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CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE SMALL FARMER PRODUCTION PROJECT			2. PROJECT NUMBER 263-0079	3. MISSION/AID/W OFFICE USAID/EGYPT
5. KEY PROJECT IMPLEMENTATION DATES			4. EVALUATION NUMBER (Enter the number maintained by the reporting unit, e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 85-19	
A. First FAO/AG or EQUIPMENT FY 79	B. Final Obligation Expected FY 84	C. Final Input Delivery FY 87	<input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
6. ESTIMATED PROJECT FUNDING			7. PERIOD COVERED BY EVALUATION	
A. Total \$ 67 million			From (month/yr.) March, 1983	
B. U.S. \$ 49 million			To (month/yr.) June, 1985	

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Determine if an additional obligation is necessary for SFPP to proceed in support of the planned GOE replication.	USAID/AD//AGR USAID/AGR/A	12/85
2. Translate, distribute and test the Policy and Procedures Manual.	SFPP Project Director & ACDI	12/85
3. Complete development, test and implement a new accounting system compatible with EDP.	SFPP Project Director & ACDI	12/85
4. Reorient ACDI/TA team composition to serve expansion as well as pilot project areas.	ACDI, SFPP Project Director, & PBDAC	12/85
5. Complete development of training materials and initiate assistance to PBDAC training program for expansion.	SFPP Project Director, ACDI & PBDAC	3/86

ACDI: Agricultural Credit Development International.
SFPP: Small Farmer Production Project.
PBDAC: Principal Bank for Development and Agricultural Credit.

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. <input type="checkbox"/> Continue Project Without Change
B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan
C. <input type="checkbox"/> Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Ware, DPPE/PE *[Signature]*
 Moldrem, DPPE/PE *[Signature]*
 Swanson, AGR/A *[Signature]*
 Beausoleil, AGR/A *[Signature]*
 Wanssen, AD/AGR *[Signature]*
 AID 1330-15 (3-78)

Skaldis, DPPE/PAAD *[Signature]*
 Gludato, AD/DPPE *[Signature]*
 Handly *[Signature]*

12. Mission/AID/W Office Director Approval

Signature: *[Signature]*
 Typed Name: **Frank B. Kimball, DIR**
 Date: **Oct 31, 1985**

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol: U447

1. PROJECT TITLE			2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY)				
<input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION				
5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	
A. First PRO-AG or Equivalent FY _____	B. Final Obligation Expended FY _____	C. Final Input Delivery FY _____	A. Total \$ _____	7. PERIOD COVERED BY EVALUATION
			B. U.S. \$ _____	From (month/yr.) _____ To (month/yr.) _____
Date of Evaluation Review _____				

E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues cite those items needing further study.
(NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)

B. NAME OF OFFICER RESPONSIBLE FOR ACTION

C. DATE ACTION COMPLETED

6. Develop and implement a loan classification, monitoring and risk analysis system in village banks.

SFPP Project Director & ACDI

6/86

7. Continue efforts to refine data collection and analysis to facilitate attribution of returns to individual inputs and production practices.

SFPP Project Director & ACDI

Ongoing

8. To replicate successful aspects of SFPP, a new credit project PID should address:

AID/AGR/A & PBDAC

N/A

- (i) incorporation of the new and improved loan approval and credit management process in the village bank system;
- (ii) the complementary roles of credit provision and extension, and use of "subject-matter specialists" to diffuse new technologies to small farmers;
- (iii) PBDAC staff development needs to support expanded agricultural credit activities; and
- (iv) credit needs for private sector input suppliers.

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. Continue Project Without Change
- B. Change Project Design and/or Change Implementation Plan
- C. Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

12. Mission/AID/W Office Director Approval

Signature _____

Typed Name _____

Date _____

NEAR EAST EVALUATION ABSTRACT

PROJECT TITLE(S) AND NUMBER(S) SMALL FARMER PRODUCTION (263-0079)	MISSION/AID/W OFFICE USAID/EGYPT
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PROJECT DESCRIPTION

The project is a pilot effort to develop and apply an improved, replicable credit and input delivery system in three governorates. The project is assisting the Principal Bank for Development and Agricultural Credit (PEDAC) to improve small farmer access to agricultural inputs, technology and financing, in order to increase productivity and incomes.

