting all the farmers expressed their appreciation on the simplicity of the technology and that it does improve the soil especially using it to fill polybags or pots to propagate trees and in back yard fields It will be difficult to adopt on large scale due to difficulty to transport compost product and incorporate it in yields For liming, all the women expressed seeing impact of lime in their demonstration plots Further data collection indicated that an average 292 kg increase in rice yield in limed plots over non-limed plots and the lime product is locally available For Rhyzobia demonstrations, the five demonstrators expressed seeing difference in plant height in the treated over the non-treated trees

c ANR sub-regional conference

Save the Children organized and hosted a sub-regional conference on agriculture and natural resources in March 1995 The aim was to bring together the key actors (Donors, NGOs and farmers) in Agriculture and Natural Resources Management (ANRM) to discuss common problems and look at different interventions All the eleven collaborating NGOs attended as well as staff from OFPEP offices in Senegal, Uganda/Kenya and Save the Children Federation offices in Mali, Burkina Faso, and Tunisia The participating farmers contributed well beyond many people's expectations They (farmers) fully recommended such forums be organized for farmers on a more regular basis

d Needs assessment with OFPEP

Partners A month and half needs assessment was carried out with all 11 collaborating NGOs The aim was to look at planned programs and training needs of all the NGOs with a view to expand and decentralize the implementation of an OFPEP-type program During the exercise, meetings and discussions were held with the management, field staff and target farmers of each NGO and training plans drawn It was the first time for extension staff and farmers to express their training needs

The assessment results were compiled and reviewed by the Advisory Council in the hopes that an expansion of OFPEP-type programs empowering farmers to implement sustainable and proven technologies might be undertaken by various members

e Technical equipment

To enhance the technical capacities of collaborating NGOs, some equipment was purchased and distributed to selected needy NGOs for use in their program implementation Soil probes, tapeline measure, stakes and soil pH meter readers were provided Despite the discontinuation of OFPEP funding, a Training of Trainer (TOT) was organized for NGOs to increase their skills in using these tools

f Final survey on adoption and impact assessment

To understand the adoption rates of improved rice varieties and animal traction use, as well as the impact of ANR activities, a follow-up survey was conducted after the closure of the grant (OFPEP) The survey also looked at the local diffusion systems, conservation practices, yields and food security levels among others It became evident that ANR sites produced more rice than other sites and that food security is improving for the first time in more than ten years, over 30% of women claimed that their production will last them between 7-12 months and most of those women are in ANR villages

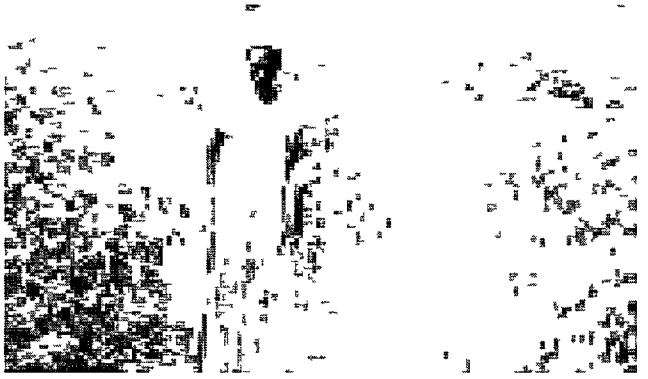
IV. In Their Own Words – Through Their Own Eyes

A. Farmer's Stories
B. Lessons Learned
C. Through Farmer's Eyes
D. As OFPEP Ends, What did we Achieve and what lessons did we learn

FARMERS' STORIES

Senegal

Mr Charles Ngom and his wife and seven children live in Ndollor For three years he participated in OFPEP/CCF's Live fencing/ cassava program Live fencing with the thorny, fast-growing bush *Euphorbia balsamifera* prevents wind erosion and keeps out animals Before his participation in the program, the soil in Mr Ngom's field was blowing away Now he has stopped the erosion and increased the fertility of his soil with applications of compost One-half his plot is planted in cassava and the other half is divided between cowpeas and a mango orchard



Mr Ngom the midst of his 1 ha Cassava field

Cassava is the family's most useful and profitable crop The leaves fall and fertilize the soil, the tubers are eaten or can be sold for cash Mr Ngom also gives cuttings to other family members to take home and plant This helps create a means of support for his extended family With increased income from the sale of cassava he buys clothes for his wife and children, kerosene for household use, and meat, vegetables and condiments for more nutritious family meals

Mr Babacar Diouf lives in the hamlet of Ngnoudu His home is 15 kilometers from Diokhar village, one of the OFPEP sites in Senegal The Diouf family, 8 children and 4 adults, became involved with OFPEP several years ago Mr Diouf learned about composting techniques and was provided with seeds for Souna 3, an improved variety of millet In 1996 the Dioufs harvested 800kg of millet compared to only 600kg in the 1995 season They are very excited about this year's planting and have prepared two compost pits so that they will be able to fertilize more of their millet crop Mr Diouf saved seed from the Souna 3 millet to plant again this season Other farmers in Ngnoudu were impressed with the size of his harvest, so Mr Diouf explained composting techniques to them and shared some of the seeds he had saved He hopes the entire hamlet will benefit from what he has learned

Mr Diouf and two of his sons stand proudly in front of their abundant harvest of millet

Mrs Maye Diallo of Ndiayane Post is a rice farmer, mother and wife in a household of 9 people Thanks to her work with the "soil fertility for the rice fields" program, she had

Mrs Diallo with some of her record-breaking harvest

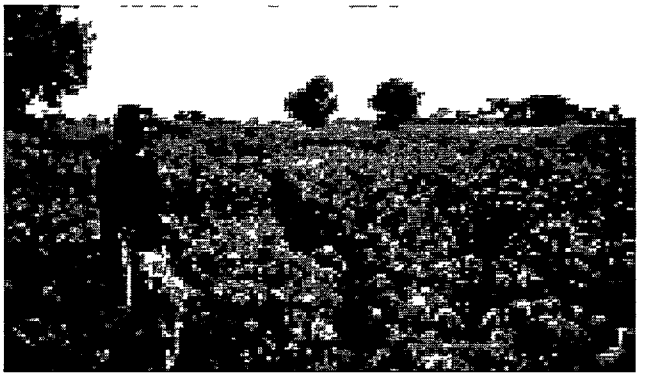
the highest production of rice in her women's rice association She produced 450 kg with the technology and 330 kg without This increased production equals about two more months of rice for her family Because much of a women's status in the family and village is based on how much rice she brings to the household, Mrs Diallo's prestige has risen because of her success in the project The challenge now is to convince her husband to use some of the money he would have spent buying rice for the family to purchase fertilizer for his wife's fields

Mrs Diaga Diop and a neighbor are taking millet stalks for processing from the granary Her husband, who has been a part of the OFPEP seed program, now harvests enough millet to last 6 months longer than the harvest of the previous years This harvest not only provides food security for the family but allows them to cover basic household expenses It also means that Mrs Diop can use the income she generates from her productive activities to build up savings

Mrs Diaga Diop

Uganda

Mrs Rose Akai became involved as an OFPEP lead farmer in 1995 and has worked with the Maro-Kiber Women's Group ever since She has planted over an acre of ACMV resistant cassava that helped see her family through the recent drought period and earned her the nickname of "Mama Cassava" Mrs Akai has also harvested and sold enough soybeans to see her first child graduate from high school Not content with that, she has established a tree nursery, and boasts of having vegetables year round thanks to learning about using compost and manure from OFPEP The success of Mrs Akai and her group attracted the attention of the Church of Uganda who are now supporting their activities Their latest foray into new crops is improved millet which she and the other members of her group feel will add to their new-found food security



Mrs Rose Akai "Mama Cassava" in her healthy cassava

Field Days Another training method which has been used to great effect by OFPEP is the Farmers Field Days The farmers of several communities convene at one model demonstration site and the lead farmers go through each technology or intervention with them This serves as a review session and consolidation of knowledge by the farmers and enables the OFPEP extensionist to answer any questions that the lead farmers may not be able to handle

A farmer leads evaluation process of the performance of new technology

Kenya

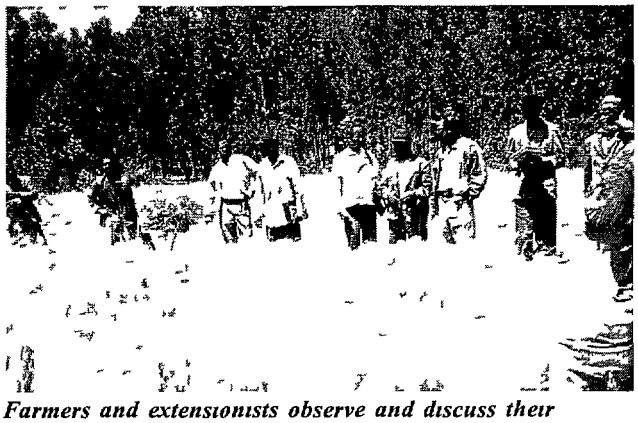
The number of farmers trained by OFPEP has increased by 26% over last year, while the number of trainers trained has gone up over 160% during the same period The multiplier effect of farmers that will be trained by these new trainers will undoubtedly have significant effects over the next year

As might be expected with the increase in exposure to more farmers, the land area under cultivation using one or more new technologies has increased to over 706 hectares—over three and a half times more land than the previous reporting period One of the crops with the highest adoption rate is the maize variety, Maseno Double Cobber (MDC), which is now being grown by 40% more farmers than in the previous two seasons This figure could be even higher, but there is shortage of the seed in some districts

Ethiopia

Demonstrations set up on partner farmer fields were the main means of transferring improved techniques of agricultural production A total of 171 demonstration plots covering a land area of 2 0 ha of land were organized with partner farmers and agricultural extension agents of collaborating NGOs within the 2 years of the existence of OFPEP-Ethiopia Farmers' responses and their assessments were gathered during the cropping season The results were convincing evidence to the project implementers of the NGO programs that OFPEP's approach was appreciated and liked by the smallholder farmers

A farmer leads evaluation process of the performance of new technology



Farmers and extensionists observe and discuss their experiences in meetings and on-site gatherings

THE SEEDS AND SOILS THAT GAVE BIRTH TO A LEADER

Editor s Note *The political empowerment of collaborators was an unintended impact of OFPEP but one which is turning out to be a very important element in the sustain ability of the program Here is one story that shows why*

Mrs Gertrude Namugere is a middle-aged lady, married with children She is a farmer, and a political leader at the same time Below is the story of how she credits her climbing the leadership ladder to OFPEP

In 1989 Gertrude, together with 4 other people formed a community-based organization called REPROD (Rural Education Program for Development) to target women and youths Their main focus was on adult literacy and development in Nankoma subcounty She was elected chair person of the group and recalls that they did not have much to do as an organization because the people who went through the adult literacy program did not see anything more since that was the only activity for the organization

In 1994, REPROD got in contact with OFPEP, which opened the future of the organization *' We had more activities and for the first time Literacy became functional* she says They got involved both in seeds and soils activities and in 1996 they went through a gender training There were 18 groups (all scattered with the sub - county) which were under REPROD and benefiting from all the activities For example they received 1 sack of cassava material which has been multiplied to 4 acres of planting material

Mrs Getrude Namugere, Chairperson, Rural Education Program for Development (REPROD)

Through OFPEP activities, REPROD with Gertrude as its Chairperson, became very popular with the subcounty and later the new district of Bugiri During the 1997 elections for members of Parliament, one of the aspiring candidates (Mr Mukisa) recognized her as a potential leader and appointed her as his chief campaign manager (He won the race, and in addition to being a member of Parliament, he was also appointed a Minister)

For the elections at the lower levels, Gertrude passed through unopposed as a councillor at the subcounty level and was elected the chairperson for the Finance Section Committee She was encouraged (by her people) to compete for the post of woman Councillor at the District Level, but feared to do so because she had not completed high school

She remarks that whereas most candidates used money to go through, Gertrude's involvement with OFPEP provided her the much needed support and popularity to win After the elections, while many of her colleagues are failing to deliver what they promised, she has much to offer

REPROD is still training using the OFPEP approach and most of the improved seed materials introduced by OFPEP are still spreading throughout the subcounty Gertrude is now considered a specialist on gender issues and is consulted by other council members on gender issues Recently, Gertrude was among the people who spearheaded the formation of a network which was named BOFPEP (See attached story)

Lesson

Although staff had originally only looked at community group leaders as useful for OFPEP's entry into the areas, the program has succeeded in grooming a new, well-informed cadre of leader

From the Field:
Lessons Learned From OFPEP/Ethiopia Staff and Partners

About Farmers

Farmers were very cooperative in participating in the demonstration projects They took leading roles in the evaluation of the technologies and in establishing standards of measure for the different aspects

Farmers are open to new technology packages However, they prefer to see many aspects of the introduced technologies at once We were asked questions about taste, texture, and yield regarding the improved seeds we introduced at the time of planting

Farmers tend to feel part of the action when the demo plots are carved out of fields where they grow traditional versions of the crop being demonstrated

Farmers tend to take their own action unless extension agents visit them quite often (formally and informally) Extension agents of the collaborating agencies are often so busy with their routine assignments that they are unable to monitor the joint demo sites The result of this negligence has been reflected in the partner farmers taking their own action outside the agreed treatments and management

On Technologies

Farmers consider all aspects of a technology They use these evaluations to accept or reject a given technique

Soil analytical data which shows serious deficiency of phosphorus, nitrogen, and other nutrients supports the farmers' claim of declining yields

Smallholder farmers' crop productivity could be increased manyfold under farmers' management by introducing new varieties and application of compost and chemical fertilizers

Fertility improvement practices have been well accepted by the farmers Their evaluations indicate that they have quickly caught up with the virtues of fertility improvement practices, and they were able to weigh the merits and constraints of each accordingly

On Gender Differences

Women need to be even more involved in agricultural development activities In the rural communities where OFPEP operated, women account for 50% of the population This shows there is a need to bring women to the training sites (demonstration sites) In addition to increasing the overall number of female farmers, emphasis should be placed on the nature and quality of improved agricultural production techniques introduced to women

From the Field:
Lessons Learned in the Words of OFPEP/Kenya Staff and Partners

On Sustainability

Local partners
CARE-Kenya is training the local institutions they are working with on seeds (encouraging them on seed selection, storage, and formation of seed banks), soil fertility, capacity building, and crop utilization These include Locational Agroforestry Committees (LAC) Such institutions will continue with the activities even when agroforestry as a program of CARE-Kenya is gone

CISS and CARE-Kenya are training farmers using OFPEP-produced materials These include a training chart that demonstrates various technologies OFPEP is promoting

SCODP
The Tatroo women's group in Siaya has started a farm input store where the community can get seeds and fertilizers easily OFPEP had created awareness within the group and trained on improved seeds in short rains 1996 SCODP came in to assist the group get the inputs within the community

The Ongira women's group in Ugenya, Siaya district have also been supported to start an input store within their community

OFPEP Organization
OFPEP/Kenya has been building the capacity of farmers through training on various topics including seed selection During the long rains of 1998, six farmers were involved in seed multiplication These were spread out in the Siaya and Homabay districts Crops being multiplied include beans (K131 variety), maize (Maseno double cobber), sorghum (seredo) and soybean An example is Mr Richard Owoko who, after a demonstration and training, selected sorghum seeds of the seredo variety Mr Owoko sold part of the selected seed he produced and had some for left for banking

Groups are also organizing themselves to have seed stores (seed bank) Farmers are carrying out their own germination tests on seeds to determine whether the stored seeds are viable An example is the Mudindi Methodist church group and the Semenye women's group, both in Siaya district

On Building and Maintaining Ties with Other Organizations

Partner organizations
To add onto their basket of technologies, SCODP, CARE-Kenya, OFPEP, MOALD&M are linking with the ICRAF/KEFRI/KARI regional research center for improved technologies Currently, their focus is on improvement of soil fertility through addition of organic materials like compost, animal manure, green manure, and crop residues

Lagrotech is linking with EARRNET and KARI on multiplication of improved/tolerant cassava clones as an effort to control the African Cassava Mosaic Virus(ACMV)

Lagrotech/OFPEP is linking with CIAT for new bean varieties, both bush and climbers

CARE-Kenya organized training and demonstration for the Seme women's group on Agnes Asiyo's farm in Homabay where they invited all collaborating agencies (both GO and NGOs)

CARE-Kenya in February, 1998 organized a symposium where they invited researchers, extension agents, and farmers to discuss their findings on adaptive research

Community groups
Mudindi Methodist church group has linkages with various development organizations, e g

- Environment Liaison Center
- International Potato Center
- CARE - Agroforestry
- SCODP - Farm inputs
- OFPEP/Kenya

In June 1998, the group organized a field day where they invited all development agencies interacting with them The theme for the field day was "Collaboration and How It Enhances Development "

After OFPEP held demonstrations at Ongira farmers group in Ugenya, Siaya district, the group approached SCODP to facilitate its coming up with a farm input store Joshua Oduor from Ongira group harvested 180 kg of soybean from his farm and found a market for it with the Elianto company

On the Diffusion of Technologies and Information

Through collaborators
OFPEP technologies will continue being introduced through training for both farmers and collaborators, training around demonstrations, e g , through field days and cross visits

Examples

- CISS, CARE-Kenya, C-MAD, SCODP have been using OFPEP developed training materials during their farmer training
- SCODP makes inputs such as seeds and fertilizers available to the farmers within the villages
- CCF supports adoption of improved seeds and use of fertilizers through loans to needy farm families in their project area
- The Agroforestry program of CARE-Kenya will soon phase out It is currently training other organizations in their mandate areas and local institutions such as Locational Agroforestry Committees (LAC) to continue future activities

Farmer to farmer/group to farmer
This method can be sustainable, especially where a technology directly addresses farmers' specific need, e g , the Tatroo farmers group were trained on seed selection in 1996, and since then they have been growing and selecting seeds of improved varieties, which it has been selling to the community around Anyiko village of Yala division, Siaya district

Due to the excellent performance of Maseno Double Cobber (MDC) maize in the last few seasons, more farmers in parts of western Kenya and the Lake Victoria region are looking for the MDC seeds

On Collaboration with a Variety of Partners

Organizations
More farmers are reached

More with Less A few resources can be used to achieve more, e g , OFPEP had one field car and three motor cycles However, through collaboration, collaborators' vehicles have been used for follow up

Individuals
Collaboration makes work easier and faster

Collaboration, however, depends on the goodwill of the partners or staff implementing the project

Recommendations
A clear memorandum of understanding defining the respective roles of collaborating partners is needed at the beginning of the program

For the collaboration to work well, the partners ought to have some shared interest A good example is the OFPEP and CARE-Kenya collaboration The two programs have a shared interest in research on improved technologies

On Using Participatory Methods

Organizations
The participatory process is slow It involves getting all the stakeholder views and therefore gives representative information It also helps the farmers to own or be part of the program activities

Individuals
The process is interesting, one learns more about communities in which he or she is working The process also helps to capture the indigenous knowledge of farmers

On Monitoring and Evaluation

Mainly participatory, the farmers are involved in monitoring the performance of varieties in their demonstration plots Each farmer is given a chance to score the varieties according to their yield, maturing time (earliness), and in some cases seed size and taste

Recommendation
Clear methods for monitoring and evaluation need to be developed that include the farmers participation

On Working with Community Groups

Groups are cohesive and an effective means of reaching many farmers within a short time However, an understanding of the community, especially its culture and traditions should be considered

Communities normally have expectations that are broader than any program can offer Their needs might also include components like schools, water, nutrition, or even health Thus when a program like OFPEP arrives that only deals with improved agricultural technologies, adoption might still be low because it does not address ALL the farmer's needs

When working with communities, it is good to identify other organizations that had interacted with the community earlier

On Working with Government Agencies

The government agencies for a long time were negative about collaboration with NGOs until resources started dwindling They are, however, a potential group for collaboration since they have staff and also knowledge They could be good partners where there is a clear understanding of the various roles

On Training and Capacity Building of Staff and Partners

Earlier it was assumed that the staff were competent for the jobs for which they had been hired Later on it was found that the program had underestimated the need for capacity building for the staff Toward the end of the program, several areas of need were tackled including PRA, gender, seed technology, and soil fertility

OFPEP/Kenya partners looked at OFPEP/Kenya as a small organization and had doubts on its ability to conduct training for capacity building and impart other improved agricultural technologies However, after attending a few training sessions organized by OFPEP/Kenya and on-farm demonstrations, the collaborators now value the training to the point where they contribute toward meeting the costs For example, during the PRA training held in Uganda in 1997, participants contributed by paying for their travel permits and CARE-Kenya provided transport for Kenya participants

The program had also had an assumption on the partners' competence to handle various technologies It was, however found that just like with the OFPEP staff, capacity building was a necessary requirement for successful implementation of the program Therefore, it is important to train partners as well as farmers in all technologies to be demonstrated

On Gender Issues and their Relation to Agricultural Development

The choice to work with women was based on the fact that 70% of the people involved in food production are women Statistics show, however, that more men attend training sessions than women Understanding of the gender roles among the communities became important Gender awareness has proved fruitful in that men are now appreciating the workload of women Gender training was an eye opener to the program

On Food Security

The concept of food security is still misunderstood by many people As a result, more training is needed to clarify its meaning Any new program should conduct initial training on the meaning of food security and its implications

From the Field:
Lessons Learned in the Words of OFPEP/Uganda Staff and Partners

On Sustainability

What partners and OFPEP farmers are doing

Multiplication and adoption of improved seeds
Training on seed selection is now being implemented and the farmers' groups are continuing to multiply the already introduced crop varieties like K131 and K132 beans, Longe 1 maize, Nam 1 and Nam 2 soybean, NASE 1, NASE 2, Migyera and SS1 cassava, Seredo and Sekedo sorghum varieties and Pesse millet variety The multiplication is either by groups or individual farmers within the groups More farmers are beginning to keep and save seeds for planting the next season especially after achieving food security For most of the introduced crop varieties, the farmers are at the adoption level with only the challenge of keeping pure viable seeds, and this technology has been built into the OFPEP seeds component

Second, there are individual farmers and groups who have become commercial seed multipliers, for example Mr Wafula in Sikhubira-Busia, Mr Muwanika in Najja-Mukono, and Mrs Namirengo in Magamaga-Iganga With the technologies of seed multiplication acquired, they are able to produce, store and market good quality seeds Since such farmers are also OFPEP trainers, they facilitate adoption of the new varieties

Third, some partners like agricultural departments, and other organizations, e g , World Vision Projects in Mukono and MTEA in Iganga and Sasakawa Global 2000, Africa 2000 Network in Tororo in Iganga, have appreciated and are adopting the OFPEP approach of transferring technologies to farmers

Training of farmers
Because of the capacity built through the TOTs, the local partners continue to train their farmers on various improved methods of farming extended to them by OFPEP Activities like demonstrations/on farm research and field days are continuing to take place within the farmers' groups

OFPEP trainers are being approached by other farmers to address their training needs These farmers willingly part with a little money for lunch and transport to facilitate the TOTs In addition, these TOTs are helping other organizations like UNFA (Uganda National Farmers Association) and UOSPA (Uganda Oil Seed Processors Association)

Soil and water conservation methods
Most of these technologies such as hedge rows, trash lines, and ridges will remain because they have been established permanently

Networking
Because of collaborating with OFPEP, local partners now know each other through workshops and exchange visits The partners have also been linked with institutions and organizations at a higher level like research institutes, JEEP, Ministry of Gender, COOPIBO, and others Such links will stay and even be more established through the networks

Environment and energy conservation
The communities under the local partners have been sensitized about the need for conserving their environment There is also capacity built for disseminating information and constructing energy saving stoves (mainly the lorrena and UNICEF stoves), through TOTs For the stoves already constructed, of course they will stay, but also more are being adopted because the people appreciate the technology The materials used for constructing them are locally available, at no cost, which greatly facilitates sustainability