AUTHORIZATION DATE AND U.S. LOP FUNDING AMOUNT 1979 \$49 million	PES NUMBER 85-19	PES DATE October, 1985	PES TYPE <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Special <input type="checkbox"/> Terminal
ABSTRACT PREPARED BY, DATE SConly, DPPE/PE October, 1985 <i>SC</i>	ABSTRACT CLEARED BY, DATE JSwanson, AGR/A JBeausoleil, AGR/A		

This evaluation was conducted to assess the feasibility of replicating elements of this pilot project, in light of the GOE decision to expand the project approach to 8 new governorates.

The team found the pilot project very successful in making credit more readily available to small farmers at near-market interest rates (14%). The project has freed provision of credit and inputs in pilot areas from prevailing price and quota controls. An active, expanding credit operation in 38 village banks, including total coverage of 3 districts, has made 41,563 loans for a total of LE 34 million. The project has involved over 28,000 farmers; 22% and 2% of all loans have been to tenant and landless farmers respectively, with no other access to loans. Women were listed as the borrowers for 13% of all loans. Repayment rates are 99%. Various banking innovations, such as increased delegation of authority to village banks and revolving line of credit farm loans, have improved credit delivery to farmers.

The team considered the proposed expansion of the project approach justified by high anticipated rates of return. The internal economic rate of return on current project activities is estimated at 31% excluding the construction component, and 20% overall. Specific activities have much higher returns — as high as 800% for selected extension activities. Eighty percent of the loans are for livestock and poultry enterprises with a 30% average rate of return. The project has demonstrated a significant impact in increasing productivity and net income. Yields for all project-sponsored crop packages are higher than national averages and baseline data. Returns are highest for high-value limited demand crops, and plans for national replication should take this into consideration. Livestock and poultry enterprises increase net income for small farmers by an estimated one-third over traditional crops alone. Project credit, input delivery and extension activities have all contributed to overall project performance.

Wider replication of the project approach is administratively feasible, but requires careful planning, commitment of counterpart institutions and training. The SFPP has trained personnel and experience on which to base an expansion. However, certain key tasks, such as institutionalization of a procedures manual and installation of an improved accounting system, remain unfinished. Too rapid an expansion may strain the system and result in sacrifices in quality and rates of return. Overlap with the current project and its technical assistance team is critical to successful replication. Ultimate success further requires integration of the existing parallel project structure into the PBDAC. The team identified the need for major financial inputs in equity capital for village banks if the project is expanded, to supplement available savings and borrowing.

The team noted limited progress in developing alternative input distribution systems to the PBDAC. They stressed the need to develop new private sector channels, but noted that in the short-term, farmers will continue to depend on PBDAC for inputs.

The construction of planned storage facilities is two years behind schedule. The team did not consider this component critical to project purpose, and recommended against incorporation of a similar component in an expansion of the project.

Lessons Learned: (1) Farmers will pay higher than subsidized prices for inputs and interest when credit is available and investments are profitable. (2) Virtually 100% repayment can be achieved when loans are for financially viable investments and without excessive collateral.



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UNITED STATES AGENCY for INTERNATIONAL DEVELOPMENT

CAIRO, EGYPT

October 21, 1985

MEMORANDUM TO : See Distribution
FROM : Shanti Conly, DPPE/PE *SC*
SUBJECT : USAID/Egypt Comments on Small Farmer
Production Project Evaluation

The recently conducted evaluation of the Small Farmer Production Project (SFPP) documents the project's success in improving access to credit for small farmers and in stimulating financially profitable farm enterprises. However, the evaluation does not address several important issues, and it makes certain recommendations which in USAID's view are based on inadequate analysis and findings. The PES action decisions reflect those major findings and recommendations which we feel are adequately justified in the report.

1. Replication: The SFPP is a pilot project to improve farmers' access to credit, extension and inputs in order to increase agricultural production. The pilot effort has included intensive technical assistance. The report's recommendation regarding replication of the project is misleading, because it is really referring to replication of the improved credit delivery, extension and input supply systems developed by the project, not the project as a whole.

Moreover, the annexes point out important qualifications to the team's recommendations which are not reflected in the main body of the report. The main report recommends replication (p. 8), but Annex II also notes that "there remain several important areas of operation where changes and improvements must be made before the project has fully attained unqualified replicability" (p. 91). Incomplete activities critical to replication include translation and application of the Policy and Procedures Manual, and implementation of an accounting system and loan classification and monitoring system. While many of the individual procedures have been tested and proven, neither the manual nor the accounting system has been introduced and tested in the field. Completion of these systems should be given high priority by SFPP and ACDI, so that they can be tested, proven and revised as necessary prior to the start-up of the planned replication.

2. Extension: The evaluation does not adequately discuss the changes in the extension system introduced by the project, although it makes the point that extension and input supply have been complementary to credit provision. Changes in the role and structure of the extension service have played an important part in the success of the project. The evaluation does not provide us with any analysis of these changes, or with guidance on which aspects of the project extension system could be replicated on a larger scale. The PID should identify successful elements of the improved extension system that can be effectively replicated.

3. Input Distribution: A major project activity, construction of storage facilities, was intended to improve the input delivery system. The report does not discuss the issue of an improved input delivery system, but dismisses the construction component as peripheral to project purpose. The report further recommends the development of alternate input distribution systems through allocation of credit for private sector input suppliers in a follow-on project. However, it does not contribute to our understanding of what opportunities currently exist for the private sector in input distribution. USAID should analyze the potential for expanding the role of the private sector in more depth during the design of the Agricultural Production Credit Project.

4. Economic vs. Financial Viability: 80 per cent of loan funds have supported livestock and poultry enterprises, activities for which feed subsidies have created major pricing and structural distortions. The economic analysis established that these enterprises are financially profitable to individual farmers, but it only superficially addresses their economic viability, i.e., how profitable would these enterprises be under shadow prices? (Price distortions on livestock prices are considered on pp. 71 - 75, but the discussion is vague and is focused only on livestock, although poultry was a more important loan activity). This issue has important implications for the feasibility of large-scale replication of the SFPP approach; the evaluation does not provide us adequate guidance regarding continued support for investments in livestock and poultry enterprises.

5. Loan Utilization: Only 19 per cent of loans have been for crop production, compared with over 80 per cent for livestock and poultry production. This is an important finding, yet the evaluation report discusses only indirectly the reasons that crop-related loans are so low, even for non-controlled crops such as tomatoes with very high returns.

6. Capitalization of Village Banks: The evaluation recommends that a follow-on credit project supported by AID include "ample funds to provide the village banks with basic equity capital structure - about L.E. one million per bank" (p. 11). The report further states that at best 60 per cent of loan needs could be mobilized from savings and commercial bank borrowing, and that there will be a need for substantial inputs of funds to capitalize the village banks. It suggests that USAID at least match the GOE commitment of L.E. 100 million for lending operations. (pp. 100-101).

The analysis in the report appears inadequate to determine the capital needs of the project. Moreover, the report does not adequately explore other options for leveraging additional funds from the banking system. Further work is needed during design of the PID and PP for the Agricultural Production Credit Project to analyze agricultural credit demand, the alternatives to, and implications of, major infusions of capital into the PBDAC system, and the appropriate role for AID assistance. For example, the report recommends several actions to promote increased savings deposits through marketing efforts, but all of these seem marginal to the primary constraint: that allowable interest rates on savings are only about half of the current inflation rate of 20%.

7. Interest Rates: The report refers to the 14% interest rates charged to farmers for loans under the project as "unsubsidized" rates. Yet the analysis does not demonstrate that this is so. In fact, given inflation rates of 20%, additional administrative costs associated with SFPP (part of the interest income is used for salary incentives of bank and extension staff), and the team's analysis of PBDAC's overall financial viability, it would seem that even a 14% interest rate contains a substantial subsidy. A more careful analysis of the costs involved is needed to draw conclusions on the sustainability and recurrent cost implications to the GOE of a national expansion.

8. FY 86 Obligation: The report recommends that AID provide approximately \$10 million in additional funding to SFPP. These funds are considered necessary to continue SFPP lending and training activities in support of the planned replication. Overlap between SFPP and any larger-scale, successor credit project is considered by the evaluation to be essential to an orderly transfer of SFPP systems and know-how. It is not clear, however, how the team arrived at a figure of \$ 10 million.