Gender and awareness
One trainer defined the gender awareness seminars of OFPEP as starting an equity fire in the rural area Although the impact is slow and gradual, the collaborators agreed that gender sensitization has gone a long way in changing people's attitudes, first among those attending the TOTs, and then those in the targeted families

Moving into leadership
Involvement in OFPEP activities (complementing their own), has helped many managers and members of participating organizations to win election to leadership posts at the Local Councils (LCs) Several of them have won the post of Production and Environment Representative because of the expertise they gained with OFPEP

In Busia District, Sihubira Farmers Group members were elected into positions of leadership because of what they had achieved in OFPEP Several are heading the women's council committees at the district or sub-county levels

Mr Lukooya Francis in Mukono was elected as Production Secretary at Local Council III (District level)

These leaders continue to promote OFPEP-style activities, and they now have more widespread influence

Formation of groups
Although OFPEP's original intention was not to influence directly the formation of groups to rotate around the objectives of the program, in several cases it was inevitable As a result

of people's interaction with OFPEP, they have formed many groups which may have the same or similar objectives to those of OFPEP Some groups that were initially weak, with no activities, have become busy in the process of collaborating with OFPEP For example in Kalait, Kwapa 16 women's groups have formed one unified group to help coordinate and strengthen their activities

Farm visits
Recently a group in one sub county in Mukono collected money, hired a car and visited one of OFPEP's progressive farmers, Mr Muwanika They did this on their own initiative, without the influence of the extension staff Other groups in the district have also visited the Sihubira Farmers Group to see what it is doing as a group

Proposal writing
Several local partners have written proposals that have been funded because of OFPEP's influence For example, three groups applied for and received grants from COOPIBO for cassava multiplication Sikhubira Farmers Group recently wrote a proposal on tree planting It was reviewed by the OFPEP gender staff and submitted to the Forestry Department

On Building and Maintaining Direct Linkages

Linkage with research institutes
Groups like Abur, Buyengo and Buhenye, after initial contacts, have been able to obtain cassava planting materials directly from Namulonge and Serere Research Institutes

Talent Calls Club in Mukono now has a direct link with the Namulonge Research Institute a link started by OFPEP

Some farmers' groups also directly contact Makerere University or the Kakira plant for Rhizobium inoculum

Linkage with government extension
Most of the groups are now linked to the government extension services because of their involvement with OFPEP The government extension service identifies them as strong groups, and many more farmers are also joining

In Iganga, where the government extensionists were first opposed to the OFPEP approach of entrusting research with the farmers as they termed it, now fully embrace OFPEP and FOSEM, and work hand in hand with OFPEP/FOSEM staff and farmers

The OFPEP-trained trainers from the Sihubira Farmers group are recognized by the newly formed district of Busia as people who have done a lot of extension in their sub-county

Accordingly, the local government extension staff invites them to attend and consult at agricultural meetings

Some farmers' groups in Mukono are officially registering with the Ministry of Gender to obtain certificates, for acquiring small loans from micro-enterprise organizations like FINCA and The Co-operative Bank This would not have happened without the encouragement and capacity-building received from OFPEP

In Najja-Mukono, during an OFPEP training on environment and energy conservation, the government officer in charge of environment was happy to note that there is a rural community committed to environmental protection He promised government facilitation to the group with tree planting materials such as seeds and bags

On the Diffusion of Technologies and Information

Ways in which OFPEP technologies are being diffused

Demonstrations
Training of Trainers (TOTs)
On-farm training by TOTs or extensionists
Farmer research
Seminars and workshops
Exchange visits between groups
Multiplier effect through neighbors and relatives
Literature - farmers guides and gender training manuals

Continuation of the diffusion mechanisms
The diffusion mechanisms will definitely continue because

There has been a lot of capacity development in the local partners through the TOTs These new trainers will continue the demonstrations/farmer training and some of them are in influential positions at the sub county or parish levels where they are beginning to influence resource allocations for agriculture In that case, seminars and workshops, exchange visits, and linkages to research and other technical institutes will be able to continue

- The FOSEM project which is targeting the same OFPEP farmers and more, and is using the OFPEP approach, is definitely sustaining all the above diffusion mechanisms All the former OFPEP extension specialists were hired by this new project

- With most government agricultural departments and large organizations like Africa 2000, Sasakawa Global 2000, Plan International, World Vision and many of the

small participating organizations adopting the OFPEP approach of transferring technologies, there will be continuity of the OFPEP cause

- Farmers have been made aware that most programs have a time limit and they should avoid being dependent on them They are now willingly parting with money to facilitate TOTs or to invite agricultural trainers from the government or NGOs to train them In Ssi sub-county-Mukono, farmers already meet the lunch and transport costs

- Mr Muwanika has been able to disseminate information outside his sub-county on the invitations of farmers groups from other areas, and Mr Ouma Geofrey is now being called upon by many groups in Tororo to train them on building energy-conserving stoves

- Some technologies adopted are physical assets in the community and will stay and facilitate diffusion for a long time Such technologies are the seeds, energy stoves, and soil and water conservation structures

On Collaboration and Partnerships

It is the best approach to reach many farmers with a thin staff on the ground The collaborators report that such an approach

- fostered linkages among the stakeholders in rural development
- brought about farmer to farmer collaboration
- built the capacity of the resource poor farmers to take decisions

However, partners need to be selected carefully before any commitment of working together is made, since some partners expected financial assistance and this led to their early withdrawal

On Using Participatory Methods

The common ones used were

- meetings and group discussions
- demonstrations
- field days
- gender analysis with communities
- home to home visits

All the above facilitated effective communication which became a two-way process The gender analyses allowed self discovery by the groups and also equipped the OFPEP workers with a lot of information about their communities Participatory methods and collaborations are the secrets behind OFPEP's success story

On Monitoring and Evaluation

This was a difficult mechanism to implement Most of the organizations had their own obligations to meet, and this affected the time they were able to spend monitoring OFPEP activities OFPEP staff initially assumed that local partners would be able to provide more in terms of M&E than they were able Some forms designed for evaluation were too complicated, and the individual staff could not process their own data because they had limited access to the computers

M&E needs a full time officer, or the farmers and trainers can be provided with more resources to enable them to collect important information

On Working with Community Groups

This strengthens the groups and makes the work less tedious for the staff of OFPEP and its partners These groups are owned by farmers and they are located within the target areas It must also be said that some community groups do not appreciate the technical assistance approach of OFPEP, this makes working with them difficult

On Working with Government Agencies

Since many of them came to realize the effectiveness of OFPEP, networking with them became a lot easier But still many of them expect financial gains

On Training and Capacity Building of Staff and Partners

For the staff, training was not satisfactory The fact that it was not budgeted in the proposal was a major weakness, leaving the staff to only train with collaborators, which many times could not cater to their specific training needs However, the training on monitoring and evaluation and PRA were much appreciated, though they came late in the program

For the partners, a lot of capacity has been developed through training of trainers workshops, demonstrations, gender awareness training, and workshops on PRA, M&E and post harvest treatments This has enabled effective training of farmers and better planning and management of partner's activities

On Integrating Gender Issues and Their Impact on Agricultural Development

Integration of gender awareness into interventions has facilitated a good understanding of targeted communities The OFPEP-gender sensitization program on issues related to production has become popular among the groups After most families attain food security and are sensitized on gender issues, there is a positive (though slow) change towards

- sharing of farm and home work load,
- better use and management of family resources

On Food Security and Impact

All the farmers who were keen about OFPEP technologies can now boast of

- having sufficient food stocks,
- having increased income,
- multiplying and saving better quality seeds,
- being able to conserve their fuel wood,
- women cooking in a healthier environment

Through Farmers' Eyes

A photographic depiction of the impact of The On-Farm Productivity Enhancement Program (OFPEP) as seen through the eyes of participating farmers in Uganda and Kenya

A lush soybean crop

If the measure of a program's success is in the lives it has touched, then OFPEP's success can be seen in the faces of these children. With help from OFPEP and its partners, farmers are able to grow more food for their families.

Processing soybeans into milk

Drinking soy milk in tea

In 1992, a consortium of organizations led by Winrock International and the Center for PVO/University Collaboration in Development (PVO/University Center) initiated the On-farm Productivity Enhancement Program (OFPEP) in Senegal, Uganda, and The Gambia An expansion of the On-farm Seed Project (1987-1992), OFPEP aims to improve farmers' access to and use of good seeds, and improve soil fertility and structure through better soil management at the farm level Although OFPEP activities in The Gambia were discontinued, project sites were added in Kenya (1994) and Ethiopia (1995)

The success of OFPEP hinges on the participation of local farmers with OFPEP's partner organizations in every phase of implementation In May of 1996, as part of the ongoing evaluation process, PVO/University Center staff introduced photography as a documentation and evaluation tool to several of the participating farmer groups Each of the groups was given an automatic disposable camera and briefed on its basic operation After electing one member to serve as photographer, each group discussed how best to portray their experience with OFPEP Then the photographers were given their assignments go back to their farms, homes, and communities, and take pictures that expressed the groups' perceptions of OFPEP's impact

This report highlights six of the participating groups in Uganda and Kenya the Sango farmers' group and the Sidindi farmers' group in Siaya district, Kenya, a combination of youth groups in the Grail community, in Kisumu district, Kenya, the Adhola farmers' group and the Abur farmers' group, in Tororo district, Uganda, and the Kamukamu women's group in Iganga district, Uganda The Sango, Sidindi, Abur, and Adhola groups are organized by Christian Children's Fund (CCF) The Grail group is sponsored by the Grail Community Development Programme of the Catholic Church And the Kamukamu group works with the Multipurpose Training and Employment Association (MTEA)

Photos taken by members of the Grail group, one of OFPEP's newer project groups depict some of the major agricultural problems directly related to poor seeds and infertile soil that are prevalent throughout East Africa The farmers identified these problems and will work with OFPEP and its partners to address them

Photographs from the other groups show some of the agricultural practices in place due to the work of OFPEP and its partner organizations Their other photos portray the impact of OFPEP activities on their lives, families, and communities

On the Cover

OFPEP introduced new varieties of soy beans (Nam 1, Nam 2) which mature earlier than local varieties and have higher yields The farmers have learned that soybeans are high in protein and can be processed into milk Since dairy cows are scarce, soy milk is becoming an important dietary component, especially for children

Please remember these photographs were not taken by professional photographers, nor by OFPEP or PVO/University Center staff, but by the farmers themselves In lively group discussion, each of the farmers' groups selected five photographs which they felt best represented their own problems or best depicted the impact of OFPEP's soils and seeds activities

We have included as many of these photos as quality permitted, and added a few others, also taken by the farmers Much of the information in the photo captions was contributed by the farmers

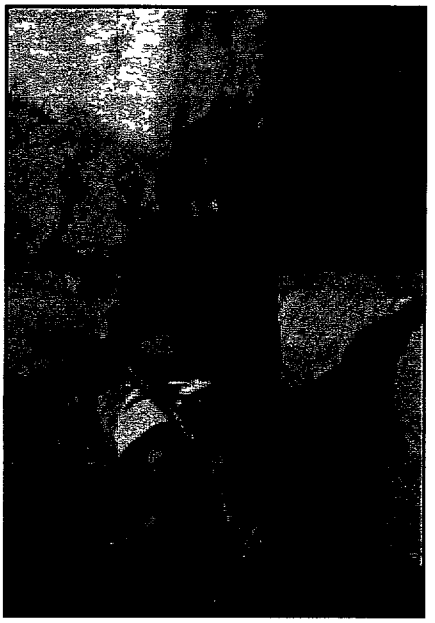
Problems

Striga is a parasitic weed that attacks maize sorghum millet sugar cane and rice throughout Africa The weed stunts crop growth and reduces yields This can have tragic consequences for subsistence farmers many of whom grow barely enough maize to feed their families and who invest heavily in seed and their own labor during cropping seasons

Loss of topsoil due to wind and water erosion reduces soil fertility and results in poor crop yields as can be seen from the condition of these plants

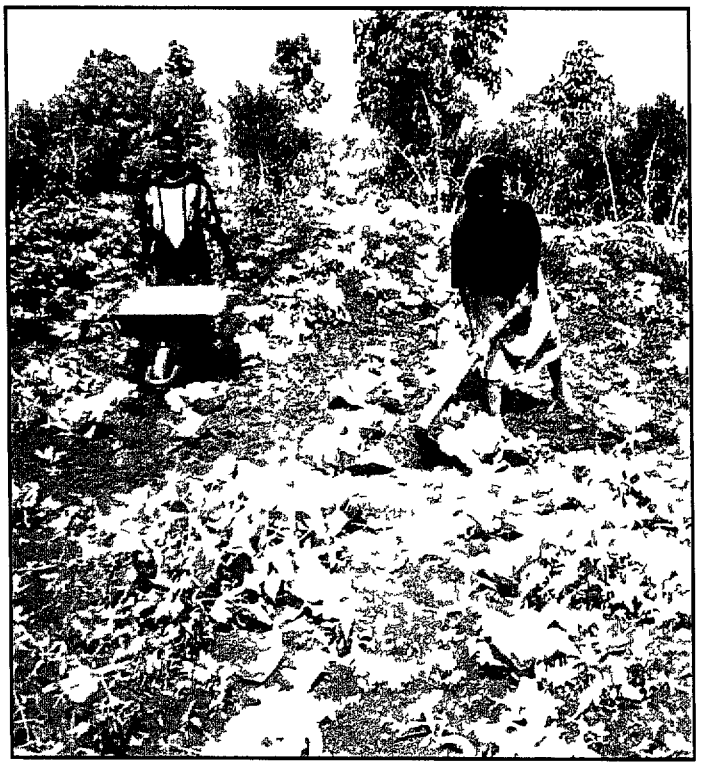
When farmers save seeds from diseased plants infection of future crops is likely Insects are also a problem which can cause low yields OFPEP teaches farmers how to identify and select the best seeds and how to store them to guard against disease and pest infestation

The ultimate impact of low fertility soils poor seed quality and inefficient agronomic practices can be seen in high malnutrition rates and in the poor living conditions of the farmers and their families



Activities

Mama Sabena broadcasted seeds of various sorghum varieties harvested from an OFPEP demonstration and is already noticing differences in growth She will keep seeds from the best varieties using seed selection techniques learned from OFPEP



By using compost as fertilizer farmers are able to increase their yields of cabbage onions carrots sweet peppers and tomatoes These crops are sold at local markets for income as well as used in family meals

Some Sidindi group members have adopted the technology of compost making that they learned from training and demonstrations by OFPEP and CCF

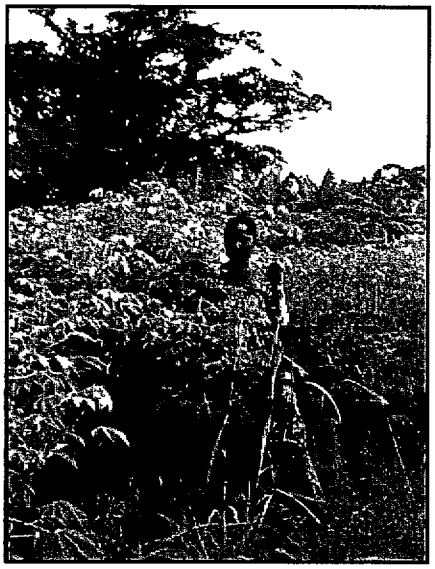
Mr Lenus Oumo and his son have learned through OFPEP to plant fast growing local shrubs along the path to their home to prevent the formation of gullies Gullies carry unwanted water to their farm flooding their crops and eroding soils

Group members share the work in the OFPEP demonstration plots At harvest time after evaluating the performance of each crop based on their own criteria they share the harvest among themselves Members may then save some seeds for the next season or sell or exchange them with neighbors

This farmer had helplessly been watching her fertile topsoil disappear down this steep slope OFPEP came to her rescue with soil conservation measures With the use of compost and on farm selected seeds she is now able to harvest good maize crops from the reclaimed land

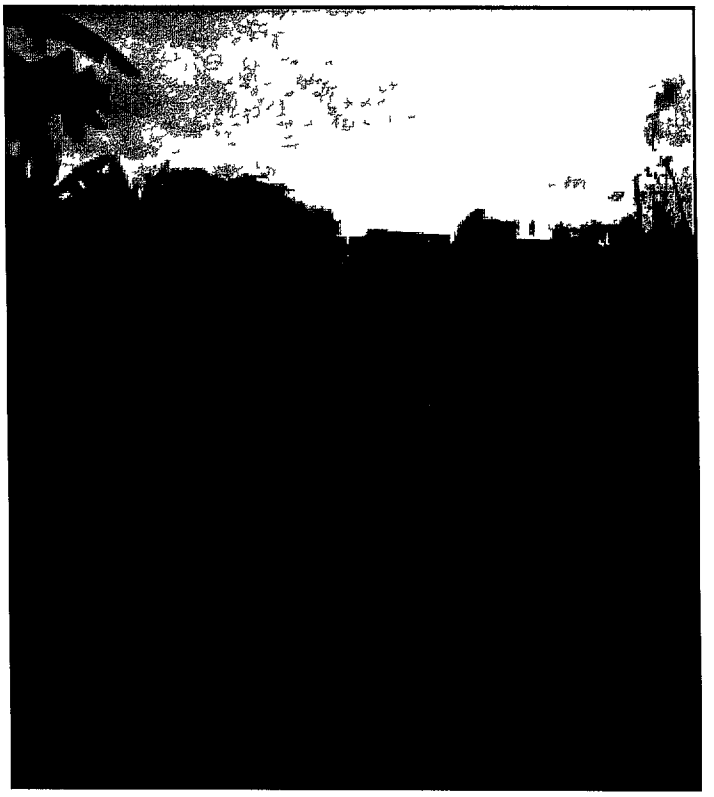
This family in Tororo district Uganda is harvesting Seredo sorghum an OFPEP-promoted variety Sorghum is used for food and sold for income

A farmer shows off his high yield of Igola groundnuts a new variety introduced by OFPEP Groundnuts are an important food and cash crop This variety is resistant to Rosette stunt disease which has affected other varieties of groundnuts



This farmer is proud of her healthy cassava plants Cassava is a major food and cash crop in Uganda but it is in short supply due to attacks of cassava mosaic virus In some districts virtually all cassava has been destroyed causing great hardship for the many families who depend on it OFPEP introduced new disease-resistant varieties of cassava to farmers in Iganga district in 1995 96 and is working with several organizations to quickly multiply these varieties

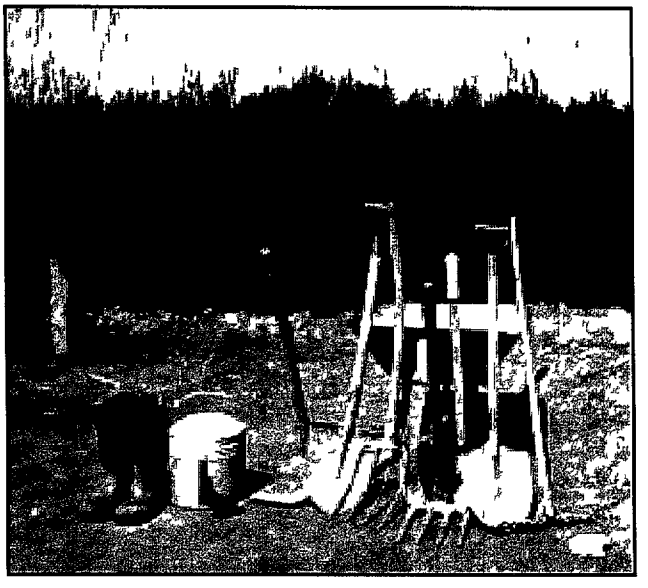
Impacts



OFPEP interventions enabled a family to realize crop surpluses which have translated into building materials for an improved house. This is a highly significant achievement since many farmers live in grass thatched mud and wattle dwellings.

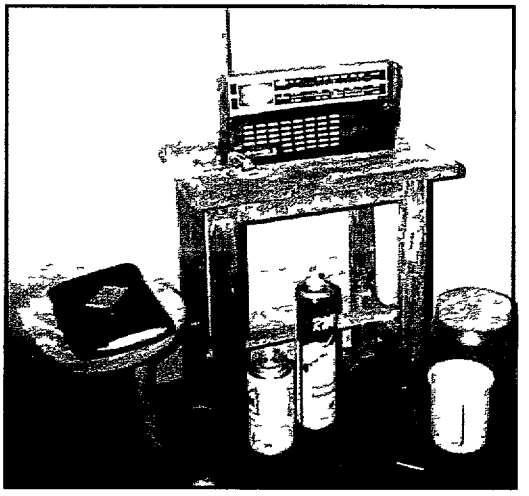
Participating farmers have been able to increase their yields by adopting techniques learned through OFPEP training on seed selection and soil management. The sizes of the baskets indicate a good crop yield.

With the extra money farmers make from selling their surplus crop yields they have been able to purchase necessary farm implements like hoes, rakes, and shovels.

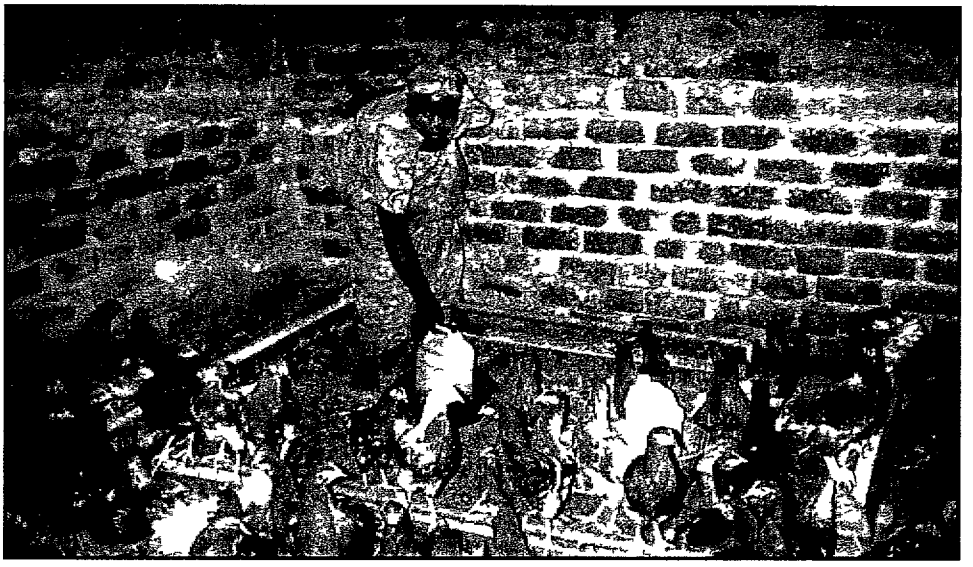


This granary is full of an improved variety of millet (Pese 1) Introduced by OFPEP it matures earlier than local varieties The Adhola farmers were able to harvest full granaries of millet from small plots Some of them used the profits from selling this crop to buy livestock

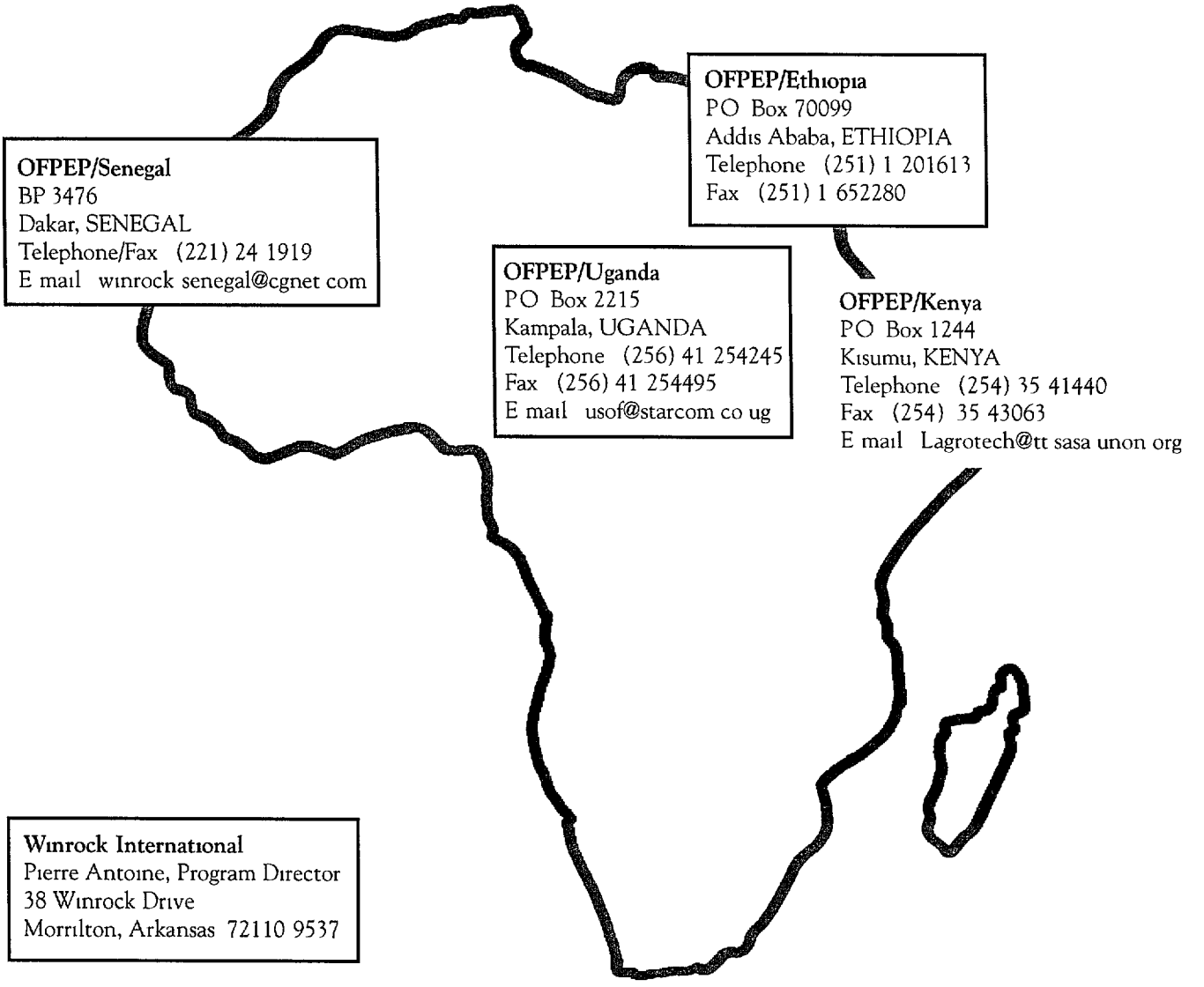
One farmer purchased a radio with money he earned from selling surplus Nam I variety soy beans which were introduced by OFPEP



Mrs Eguire looks after chickens the Kamukamu group purchased with earnings from beans maize and soybean production Poultry is an income generating activity for the farmers



OFPEP has touched the lives of over 100,000 farm families in five African countries in the past four years. It collaborates with eighty-eight local, national, and international groups, organizations, universities, and research institutions, creating linkages and networks with the hope that these groups will continue working together to apply sound solutions to the problem of decreased food production faced by small farmers.



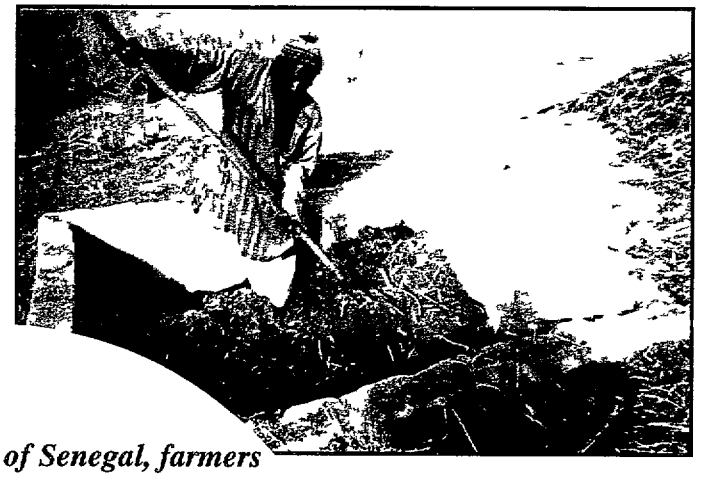
The On Farm Productivity Enhancement Program (OFPEP) primarily funded by the U S Agency for International Development (USAID) under agreement FAO 0158 A 00 2054 00, focuses on farmers' access to and use of good seeds, improved soil management practices, and sustainable yield increases The program, led by Winrock International and implemented jointly with the Center for PVO/University Collaboration in Development, Agricultural Cooperative Development International, the Peace Corps, and many other nongovernmental organizations (NGOs) and research/extension organizations, has sites in Senegal, Uganda Kenya, and Ethiopia The PVO/University Center disseminates program information and welcomes inquiries and comments Please address all correspondence to Ms Mary Lou Surgi, OFPEP Program Coordinator Bird Building, Western Carolina University Cullowhee, North Carolina, USA, 28723 9056 fax (704) 227 7422, or send e mail to pvouc@wcu edu

Senegal

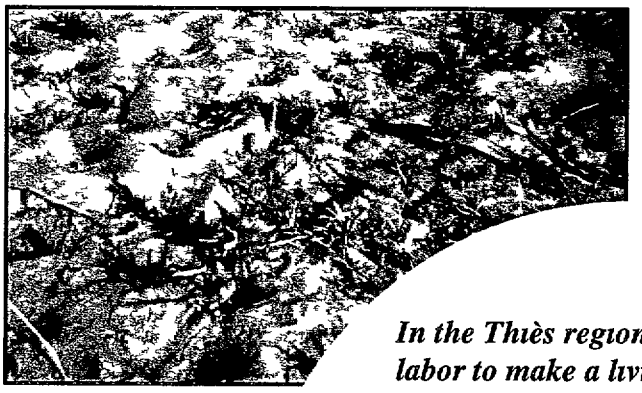
Through Farmers' Eyes

A photographic depiction of the impact of The On-Farm Productivity Enhancement Program (OFPEP) in Senegal

A farmer mixes dry matter and manure in a durable pit to produce compost to nourish his crops

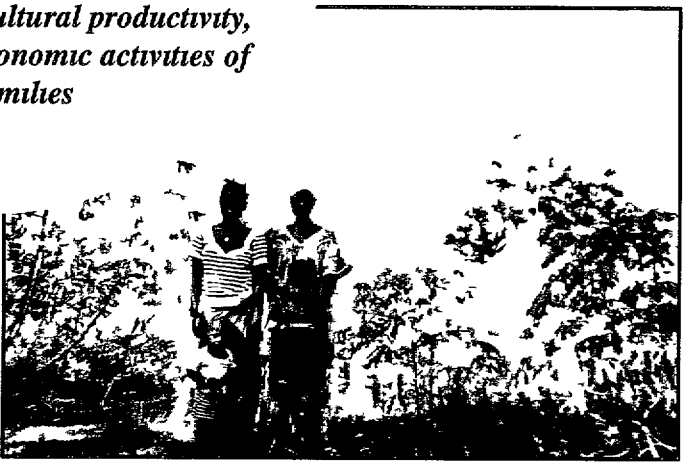


Weeds seem to be the only things that grow from poor soils



In the Thiès region of Senegal, farmers labor to make a living raising crops in degraded soil, dependent on erratic rainfall (about 400 mm per year), and without access to improved seeds and methods of improving soil fertility Nonetheless, OFPEP-- an innovative program partnering an international development organization with local counterparts and technical resources has been successful in improving the agricultural productivity, food security and economic activities of farmers and their families

Using compost improved millet varieties and better farm management skills helped this farmer produce more millet then ever before



This farmer and her family planted a live fence around their cassava plot to prevent erosion

All but one of the pictures in this document were taken by Senegalese farmers in the villages of Baback Diokhar Fandene, Fissel Ndollor and Thaidiaye They selected photographs they felt best represented their problems, the achievements and impacts of OFPEP s soils and seeds activities

Partnerships, Activities, and Impacts

OFPEP and Christian Childrens' Fund (CCF) have been working together with farmers in six villages in the Thiès region of Senegal since 1992 In that time they have jointly addressed problems identified by farmers such as decreasing soil fertility, soil erosion and the poor quality of seeds With technical input from the Senegal Institute for Agricultural Research (ISRA) and OFPEP, almost half of the area's 3,500 households have been trained in improved techniques and have witnessed demonstrations of improved seeds, live fencing and how to make and apply compost In 1997, more than 450 hectares of land are being cultivated using one or more of the improved technologies introduced by OFPEP Farmers have reported increased yields ranging from 30 to over 100 percent using improved varieties and compost These numbers look dramatic on paper, but more impressive is what the farm families have been able to do with the increased fruits of their labors They purchase livestock and additional food, build houses, and construct granaries to store their harvests They send their children to school There is no better indication of a project's impact than the expressions of farmers themselves They took these photos to show the world what they have been able to accomplish This story, is one that is being replicated in other communities in Senegal, Uganda, Kenya and Ethiopia with thousands of farm families

Two farmers create a traditional compost pit in the village of Diokhar

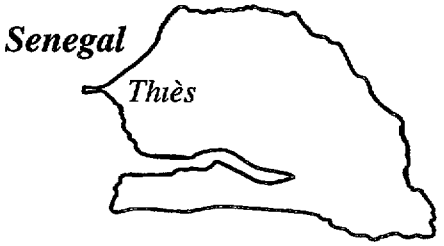
Simple techniques proven to improve productivity - applying animal manure as fertilizer, composting crop residues, planting seeds of improved varieties, or inoculating seeds with rhizobium are demonstrated on the farmers' own fields.

Farmers protect their fields by planting Euphorbia balsamifera cuttings to form a 'live fence which protects against erosion from wind and rain and keeps animals out

This farmer in the village of Ndollor like many OFPEP assisted farmers is able to plant cassava an important staple food crop in this protected field

In the early years of OFPEP, farmers were able to improve millet yields by at least 20% using the techniques of better seed selection and establishment of seed plots as taught by OFPEP The next step was to give attention to finding improved varieties and address soil fertility Now, yield increases averaging 117% have been obtained!

One of the farmers of Ndollor has produced enough millet for his family and enough surplus for sale thanks to an improved seed variety grown with compost applications to enhance soil fertility



With cash earned from surplus millet production a farm family was able to build this new building in their compound out of durable materials

With increased crop productivity, farmers were able to diversify their assets. Livestock have many uses - sources of manure to improve soil fertility, meat and milk for home consumption or sale, and as "living savings accounts" - to be sold when expenses such as weddings, funerals or school fees need to be paid.

With surplus quality millet a farmer in Fissel made enough money to purchase several head of sheep

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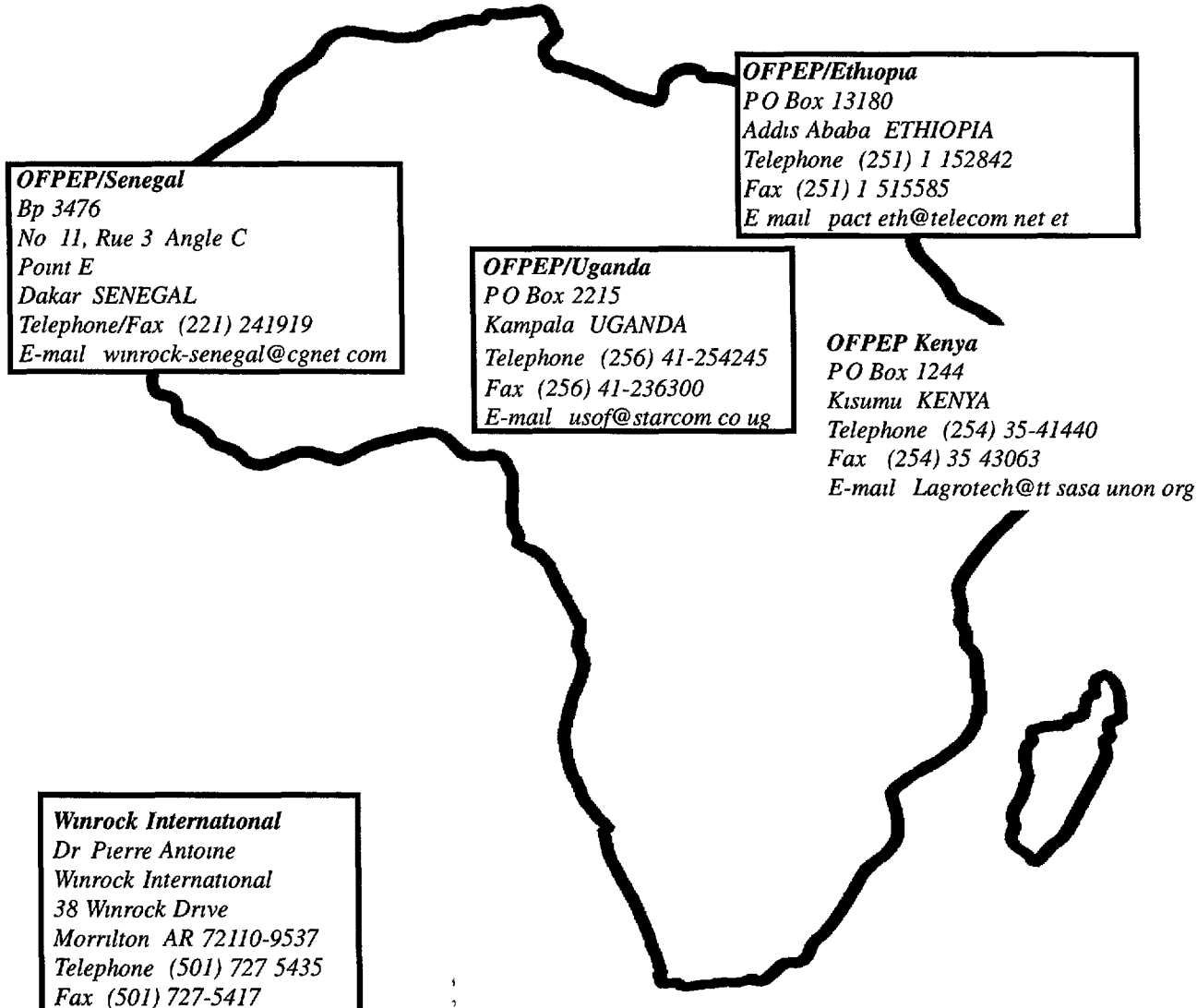

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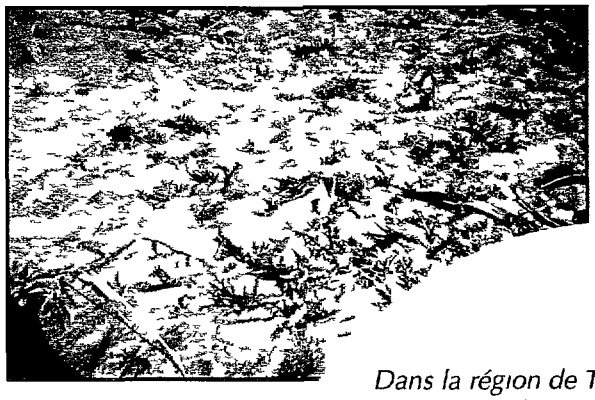
Regard Paysan Sénégal

Une presentation en images des incidences du Programme de Valorisation Agricole en Milieu Paysan (OFPEP), tel qu'il apparaît aux yeux des paysans qui sont impliques dans sa mise en oeuvre au Sénegal

Les mauvaises herbes envahissant les sols pauvres constituent un probleme auquel les paysans doivent constamment faire face



Un fermier melange des matieres seches et du fumier dans une fosse pour produire du compost destine a servir d'engrais pour ses cultures

Dans la région de Thies, les paysans peinent pour gagner leur vie ils s'adonnent a la culture de sols ingrats, leur sort lié a une pluviometrie erratique (environ 400 mm par an), sans acces aux semences améliorees et aux méthodes permettant d'accroître la fertilité des sols En dépit de cela, l'OFPEP - un programme novateur qui unit une organisation internationale de développment et des partenaires locaux, avec l'utilisation de ressources techniques, - a eu un impact majeur en améliorant la productivité agricole, la sécurité alimentaire et les activités économiques des paysans et de leurs familles

L utilisation de compost de variete de mil ameliore et de meilleures capacites de gestion ont permis a ce cultivateur de produire plus de mil que jamais auparavant

Ici en compagnie de membres de sa famille une paysanne qui a entoure son champ d une haie vive de plants de manioc pour prevenir l erosion du sol

Toutes les photos dans ce document sauf une ont été prises par des agriculteurs et agricultrices Sénégalais dans les villages de Baback, Diokhar Fandene Fissel Ndollor et Thaidiaye Ils ont choisi des photos qui selon eux représentent le mieux leurs problèmes les réussites et l impact du programme OFPEP en matière de technologie semencière et de gestion des sols

Partenariat et Impact

L'OFPEP et le Fonds Chretien pour L'Enfance (CCF) travaillent ensemble aux côtés des paysans de six villages du Senegal depuis 1992 Depuis lors, ils s'attaquent conjointement aux problemes identifies par les paysans, tels que la pauvrete croissante des terres, l'erosion des sols et la qualite medicore des semences Grâce aux apports techniques de l'Institut Senegalais pour la Recherche Agricole (ISRA) et de l'OFPEP, pratiquement la moitie de la zone, a savoir quelque 3500 menages, ont ete formes aux techniques ameliorees, a la maniere de fabriquer et d'utiliser le compost A l'heure actuelle, en 1997, plus de 450 hectares de terres sont cultivés en utilisant une ou plusieurs des techniques introduites par l'OFPEP Les paysans ont fait etat d'une augmentation des rendements allant de 30 a plus de 100 pour cent, grâce a l'utilisation de varietés ameliorees et de compost Sur le papier, ces chiffres apparaissent comme frappants, mais ce qui est plus impressionnant encore, c'est l'usage que les familles de paysans ont pu faire de l'augmentation des fruits de leur labeur Ils achetent du betail et de la nourriture supplementaire, edifient des maisons et construisent des greniers pour abriter leurs recoltes Ils envoient leurs enfants a l'ecole Il n'est de meilleur indicateur de l'impact d'un projet que la voix des paysans eux- mêmes Ils ont pris ces photos pour montrer aux autres l'oeuvre qu'ils ont ete en mesure d'accomplir Il s'agit la d'une experience qui est en cours de reproduction dans d'autres communautes au Sénégal, en Ouganda, au Kenya et en Ethiopie, avec le concours de milliers de familles paysannes

Deux fermiers amenagent une fosse a compost traditionelle au village de Diokhar

Des techniques simples comme l'epandage de fumier utilises comme engrais, le compostage des déchets agricoles, l'utilisation de variétés de semences ameliorées ou le traitement des semences au rhizobium font l'objet de demonstrations sur place, dans les champs

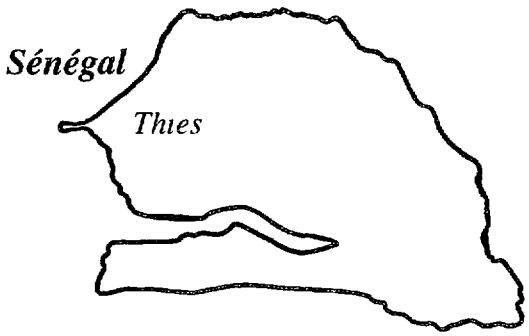
L'une des plus importantes activites menées en collaboration avec le CCF est la mise en place de parcelles de manioc cloîtures par de la haie vive Le nombre de villages impliques dans cette activite est passé d'un village en 1993 a 11 villages en 1997

Les paysans protegent leur champ en plantant des boutures d euphorbe (Euphorbia balsmifera) pour eriger une haie vive destinee a le preserver de l erosion eolienne

Ce cultivateur du village de Ndollor comme beaucoup de paysans assistes par l OFPEP est en mesure de planter du manioc important produit alimentaire de base dans ce champ protege

Durant les premieres annees d'intervention de l'OFPEP, les paysans ont pu augmenter leurs rendements de mil d'au moins 20%, en mettant a profit les techniques de selection des meilleures semences et l'aménagement de parcelles L'etape suivante fut de porter l'attention sur la detection de varietés ameliorees et de concentrer les efforts sur la fertilite des sols A l'heure actuelle, des hausses de rendement de 117% en moyenne ont été obtenues!