No obligation is currently planned for SFPP in FY 86. USAID needs to determine the need for additional funding for the project, and if additional funds are found to be necessary, to plan for an FY 86 obligation.

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**SMALL FARMER PRODUCTION PROJECT OF THE
PRINCIPAL BANK FOR DEVELOPMENT
AND AGRICULTURAL CREDIT
(253-6079)**

EGYPT

EVALUATION REPORT

**SONCO Consulting Corporation
1329 K Street, N.W.
Suite 401
Washington, D.C. 20006**

June 1985

V1

EVALUATION REPORT
ON THE
SMALL FARMER PRODUCTION PROJECT
AID GRANT NO. 263-0079

IMPLEMENTED BETWEEN

THE PRINCIPAL BANK FOR DEVELOPMENT AND AGRICULTURAL CREDIT
110 KASR EL AINI STREET
CAIRO, EGYPT

AND

AGRICULTURAL COOPERATIVE DEVELOPMENT INTERNATIONAL
201 CONTINENTAL BUILDING
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SUBMITTED BY:

RICHARD NEWBERG,	ECONOMIST & TEAM LEADER
JANNA LAUDATO,	TRAINING, SAVINGS, & WOMEN IN DEVELOPMENT
GLENN G. BROWNE,	CREDIT AND BANKING

June 13, 1985
Cairo, Egypt

PREFACE

The principal objective of the current evaluation has been to determine the feasibility of national replication of the Small Farmer Production Project (SFPP). The feasibility of widespread replication was to be examined from several perspectives:

- the administrative and operational feasibility of the SFPP credit system within the PBDAC structure.
- potential for mobilization of substantial capital from savings and commercial borrowing to support expansion of the program.
- the economic viability of the project activities at the farm level and at the institutional level.

Separate contractual arrangements were made for three people to be principally responsible for the evaluation:

- Glenn Browne, Credit Administration and Operations
- Janna Laudato, Training, Savings and Project Impact on Women
- Richard Newberg, Economics

Browne and Laudato started work in late February; however, because of AID/W contracting delays, Newberg was not able to start until the end of March, about the time Browne left. A farm management study contract was to have provided the team with additional economic data and analysis, but only a small part of work planned was obtained and received too late to be used, except superficially.

The report conforms to the 14 point AID project evaluation summary guidelines and is supplemented by annexes describing findings and recommendations in more detail. While drafting of annexes was assigned to individuals on the team, the conclusions have been reviewed by and reflect the views of the team as a whole. The team's principal conclusion is that it is both economically and administratively feasible to replicate the

project approach widely. Such expansion will require careful planning, full Principal Bank for Development of Agricultural Credit (PBDAC) and Ministry of Agriculture (MOA) support and a major amount of financial resources provided as permanent capital to implementing agency, the PBDAC.

At this point, it is somewhat risky to make a judgment as to total resource requirements to carry out a complete national scale program along the lines pioneered by SFFP, but it is the judgment of the team that the permanent capital structure required will be between \$500 million and \$1,000 million over the next 8 to 10 years.

Some change will also be needed on how the project is viewed. Up to now it has been viewed as an experimental program and operates in parallel with PBDAC's normal lending and input activities. Future success will hinge on incorporation and full integration of the project into PBDAC and MOA.

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I. EXECUTIVE SUMMARY

A. Project Background

The Small Farmer Production Project was designed to provide credit and technical assistance to small farmers to increase agricultural productivity and farm incomes. The implementing institution is the Principal Bank for Development and Agricultural Credit (PBDAC) whose over 700 village banks make inputs and agricultural credit available to all Egyptian farmers.

Working through village banks, SFFP has improved lending procedures and evaluation so that all types of credit are available to small farmers and agri-businesses at market rates. One third of the interest may be used for incentives for bank employees and extension workers and consulting fees to subject matter specialists. New personnel evaluation criteria have been introduced to base incentives on performance. Thus the marginal costs of providing intensive extension services and upgrading extension workers' skills through collaboration with research institutions are primarily borne by recipients themselves. SFFP's role has been to organize, coordinate and supervise extensionist performance.