Un des cultivateurs du village de Ndollor a produit assez de mil pour sa famille et un surplus suffisant pour la vente grâce a des epandages de compost pour soutenir la croissance d une variete de semence amelioree et accroître la fertilite du sol



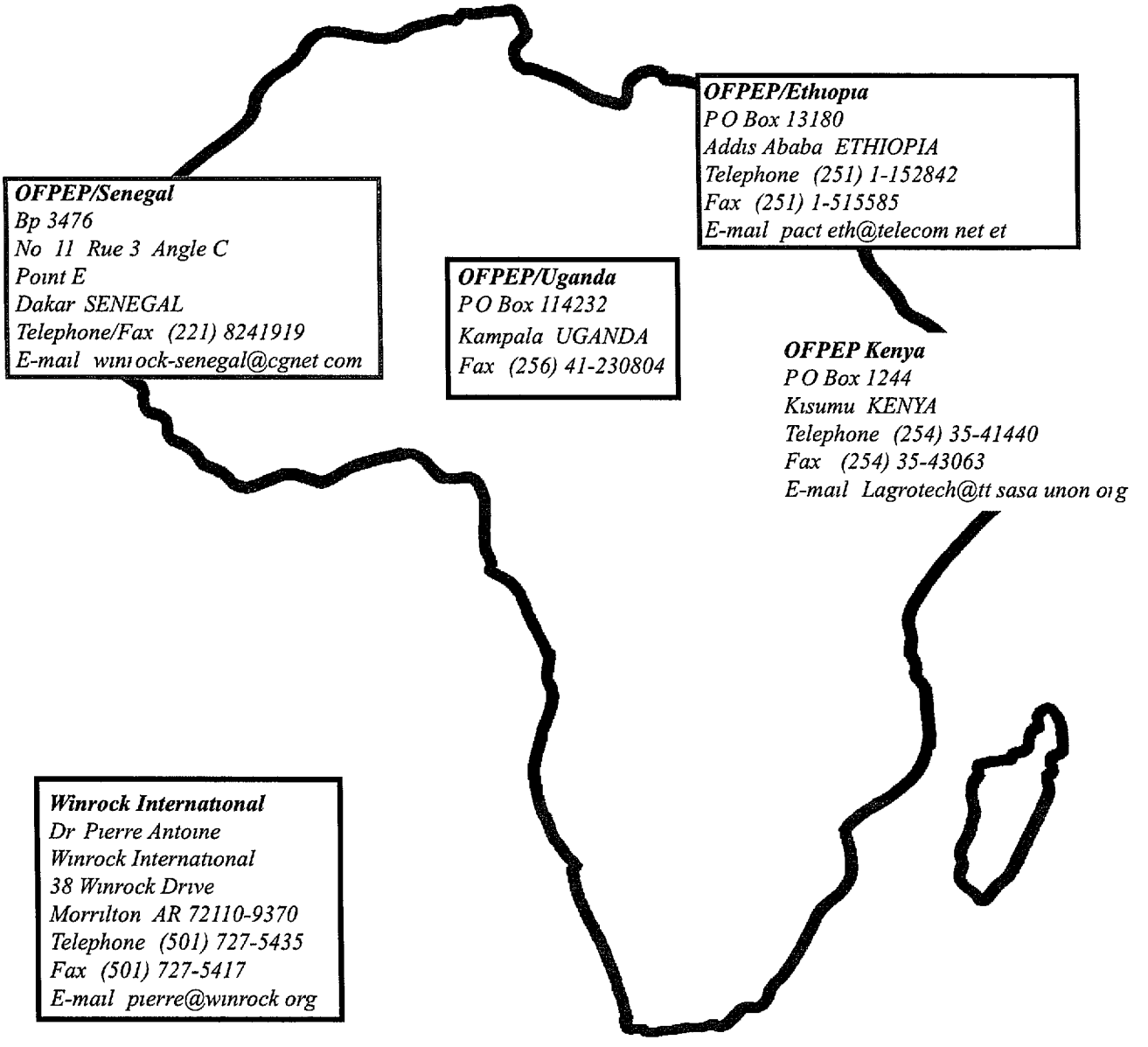
Avec l'accroissement de la productivité des cultures, les paysans ont pu diversifier leur patrimoine Le betail est utile a plusieure titres - source de fumier pour améliorer la fertilité des sols, lait et viande pour la consommation des menages ou pour la vente, il sert également de "compte d'épargne vivant" que l'on peut revendre au besoin, pour couvrir les dépenses qu'occasionnent des circonstances telles que les mariages, les funerailles ou les paiement des frais de scolarité

Avec l argent genere par la vente du surplus de mil produit une famille de paysans a pu construire ce nouveau bâtiment a l interieur de sa concession a partir de materiaux durables

Grâce a une production excedentaire de mil de qualite un fermier de Fissel a gagne suffisamment d argent pour acheter plusieurs moutons

95

L'OFPEP a eu un impact sur la vie de plus de 100 000 familles paysannes dans cinq pays Africains, au cours des cinq dernières années Le programme travaille en collaboration avec plus de quatre-vingt-huit structures locales, nationales, internationales, des organisations, des universités et des institutions de recherche, créant ou renforçant ainsi des contacts et des réseaux pour apporter des solutions appropriées aux problèmes de la diminution de la production alimentaire à laquelle sont confrontés les petits paysans



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Le Programme de Valorisation Agricole en Milieu Paysan (OFPEP), finance a l'origine par l'Agence des Etats Unis pour le Developpement International (USAID) au terme de l'accord F A O 0158 A 00 - 2054 - 00, est centre sur l'acces des agriculteurs aux semences de qualite, l'amelioration des pratiques de gestion des sols et l'augmentation durable du rendement des sols Le Programme qui est dirige par Winrock International et qui est execute conjointement avec le "Center for PVO/ University Collaboration in Development", le Agricultural Cooperative Development International (ACDI), le Corps de la Paix et de nombreuses autres organisations non gouvernementales (ONG) et Organisations de Recherche / Vulgarisation, dispose de sites au Senegal, en Ouganda, au Kenya et en Ethiopie Le PVO / University Center vulgarise les informations relatives au programme et recueille les questions et les suggestions Veuillez adresser toutes vos correspondances a Mary Lou SURGI, Coordinatrice du Programme OFPEP, Bird Building, Western Carolina University, Cullowhee, North Carolina 28 723 9056 , Fax (704) 227 74 22 , e-mail to PVOUC@wcu edu

AS OFPEP ENDS, WHAT DID WE ACHIEVE AND WHAT LESSONS DID WE LEARN?

J F Moses Onim
OFPEP-East Africa

On-Farm Productivity Enhancement Program (OFPEP) will end on September 30, 1998 It was such a successful program that between October 1992 and September 30, 1997, OFPEP had given birth to a new program in each country where it operated In Senegal and other countries of west Africa, it evolved into similar activities in ALFALFA and RADORT, FOSEM in Uganda, EAT in Kenya and EMPOWER in Ethiopia These outgrowths of OFPEP have attracted funding to the tune of approximately US $ 1 8 million OFPEP has been a very successful program

1 What OFPEP set out to do

In the last six years, OFPEP has worked on four major mandates improvement of soil conservation and soil fertility, improved on-farm seeds, especially food crops on smallholder farms, training of farmers and extension staff of partners (capacity building), and protecting the environment by reducing felling of trees for charcoal and firewood by introducing improved cook stoves As the program progressed, the need for training farmers in marketing and food utilization became urgent, and were included as program activities All this was capsulated into the program goal which was to improve nutrition, income, and well being of smallholder farmers in targeted developing countries The purpose of the program was to achieve sustainable agricultural productivity and conservation of natural resources through improved management of community and individual resources, inputs, and knowledge (indigenous and introduced) pertaining to soil fertility management and seed production and handling

2 OFPEP Approaches

Needs assessment

In the countries where OFPEP operated, it was always based on collaborative mode, working with the government ministries of agriculture, non-governmental organizations (NGOs) and Community Based Organizations (CBOs) The program conducted baseline surveys on needs assessment for the communities where it proposed to operate The communities would come up with their own needs on soil conservation, soil fertility improvement, improved seeds of important food crops, capacity building (training), environmental protection, energy saving cook stoves and crop utilization The development work which followed was entirely based on the smallholder farmers' agenda, and not that of OFPEP, its staff or donors

Gender sensitive approaches

It has been established that in smallholder farms in developing countries in Africa, women produce 70% of food produced on-farm OFPEP has therefore strongly advocated for recognition of women as very important stakeholders in development of food crop based programs OFPEP conducted studies on the roles played by women in family agricultural development The results significantly convinced the men folk in these communities that the women were overburdened, and therefore men needed to participate more actively in agricultural and family responsibilities The results were very encouraging These results show that women were more trusted with money than men, and therefore in farmers credit groups, most of the treasurers were women Because women play such an important role in smallholder food production agriculture, they were targeted by OFPEP for training However, OFPEP's segregated training records in east Africa indicated that there were men trained than women This is because although OFPEP changed its farmers training courses from residential to on-farm demonstration plot-based, some women still failed to find time to attend these courses They therefore sent their spouses OFPEP generated data bases on gender, especially in conjunction with its sister Gender Program -- African Women Leadership in Agriculture and Environment (AWLAE), which will be useful assets for future programs In February 1998, OFPEP and AWLAE conducted one Training of Trainers (TOT) on gender for its partners from Kenya and Uganda These trainees thereafter went back to their organizations and trained their colleagues and farmers on gender issues and gender in development

Integrated Strategy and Participatory Program Approach

Participatory methods of decision making have been a major landmark in OFPEP Because the program placed a lot of importance on participatory approach in its extension work, OFPEP and AWLAE in east Africa conducted a two weeks TOT course on Participatory Rural Appraisal (PRA) for the staff of its partners and OFPEP from Kenya and Uganda in February, 1997 OFPEP recognized that farmers have valuable agricultural knowledge on their environments, and they have very good reasons for their farming practices However, there are new agricultural problems which may need external interventions OFPEP therefore used the valuable farmers' knowledge and reinforced it with modern science and current but relevant research findings to produce excellent and sustainable results

The program operated through several organs, including the national advisory councils which were made up of all the administrators of the partners and OFPEP staff In each country, there were also advisory technical teams which were made up of all technical staff of collaborating partners and OFPEP extension staff The councils determined OFPEP's program policy issues in a given country, while the advisory team dealt with program's technical and development issues The farmer communities became fully involved through the needs assessment, decided the types of technologies they wanted to try to address their needs, established demonstrations on their own land and assessed

the performance of these technologies The farmers then advised the program which technologies worked best under their conditions The role of the program was therefore simply to make more of the desired technologies available to the farmers in more communities This program was therefore fully participatory

Demand Driven Approach

OFPEP only responded to farmers' needs when there was a widely felt demand To that extent OFPEP was always demand driven This further assured that any results accruing from the program's on-farm activities was immediately usable by the farmers

On-farm Demonstrations

OFPEP tested the best option technologies as on-farm demonstrations The demonstrations enabled farmer groups and observers walking on village paths and roads to see and enquire about the new technologies Seeing is believing Therefore these demonstrations became valuable learning classrooms and practical training for farmers, extension staff and scientists They were also used for practical training for high schools, and for students of agriculture from colleges and universities The farmers were able to see a large menu of technologies and were able to select the best ones which suited their conditions These technologies diffused from these demonstrations and farmer groups to the wider community through farmer to farmer or extension field staff New seed varieties were often multiplied on demand and sold to more farmers Some very successful farmers specialized in seed multiplication and some of them produced up to 10 tones of seed annually This assured sustainability even when the program comes to an end

3 OFPEP Achievements

During the last five years of OFPEP (October 1992 to October, 1997), OFPEP made a number of significant achievements These included a quarterly newsletters -- Of Soils and Seeds -- which was published in both English and French. This newsletter reached many countries all over the world, and it is found in libraries of many institutions worldwide OFPEP's mid-term evaluation recommended a number of changes and areas which needed improvement These areas were addressed and the program became much stronger One of the areas which needed strengthening was regular staff training in new technologies The other was the need for more documentation on the activities of the program There was also need for developing visual training materials for farmers and field extension staff One of the achievements was evaluating the program through the farmers' eyes Farmers were given simple disposable cameras and they were asked to take pictures of farming constraints, useful results of the program and their successes as a result of the program The colored pictures were annotated and compiled into a publication by the same name "Through the farmers' eyes" This was a great success

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AS OFPEP ENDS, WHAT DID WE ACHIEVE AND WHAT LESSONS DID WE LEARN?
By Moses Onim

A study on the impact of OFPEP technologies on smallholder farmers was also carried out in Kenya and Ethiopia in June, 1997 *(Byaruhanga et al 1997)* This study analyzed factors which influenced technology adoption Some of the findings of this study were (a) 70% of the survey respondents said they had been trained on all OFPEP technologies, (b) 90% of the farmers tried the technologies in anticipation of increased yields, (c) 71% tried these technologies for improved food security, (d) 56% tried them for improved soil fertility, and (e) 56% for early crop maturity These were mean results from all the OFPEP districts These were great successes However, in districts where farmers had prior exposure to these technologies, e g due to their proximity to urban centers, the adoptions rates were much lower (34 6% in Vihiga district, Kenya)

In the same year, another study called "Impact of the OFPEP Approach on its partners" was also carried out in 1997 through all OFPEP countries in the Gambia, Senegal, Ethiopia, Kenya, and Uganda *(Cabanis, 1997)* The results of this study showed that (a) OFPEP collaborators were all committed to the program, and this spoke well for the program's choice of partners, (b) the OFPEP collaborators were very pleased because OFPEP program produced concrete results, and it was not top-down, (c) 44 partners (90%) felt that OFPEP had done an adequate or more than adequate job adhering to a research-based definition of the elements of collaborative work, (d) with regard to the five best practices of successful collaboration, 34 organizations (88%) rated OFPEP as moving towards achievement of all five outcomes, and (e) asked on organizational change as a result of collaboration with OFPEP, it was reported " collaborative experience with OFPEP has had dramatic effects on the way partner organizations function, interrelate with each other, make use of resources and structure themselves" (Executive summary, page 4)

The final evaluation of OFPEP was extremely supportive and in a summary said that the program must now move to a new phase with higher technologies like field mechanization, the use of herbicides and more commercial production It has been a very successful program

4 Lessons learned

There are several lessons learned from the experience of working in OFPEP for the last six years (a) With a relatively modest budget and field staff, a well focused and managed program can achieve a high level of collaboration and trust with partners and achieve a lot of development (b) Pooling together resources from committed partners can enable organizations working on the same development problems achieve excellent results with least duplication of efforts (c) When development workers humble themselves and trust farmers' knowledge in agriculture, and view farmers as equal partners in development, very high adoption rates of introduced technologies can be achieved (d) Government ministries and a few partners came into collaboration with very high expectations for material benefits for themselves and their organizations, thereby losing sight of the primary objective of working with, and for the, resource poor farmers

5 What I should wish to do differently in a similar development rural program

I would like to recommend the hiring of qualified but also more experienced field staff who would have more confidence in the delivering of program technologies, with minimum additional training With a limited budget which did not even provide for adequate transport for the field extension staff, the tendency was to hire younger, often fresh graduates from the universities, with little field experience However, with the above excellent results, it is clear that with all the handicaps and limitations, these young staff did a starling job!

With the above concerns, I would insist on motorcycles for all my field extension staff, and request for slightly higher salaries

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2 Cabanis, J M 1997 On-farm Productivity Enhancement Program Impact of the OFPEP Approach on its Partners, A Survey-Based Study of the Collaborative Process Center for PVO/University Collaboration in Development Western Carolina University pp 74

V. Program Evaluation Summaries

A. Impact Study in Kenya
B. Collaboration Study
C. Final Evaluation
D. Ethiopia's Performance Assessment

Factors Influencing Technology Adoption and the Impact of OFPEP on Rural Communities in Western Kenya

Summary and Conclusions of the Impact Study

Factors Influencing Technology Adoption and the Impact of OFPEP on Rural Communities in Western Kenya

Summary and Conclusions of the Impact Study

Over the last twenty to thirty years, an enormous number of studies has been done regarding the adoption of technology by farmers in less developed countries The results of these studies have generally indicated that certain factors, more than others, contribute to technology adoption Some of these factors, particularly gender, age, education, farm size, and off-farm employment, have been examined in this report and in most instances appear to support the findings of the earlier studies

The broad objective of this study was to evaluate the performance of the OFPEP activities in five Western Kenya districts This report shows quite clearly, as discussed below, the areas where OFPEP has achieved success and areas where improvement, or more attention, is needed It also reveals certain methodological failures that resulted in the omission of valuable data which, in particular, would have helped to demonstrate more clearly the rate of technology adoption per household

The overall results of this study can be best highlighted within the context of specific objectives of the study One of the those objectives was to ascertain the level of farmer exposure to and trial of the OFPEP technologies The results of this study reveal that various technologies introduced by OFPEP have, generally, been received by farmers Following OFPEP demonstration plots and training sessions, about 70 percent of the survey respondents have had the exposure to all the technology categories which had been designed for the main target crops The majority of the farmers tried the technologies in anticipation to increased yields (90%), improved food security (71%), improved soil fertility (56%), and early crop maturity (56%) This objective was fairly well met in all the five districts The only low success in respect to the trial of the technologies is indicated by Vihiga district which had the lowest percentage (34 6%) of the trial

The second objective of the study was to analyze the factors influencing the technology adoption The study examined gender, age, education, farm size, number of adults in the household, and off-farm employment as factors likely to influence technology adoption The report shows that farm size, education, gender, and age had a very significant influence on the rate of technology adoption in the five districts In contrast, off-farm employment and the number of adults in the household do not appear to have any significant influence Although the report suggests some possible explanations as to why these factors have less influence, further research is needed to demonstrate clearly the role they have played in technology adoption Another factor (if it can be viewed as a factor) that may also have significantly influenced technology adoption in Western Kenya is the approach OFPEP takes to introduce the technologies to the farmers Farmers are treated

with respect, they are voluntarily involved in OFPEP activities, and their expertise and experiences are utilized as the foundation on which to build their farming skills and to expand their capacities for sustainable productivity

The third objective, which is an extension of the second objective, was to determine the extent to which OFPEP technologies had been adopted The survey results indicate that in many cases OFPEP has been able to successfully introduce technologies which have been adopted to varying degrees by a large percentage of the population in the five districts Across all districts, about 64 percent of all respondents in Homa-Bay, Migori and Siaya adopted all the three technologies, while the adoption rates for Vihiga and Kisumu were merely 34 6 and 48 3 percent, respectively Given that the new technologies were introduced in 1994 and the evaluation study conducted in early 1997, it is likely that many farmers have not achieved final adoption In particular, factors which could have constrained technology adoption, especially in Vihiga and Kisumu, include small farm size, inefficient follow-up by farm extensionists, and prior exposure to technologies (e g , goat program) competing for the same resources Regardless, a very high percentage of respondents who tried the technology either partially or completely, adopted the technology

The fourth objective was to assess the socioeconomic impacts of the OFPEP technologies in terms of changes (negative or positive) in income, food security, farming skills, workload, gender roles, quality of life and many other aspects of their social dimension According to this table, over 70 percent of the survey respondents in all five districts indicated that the adoption of OFPEP technologies had increase their personal as well as household incomes, improved food security, and improved household nutritional status Another 68 6 percent of the respondents report that OFPEP technologies improved their farming skill levels About 50 percent of the respondents were able, as the result of increased income, to pay school fees and purchase educational materials Also, as the result of increase income, 42 3 percent of the respondents were able to purchase livestock as a form of savings These socioeconomic impacts are consistent with the goals of OFPEP which aim at improving the quality of life of the people

The study, on the other hand, indicates some areas, or problems, that require attention because if left unattended, could jeopardize the accomplishments already made One of these areas, as indicated in Table 21, is that female farmers had a lower technology adoption rate compared to male farmers Given the fact that women are the majority of the farm workers, their inability to adopt the OFPEP technologies calls for some action to address the problem Related to this problem is the finding that 31 percent of the respondents experienced increased workloads as the result of adopting OFPEP technologies In Kisumu, for example, 55 2 percent of the respondents indicated that the technology adoption had increased their work load The reason for this is that agronomic practices (e g , row planting, seed rating, germination count, etc) have turned out to be more labor intensive in the short run than the traditional practices This puts more

pressure on the already busy schedules of farmers, especially women The long-run consequence of this is that food security at household level many be seriously affected

Table 21 Percentage of Survey Respondents Who Adopted Each Technology Type by Respondent's Gender

Survey Respondent's Gender	Seed Activity Technology (ASA)	Soil Enhancement and Management Technology (ASM)	Soil Fertility Improvement Technology (ASF)
	----------Percent----------		
Male	81 3	85 9	89 1
Female	71 2	67 1	72 6

Another problem area, also related to the adoption problem just discussed, is the very low percentage in all the districts reporting improved gender roles following the adoption of OFPEP technologies This means that women continue to bear most of the agricultural responsibilities The implication of this is a clear vicious cycle of low productivity, low income, low nutrition status, and low quality of life Thus, there is a clear need for introducing labor saving technologies But the dilemma is that OFPEP does not provide technologies such as tractor and ox-plows that would alleviate some of the labor burden It is this kind of problem that calls for more collaboration from other NGOs, or even government, to provide complementary services to enhance OFPEP accomplishments

Another area of concern is the indication by survey results that OFPEP technology introductions have been far less successful in Vihiga and Kisumu Vihiga, for instance, had the lowest percentage (34 6%) of the trial of the three OFPEP technologies compared to other districts Also in comparison, it had the lowest percentage (69) choosing "quality of life" as the reason for trying the new technologies, and another low percentage (34 6) choosing "improved food security" as the reason for trying the new technologies Similarly, Kisumu also had a very low percentage (48 3) of the respondents who had adopted all three technologies Compared to other districts, Kisumu and Vihiga had the lowest percentages (37 9 and 38 5 respectively) of the respondents who reported using the OFPEP technologies on "more of their land " Although the report offers some possible explanations for these shortcomings, it would be very useful to conduct a follow-up survey to determine why technology adoption in these two districts is significantly lower than in the other three

The last major area of concern, in terms of future evaluation study, relates to the research methodology This report reveals three important things that the study omitted, but which could have contributed in providing a clearer picture of the adoption and the socioeconomic impacts of the OFPEP technologies One is that the study did not collect

data on differences in the climate, soil types, and topography of the operation areas Second, is the observation that the survey focused primarily on technology adoption at a point in time, thereby generating data that could not help to produce useful chi-squared statistics to show a dynamic adoption of technologies over time and whether or not certain factors are significantly related to technology adoption Third, is the exclusion of non-OFPEP farmers in the study to serve as a comparison group and to make it possible to determine the nature, mode and extent of technology diffusion beyond the target group The study group, however, had planned to survey non-OFPEP farmers but ran out of time and money It is the strong feeling of the study team that any future evaluation study pay closer attention to these three evaluation areas that were inadvertently left out

Regardless of any shortcomings of the study or the negative findings of the report, OFPEP, in collaboration with various NGOs, enjoys high popularity with the farmers and is definitely meeting its stated objective of making a positive impact on the quality of life of farm families

A full copy of the findings of this study accompanies the Annual Report, or is available on request from any OFPEP office

Table 23 Survey Respondents Who Indicated that OFPEP Technologies Either Had Positive, Negative or Other Impacts, by Kenya District

Influencing Factors	Homa-Bay	Kisumu	Migori	Siaya	Vihiga	All 5 Districts
	----------Percent----------					
1 Positive Impacts						
(a) Increased Income	81 0	86 2	100 0	86 7	42 3	80 3
(b) Sent Children to School	42 9	37 9	54 8	70 0	19 2	46 0
© Purchased School Material	61 9	31 0	61 3	66 7	26 9	49 6
(d) Improved food Security	76 2	69 0	96 8	86 7	50 0	76 6
(e) Purchased better health care	42 9	31 0	51 6	43 3	26 9	39 4
(f) Improved home	19 0	13 8	16 1	30 0	11 5	18 2
(g) Improved family nutrition	66 7	86 2	87 1	90 0	50 0	77 4
(h) Improved gender roles	14 3	13 8	12 9	6 7	7 7	10 9
2 Negative Impacts						
(a) Decreased leisure time	0 0	10 3	6 5	0 0	15 4	6 6
(b) Increased work load	33 3	55 2	29 0	23 3	15 4	31 4
© Decreased male head of household income	0 0	3 4	0 0	0 0	0 0	0 7
3 Other Impacts						
(a) Purchased non-educational material	28 6	51 7	38 7	46 7	11 5	36 5
(b) Purchased Livestock	61 9	48 3	48 4	40 0	15 4	42 3
© Increased Social status	14 3	37 9	22 6	36 7	19 2	27 0
(d) Improved Parent's skills	71 4	58 6	71 0	90 0	50 0	68 6
(e) Increased demand for hired labor	28 6	44 8	25 8	23 3	15 4	27 7

Source Primary Survey data

The Impact of the OFPEP Approach on its Partners

Summary and Conclusions of the Collaboration Study

The Impact of the OFPEP Approach on its Partners

Summary and Conclusions of the Collaboration Study

Executive Summary

The On-Farm Productivity Enhancement Program (OFPEP) addresses not just the agricultural challenges of the African smallholder, but also the social and economic context in which those challenges exist The result—"the OFPEP approach"—is a model of technology transfer based on participation and collaboration One key element of the approach is working through and with local organizations and resource institutions to reach farmers

Why This Study?