B. Principal Findings

1. Economics

Overall rates of return for the project cannot be determined directly; however, evidence indicates that average farm level rates of return were at least 31% on total costs. Returns for some activities were much higher. Thus selection of enterprises and practices on the basis of rates of return should permit a significant increase in average farm level returns. Technical extension was a critical factor in some cases and returns were very high relative to costs. Credit was critical for other changes, especially for large, indivisible investments such as cattle and machinery. Project delivery of inputs was also critical for certain changes, especially use of additional chemicals and some types of machinery.

SFFP's overall rate of return, excluding construction, is estimated at over 20% based on a 31% farm rate of return on all costs and 65% of project funds used for lending. This is a very conservative estimate of the rate of returns since available evidence indicates that farm level marginal returns to project supported marginal costs for crops tended to be much higher than average returns on all costs - frequently 200% or more. Often extension was the

only service provided farmers in a block. Additional credit was not needed because costs were increased little or reduced. In such cases, the returns were many times the cost of extension services. In some such cases, of course, adoption of production increasing technology may have only been possible because credit was allocated to suppliers of inputs and services.

About 25% of project resources were allocated to the construction of village bank facilities and input warehouses. Data on return on these investments were not available since construction is just getting underway. The evaluation team does not consider them a critical part of SFPP. If these costs were included, the overall rate of return would probably be in the 15 - 20% range.

2. Credit

SFPP has made impressive gains in developing policies and procedures so that credit can be made available to small farmers. Even at relatively high interest rates, farmers are willing to borrow to invest in profitable enterprises. Repayment rates have remained high as a result of PBDAC's strength and SFPP systems for loan evaluation and technical support.

In the remaining two years, SFPP has several important credit tasks to finish in the pilot area:

- a. The SFPP policy and procedures manual has been completed, but has yet to be translated and put into operation. This manual includes budgeting and the farmer line of credit concept.
- b. An improved accounting system must be field tested and installed in project districts. Systematic automation of some accounting activities is essential for accurate record keeping and timely management information.
- c. A loan monitoring and classification system should be developed to manage loan risk.
- d. Establish a revolving loan fund at village level and consolidate system throughout SFPP districts. Develop budgeting and planning procedures at village bank level.

The decision in November 1984 by the Government of Egypt to expand SFPP systems and policies into eight new governorates presents a tremendous opportunity to replicate past successes and boost farm productivity and rural incomes on a national scale through economically sound policies. If supported adequately, it will make needed inputs along with technical assistance and credit widely available to small farmers. Achievement of this goal will require substantially

increased involvement at the national level of PBDAC.

C. Project Replicability

The feasibility of widespread replication of the project has been examined from the following perspectives:

- the economic viability of the project activities at the farm level and at the institutional level.
- the administrative and operational feasibility of the SFPP credit system within the PBDAC structure.
- potential for mobilization of substantial capital from savings and commercial borrowing to support expansion of the program.

The construction element of the project (one fourth of total funds) is just getting underway so it is not possible to make judgments concerning its rates of return. This element should not be included in a future expansion, except for construction as financed from internally generated resources.

The remainder of the project shows very favorable returns. At the micro level, they vary from about 30% measured in terms of average return on total investment in livestock (80% of total loan funds) to 800% on extension inputs which achieved important simple changes in farm practices. These "extended" changes which often involved little or no increase in costs but high returns generally resulted from use of herbicides, improved seeds, a better balance of fertilizer and/or mechanical seeding.

An important aspect of the initial SFPP project was identification of opportunities to shift from low value to high value crops (e.g. tomatoes, citrus, bananas). This involved higher returns per LE invested than changes within the existing crop pattern. These possibilities have not been included in considering returns to widespread replication since the feasibility of widespread shift to such high value crops is limited by market demand.

Widespread introduction of some high return technology (mechanical planting and fertilizing equipment) now available in limited quantities will raise returns above experience of SFPP to date.