This study's purpose is not to address the success of the specific initiatives via technology adoption rates or other easily quantifiable concrete outcomes Instead, we set out to explore how the educational, people-involvement approach of OFPEP may have affected those outcomes and, in the process, altered the self-sufficiency of farmers, strengthened local organizations, and created a climate where not only the farming techniques introduced, but also the collaboration among people and organizations in the field, is sustainable over the long term with or without OFPEP facilitation

Studying the interactions between individuals, between individuals and organizations, and between organizations over a five-year period and at a distance of some 10,000 miles provided quite a challenge This study honored the participatory research philosophy of OFPEP by going directly to the source for information about the experience of collaboration Fourteen community-based farmers' organizations, 20 NGOs, 11 international PVO/NGOs, five government agencies, and one research institution were selected from the total 143 of organizations participating in OFPEP Ten women's organizations were included in the survey population, while another 19 organizations were gender-balanced

The study was initially limited to Senegal, Uganda and Kenya, Ethiopian partnerships being too recent, it was felt, to give a clear picture of how the collaborative process was working The Gambia was added to the scope of the study even though OFPEP had not been active there since USAID interrupted funding for projects in the Gambia in March, 1995 We felt that this would help show to what extent the collaborative process had established networks and linkages among existing local groups which were capable of enduring even in the absence of the coordinating agency

The Collaboration Study has three purposes

To benchmark OFPEP's collaborative process against existing literature on what makes for a successful collaborative effort

To go to the source and ask the organizations who were our partners in collaboration what worked well and what could be improved upon

To develop a profile of the type of organization most likely to be active and successful for future collaborative projects

The foundations of our survey instrument were supplied by ***Collaboration Making It Work*** (*Paul W Mattessich and Barbara R Monsey, Amherst H Wilder Foundation, St Paul MN, 1992*) This publication, based on a meta-analysis of 18 successful collaborative social service projects in the United States, defines collaboration and identifies the critical elements of collaboration and the key best practices of successful collaborative efforts We used these five research-based best practices to benchmark OFPEP's activities in the field

New services were created or access to existing services improved
Costs of administering programs reduced or better programs offered for the same cost
Duplication of programs or services was avoided
Communications amongst organizations were improved
Organizations involved developed continuing connections with each other, information Sharing continues after program completion

OFPEP has quite a different history in, for example, the Gambia, than in Uganda and these historical differences show up clearly in the data However, overall, the surveys are overwhelmingly positive Even those that have pages and pages of complaints and suggestions for improvement are extremely positive about the process and the program, and this outpouring should be considered evidence of the intensity of their engagement in the process and with the program

The questionnaire was divided into three sections, addressing the three purposes of the study Here is a brief overview of the highlights of the survey results for each of these sections

Section I focused on the participating organization, its mission, history, previous experience with collaboration, and commitment to collaboration

All the partners are committed in some way to helping poor communities become healthier and more prosperous by promoting sustainable agricultural and income-producing activities Since one of the primary benchmarks of a successful collaboration is shared vision, this congruence of missions speaks well for the process by which the program recruited partners

In general, the partners displayed a fairly good understanding of the collaborative process in general, although some of the small NGOs and farmers' organizations provided answers that demonstrate a historical involvement in top-down relationships, as receivers of inputs rather than as equal contributors

For the majority of the farmers' organizations, OFPEP has represented the first, or one of the first experiences with collaboration For these organizations, the difference between a collaborative program and the other aid programs they have been familiar with is often not clear As noted earlier, when asked to define collaboration, they often make statements that clearly reflect a bias toward being one-down in the relationship with aid organizations

About half of the respondents supplied explanations as to why they felt their previous collaborative experiences had succeeded or failed From these responses, two principal themes emerge (1) OFPEP partners identify a successful collaboration by its successful concrete outcomes Our partners are looking for practical, everyday outcomes they can use And (2) OFPEP partners also understand the value of *process*, 18 of the 25 organizations that provided explanations as to why their previous collaborations had succeeded or failed cited *process-related factors* Issues of poor communication and misrepresentation, failure to take responsibility, and poor planning are mentioned as reasons for project failure As components of success participation, commitment, close personal ties, vision, inclusion, trust and communication were cited

And, perhaps most telling, even in cases where the outcomes were successful, process issues sometimes led the partner to feel the collaboration had failed

Section II focused on the OFPEP experience itself and asked partners to judge and rate OFPEP on how well we operated as a collaborative partner Among the most interesting results that emerged from the data

All but one of the partners interviewed reported experiencing organizational synergy as a result of the collaborative process

Benchmarking against a standard definition 26 organizations (53%) rated OFPEP as conforming Mostly or Completely with the definition of collaboration provided, a further 18 (37%) said conformance was Adequate Thus, 90% of our partners felt that OFPEP has done an adequate or more than adequate job of matching up to a research-based definition of the elements of collaborative work

Benchmarking against the five best practices of successful collaboration 43 organizations (88%) rated OFPEP as at least Moving Toward Achievement of all five outcomes, of those, 22 organizations (45%) rated OFPEP as having Nearly Achieved or Achieved those outcomes

When asked if collaboration itself had brought tangible benefits to the farmer, many respondents had trouble separating out the benefits that derived from collaboration from those that derived directly from the new technologies themselves, therefore, only 33 partners answered this question However, of those 33, 32 (65% of the survey population) said that tangible benefits had accrued to the partners from the collaborative process

The collaborative experience with OFPEP has had dramatic effects on the way our partner organizations do business, interrelate with each other, make use of resources, and structure themselves Respondents were asked to indicate whether or not changes had taken place within their organizations in five areas Changes in mission or objectives, in organizational structure, in operations, in personnel, and in community presence or support Highlights include 26 organizations created new methods of service delivery, 19 reported a more participatory management style within their own organization, 34 said their personnel (staff and volunteers) had gained in technical skills, 28 reported organizational learning from access to new sources of information, and 35 reported that their participant base had increased

Section III/ asked partners to look into the future, to predict how well the lessons of collaboration would persist even in the absence of OFPEP, and also to offer suggestions for how collaborative efforts could be improved

All but two of the surveyed organizations indicated that they felt the relationships established within OFPEP would continue after the program itself ended, and 28 organizations are already involved in new collaborative ventures

Respondents offered pages and pages of advice on how future collaborations can run more smoothly, be more participatory, and achieve greater success In brief, they want more training, more joint planning, more access to lead agency staff and to each other, and increased accountability

Conclusions

While, according to the definition of collaboration established by Mattessich and Monsey, OFPEP cannot be said to be a truly collaborative venture, lacking the elements of a jointly-developed structure, mutual authority and shared accountability, the program has incorporated many elements of collaborative culture and, to the extent that collaboration and participation have been practiced by the coordinating agencies, these have contributed significantly to the sustainability of OFPEP's initiatives Local organizations have been strengthened, the farmers who are beneficiaries of the program have gained in self-sufficiency and concrete skills through their participation, and the ground has been laid for the seed and soil technologies—and for the "technology" of collaboration—to continue beyond the closeout of the program itself

Further, the study lays the groundwork for future programs to incorporate an even greater degree of collaborative process By soliciting the input of these partner organizations into how collaboration can work better in the future, the OFPEP Collaboration study has made it possible to include in planning and program design suggestions that come directly from the beneficiaries

It is our hope that the insight and experience that these partners have shared with us--particularly the farmers grassroots organizations--will be regarded as valuable input into the design of future agricultural projects The participation of these farmers in the form of their painstakingly completed questionnaires should not be taken for granted Those of us who worked on the study are humbly grateful to the farmers who took time from their crops, homes, and children to offer us the wisdom born of experience We hope their contribution will come back to them in the future in the form of improved and ever more effective programs

OFPEP FINAL EVALUATION EXECUTIVE SUMMARY

OFPEP FINAL EVALUATION EXECUTIVE SUMMARY

In May 1997, an external evaluation team led by Mr John Zarafonetis visited the four OFPEP countries to assess the achievements and impact of OFPEP on collaborating institutions and participating farmers' communities during the 1992-1997 period John Zarafonetis was assisted by Dr Naraine Persaud during the major part of the evaluation program Ms Sallie Jones, Chief, USAID/BHR/PVC, and Ms Mary Liakos participated in the evaluation in Senegal Conclusions of the evaluation supported the OFPEP approach and indicated that the program has had positive impact on partners and beneficiaries The evaluation team recommended a continuation of Winrock's overall program at the smallholder level when the present OFPEP funding phase ends, and made recommendations that could be included in the implementation plan for OFPEP's sixth year, as well as for a next phase, past 1998

Following are the executive summary, and major findings and recommendations included in the final revaluation report

EXECUTIVE SUMMARY

The On-farm Productivity Enhancement Program (OFPEP) was initiated by Winrock International and a number of collaborating partners with USAID Matching Grant support in October 1992 Central to its purpose is to address two major constraints to agricultural production

1) Availability of viable seeds of appropriate varieties of basic food crops, and

2) Improvement and sustainability of soil fertility through management practices

The program is an outgrowth of the USAID Matching Grant-supported On-farm Seed Project (OFSP) which began in 1987 in Senegal and The Gambia Success of this project in improving smallholder access to and use of viable seeds of improved varieties led to a continuation, with increased emphasis on cultural practices, particularly soil fertility and improved soil management The anticipated funding level of the current five-year Matching Grant is $2,999,350

OFPEP is concerned with integrating sound technical knowledge with social, cultural and educational conditions at the farm level Unlike most agricultural projects in Africa, which tend to be top-down, OFPEP uses a participatory, request-driven approach where farmers with assistance from OFPEP and its implementing partners use participatory rural appraisal (PRA)

techniques to identify problems and potential solutions related to agricultural productivity OFPEP then serves as a liaison between PVOS, NGOS, and other community groups and research institutions that provide training and information about the tested techniques to stem the decline in soil fertility and improve crop production through better seed varieties

OFPEP initially began operating in Senegal, The Gambia, and Uganda The program was later approved for Kenya, and, more recently, with the decision of USAID to discontinue working in The Gambia, USAID approved transfer of the allocated funds to open operations in Ethiopia in 1995 This evaluation, conducted in May, 1997, included short field visits to all four OFPEP program countries

The evaluation revealed that OFPEP is on track to meet the goals and objectives of the Matching Grant Field visits confirmed that OFPEP has had considerable impact on actual agricultural production, food security and income generation Largely due to exposure to and adoption of OFPEP technologies, farmers have increased productivity in rice, sorghum, millet, groundnuts, maize, cowpeas, cassava, wheat, teff, barley, and vegetables It is estimated that more than 250,000 farmers are participating in OFPEP, and the evaluation team saw evidence that the programs technologies were being adopted by non-participants

There was also anecdotal evidence that OFPEP has contributed to changes in the daily lives of farmers Although hard to document, farmers, many of them women, spoke of having more options and greater control over the decision-making processes that affect their daily lives

In addition to these and other impacts on farmers, OFPEP has impacted a number of implementing partners in the four countries through training and technical assistance and backstopping Working with these groups has allowed for extension and diffusion of seed and soil technologies Indeed, the evaluation showed that many of these groups have benefited from increased program impact, capacity and prestige as a direct result of their participation in OFPEP

The evaluation also found that OFPEP has forged important linkages with research and academic institutions in the four countries While not enough of these linkages have been sufficiently operationalized during the course of the grant, they offer potential to test and validate research aimed at improving production at the farm level

OFPEP has been opportunistic both programmatically and operationally In all four countries, crops and technologies not in the original program document have been added to meet farmer needs and requests for assistance Other funding mechanisms, some not traditional for non-governmental organizations (NGOs), have been pursued to help finance these activities

The evaluation team found that OFPEP has been appropriate and effective and that it should be strengthened and continued The team's few recommendations focus on opportunities brought on by OFPEP's evolution since the beginning of the grant and on future action Key among these recommendations is that OFPEP expand its objective from improving production to helping subsistence farmers become commercial producers It is recommended that this be done by introducing more technologies and by consolidating certain on-going activities, up-grading staff capacity to train, and making the linkages with research institutions more substantive through joint strategies The team also concluded that although OFPEP is doing relatively well in basic program monitoring and documentation, it could do more to capture its achievements and validate the merit of its participatory approach

EVALUATION FINDINGS

The following is a summary of major evaluation findings (see Section 3 3 for country-specific findings)

- In all four program countries (Senegal, Uganda, Kenya, and Ethiopia), OFPEP has had a positive impact on actual agricultural production, food security and farmer income

- In contrast to traditional project-oriented technology programs, OFPEP is participatory and demand-driven Rather than promoting technologies, OFPEP is working with farmers to identify constraints to production and then is introducing technologies from which farmers can choose to adopt or not adopt Farmers are involved in program planning, implementation and monitoring and, consequently, this approach appears to be sustainable

- An estimated 250,000 small and mostly poor farmers, many of them women, have learned or are learning about testing and implementing improved seed varieties and soil management technologies for producing basic food crops Depending on the country and on local ecologies and cultural practices, OFPEP has helped farmers to increase productivity of rice, sorghum, millet, groundnuts, maize, cowpeas, soybeans, cassava, wheat, teff, barley, and vegetables Farmers have eliminated or are reducing the length of the *hungry season* and, in some cases, are producing surpluses for sale

- Field visits and discussions with farmers and farmers' groups reconfirmed that seeds and soil fertility are priorities for the African farmer This reaffirms that the technologies being introduced by OFPEP are relevant as they address real, not perceived obstacles to production The technologies most in demand were those at addressed food security and income generation

- There was anecdotal evidence that OFPEP has contributed to changes in the daily lives of farmers who have adopted the programs' technologies Farmers and farmers' groups spoke of having more options and greater control over the decision-making processes that affect their daily lives

- There is anecdotal evidence that OFPEP has improved the capacity of participating NGOs and CBOs (community based organizations) to plan, organize, and provide training Many groups enjoy increased credibility and prestige because of their participation in OFPEP

- Similarly, OFPEP has helped foster empowerment of women First, this is done by increasing women's prestige as agricultural producers through the introduction and adoption of production technologies and second, by strengthening the capacity of women's groups to plan, implement, and advocate for programs

- There is quantitative and anecdotal data that OFPEP technologies are being diffused laterally and adopted by non-OFPEP participants

- In addition to working with more dm sixty NGOs and farmers' groups, OFPEP has forged important linkages with research and technical institutions in all four countries This is significant as these linkages operate in both directions between the institutions and farmers, and offer opportunities to test and validate research aimed at improving production

- One inherent weakness in OFPEP is its reliance on partner organizations for data collection and reporting Few groups seem to have the organizational capacity to provide accurate and timely information The need to have accurate data for research and program management has placed a burden on OFPEP staff to collect and analyze data themselves

- OFPEP has been opportunistic programmatically and operationally In all four countries, crops and technologies not in the original program document have been added to meet farmer needs Other funding mechanisms, some not traditional for NGOS, have been pursued to help finance these activities

- Despite the apparent complexity of OFPEP's overall management structure, which involves long distances, many players (including WI, the PVO/University Center, four country staffs, and international and local partner agencies), many funding entities and multiple field sites covering large geographic areas, the program appears to be well-managed

- Although highly successful by many indicators, OFPEP's participatory and demand-driven program is not without weakness Participation is, by nature, process-oriented and slow There is a definite limit to OFPEP's capacity to expand continually in order to respond to the myriad needs (requests) of farmers This is leading to over-extension of organizational capacity and is diluting the effect of OFPEP activities and services Moreover, once technology is adopted it automatically generates the need for further technology change and necessitates more follow-up activity

- OFPEP helps fill a void associated with 1) major obstacles to food production and food security in Africa, 2) the ineffectiveness of government extension programs in the four countries, and 3) a lack of linkage between agricultural research institutions and the farmers who are supposed to derive benefits from research and who offer opportunities to test research at the smallholder level

- Because it fills a wide gap, OFPEP is in high demand by farmers because it fills a wide gap between research and extension It is working with more farmers and farmers' groups, with more crops and seed and soil technologies, and in more geographic areas dm outlined in the grant proposal and the detailed implementation plan (DIP) Additionally, some research institutions are beginning to see the value of an OFPEP type program as a broker between their work and farmers This is leading, if it has not already, to a situation where the capacity of OFPEP (and its implementing partners) is being exceeded

- Similarly, the opportunistic way in which Winrock has approached project funding and partnerships also has shortcomings Although most partnership choices have been inspired and mutually beneficial, these organizations have their own agendas and timeliness and vary greatly in capacity Few, if any, groups are in sync with OFPEP, and OFPEP staff must devise separate strategies to work with each partner group

- OFPEP country staff is knowledgeable about the technologies that they are introducing For most training to NGOs or lead farmers they rely on of trainers (TOT), meetings and workshops, demonstration plots, and one-on-one follow-up consultations Some members of OFPEP staff appear to be less dm comfortable with these g methodologies, and all would benefit from exposure to others such as advanced TOT and participatory rural appraisal (PRA) In all countries, methodologies need to be reviewed and expanded and follow-up to needs to be routinized Also, OFPEP/Kenya staff is severely hampered by lack of transport

- The evaluation team heard many requests from farmers for training in non-production technologies and activities including credit, integrated pest management, marketing and postharvest storage

- The progress of the program over the past five years illustrates that OFPEP is poised to move onto Winrock's new paradigm *From Subsistence to Commercial* Some OFPEP-trained lead farmers, for example, are already adopting technologies that have put them past subsistence level A few have become *defacto* seed contractors Some appear to be in a position where the use of small-scale equipment such as seeders would put them over the hump to become commercial This would appear to be a natural development for the program Logic indicates that this may be necessary, as the high labor-intensity of OFPEP's low-resource approach will ultimately reach a saturation point

- OFPEP is not doing enough to capture its achievements- Although progress has been made in the program's monitoring system, the current system does not provide the best information to make better management decisions about the program or to approach potential funders Efforts should be made to better demonstrate how OFPEP is influencing the lives of farmers This is particularly important as OFPEP's future funding is uncertain in all four-program countries, and Winrock is exploring funding opportunities

RECOMMENDATIONS

The evaluation team recommends that OFPEP take the following courses of action if it is to continue to be effective and to improve

1) **Expand the program objectives** The evaluation has shown that among OFPEP's greatest achievements has been the adoption of OFPEP technologies to the point where some farmers have moved from mere subsistence farming to becoming commercial producers The evaluation also concludes that because of the labor-intensity of OFPEP's low-resource technologies, there is a limit as to how much or how many of these technologies farmers are able to take on and at what point returns on this investment of time and labor decrease Moreover, there is a sense that in some instances the introduction of small machinery such as simple seeders or inputs such as rock phosphate may be the most appropriate technology to help improve production With these in mind the **team recommends that Winrock expand the OFPEP program objective from improving agricultural production and food security to include, where practical, assisting small farmers to move from mere subsistence farming to becoming small-scale commercial producers**

2) **Expand technologies** During visits to the field and meetings with OFPEP partners and farmers, the evaluation team heard, in addition to requests for production assistance, great interest in pre- and post-production areas Areas of greatest interest were credit,

marketing, post-harvest storage processing and integrated pest management It appeared to the team that the introduction of non-production technologies would be appropriate for OFPEP in instances when it complemented country strategy, was sequentially appropriate, and was within the capacity of OFPEP staff and the corresponding partner organizations **It is recommended that in certain instances where there is interest and capacity, pre-production and post-production activities be considered as part of the OFPEP approach and introduced to farmers**

3) **Consolidate activities** OFPEP is in great demand by farmers and partner institutions because of its appeal and achievements, and the fact that it fills a wide gap This demand, plus the request driven aspect of the program, have led OFPEP to expand at such a rapid rate that OFPEP's small staff is over-extended and there is a risk that the impact of the program will be diluted Working with new and nascent groups has been especially time-consuming and demanding To maintain program quality and not over-stretch staff capacity, **it is recommended that OFPEP country activities be consolidated geographically to fewer regions and districts as well as to mature implementing partners that have some demonstrated capacity for training and program implementation It is further recommended that in order to clarify roles and expectations, including reporting requirements, OFPEP enter into 'a formal written agreement with each implementing partner**

4) **Improve research linkages** The evaluation revealed that, although OFPEP has had significant success in introducing seed and soil fertility technologies to farmers through its implementing partners, it has been less successful in meeting the objective of linking these groups with national and regional research and academic institutions The evaluation team concluded that OFPEP's country and regional coordinators enjoy collegial relationships with, and free access to, these institutions, but there has been a natural tendency and preference of OFPEP staff to want to work at the grassroots level Through consolidation efforts suggested in #3, it is hoped that more time would be made available for ups linkages **The evaluation team recommends that each OFPEP country program work jointly with current and potential research linkages in order to develop a liaison strategy**

5) **Improve staff technical and training capacity** Although OFPEP staff are well-known and highly regarded in all four program countries, an overextended workload and an increasing number of complex technologies requested by farmers is resulting in a need for more planning and more technical knowledge The evaluation also revealed that some staff are not altogether comfortable in their roles as trainers and all could benefit from new and alternative training methodologies **The evaluation team recommends**

that OFPEP staff will receive regular supplemental training production technologies and be introduced to alternative training methodologies including advanced versions of TOT and PRA

6) **Improve the capability to capture the OFPEP experience** The evaluation revealed that OFPEP is doing relatively well in basic program monitoring and in documenting evidence related to OFPEP technologies It does not appear, however, that OFPEP has done enough to validate its overall participatory, demand-driven approach To the team, this seems critical as OFPEP is faced with some levels of uncertainty regarding future funding in the four program countries, has an interest in expanding to other countries, and has begun to approach non-USAID sources of funding for support Because the 18-month extension of the matching grant represents a transition time of sorts, **it is recommended that WI and the PVO/University Center develop ways of better capturing the achievements of OFPEP with an eye towards validating the OFPEP approach**

Summary of Ethiopia Performance Assessment

Summary of Ethiopia Performance Assessment

I. INTRODUCTION

OFPEP operated at the field level in Ethiopia during the 1996 and 1997 cropping seasons Its implementing partners were Christian Children's Fund (CCF), Africa Village Academy (AVA), and Agri-Service Ethiopia (ASE) Partner farmers as well as non-partner farmers were involved in activities such as PRAs, demonstration plots on fertility improvements and improved varieties, and evaluation of crop performance Yield data was collected and recorded by farmers and analyzed by them during field days

OFPEP ceased to operate in Ethiopia at the end of 1997, and a performance assessment was undertaken jointly by staff from AVA/OFPEP and members of the partner organizations with guidance from the PVO/University Center Its primary aim was to explore the level of understanding of the demonstrated technologies and the extent of their diffusion, as well as the OFPEP approach

The specific objectives for the study were to

1 Assess the level of OFPEP technology exposure and the options introduced to farmers, collaborating organizations, and development agents (DAs),
2 Determine the factors influencing farmers' criteria for selecting OFPEP technologies,
3 Assess the changes made in decision-making processes, the up grading of skills, and the attitudinal changes stimulated in the community by OFPEP technologies,
4 Assess the influence of the OFPEP approach on collaborators,
5 Conduct a case study on three OFPEP partner farmers and the results of their trials with OFPEP

II. METHODOLOGY

Two former staff members from OFPEP/Ethiopia together with staff from collaborating organizations conducted the performance assessment A semi-structured interview technique was devised for group and individual farmer interviews, and 3 case studies were also conducted All three geographical areas of intervention were included in the study North Shewa area with CCF, Kerabu Harbu area with AVA, and North Omo with ASE

III. FINDINGS

The assessment found that OFPEP farmers, non-partner farmers, and collaborators were all

positive about their experience with OFPEP As might be expected, however, they were concerned that the program was ending after such as short period of operations They felt that a longer period to solidify the use of the technologies and approach used by OFPEP would have been beneficial

A Farmers Opinions

Not surprisingly, most farmers joined the program in order to learn about new technologies that would help to increase their agricultural production Some of them had had positive experiences with extension programs with our collaborating partners, while others wanted to see if OFPEP offered something other than the present government extension program with its high input standardized package They liked the idea that OFPEP would demonstrate several technologies on small plots of ground for them to observe, analyze, and select

In the second cropping season, farmers who had seen the results of the previous year were eager to join the program They especially liked the improved seeds, seedlings and demonstrations of fertilizer application (In the ASE North Omo areas, farmers mentioned that they especially liked the training on building compost heaps near their fields, so that women and children would not have to transport compost from the homesteads to the fields)

B Advantages Realized by Farmers

The farmers interviewed were unanimous in remarking on the increased yields obtained using improved seeds and fertilizer applications, together with training as contributing to changes in their own farming practices Many farmers added that they were now able to access improved seeds of wheat, barley, Teff, sorghum, sweet potatoes, etc on loan from OFPEP partners which they could multiply and distribute to other farmers

Farmers also appreciated the new techniques related to seeding rates, fertilizer applications, and farming techniques such as repeated plowing and weeding They also welcomed the training on producing compost near the farmer plots as an important contribution The farmers interviewed stated that almost all the farmers who were trained in compost making are now making compost For those farmers who participated in the sweet potato demonstrations, they report that the spacing and planting in rows have much improved yields and produced larger tubers They are now using these practices with their traditional varieties as well

C. Diffusion to Non-OFPEP Farmers

In its first phase OFPEP worked with 26 lead farmers and 3 collaborating organizations However, the public nature of the demos and their extensive labeling elicited a great deal of interest in surrounding communities On "Farmer's Day" partner and non-partner farmers were invited to come and evaluate the performance of the demonstrations This new approach in the field of extension work in Ethiopia allowed farmers to test their knowledge of farming practices

and to share experiences with each other On this occasion, technical people from the Institute of Agricultural Research (IAR) and staff of the responsible government bodies from the Bureau of Agriculture were invited to see and comment on what had been done The interaction between the farmers and the technical people was very interesting and educational to both sides This opened the way to create linkages between the technical people and the target communities At least 200 non-partner farmers visited the demonstrations in the different sites in the three project areas

D Changes Made in Farmers' Practices

More farmers report that they are using the methods of compost making presented by OFPEP Of farmers interviewed, 99% said that they have multiplied and saved seeds from their demonstration plots for the next cropping season All farmers interviewed at Farmer's Days expressed interest in trying some or all of the new varieties should they become available This included non-OFPEP farmers as well

OFPEP farmers commented that they have shared their learning with other farmers and encouraged them to try the new techniques Many farmers also spoke of now involving their wives and sometimes entire families in selecting varieties and techniques to be used

E Influence of the OFPEP Approach on Collaborating Partners

The three collaborating partners, CCF, AVA and ASE all expressed their satisfaction with the OFPEP Ethiopia approach They felt that it complemented what the government extension program is lacking and showed staff how they could learn from farmers as well as teaching them They appreciated the fact that the OFPEP approach called for direct farmer involvement in activities from planning, through implementation and evaluation They also expressed appreciation for the general operating style of OFPEP staff, their patience, persistence in overcoming obstacles, and consensus mode of decision making

Partners also gave OFPEP high marks for improving their institutional capacity in several ways The training and practice they received in PRA techniques has improved their ability to conduct community needs assessments, helping their communities to identity their problems and better prioritize project ideas They are continuing the use the results of the PRA's conducted with OFPEP in their program planning

In terms of institutional development in agricultural technologies, the partners listed the various improved plant varieties and associated agronomic practices, how to conduct on-farm demonstrations, and how to organize Farmer Evaluation Days as important experiences that they had gained from OFPEP

IV. CONCLUSION

A consensus emerged from both partners and farmers regarding the value of the OFPEP experience in Ethiopia Overall, they have positive views regarding the OFPEP approach and interventions

Specific aspects of the program that were favorably reviewed are as follows

1 The collection of baseline data using PRA techniques with farmers and partners,

2 Inclusion of land race (farmers' seed) in variety demonstrations,

3 Training of farmers and front line development workers on seed production and maintenance, soil fertility management, and gender issues,

4 Encouraging and creating an environment for farmers to evaluate indigenous technologies and find means of improving the technologies,

5 Encouraging preparation of manure and compost for fertility improvement,

6 Soil analysis of farmers' demo plots,

7 Involving farmers, researchers, and extension agents from problem identification through to the evaluation of introduced technologies and the framing of options for the farmers to choose from, thus enabling them to make the technology their own or to adopt/adapt it to their specific situations

In the two years of OFPEP intervention activities, partner farmers and collaborators have learned several techniques and methodologies that contributed to productivity Because of the short operational period of OFPEP, it was not possible to assess its economic impact However, in terms of the responses given by partner and non-partner farmers, the OFPEP program was a success

As farmers said repeatedly, the time given to accomplish OFPEP activities was very short, and the view of collaborators was the same OFPEP should have continued working with farmers at least for the coming three or more years in order to increase and expand and to bring sustained changes to the traditional farming practices as well as to the income of farmers

The OFPEP-introduced techniques are well accepted by farmers as they have been laid down on

the indigenous practice of each locality The sincerity of the approach, the strong discipline, its practicality in implementing the farming techniques, and the need to follow recommended rates of input application are basic practices now firmly embedded in the farmers' minds Almost all interviewed farmers promised they would continue using all of the techniques and technologies introduced by OFPEP

Collaborators' opinion echoes what farmers have said The joint effort made by OFPEP and collaborators' staff contributed a lot to the results achieved in two years The common outlook between OFPEP and collaborators in agricultural promotion activities was one of the basic points for the success of the interventions

Although farmers and collaborators commented on the time shortage, they did promise to continue using the techniques and technologies introduced The prospect that all who took part in OFPEP activities would continue to apply whatever they acquired from the program in their future activities is encouraging

In conclusion, the OFPEP program, despite its short duration, has been successfully implemented in Ethiopia Farmers are ready to work with OFPEP at any time in the future OFPEP's contribution during the last two years was a great way for farmers to advance to the present, rather than looking only backward at the traditional farming practices

VI. Financial Summary

As illustrated by the attached table, program expenditures were made according to the projections All USAID funds were spent The match contributed by Winrock and its partners exceeded the initial pledge

Not included in the match report, but very important to OFPEP's success, were the additional funds leveraged from other U S federal sources, e g , the USAID missions in Ethiopia and Senegal, and the USDA funds for Senegal (about U S $200,000) Innumerable contributions made by "in-kind" by local research or NGO partners were not specifically accounted for, and reported, but were equally essential to the program success

Global Financial Report, Years I-VI

USAID FUNDS			BUDGET	YEARS I-VI
I	SALARIES AND WAGES			
	A	FULL TIME FIELD STAFF	209 639	206 581
	B	HOME OFFICE SUPPORT	126 542	132 345
	TOTAL SALARIES AND WAGES		336 181	338,926
II	FRINGE BENEFITS		131 013	131 989
III	SHORT-TERM SPECIALISTS		111,405	112 958
IV	TRAVEL AND PER DIEM			
	A	AIRFARES	99 109	105 832
	B	PER DIEM	62,125	62,876
	C	MISCELLANEOUS	7 812	10,165
	TOTAL TRAVEL AND PER DIEM		169 046	178 873
V	ALLOWANCES		13 066	13 148
V	IN-COUNTY COSTS			
	A	LOCAL HIRE STAFF	267 543	229 537
	B	WEST AFRICA	244,196	234 672
	C	EAST AFRICA	262 693	291,568
	TOTAL IN-COUNTRY COSTS		774 432	755 777
VII	OTHER DIRECT COSTS		38,618	45,336
VIII	PROCUREMENT		5 929	4 395
IX	SUBCONTRACTS			
	A	PVO/JOINT CENTER/WCU	991 191	990 855
	B	ACDI (UGANDA)	347,408	334 133
	C	SAVE THE CHILDREN	176 370	167 673
	D	PACT	20 896	29 592
	TOTAL SUBCONTRACTS		1 535,865	1 532 253
X	INDIRECT COSTS		183 843	185 742
	TOTAL COSTS-AID SHARE		**3,299,398**	**3,299,398**
COST SHARE MATCHING				
SUBCONTRACTS-PVO MATCH				
	A	PVO/JOINT CENTER	342,505	334 336
	B	ACDI (UGANDA)	132,438	157,625
	C	SAVE THE CHILDREN	66,835	110,669
TOTAL SUBCONTRACTS			541 778	602 630
MISCELLANEOUS-WI SHARE			161,148	119 083
OVERHEAD-WI SHARE			458,144	485 993
TOTAL COST SHARING			**1,161,070**	**1,207,706**

PROGRAM CHRONOLOGY

1987-1992	On-Farm Seed Program (OFSP) Senegal and the Gambia
Oct 1992	On-Farm Productivity Enhancement Program (OFPEP) begins in Senegal The Gambia and Uganda
April 1994	Limited OFPEP activities begin in Kenya
December 1994	Mid-Term Evaluation Report
May 1995	USAID withdraws funding from programs in the Gambia including OFPEP
June 1995	OFPEP begins operations in Ethiopia
February 1996	All-OFPEP Workshop held in Kisumu, Kenya
May 1997	Final Evaluation
September 1997	OFPEP extended by one year with limited additional funding
December 31, 1998	End of OFPEP

Kenya—OFPEP Partners

International NGOs

CARE/Kenya
Christian Children s Fund
U S Peace Corps
World Vision International
Food Industry Crusade Against Hunger (FICAH)

University/Research Centers

Kenya Agricultural Research Institute (KARI)
International Center for Research in Agroforestry (ICRAF)
Sigoti Agricultural College

Non-government Organizations (NGOs)

Grail Community Development
Lagrotech
Sustainable Community Oriented Development Program (SCODP)
Mobilizing Against Desertification
Anglican Church of Kenya
Methodist Church
Family Planning Association of Kenya

Community-Based Organizations (CBOs)

Kawuonda Women's Group
Ogoro Women's Group
Hodi Women's Group

Government Agencies

Ministry of Education
Ministry of Natural Resources
Ministry of Agriculture, Livestock Development and Marketing

Senegal—OFPEP Partners

International NGOs

Christian Children's Fund
World Vision International
Rodale International

University / Research Centers

Natural Resource Based Agricultural Research (NRBAR)
Research on Accelerated Diffusion of Rice Technology (RADORT)
Senegalese Institute for Agricultural Research (ISRA)
West African Rice Development Association (WARDA)
International Institute for Tropical Agriculture (IITA)
International Potato Research Institute (CIAT)
National Advanced Agricultural School (ENSA)

Non-government Organizations (NGOs)

ENDA GRAF
Diapante
COMI

Community-Based Organizations (CBOs)

GIES (Economic Interest Groups) of Anambe
CBOs of CCF

Government Agencies

U S Peace Corps
National Extension Service

Private Sector

Monsanto Corporation

Ethiopia—OFPEP Partners

International NGOs

Christian Children s Fund
Farm Africa
PACT
Sasakawa Global 2000
VOCA

University / Research Centers

Institute of Agricultural Research (IAR)
International Livestock Research Institute (ILRI)
National Soil Laboratory

Non-government Organizations (NGOs)

Agri-Service Ethiopia (ASE)
Africa Village Academy (AVA)

Government Agencies

Ethiopian Seed Enterprise (ESE)

Uganda OFPEP Partners

International NGOs

World Vision/Uganda
Agricultural Cooperatives Development International (ACDI)
Christian Children's Fund (CCF)
COOPIBO-Belgium/Uganda
World Vision International

University / Research Centers

International Institute for Tropical Agriculture (IITA)

International Potato Research Institute (CIAT)
International Center for Research in Agroforestry (ICRAF)
Namulonge Agricultural and Animal Research Institute
Serere Agricultural and Animal Research Institute
Kawanda Agricultural Research Institute
Makerere jUniveristy
National Agricultural Research Organization

Non-government Organizations (NGOs)

Talent Calls Club
Uganda Association for Social Economic Progress
Young and Elderly in Society
Kisimba Moslem Mission
Multi-Purpose Training and Employment Association (MTEA)
Joint Energy and Environment Programs (JEEP)
Uganda Oil Seed Processors Association
Uganda Cooperative Alliance

Community-Based Organizations (CBOs)

Buzaama Growers Cooperative Society
Kisimba Moslem Women=s Group
Makindu women=s Group
Mawoto Women=s Group
Tulikimu Najja Women=s Group
Ndabakuki Women=s Groups
Tusitukire Waamu Women=s Group
Lumuli Women=s Group
Mawangaala Women=s Group
Nyenje Farmers Group
Agali-Awamu Association
Kyosimba-Onanya
Misindye Farmers= Group
Kasaayi Farmers= Group
Namulesa Group
Lubongo Farmers' Group
Ddungi Farmers' Group
Kiyindi Farmers' Group
Busagazi Farmers' Group
Gulama Farmers' Group
Ndolwa Farmers' Group
Njru South AIDS Initiative Program

Wekembe Contact Farmers Association
Zibulatudde Farmers' Group
Kitabazi Farmers' Group
Ajiija Farmers' Group
Bujjuta A Farmers' Group
Naava Rd Economic Group
Kinoni Economic Group
Mukwanya Rd Economic Group
Busabalamu Agro-Silk Development Association
Baitambogwe Fruit Farmers= Association
Toka Farmers Group
Kamukamu Women's Group
Tuje Tugezeku Women's Group
Wairama Women=s Group
Mpande Tweyambe Women=s Group
Kalungami Health Care Project
Namulanda Youth Group
Bunabbala Labe Women Group
Bugwe Youth and Women Group
Yaniyamaite Women Group
Bugabwe Green dramatic Group
Busiime Rural Development Association
Busaba CCF Project
Buyngo CCF Project
Buhwama CCF Project
Busabi Development Association
Buhenye CCF Project
Kigulu Development Group
Kigulu Development Group
Rural Education Programme for Development
Multi-Sectoral Rural Development Project (MSRDP)
Agooma General Enterprises
Busiki Multi-purpose Development Association (BUMURUDA)
Sihubira AFF Project
Kidoko Women Development Association
Gababiri Development Association
Morekebu Women=s Association
Atirir Women=s Association
Babiri Bandu Farmers Association
Koyoro Women=s Club
Buteba women=s Rehabilitation Association
FURA Fellowship

Nambule Mudebi Youth Club
Mudodo Women Farmers= Group
Abur CCF Project
Adhola Social Services Center
Poyameri CCF Project
Mari Group
Budoba Hiri Hyanjobe Framers Group
Papoli Active Women Association
Poyameri United Women Association
Osukuru Young Farmers Association
Asinget Women Charitable Association
Abur Foundation for the Unfortunate People
Aminari Mukujju
Mukujju Farmers Association
Katerema Women=s Group
Amoni 1 Women Association
Amoni 11 Women Association
Angololo women Association
Agola Farmers Association
Osukuru c/u Farmers
Sindwala Rural Development Association
Budumba United Farmers Association
Kalait Farmers Association
Amoni-Kakinet Farmers Association
Tororo Arch-Deaconary of the Church of Uganda
Budhwege Gospel of Peace Group
Mayuge Women Group
Musubi Development Association
P I E D , Nakalama
Kitaigawa Farmers Group
Multi-Sectoral Environment Development Association
Namayemba Women=s Group
Kisowogi Women=s Group
Kikalu/Namakoko Women Group
Lwatama Development Group
Kisega Women=s Group
C A R D Baitambogwe
Namadu Group
Ikumbya Group
Nabyoto Group
Gwembuzi Farmers= Group

Namakoli Farmers= Group
Matovu Farmers= Group
Nawango Farmers= Group
Kigobero Farmers= Group
Namuntenga Farmers Group
Isenda Farmers= Group
Naisamula Women Group
Nabitulta Women Group
Nakisenhe Adult Literacy Class
Masita Youth Group
Bugalama Farmers Association
Bubago Farmers= Group
Mukitono Rural Rehabilitation and Development (MURRAD)
The Corner-Stone Orphans Education Association
Club-Zuka
Musubi Development Association

OFPEP List of Publications

Title	Author	Date
OFPEP General	**OFPEP**	**OFPEP**
Food Production Sector Report on Survey on Improved Rice Seed and Technology Adoption Rate (The Gambia)	Alhaji Bah	5/93
ON-FARM Productivity Enhancement Program - Training of Trainers for Seed Activities	ns	7/26/94
Consultancy Report on Monitoring and Evaluation	Jim Rugh	10/10/94
Mid-Term Evaluation of OFPEP	Jim Rugh	10/18/94
Winrock and Smallholder Farmers Realizing Visions Through Partnerships	ns	5/6/97
Workshop on Collaboration Radort/Nari, Ngos, Das, and Ladep	Remileku Cole	12/17/97
The Winrock OFPEP Impact and Lessons Learned in West Africa	Pierre P Antoine and Francis C Byrnes	10/18/97
Impact of the OFPEP Approach on It's Partners A survey-Based Study of the Collaborative Process	Jeannette Cabanis	12/97
World Food Demand-Supply Balance The Role of Sub-Saharan Africa, the Caribbean, and the Poorest LDCs	Pierre Antoine and Brad Rutherford	ns
End OFPEP General	**End OFPEP General**	**End OFPEP General**

UGANDA	UGANDA	UGANDA
Consultant's Report on Initiation of the Seed Component of OFPEP Uganda for Winrock International and ACDI	Tom Osborn	11/3/93
Role of Women in Agriculture	Cissy Katunze	10/15/94
Uganda OFPEP Training of Trainers' Workshop on Soil Conservation and Soil Fertility Proceedings	Moses Onim	1/28/95
Marketing Small-Holder Farmer's Soya Beans in Uganda (A consultancy Report for OFPEP)	Benjamin Ekoot	5/95
ON-FARM Productivity Training of Trainers for Seed Activities	Rose Sigar, Robert Ondigo, Moses Onim	7/18/95
Joint OFPEP - Coopibo Programme to Promote New A-CMV Tolerant Cassava Varieties and the Rapid Multiplication Rooting Chamber in Eastern Uganda	ns	1996
An Internal Evaluation of Gender T O T S Conducted in Tororo District During 1996	Beatrice Luzobe	1/97
Proceedings of the PRA Review Workshop At Rock Hotel - Tororo (Uganda)	Beatrice Luzobe and Adeline Muheebwa	9/8/98
Baseline Surveys for Soil Fertility and Conservation, and Review of Demonstrations in Iganga and Tororo Districts in Uganda	J F Moses Onim, Tom Osborn, and Francis Oching	ns

Soil Fertility Plant Vigour in Response to Animal Manure in Iganga District	ns	ns
OFPEP Gender Issues	Beatrice Luzobe	ns
End UGANDA	**End UGANDA**	**End UGANDA**
ETHIOPIA	**ETHIOPIA**	**ETHIOPIA**
AVA/OFPEP - Ethiopia Report on Planning Workshop	ns	1/23/96
Report on Participatory Rural Appraisal (Western Shewa Administrative Region)	OFPEP	4/10/96
AVA/OFPEP PRA Training	ns	4/11/96
Report on Participatory Rural Appraisal (Northern Shewa Administrative Region)	OFPEP	6/96
Photo Baseline Experiment Report	Asrat Asfaw	10/96
Chemical and Physical Characteristics of Soils of Chelbe and Zefano Peasant Associations of North Omo Zone in Southern Ethiopia (Draft)	Eyasu Mekonnen	ns
OFPEP Activities in Weed Control	Eyasu Mekonnen	ns
Training Material for Smallholder Farmers Seed Technology Improvement Programs	Eyasu Mekonnen	ns
Performance Assessment of OFPEP Ethiopia	Asrat Asfaw Bezu Demelash	5/98
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KENYA	KENYA	KENYA
Kenya OFPEP Mid Term Report to FICAH	Rose Sigar	11/94
OFPEP Kenya Training of Trainers for Seed Activities	Ms Rose Sigar Mr Robert Ondigo, and Dr J F Moses Onim	7/18/95
Training of Trainers Workshop on Rapid Multiplication of Cassava Varieties Resistant or Tolerant to Cassava Mosaic Virus and Soil Observation in OFPEP Western Kenya Districts	ns	12/17/96
Factors Influencing Technology Adoption and the Impact of OFPEP on Rural Communities in Western Kenya	John Byaruhanga, Susan Kask, Mark Phillips, Mary Lou Surgi and Nyaga Mwaniki	12/97
Proceedings of the Gender Training of Trainers Workshop at Tom Mboya Labor College - Kisumu, Kenya	Celestina Asena	2/27/98
Farmers Training Guide On OFPEP's ON-FARM Promoted Technologies	OFPEP-Kenya	ns
Seed Production and Supply Policy In Developping [sic] Countries With Special Reference to Kenya	J F Moses Onim	ns
Introduction to Energy Saving Stoves	ns	ns

Training of Trainers on Soybean Production and Utilization and Energy Saving Stoves Organized by OFPEP-Kenya	ns	ns
Training Instruction Manual for Technical Packages (Tech Packs) on On-Farm Research and Technology for Dual-Purpose Goats and Other Livestock	ns	ns
End KENYA	**End KENYA**	**End KENYA**
SENEGAL	**SENEGAL**	**SENEGAL**
Rice Extension Activities Kolda Region 1991	John McPeak	1991
Gender Analysis Framework for the On-Farm Productivity Enhancement Program/Peace Corps Rice Initiative A Model for OFPEP Initiatives	Kristen A Velyvis with Stacy Erickson and Kristina Thompson	10/94
Survey of the Rice Program Case Studies in the Region of Kolda	Jerome Guin	12/94
Summary and Translation of Consultancy Report Creation of Land Management Program for Rice Fields of the Valleys in the Departments of Kolda and Nioro	Mamadou Daffe, Agronomic Engineer and Soukeye G Thiongane, Sociologist	5/95
Rapport D'Evaluation D'Impact du Programme Rizicole au Senegal	Atoumane Elfeky Agne, Salimata Ba, and Biram Ndiaye	7/24/95
Programmes Gestion des Ressources Naturelles Dans le Bassin Arachidier	Safietou Fall and Aminata Badiane	10/95

Compte Rendu de Seminaire sur le Diagnostic Institutionel Participatif-Dynamisateur (DIP/D)	Lisa Washington-Sow	12/12/95
World Vision Senegal Gender Analysis and Training	ns	2/??/96
Study on Village Organizations and The OFPEP in Nioro and Foundiougne	Susan Gannon	6/??/96
Womens' Associations in the Kolda Region A Case Study of Local Institutional Issues	Wendy Wilson Fall	6/20/96
OFPEP Case Study Millet Activities with Christian Children's' Fund	Tom Osborn	8/21/96
OFPEP Case Study Compost Activities with Christian Children's' Fund	Tom Osborn	8/21/96
OFPEP Case Study Live Fencing and Cassava Program with Christian Children's' Fund	Tom Osborn	8/21/96
OFPEP Case Study Participatory Rice Extension Kolda Region of Senegal OFPEP/US Peace Corps	Tom Osborn	8/21/96
A Collection of Executive Summaries of Documents Related to the OFPEP/Peace Corps Rice Program in Senegal from 1990-1996	Edited by Mark Phillips	10/96
Preparation for the OFPEP Final Evaluation Synopsis of the Soil Fertility for the Rice Fields Program	Amadou Diouf	4/97

Gender Analysis in OFPEP/Senegal Activities Examples from Collaborative Programs Improved Rice Soil Fertility for the Rice Fields and Christian Children's' Fund	Lisa Washington-Sow	5/97
Summary of Documents on Impact of OFPEP Activities	OFPEP Senegal	5/97
Summary of Documents on Outreach and Diffusion	OFPEP Senegal	5/97
Summary of Documents on Training Methods and Approaches	OFPEP Senegal	5/97
List of Documents Produced at OFPEP/Dakar	OFPEP Senegal	5/97
A Study of the Rice Cultivation Practices in the Arrondissment of Dioulakolon, Department of Kolda, Region of Kolda for the Rainy Season of 1990	Julia Gamble and John McPeak	ns
OFPEP Mid Term Report	ns	ns
End SENEGAL	**End SENEGAL**	**End SENEGAL**

OF SOILS AND SEEDS

No. 8, Summer 1998

Last Issue!

(See the back page)

Fill in the questionnaire on pages 9 and 10 to receive a new newsletter!