In the next project, some high cost overhead items such as technical assistance will be a smaller percentage of the total funds. Key features such as concentration on small farmers, high repayment rates and economic interest rates, and extension should be continued. Thus the internal rate of return for the follow on project will be well above the present phase. It should easily exceed 30%. An important aspect of the program will be injection of sufficient equity

funds at the village bank level to permit village banks to operate with a substantial degree of autonomy in mobilizing savings and other financial resources and making lending decisions based on careful examination of the economic viability of individual activities proposed for loans.

The analysis of credit operations and administration indicates an adequate base in terms of trained personnel, tested procedures and experience to permit a fairly rapid expansion of the SFPP approach in the three project areas. The expansion to eight new governorates in the next year or so as proposed by the MOA will put more strain on the system and may result in some sacrifice of quality and rates of return. It might be better to concentrate another year or two on expansion in intensity of coverage in the present three governorates with start up in only one or two more in 1985-86. This is not to say that a larger expansion is unfeasible but that the more intensive approach involving the same number of new village banks would be less difficult.

The current enthusiasm among PBDAC, governors and bank chairmen presents a positive climate and opportunity to see the policies embodied in SFPP expanded on a national scale which may be lost if AID declines to provide broader geographical support. This consideration should substantially outweigh negative aspects of more rapid expansion. Intensive support and liaison with PBDAC at the national level will be necessary to ensure that the PBDAC expansion gets off to a good start. The two critical issues for a successful Egyptian expansion are organization and training. The team view, which has found wide support, is that overlap between SFPP and a larger scale credit project is essential to allow orderly transition, and ensure that the lessons learned at considerable cost are not lost. This will require not only that the two projects function in a more co-ordinated manner, but also that the current ACIDI team continue in Egypt until the next credit project is functioning. The marginal cost for a modest increase of technical assistance and related inputs are more than justified by the potential benefits in paving the way for a large scale project.

Evidence indicates that at most the village banks will be able to mobilize 25 - 30% of their resource needs from local savings and perhaps 40% from commercial bank borrowings. The rest should be equity capital to permit banks to operate in a financially sound manner

D. Recommendations

1. That AID provide approximately \$10 million of additional funds to the current SFPP to permit it to proceed in an orderly fashion in support of the GOE plans for replication of the project in 1985 - 87.

2. That AID extend the ACIDI contract through the current PACD of July 1987. The contract now expires on July 31, 1985. Ten to eleven positions for a total of twenty to twenty-two person years plus some short term input is recommended. Details of proposed positions are provided in the Input Section.

3. SFPP should continue its current program, and support GOE plans for expansion with some changes in technical assistance and major outputs. The work remaining to accomplish these goals include:

- a. Final testing, refinement and presentation to PBDAC of the policy and procedures manual.
- b. Development of training materials based on the policy and procedures manual, technical assistance and funding for PBDAC's training program for expansion.
- c. Assistance in developing an overall management development plan.
- d. Completion of construction of bank and warehouse facilities agreed to in the SFPP agreement. The only further AID support for construction should be modification of training facilities urgently needed during the next four to five years.
- e. Testing and preparation for wide adoption of Dr. El Maazawy's accounting proposals or an alternative. Before final adoption, these should be reviewed for compatibility with the EDP system to be used.
- f. Development of a loan classification and monitoring system as well as a simple method of risk analysis for use in the village banks.
- g. Collect data on village bank depositors and develop a training program to assist village bank managers in increasing deposits.
- h. Increased liaison with PBDAC and support in planning and organization for expansion of SFPP.
- i. The SFPP project has outgrown its current staffing pattern which basically reflects needs established when the project was much smaller. The project director and team leader need understudies in farm management and credit to relieve them of daily operating responsibilities.
- j. Re-orientation of technical assistance to serve both project and expansion areas.

k. Continued expansion of SFPP in the three project governorates with testing of new approaches and techniques.

l. Identification and testing of high return practices and investments. By directing financing to those investments having the highest rates of return, the project's overall rate of return should be greatly increased.

m. Increased support to suppliers for development of planting machinery and other high return inputs identified through work described above. Increased production has created needs for other farm services and opportunities for food processing enterprises which should be supported by the project.

n. Data on PBDAC should be collected and maintained at SFPP for use in developing the follow-on project.

o. In the absence of adequate research information from the ARC, SFPP should expand data collection and analysis to determine rates of return at the farm level to different production practices.

p. Develop "packages" suitable for management by farm women to offset decreased loans for livestock and poultry.