Newsletter of the On-Farm Productivity Enhancement Program (OFPEP)

The Spirit of OFPEP Will Remain

Pierre Antoine Director, OFPEP

Six years have already elapsed since the USAID-funded On-Farm Productivity Enhancement Program (OFPEP) was successfully launched in three African countries (Senegal, The Gambia and Uganda), building on the lessons learned and achievements of the On-Farm Seed (Senegal and The Gambia) and the Biological Nitrogen Fixation/ Legume Management projects (Uganda)

Six exciting, challenging, sometimes difficult years during which the program expanded to Kenya and Ethiopia, and was forced to prematurely leave The Gambia Six years also during which an increasing number of donor agencies, partners, and local communities became interested in the basic tenets of OFPEP - a participatory collaborative and incremental approach at the service of the smallholder farmer - enabling the program to leverage new funds and expand its client base and activities, not only in the OFPEP countries per se, but also in new areas such as Mali, Cote d'Ivoire, Mozambique, Malawi, Nigeria, Guinea, Indonesia and The Gambia

Listening to the farmers, collaborators and donors participating in the program, we believe that the assessment of OFPEP's impact must be approached in at least three ways

Did the program increase the access of smallholder farmers to improved seeds and associated inputs, and, if so, with what result? Clearly, both availability of and access to improved seeds and inputs increased, farmers were able to chose the technologies they wanted to increase yields, improve diets, generate off-farm sales, and generate enthusiasm about continuing

Did the program enable participants (farmers and change agents) to gain knowledge and skills about how to manage soil and other natural resources to increase productivity and enhance sustainability? In every community there was evidence of adoption, adaptation and improvisation of management techniques introduced and demonstrated Where such techniques minimized or reduced labor requirements, their acceptance and use was considerably greater

Did the program develop increased agricultural and managerial competence and confidence among NGOs CBOs, farm technicians, and farmers in their ability to diagnose problems and then plan, implement, manage, and evaluate sustainable solutions? Evidence that such developments are beginning to happen are emerging in closer working relationships between the agricultural professionals (research workers and extension specialists) and the informal "change agents" There is growing recognition of the value of close and continuing interaction that ensures that research continues to be demand-driven and farmers continue to participate actively in on-farm trials and adaptations *(continued on page 5)*

Winrock International • PVO/University Center • ACDI

As OFPEP Ends, What Did We Achieve and What Lessons Did We Learn?

J F Moses Onim, Coordinator, OFPEP-East Africa

The On-Farm Productivity Enhancement Program (OFPEP) will end on September 30 1998 It was such a successful program that between October 1992 and September 30 1997 OFPEP had given birth to a new program in each country where it operated In Senegal and other countries of west Africa it evolved into similar activities in ALFALFA and RADORT it gave birth to FOSEM in Uganda EAT in Kenya and EM-POWER in Ethiopia These outgrowths of OFPEP have attracted funding to the tune of approximately US $ 1 8 million OFPEP has been a very successful program that other donors are eager to support

What OFPEP set out to do

In the last six years OFPEP has worked on four major mandates improving soil conservation and soil fertility increasing the use of improved on-farm seeds especially food crops on smallholder farms training of farmers and extension staff of OFPEP partners (capacity building) and protecting the environment by reducing felling of trees for charcoal and firewood by introducing improved cook stoves As the program progressed the need for training farmers in marketing and food utilization became urgent and these were included as program activities All this was encapsulated into the program goal which was to improve nutrition income and the well being of smallholder farmers in targeted developing countries The purpose of the program was to achieve sustainable agricultural productivity and conservation of natural resources through the improved management of community and individual resources inputs and knowledge (indigenous and introduced) pertaining to soil fertility management and seed production and handling

OFPEP Approach

Needs Assessment In the countries where OFPEP operated it was always based on a collaborative mode working with the government ministries of agriculture non-governmental organizations (NGOs) and Community Based Organizations (CBOs) The program conducted baseline surveys to assess needs and resources in the communities where it proposed to operate The communities would come up with their own choices relating to needs on soil conservation soil fertility improvement use of improved seeds of important food crops capacity building (training), environmental protection energy saving cook stoves and crop utilization etc The development work which followed was entirely based on the smallholder farmers agenda, and not that of OFPEP its staff or donors

Gender Sensitive It has been established that on smallholder farms in developing countries in Africa, women produce at least 70% of the food OFPEP has therefore strongly advocated for recognizing women as very important stakeholders in development of food crop-based programs OFPEP conducted studies on the roles played by women in family agricultural development The results significantly convinced the men folk in these communities that the women were overburdened and therefore men needed to participate more actively in agricultural and family responsibilities The results were very encouraging These results show that women were more trusted with money than men and therefore in farmers credit groups, most of the treasurers were women Because women play such an important role in smallholder food production agriculture they were targeted by OFPEP for training OFPEP generated data bases on gender especially in conjunction with its sister Gender Program -- African Women Leadership in Agriculture and Environment (AWLAE) -- which will be useful assets for future programs In February 1998 OFPEP and AWLAE conducted Training of Trainers (TOT) on gender for its partners from Kenya and Uganda These trainees thereafter went back to their organizations and trained their colleagues and farmers on gender issues and gender in development

Integrated Strategy and Participatory Methods Participatory methods of decision making have been a major landmark in OFPEP To encourage the wider use of participatory tools, ***(Continued on page 3)***

As OFPEP Ends *(Continued from page 2)*

OFPEP and AWLAE in Kenya conducted a two week TOT course on Participatory Rural Appraisal (PRA) for its staff and that of its Kenyan and Ugandan partners in February, 1997 OFPEP recognized that farmers have valuable agricultural knowledge on their environments, and they have very good reasons for their farming practices However there are new agricultural problems which may need external interventions Accordingly OFPEP used the valuable farmers' knowledge and reinforced it with modern science and current but relevant research findings to produce excellent and sustainable results

The program operated through several organs including the national advisory councils which were made up of the administrators of the partners and OFPEP staff In each country, there were also advisory technical teams made up of the technical staff of collaborating partners and OFPEP extension staff The councils determined OFPEP's program policy issues in a given country, while the advisory team dealt with program s technical and development issues The farmer communities became fully involved through the participatory needs assessments, decided the types of technologies they wanted to try to address their needs established demonstrations on their own land, and assessed the performance of these technologies The farmers then advised the program which technologies worked best under their conditions An important role of the program was to bring a wider array of potential technologies to the attention of more farmers in more communities This program was therefore fully participatory

Demand Driven OFPEP responded to farmers needs when there was a widely felt demand To that extent OFPEP was always demand driven This further assured that any results accruing from the program s on-farm activities were immediately usable by the farmers

On-farm Demonstrations OFPEP demonstrated the best potential technologies in on-farm demonstrations These demonstrations enabled farmer groups and observers walking on village paths and roads to see and enquire about the new technologies Seeing is believing Therefore these sites became valuable learning classrooms and practical training grounds for farmers extension staff and scientists They were also used for practical training for high schools and for students of agriculture from colleges and universities The farmers were able to see a large menu of technologies and were able to select the best ones which suited their conditions These technologies diffused from these plots and farmer groups to the wider community through farmer -to-farmer or extension field staff New seed varieties were often multiplied on demand and sold to more farmers Some very successful farmers specialized in seed multiplication and some of them produced up to 10 tons of seed annually This will assure sustainability even as the program comes to an end

A study on the impact of OFPEP technologies on smallholder farmers was also carried out in Kenya in June 1997 *(Byaruhanga et al 1997)* This study analyzed factors which influenced technology adoption Some of the findings of this study were (a) 70% of the survey respondents said they had been trained on all OFPEP technologies (b) 90% of the farmers tried the technologies in anticipation of increased yields, (c) 71% tried these technologies for improved food security (d) 56% tried them for improved soil fertility and (e) 56% for early crop maturity These were mean results from all the OFPEP districts These were great successes However in districts where farmers had had prior exposure to these technologies, eg due to their proximity to urban centers, the adoptions rates were much lower (34 6% in Vihiga district Kenya)

In the same year, another study called "Impact of the OFPEP Approach on its Partners" was also carried out in OFPEP countries including The Gambia, Senegal Kenya and Uganda *(Cabanis 1997)* The results of this study showed that (a) OFPEP collaborators were all committed to the program and this spoke well for the program's choice of partners, (b) the OFPEP collaborators were very pleased because OFPEP produced concrete results and it was not top-down, ***(Continued on page 4)***

As OFPEP Fnds *(continued from p 3)*
(c) 44 partners (90%) felt that OFPEP had done an adequate or more than adequate job adhering to a research based definition of the elements of collaborative work (d) with regard to the best practices of successful collaboration 34 organizations (88%) rated OFPEP as moving towards achievement of all five outcomes and (e) when asked about organi zational change as a result of collaboration with OFPEP it was reported collaborative experience with OFPEP has had dramatic effects on the way partner organizations function interrelate with each other make use of resources and structure themselves

The Final Evaluation of OFPEP was extremely supportive and in a summary said that the program must now move to a new phase with higher technologies like field mechanization the use of herbicides and more commercial production It has been a very successful program

Lessons learned
There are several lessons learned from the experience of working in OFPEP for the last six years (a) With a relatively modest budget and field staff a well focused and managed program can achieve a high level of collaboration and trust with partners leading to sound agricultural development (b) Pooling together resources from committed partners can enable organizations working on the same development problems to achieve excellent results with the least duplication of efforts (c) When development workers humble themselves and trust farmers knowledge in agriculture and view farmers as equal partners in development very high adoption rates of introduced technologies can be achieved (d) Government ministries and a few partners came into collaboration with very high expectations for material benefits for themselves and their organizations thereby losing sight of the primary objective of working with and for the resource poor farmers

Experts Concur

The lessons learned internally by those intimately involved with the program were complemented by those found by the external evaluation panel who performed the final evaluation of OFPEP All of these lessons have been heeded and are being incorporated in new program initiatives like PEG/NGO that will carry forward the OFPEP approach Their findings

1 If smallholder farmers are to move from subsistence to commercial production they need locally available credit and less labor-intensive technology

2 Programs and technology must be attentive and responsive to gender issues

3 Training of program staff and field workers improves programs and strengthens NGO links with local sources of information and resources

4 Management must emphasize and demonstrate the need for systematic collection analysis and reporting of data regarding constraints results and impact

5 Farmers respond positively to participatory demand driven approaches to technology evaluation and selection

6 Local institutions need guidance on working effec tively with the private sector

7 Single component programs e g seeds or soils are not as successful as those that are system based and address simultaneously several complementary issues e g access to credit inputs seeds soils weed control marketing etc

8 Research linkages are central to an efficient agricultural development program strategy

FREE OFPEP REPORTS

We have a limited number of the following OFPEP reports

Factors Influencing Technology Adoption and the Impact of OFPEP on Rural Communities in western Kenya

Impact of the OFPEP Approach on Its Partners A Survey-Based Study on the Collaborative Process

If you would like a copy mailed to you please contact
Ms Mary Lou Surgi *Of Soils and Seeds*
Bird Building Western Carolina University
Cullowhee NC 28723 9056
Phone (828) 227 3458
Fax (828) 227 7422
E mail Surgi@wcu edu

Culture and Food Production - A Paradoxical Dilemma
The Experience with Luo Communities in Siaya District

Caroline Sikuku Field Extensionist OFPEP/Kenya

Every extension person faces the inevitable task of studying the cultural beliefs of communities they serve in order to implement activities among them Critical times are now with us and community members are having to compromise some of their cultural beliefs or face serious implications related to food production

Some Highlights

Culturally recognized funeral rituals are currently on the increase In part this dictates that no family members (including extended family) are allowed to go to the fields from the day of death and up to 3-4 days after burial It takes between 2-7 days before the deceased is buried depending on the circumstances of the death This results in an at least a week (7 days) of no farm work for the affected families This leads to low yields due to late land preparation and planting Local administrators are trying to reason with communities to change their attitude towards this cultural trend and plant on time so as to have better yields and thus improve food security

In an attempt to create more labor on farms some men have resorted to polygamous marriages This works for a little while but in the long run leaves more mouths to be fed that available resources cannot support The labor shortages therefore continue Traditional culture dictates that elder wives are expected to sow their seeds on farms before their co-wives and daughters in law can do so in their own fields Where the elder wife s children are working and supporting their mothers such women sometimes ignore this cultural role for punitive and pride reasons These cases are increasing Whatever the alternative she (elder wife) is usually given the benefit of doubt and the implications are such that the rest of the family members plant late leading to low yields especially considering the current unreliable short rains On these issues OFPEP-Kenya and its collaborators are carrying out gender awareness

Broadcasting of seeds to manage labor shortage has long been practiced This has led to low yields over the years On farm crop demonstrations and training under taken at village levels serve as eye openers to present alternatives to this practice

Realistic elderly Luo community members admit that certain cultural compromises are inevitable if the communities are to develop Any program working in these communities needs to be aware of such issues and deal with them sensitively

(Continued form page 1)

The Spirit of OFPEP Will Remain With Us

OFPEP has shown obvious impact on the lives and practices of the approximately 500 000 families which have been directly or indirectly in contact with the program For them the most direct impact has been on extended food security at home

However in the long run food security at the farm commu nity or national level can no longer depend on some form of subsistence agriculture With the increased globalization of trade that affects all countries including Africa farmers will need to increase crop production to be competitive with im ported food that is produced more cheaply in other parts of the world This is why in the next phase building on the achievements lessons learned and the successful approach of OFPEP the program will pay increasing attention to in come-generating and sustainable activities at the farm level thereby ensuring that families not only enjoy increased food security but have access to larger income that can be used for nutrition education health and re-investment in the agricultural production cycle

This new program phase--to be known as PEG/NGO and already enthusiastically endorsed by USAID and several other donors will follow the From Subsistence to Market driven Agriculture paradigm Thanks to you and thanks to all the participating farmers and collaborators at the commu nity public private sector and non-governmental level there is no doubt in my mind that it will be equally successful

Long live the spirit of OFPEP!

OFPEP BY THE NUMBERS
More than 140 organizations and institutions-- PVOs, local NGOs, consulting firms, research institutions, universities and government agencies--have collaborated with OFPEP in various phases of the program

OFPEP Technology Puts Me in a Leadership Role

I am a farmer who has collaborated with OFPEP since 1994 Before OFPEP came I had no way to learn about new agriculture technologies gender issues and many other activities After I had been trained in the above subjects and trained others I had the courage to try to be elected to the Local Council government system

I was unanimously elected on both the village Local Council (LCI) and Parish Local Council (LC II) as Chairperson and Environmental and Production Supervisor for Lunyo parish Lunyo Parish has 63 329 people and 8 100 acres of land under my supervision

With the OFPEP experience I have had I stand a chance of mushrooming as a leader at any office at the sub county level (LC III) I therefore thank the following persons who worked tirelessly and introduced OFPEP in Sihubira Farmer s Group

I thank Mr Nathan Koteki the OFPEP Extension specialist for Tororo Uganda (now working for FOSEM) for his determination

Mrs Beatrice Luzobe who has helped us understand gender issues

Lastly I can t forget to thank Mr Wafula George the Coordinator of the Sihubira Farmers Group who picked me from darkness and put me under the sun

Oumah Wanjere
Sihubira Farmers Group Lunyo Sub County Busia District

OFPEP Agricultural Revolution

Unlike many NGOs which come with money in the first place OFPEP came to our Sub county in a different way Those who thought it was a money giving agency were disappointed but those who received the knowledge it brought have benefited and will continue to benefit even when OFPEP s term of service in our area elapses

OFPEP started training me as a trainer on several agricultural technologies gender issues and PRA Since then I have become a model not only in my village parish and sub county but Busia District at large

Through this knowledge I have managed to assist in the formation of many farmers groups About 409 farmers group have been formed and are affiliated to Sihubira farmers Group where I am a coordinator

I am a new seed producer and farmers look to me as their mother in this sector I am always invited at District to give lectures on Agriculture and Environment Management

I have assisted and continued to assist many groups to identify their problems and potentials on which they can base their development I strongly thank OFPEP for their committed staff especially Tororo Office Kampala Regional coordinator and world coordinator for the efforts they have made to reach a needy farmer at the grass roots I also thank OFPEP s approach to farmers through Demo plots Training s and Exchange visits which have enabled many farmers to change their attitude on some old systems of farming

The Gender Section in OFPEP has also enabled me and many others to see that we need to share some of the workload of women which we didn t do and was a shame in the past

Lastly I request OFPEP to continue for more years so that their technology can reach larger audience

Wafula George
Sihubira Farmers Group

People Think NGOs are There Only to Fund

Many people including myself thought that NGO s were there to give grants loans and relief materials But to my surprise I have benefited more than I expected through OFPEP trainings that have been frequently attended by my group and the surrounding community I have learnt a lot in the Agricultural area and about Gender issues

Anyway apart from the agricultural technologies gender awareness training has restored peace in my house Because in my area for sure women are never considered something to equalize with in anything A large number of men thought that once one gets married he resigns from every work Even some went as far as marrying more than one wife to get many workers On the other hand many have now come to realize that woman was made a helper and to my knowledge a helper cannot take up the whole load

I can say that OFPEP has been an answer to my development because there are few questions to whatever I am doing now I have even become a teacher to the people

Thanks to OFPEP for service in my area

Parscal Wandera
Sihubira Farmers Group
Lunyo Sub County

Making Bonemeal Fertilizer

The following article appeared in the ECHO Development Notes newsletter (Issue 55, January 1997) We would like to thank ECHO (Educational Concerns for Hunger Organization) for their kindness in allowing us to reprint it here

A question has been asked about grinding animal bones to make bonemeal fertilizer for increasing phosphorus levels in poor soils Bonemeal fertilizer is produced commercially and at one time was much more widely used Bones were used as fertilizer in England as early as 1653 Processed bones may have been cooked, steamed, or treated with acid, or just been exposed to the elements for some time (desert bone) Equipment for grinding can range from simple mortar-and-pestle pounding to animal-powered grinding wheels to modern hammer or roller mills

Green (untreated) bones are sometimes ground and sold as 'raw bonemeal ' "The fatty materials found in raw bonemeal tend to delay the decomposition of the material when it is added to the soil Raw bonemeal contains 2- 4% nitrogen and 22-25% phosphate " The raw bone contains elastic materials which make the grinding process considerably more difficult, though the protein they contain adds a bit of nitrogen to the final product

Most commercial bonemeal is steamed Bones are boiled or steamed at high pressure to remove the gelatinous material (used commercially to make gelatin and glue) Thus treated, they can be ground finer making the phosphates more readily available Bonemeal is superior to mineral phosphates in its crop-producing powers Its effectiveness is increased by the modest nitrogen content and the various micronutrients it contains The calcium salts (lime) also present tend to reduce soil acidity

So is it practical to make bonemeal at the farm or community level? Possibly The FAO publication *Animal By-Products Processing and Utilization* says that "a crude but effective method is to burn the bones and to use the meal so obtained either as a mineral livestock-feed supplement or as a phosphate fertilizer " Both dry and fresh bones can be used though the process goes faster with older, dry bones "If the bones are only required for soil dressing, they can be piled directly over firewood or any other combustible material and fired The charcoal and bones are collected together and poured into sacks "

"To obtain a clean product [as opposed to the charcoal/bone mixture] -- erect some form of large grill from old piping, (or perhaps from old car springs or similar material), pile the bones on top and make a fire underneath " The bars should be spaced close enough to prevent small bones from falling through, and should not be piled too high They recommend a pile about one foot high (30 5 cm) The whole process will take from one-half to one hour The bones are ready to be taken from the fire once they have become spongy and brittle "

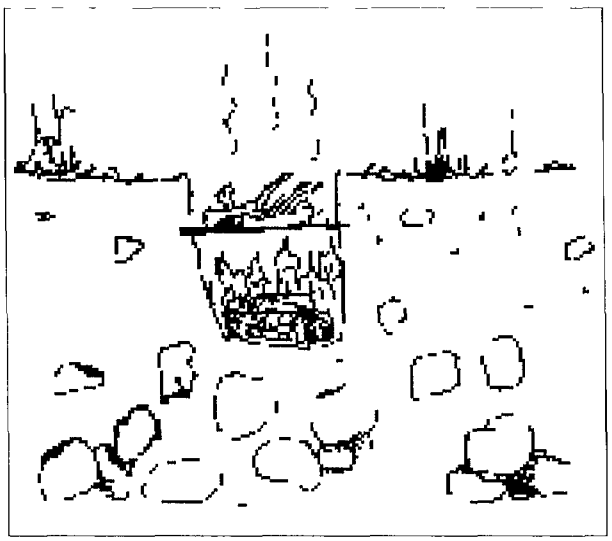
A variation on this method is "trench-firing" A fire is built in a trench a minimum of 2 feet (61cm) deep The grid is laid across a shelf dug some 6 inches (15 cm) below ground level along the trench and the bones piled on top of the grid "The advantages of this simple method are that large logs may be used for firing and that the heat is concentrated so that the required temperature is reached more quickly "

The firing process achieves three aims "(1) it sterilizes the bones, (2) it burns off all the fat, blood vessels, marrow etc , (3) the 'calcined' bones are so soft that they can be pounded easily with a pestle and mortar " It can also be done with little equipment.

"The average analysis of several samples of bonemeal obtained in this way was as follows

1 **Dry bones** 15 5% phosphorus (equivilant to 35 5% P O_5), and 30 5% calcium (equivilant to 42 8% CaO)

2 **Fresh bones with meat first stripped away** 15 2% phosphorus and 31 0% calcium"



"The meal is equal to the best quality steamed bonemeal," which is often unobtainable locally or imported at high prices even though bones may be freely obtainable

Because older, dry bones have already lost a lot of water and organic substances, they do not lose as much weight upon burning and the yield is higher One hundred pounds of dry bones should yield about 66 pounds of bonemeal Fresh bones may yield about 33 pounds

It is easy to see why one might want to add bonemeal to soil as fertilizer but why feed it to animals? Many tropical and subtropical soils are highly deficient in phosphorus Pastures grown on such soil are low in phosphates especially when the fully mature plants start to dry out Animals grazed on such land have a low blood phosphorus level The deterioration of livestock manifests itself by unthriftiness lack of production reduced fertility, poor calves lack of resistance to parasitic infestation losses in meat and milk Because the appetite decreases proportionately to the decrease of phosphorus in the blood the animal's intake of protein is reduced ' Unfortunately, such losses of production are often attributed to droughts and diseases and rarely to phosphorus deficiency, which can easily be remedied by supplementation of phosphorus! Two or three ounces of moistened bonemeal spoon dosed is sufficient to remedy phosphorus deficiency It may also be given in troughs, as a lick in brick form, or mixed with salt and trace elements "

You can also make your own cattle lick to overcome mineral deficiencies "Bonemeal can be fed alone to cattle, but it is better to enrich it by addition of other trace elements which may be lacking in your particular area In Kenya, very good results have been obtained from the following formula 66 pounds of bonemeal, 33 pounds of red oxide salt (containing iron), 6 ounces of copper sulphate, 1/15 ounce of potassium or sodium iodide, and 1 5 ounces of cobalt nitrate or cobalt sulphate or cobalt chloride In countries where other trace deficiencies occur, different trace elements should be used '
"The weighing of the trace element fraction and the initial mixing of such a small percentage is impractical in the field Hence the trace elements for 100 pounds of mix should be weighed previously, thoroughly mixed with 1 pound of bonemeal and sealed in a small package Then to each 66 pounds of bonemeal and 33 pounds of red oxide salt, there is added one such pack and the whole is mixed together "

Grevillea robusta Survives on Phosphorus-Poor Soils Where Other Trees Don't!

Grevillea trees found in Kenya are suited to semi-arid regions of 600 1700 mm annual rainfall and dry seasons up to 6 months They are used as windbreaks, interplanted with crops such as maize, beans, bananas or cotton, or grown next to the home for wood In soil that has too little available phosphorus for most trees, grevillea is able to find phosphorus, make it soluble and absorb it for its own use The leaves add organic matter to the soil as they fall but are not high in nitrogen or phosphorus They are good to be grown where phosphorus deficiency in the soils limits the growth of nitrogen-fixing leguminous trees Another weedy shrub *Tithonia diversifolia* has leaves with high phosphorus content

Please send this in to remain on our mailing list

OF SOILS AND SEEDS
READER SURVEY

1 Respondent Information

Last Name _____, First Names _____

Title _____

Organization _____

Address _____

City _____ Province _____

Country _____ Postal Code _____

Telephone _____ Fax _____ E-mail _____

Male _____ Female _____

Fields of expertise or interest _____

Education highest level attained (*please specify*) _____

2 Organization Profile

Type of Organization that you work for

Community-Based Organization (CBO) ___
Local NGO ___
International NGO ___
Academic/Research Institution ___
Government Agency ___
(*Local* ___ *Regional* ___ *National* ___)
Multi/Bi-lateral Agency ___
Private Sector/Business ___

Have you or your organization been involved in any of the OFPEP activities in your country?
Yes ___ No ___

If yes how long?
1 year ___ 2 years ___ 3 years ___
4 years ___ 5 years ___ 6 years _____

3 Source of Work Related Information

Where do you learn about innovations in your area of work or interest? Please check all that apply

Colleagues in your own organization ___
Colleagues in other organizations ___
Government extension agents ___
Local / International research institutions ___
Local / Overseas universities ___
Non-governmental organizations ___
Agribusiness firms ___
Agricultural Associations ___
Other (*please specify*) ___

What are your sources of technical adminstrative and other types of information used in your work? Please check all that apply?

Books ___
Local newsletters ___
Foreign newsletters___
Reports and official publications ___
Professional journals ___
Training Programs ___
Internet ___
Conferences / workshops ___
Films / videos / slides ___
Other (*please specify)* ___

What other newsletters do you read on a regular basis?

_____
_____
_____

4 Types of Information You Need

Please place an M if you are more interested in the topic or an L if you are less interested in the following topics

Seeds-improved varieties ___
Seed selection and storage ___
Enhancing soil fertility ___
Soil conservation ___
Composting techniques ___
Marketing ___
Commercial production _____

(CONTINUED ON THE OTHER SIDE OF THIS PAGE)

Agroforestry ___
Natural resource management ___
Integrated pest management ___
Post-harvest storage ___
Microenterprise development ___
Credit mechanisms ___
Organic fertilizers ___
Inorganic fertilizers ___
Gender analysis ___
Monitoring and evaluation ___
News about project (OFPEP/PEG) activities ___
Other (*please specify*) ___

Do you prefer articles that tell you how to do something? Yes ___ No ___
Such as _____
Would you like to contribute articles on relevant topics? Yes ___ No ___
Such as _____
Would you like us to reprint relevant articles from other sources? Yes ___ No ___
Such as _____
Would you like to see a question and answer section? Yes ___ No ___

5 Internet Access

Do you have access to the world wide web?
Yes ___ No ___

If yes please indicate level of access
Full/immediate access (*have a connected computer in your office or home or share one with a colleague*) ___

Limited access (*access through a second party a library or friend for example*)

Do you have access to e mail to send and receive messages? Yes ___ No ___
E mail address _____

6 OF SOILS AND SEEDS Newsletter

Which sections of the newsletter do you find interesting and useful to your work?
Information about OFPEP activities in different countries ___
Technical ideas and discussions ___
Have you received all seven issues of OF SOILS AND SEEDS? Yes ___ No ___ If no would you like to receive back issues? Yes ___ No ___

Please circle of back issue you would like to receive?
5 6 7 (*these are the only ones we have in stock*)

THANK YOU FOR TAKING TIME TO COMPLETE THIS SURVEY IT WILL HELP US BETTER UNDERSTAND AND RESPOND TO INFORMATION NEEDS OF OUR READERS

Please fold along this dotted line

From _____
_____
_____
_____

Please place stamp here

OF SOILS AND SEEDS

Center for PVO/University Collaboration in Development
Bird Building, Western Carolina University
Cullowhee, NC 28723 USA

AIR MAIL

195

The Impact Made by OFPEP in Najja

First and foremost we take this opportunity to thank the organization of OFPEP for having been introduced in our area by the Chairman of Local Council 5 Mukono Mr Musisi and Mr Lule who was by then the Secretary General of Buzama Cooperative Society
In particular our organization Kisimba Moslem Mission has benefitted a lot from OFPEP activities OFPEP has helped us to achieve quite a number of things
(1) The Program has held seminars in our area through which people have learnt skills in various sectors of Agriculture
(2) Because of OFPEP many groups formed to which we have passed new ideas and approaches
(3) Some of our members have been trained as Trainers in various technologies

Through contact with OFPEP members in our organization have acquired modern ways of farming and also a good number of varieties of seeds especially maize beans cassava rice (upland) millet soybean and sorghum In addition to that OFPEP has taught people how to conserve the environment by planting more trees and making cooking stoves which save on fuel e g the Dembe stoves

Through modern farming farmers have learnt how to
(a) Control soil erosion
(b) Make and apply compost manure which costs no money
(c) Select good quality seeds which can germinate well and give good yield
(d) Plant early in order to avoid pests which may attack our crops during the younger stages It also avoids weeds which would grow together with younger crops thus reducing the effect of proper growth
(e) Plant using various methods For example we learnt proper spacing of plants which allows easy weeding and increases yields

As a result of all the above we have more food for our families

Gitta Muhammad Activities Coordinator
Kisimba Muslim Mission (NGO) Najja Subcounty - Mukono

Farmers exchange ideas at one of their demoplots

From Our Partners

Community Seed Bank Project

The drought of 1996 97 affected food security in Kenya especially farming communities in Siaya District Nyaza Province in Western Kenya As the drought dragged on many small scale farm families were forced to consume stored seed saved for the next planting season When it reached planting time many farmers had no seeds to plant Those who had enough money bought low quality seeds from the market which failed to germinate That was the context within which our seed bank was born Twenty five farmers from the community came together and established a seed bank with guidelines on how and when to use stored seeds

Each of the members brought whatever seeds they could get -- sorghum maize beans vegetables and others OFPEP-Kenya helped with the initial training on seed selection and storage techniques They then brought in storage chemicals to prevent weevils Since then the bank has opened up avenues of collaboration and at the present the following are in partnership OFPEP-Kenya ICRISAT CIP Department of Crop Science University of Nairobi Sesame Project and KARI

In May we held two demonstrations on post-harvest technologies of different crops We have found that poor storage facilities and inadequate skills to multiply certain seeds are a major handicap We are presently looking for resources to acquire and multiply seeds to provide easy access to planting seeds to farmers in the community

Apart from the food crops we plan to collect seeds for ethnobotanical medicine to increase the level of primary health care in the community We have contributed information for the publication of an Ethnoveterinary Manual in Kenya published by ITDG and IIRR Kenya

We invite anyone with experience in such seed bank/storage projects to contact us Thank You

Puis Aggrey Omondi Coordinator
Ugunja Community Resource Centre
Seed Bank Project
P O Box 330
Ugunja, KENYA

Change Does Not Always Come Slowly

OFPEP came late to Ethiopia but as noted by Drs Onim and Antoine its efforts will not end at the close of 1998 The EMPOWER program funded locally by USAID has enveloped many of the OFPEP ideas and much of its approach in its efforts to strengthen the agricultural economy at the smallholder level—with special attention to female farmers EMPOWER s primary partner in these activities is the Ethiopian National Extension Service

But it is not only at the program level that OFPEP s effects will continue to be felt but also it the individual farm family level where changes have already been made and are already bearing fruit During the two years of its presence in Ethiopia OFPEP worked in three different climatic zones with three main partners A total of 81 farmers were trained in a variety of topics related to improving agricultural production Female farmer trainees accounted for 21% of these trainees Fifty two field extension agents and supervisors were trained 35% of these were women A total of 171 demonstration plots were established and yield increases ranging for 200 to 500 % over traditional management practice were demon strated These plots were used to train a total of over 1 000 farmers These are all figures documented in project reports by project staff

To look more deeply into the effects that OFPEP had with these farmers a performance assessment was carried out early in 1998 to allow the farmers themselves to report on how OFPEP s activities had changed (or not changed) their farming practices A total of 23 farmers who were involved with OFPEP for two seasons were randomly chosen for open ended interviews by the assessment team Their comments show that not only did they encounter and learn and view new ideas/practices from the OFPEP collaboration but they have already put them into practice

Some of the major changes they h ive made from how they used to farm are as follows

1 They are committed to early planting repeated and early land preparation for planting
2 Applying crop rotation techniques (particularly legumes) to revitalize soil fertility
3 Proper input application according to the recommended rate
4 Timely and repeated weeding
5 Clearing bushes from around the farm plots to discourage rodents has been found to be helpful
6 Using improved seeds for higher yields
7 Using chemical and organic fertilizers for better production
8 Pl inting single cuttings in one hole row planting ind spacing of sweet potatoes to increase yields
9 Threshing and storing of different varieties separately
10 Frequent supervision of farm plots

Some of the OFPEP Ethiopia staff

While it is encouraging to see the changes that farmers have made based on their experiences with OFPEP its partners and its farmer participatory approach it is equally important to the planning and implementing of future program activities to look at the reasons given by farmers as to *why* they made such changes in their farming practices Some of the major points mentioned by farmers as to *why* they made changes are as follows

1 To obtain better yields/increase production and income to improve family life
2 To help them solve farm problems
3 To get more bio-mass for animal feed
4 The results obtained from improved varieties in the demo were better than local varieties
5 The use of compost is improving soil fertility better than chemical fertilizer alone and they expect to get better yields in the future
6 Preparing compost near the farm plots eases the burden of women and children who have had to carry compost to the field from their homesites

One Woman's Experience in OFPEP

Beatrice N Luzobe OFPEP-Uganda

Introduction

Extension work in OFPEP has been real exciting and challenging -all at the same time Because of the amount of the work accomplished and the impact felt at the grassroots few people can believe that it has been achieved by just a handful of extension workers at any one time It is an approach admired and now being adopted by many organizations We could not have done it without our wonderful partners and farmers

My Experience

As one of those extension workers (who also wears the hat of gender specialist) I have personally benefitted from and had the satisfaction of the OFPEP job in many aspects

Fair recruitment Getting a job in OFPEP debunked my belief that in Uganda you cannot get a job unless there is someone who knows you I had never heard of the program nor seen anybody on the panel The selection was purely on merit

Opportunity to put into practice what you studied
I have been able to put into practice agriculture in general but also extension nutrition crop science/agronomy financial management and project management to mention but a few other areas!

Capacity building/career development
OFPEP has provided me with the opportunity to develop my capacities in extension training of trainers use of PRA tools handling gender issues with communities management and leadership and computer skills The opportunity to interact with the real grassroots farmer has built a great wealth of knowledge in me In addition networking and interacting with researchers has kept me up to date especially in the field of agriculture

Working with self initiative We have learned to be more self motivated in our work because of the minimum supervision and maximum responsibility

Creativity Like most NGO programs you are given your terms of reference then the sky is the limit Therefore what you do depends on how creative you are To me this is how OFPEP has been This has given me the confidence in knowing that I can handle any issue as long as I acquire the basic knowledge through reading experimenting and putting into practice I also at this time want to credit the OFPEP officers Dr Moses Dr Pierre and Mary Lou who have supported me in this

This is a program where I have seen my dreams for rural people come true For example many folks now understand gender issues and how they can affect production and the rising trend of soybean usage People now consider it as food and it is also spreading in the towns and city

Thanks to Adeline who has been very supportive and creative also She does not wait to pushed which makes work easier!

Personal development Because of OFPEP I have been able to build self confidence self-esteem communication/ writing skills increased family contribution and changed my view about life and job satisfaction

The other side of the coin I would not say that all has been smooth for the 3 years I have been in OFPEP The challenges of being a working mother babies working long hours and balancing family demands with job demands are never finished There is no time for recreation and other community activities e g visiting friends Some personal goals not yet achieved e g An M S before the year 2000 and setting up a model farm Despite all these constraints the results visible in the households and fields where we work still comfort me

Conclusion Although there has been some negative impact especially on my social life the advantages outweigh that In conclusion--OFPEP has changed my life and career completely

OFPEP BY THE NUMBERS

At least 135,000 farmers in the 5 OFPEP countries have benefited from training sessions both formal and informal, at demo sites and occasionally in classrooms Nearly half (48%) of them are women

Forty percent of the almost 7,000 lead farmers and NGO/CBO/extension staff trained as trainers to further extend the OFPEP approach and technologies are women

Milk From the Garden

Adeline Rwashana Muheebwa OFPEP Uganda

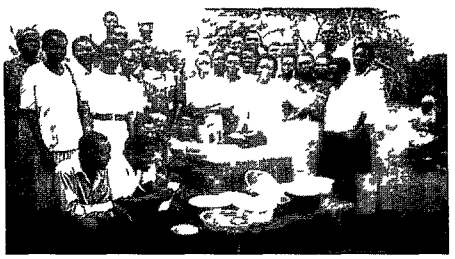
The Gender in Uganda program has helped achieve the OFPEP goal of enhancing food security with an emphasis on improved nutrition through soybean utilization especially making milk from soya This fresh and delicious milk is safely stored in soybean seeds only waiting to be extracted and consumed

Many people who had tried making soy milk had abandoned it because of the bad smell But a search of literature from other countries like Nigeria Malawi and Zambia revealed a method to eliminate this problem The seeds are dropped in boiling water to inactivate the lipoxygenease enzyme that causes the beany flavor and odor Boiling for about 20 30 minutes eliminates the Trypsin inhibitor -the most heat resistant of the anti nutritional factors found in soybeans

The beans are later dehulled finely milled and filtered to obtain the soy milk The soybean residues should not be thrown away They can be used to make a tasty sauce samosa fillers and soy balls which when served hot can be eaten as snacks

Comparison of nutritional values of soy milk and cow s milk

Content	Soy Milk	Cow s Milk
Protein	3 38 %	3 30 %
Fat	1 52 %	1 43 %
Water	92 40 %	90 12 %
Others	2 70 %	5 15 %



Sihubira Farmers Group present various soy based food items during a soybean utilization training program

Malnutrition in the under fives especially in the rural areas can be stamped out by sensitizing on the value of soya milk and promoting its use in homes Taste the milk from the garden it is like having a heifer at home

INTERNET RESOURCES

Following is a list of useful websites

Cornell Composting
http //www cals cornell edu/dept/compost/
Composting educational material and programs developed at Cornell University

Soil Fertility
http //www igc apc org/millennium/links/soils html
Internet resource on soils and soil fertility

Appropriate Technology Institute
http //www colostate edu/Orgs/ATI
Resources on useful and practical technologies in 25 subject areas

Center for Excellence for Sustainable Development
http //www sustainable doe gov/
Helps communities design and implement strategies that enhance the local economy as well as the local environment and quality of life

Community Management Handouts
http //www scn org/IP/cds/cmp/chcklst htm
Contains documents designed for community management training

Foundation Center
http //fdncenter org/
Non profit information clearinghouse that provides information on and links to foundations grantmakers and related subjects

OF SOILS AND SEEDS is the newsletter of the On-Farm Productivity Enhancement Program (OFPEP), funded by the United States Agency for International Development under agreement FAO-0158-A-00-2054-00

Please address your correspondence for the newsletter to Ms Mary Lou Surgi, *Of Soils and Seeds* Bird Building,Western Carolina University, Cullowhee, NC 28723-9056 Phone (828) 227-3458, Fax (828) 227-7422, E-mail Surgi@wcu edu

USAID-Senegal Impact Assessment Showcases OFPEP and Points the Way to Partnership for Economic Growth Through NGOs

During a recent impact assessment of its natural resources management (NRM) activities in Senegal an evaluation team from USAID visited an OFPEP-Christian Children s Fund site in the village of Ndollor Three basic NRM practices have been demonstrated there by the program over the past several years improved millet seeds in association with soils enhanced with compost composting techniques and live fences

In the team s words the results are impressive Crop yields from using the improved seeds have increased dramatically by as much as 181 percent (from 461 kg per hectare using traditional long duration varieties to 1 298 kg per hectare using the improved variety) In other areas the crop yield differences range between a 37 percent (minimum) to 365 percent increase All of the increases are attributable to the combination of improved seeds and the use of cassava and cassava by products (leaves and cutting)

According to their report the impacts from these interventions in terms of adoption elsewhere are difficult to determine The immediate problem of course is that no impact can be expected from the improved millet seed intervention for the simple fact that the improved seeds are not available for sale on the market Improved seeds are only produced in small quantities by ISRA/Bambey in the context of research not for the entire millet growing population The impact therefore is confined to the participating farm households in the project region With respect to the live fences the impacts in the project zone are considerable as nearly all farmers have adopted the practice It is noted however that only the *Salane euphorbia* fence is extended because of its rapid growth ease of installation and effectiveness of the protection it offers Not consciously extended are different kinds of windbreaks equally efficient with respect to protection but more valuable in terms of other products that can also be sold in local markets The compost pits are also adapted and used by the farmers because composted fields are a prerequisite to participation in the improved millet seed program

The first and may be the only women to build a compost bit in Ndollor Senegal

The most interesting impact question concerns adoption of the improved millet seeds This practice is explicitly mentioned in Mission documents as one that should be adopted on a large scale as a result of the investments USAID has made in research For improved peanut and rice seeds adoption on a large scale may be the case but for millet seeds this is not the case When the government got out of the improved millet seed production business farmers essentially stopped buying seeds in the market and relied on traditional seed selection methods from their own harvests to provide seeds for next year s production The result has been an overall and gradual decline in the quality of the millet seeds and an increasing susceptibility of the millet crops to pests and diseases

Given the now documented large increases in millet production in the Winrock/OFPEP project therefore the question that comes to mind is why the private sector has not stepped in to produce improved seeds There is a disconnect between farmers who want improved seeds and would be willing to pay high prices to get them and the private sector mobilization to produce In a free market if there is a strong demand for a product someone will mobilize to produce it and if they make a profit in the process others will enter the market supplies will increase and the prices will fall This dynamic is very much absent today and one that should perhaps be prioritized and addressed The whole issue of food security is at issue Based upon a few very promising results on crop yield increases already documented as a result of using improved seeds Senegal stands to make substantial progress on food security if improved seeds were plentiful and inexpensive (as a result of competition in the private sector) all over the country The private sector has yet to seize the initiative—it should be encouraged to do so by the Government of Senegal along with clear measures as to how the process of improved seed certification could be facilitated at little cost to the participating producers

These are exactly the measures that the next Winrock program in Senegal hopes to address PEG/NGO Partnerships for Economic Growth through Nongovernmental Organizations will emphasize the generation of income through agricultural production—and what better income-generation activity than the commercial production of improved seeds that will ultimately benefit the food security of the Senegalese people

From the Editor

I would like to thank all of you who have been a part of OFPEP—whether you are a farmer contributing your knowledge and experience your time and labor a researcher sharing your expertise and maybe even your stock of seeds or cuttings a partner contributing your ideas and your staff on the ground or a supporter providing us with resources to realize our ideas and reach out to an ever-larger community Working together we created a successful program—success measured by the number of farmers entrepreneurs organizations and institutions who have contributed to and are benefiting from our collaborative approach to increasing agricultural production safeguarding the environment and enhancing food security

I also want to thank all of you have shared articles letters photos and/or ideas to this newsletter as well as those of you who have shared your copy with others Please be sure to fill in the questionnaire found in this issue and send it to us so that your name will be put on the list for the newsletter from our new program PEG/NGO Please do it now!!

Thank You

Mary Lou Surgi
OFPEP Program Coordinator

IMPORTANT ANNOUNCEMENT

If you would like to receive the new newsletter for PEG/NGO, send in the questionnaire with your name and mailing address, or send us a letter or an e mail If you would NOT like to receive the newsletter, please drop us a letter or an e mail telling us And, if you know anyone else who would like to receive a copy, send us their address also! Thank you

Of Soils and Seeds

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E-mail *pvouc@wcu edu*

Address Correction Requested

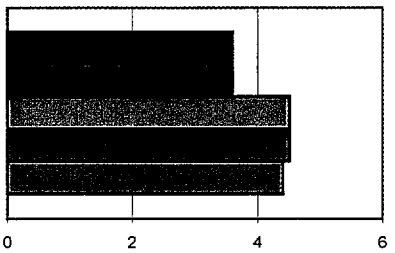
INTERNAL EVALUATION OF ONFARM/PEG WORKSHOP

DAKAR SENEGAL
DECEMBER 7-9 1998

HIGHEST=6 LOWEST=0

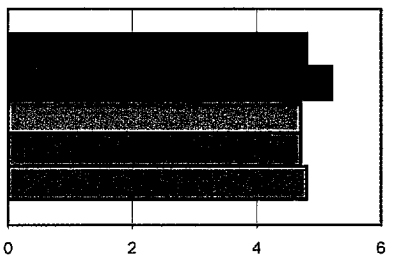
1 Presentation Goals of the Workshop

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



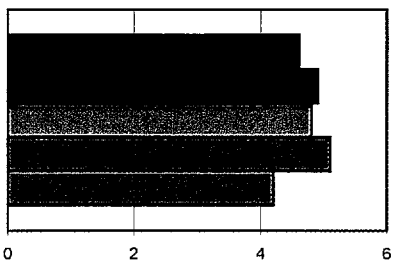
2 Presentation ONFARM Paradigm-PEG Model

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



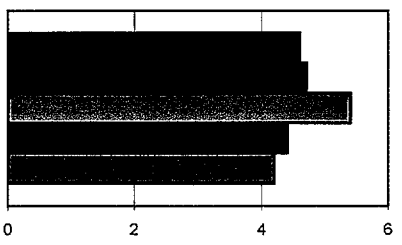
3 Presentation USAID-PVC Focus on Capacity Building

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



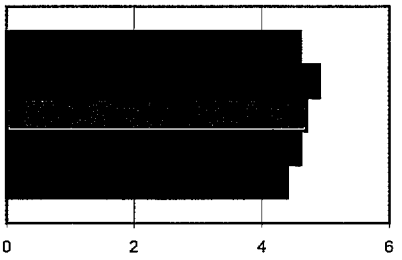
4 Presentation Various ONFARM Programs and Projects in Africa and Indonesia

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



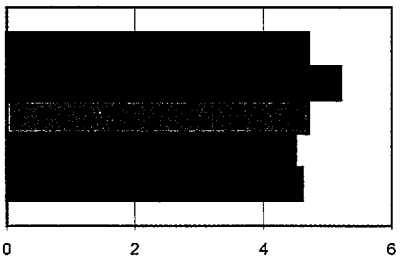
5 Presentation Tools for planning and Assessment--DIP

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



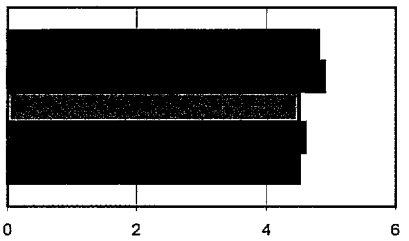
6 Presentation Planning Matrix

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



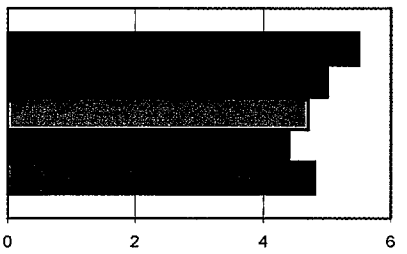
7 Presentation Key Elements of the ONFARM Approach/Assess your own

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



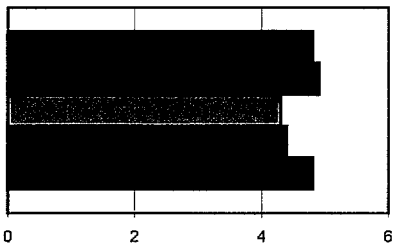
8 Presentation How to select program activities

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



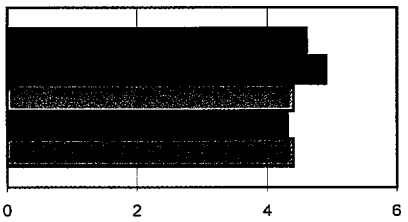
9 Presentation Creating detailed plans of activities

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



10 Presentation Common data collection and Reporting Instruments

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work



11 Developing your own plans of Action/Time lines for Completing your DIP Activity Plans, Data Collection and Reporting

Relevance to me personally
Relevance to my institution
Clarity of concepts presented
Quality of presentation
Likelihood that I will use ideas gained in my work