If the extension of the project technical assistance contract with ACDI is approved by May 31, 1985 and other recommended inputs committed by June 15th, major progress can be achieved on these recommendations during the next two years.

Mission intent must be clarified so that project work can continue and so that necessary qualified personnel can be recruited and arrive in country this Summer or Fall. Given the normal time for the new contractor selection and posting, a decision not to renew the contract would result in a hiatus of at least 18 months during which technical assistance would not be provided. The project technically might continue to exist, but project momentum would be lost and the most talented GOE staff might leave the project. The Small Farmer Production Project has consistently received outstanding evaluations and merits AID's continued support.

4. A follow-on credit project supported by AID should include the following:

a. Support of a well directed, motivated extension cadre based on SFPP's successful experience.

- b. A specific allocation of credit funds to suppliers of inputs and services which are essential to adoption of many kinds of production increasing practices. The evaluation indicates that in many cases financing of a pump or mower for a small farmer who then does custom work for his neighbors or financing for a small repair shop or inputs distributor is more important than supplemental crop credit.
- c. Ample funds to provide the Village Banks with basic equity capital structure - about LE one million per bank.
- d. A contract for TA similar to the current contract with personnel centralized and designed more to support the expansion in the PBDAC structure.
- e. A turn-key contract for software, hardware, and training for a suitable EDP system.
- f. Funds to assist in assessment of staff needs and planning of a comprehensive staff development plan.
- g. Adequate dollar support from AID to finance a 5 year in country staff training program.
- h. Funds to develop PBDAC marketing department to ensure mobilization of local resources.

II. PROJECT BACKGROUND

The major problems this project addresses are low rates of agricultural production, resulting in rapidly increasing import dependence and a stagnating rural economy. One of the serious broadly felt results of this situation is massive rural-urban migration which in turn has led to large scale urban unemployment and under-employment, and unsupportable demand for urban services and cheap consumer goods. Since the 1970's these problems have existed and worsened. The underlying causes of this situation include:

- tight management of prices of outputs and inputs, in most cases at levels a fraction of world economic levels.
- a widespread system of controls and rationing of off-farm supplied inputs including credit, agricultural chemicals, seeds, commercially prepared feeds, mechanical equipment and also control over land use and cropping patterns. These controls are to allocate resource use in the absence of appropriate economic prices.

Development and transfer of appropriate production increasing technology to farmers has suffered from price distortions, and preoccupation of the bank, government officials and extension workers with design and enforcement of the many quotas and

controls. Crop credit has been rationed on the basis of decreed cropping patterns and uniform input quotas for each crop. Long or term credit has been restricted to farmers with substantial land based collateral and uniform formulas rather than individual enterprise needs and opportunities. In this environment, private investment in supply of key production inputs and services and marketing of agricultural produce has suffered both from un-economic control of prices and margins and capital restrictions.

The SFFP attacks these problems by providing both technical assistance and credit to small farmers and agribusiness to increase production and return per LE invested in agriculture and rural enterprises and to facilitate procurement of inputs (seeds, machinery and needed services).

A. Project History

SFFP was developed after a major MOA/USAID study on how to remove constraints on agriculture to improve production. The Small Farmer Production Project is carried out through the Principal Bank for Development and Agricultural Credit (PBDAC), the GOE institution responsible for all institutional farm credit and bank services, as well as distribution of farm inputs, particularly fertilizer. Through its network of 750 village banks and 4,300 agencies, the bank serves practically every Egyptian farmer with input and seasonal credit.

The project agreement was signed on July 25, 1979. A host country technical assistance contract was negotiated with Agricultural Cooperative Development International (ACDI) and signed August 20, 1980. The first advisors arrived in September 1980 and the project made its first loan in May 1981.

The project was evaluated by a joint PBDAC/ACDI team in 1983 and by an external USAID team in 1983. The major achievements cited were:

1. Provision of credit at 10% interest and farming advice to 12,490 farmers (8/83) and 100% collection record.
2. Improved farm production and increased incomes.
3. Acceptance of higher interest rates by small farmers.
4. Successful demonstration of new systems for credit delivery, accounting, loan processing and analysis.
5. Highly effective system of information dissemination to Egyptian farmers.

6. Data collection on farm problems.

On the basis of these achievements and assessment of work still to be completed, the project was amended in 1984 to extend the FACD until May 1987.

B. SFPP Program

The SFPP has succeeded in developing a system that effectively delivers research results through extension agents and credit to the farmer for greater productivity and income. This combination has resulted in higher rates of return than could be achieved by a credit program alone.

This system provides both professional and monetary incentives based on evaluation of individual performance, to motivate researchers, extension agents and bank officials to work together on a continuing basis to deliver production increasing technology to farmers.

Differences between standard operating procedures and the project policies and procedures are outlined below.

MOA Extension Workers

1. Enforce crop patterns
2. Poorly trained & educated
3. Inefficient work methods, including poor transportation and work with individual farmers.
4. Poorly paid & unmotivated

SEFP

1. Exempted from MOA mandated patterns.
2. On-going technical training through work with subject matter specialists teams.
3. Work with motorcycle transport with farmers in blocks.
4. Receive incentives from VB based on performance.

EBDAC Village Banks

A. Inputs

1. Distribution of subsidized inputs (fertilizer, seed, pesticides, etc.). Amounts limited.

1. Credit to purchase additional inputs at market prices.
2. Development of private distributors or procurement by project.

B. Lending Policies

1. Subsidized input credit at 3% interest based on crop quota.
2. Other loans made on the basis of collateral with little financial analysis. Most small farmers and enterprises do not qualify.

1. Cash available to purchase supplemental unsubsidized inputs at market interest rates.
2. Loans made on basis of financial analysis of the particular small farm or business enterprise. Collateral is relevant, but not the central consideration.

C. Personnel

1. Standard pay and bonuses for everyone.
2. Little training

1. Personnel evaluation using performance criteria as basis for incentives.
2. In-service training on continuing basis.

D. Bank Management

- | | |
|--|---|
| <p>1. Profits return to Principal Bank.</p> | <p>1. Profits from SFPP are kept in VB for additional lending, payment of incentives and improvement of facilities.</p> |
| <p>2. Minimal planning at VB level.
Top down allocation of funds.</p> | <p>2. Budgeting and planning activity carried on at VB level. Line of credit with FBDAC to tap commercial markets. Facilitates demand driven lending.</p> |
| <p>3. Limited or no delegated authority to VB managers. Lengthy waiting period for MT lending and non-traditional loans.</p> | <p>3. Increased delegation of authority to VB managers & financial analysts. Loan approval in 1 - 3 days.</p> |
| <p>4. Efficiency
High costs due to multiple loans to each farmer.</p> | <p>4. Efficiency
Revolving line of credit</p> |

The above chart indicates the number and range of AID/GOE policy issues successfully addressed through this project.

III. EVALUATION AND METHODOLOGY

The evaluation involved several approaches to assemble information upon which to appraise project results and potential for widespread replication of similar activities. First, of course, background reports from project conceptualization through most recent progress reports were assembled and reviewed. Results of the several special studies and data collection activities e.g. farm management survey, also were assembled and additional data analysis carried out. The farm management contract economists were requested to assemble some additional micro and macro data, primarily for the economic analysis.

Much of the information came from interviews and frequent discussions with Principal Bank, SFPP, and MOA administrative, research, extension and training staff, and with USAID staff and personnel of other projects, who were very helpful in assembling additional data. Several field trips were made to visit village banks, cooperatives, private agri-businesses, farmers and farm families to discuss activities, individual participation and views of results.

Initial views on project results were compared with other secondary data and studies to verify conclusions.

The methodology was not new or original, although the volume of related reports and background materials greatly exceeded normal quantities and contacts with project and other personnel at different levels was greater than normal. The evaluators were provided with office space in SFPP headquarters which greatly facilitated opportunity for professional inter-change.

IV. EXTERNAL FACTORS

The GOE's general overall policy concentrates heavily on augmenting the productive sectors - industry and agriculture. Their policy has been to slowly remove impediments to growth such as regulatory restrictions, reliance on central planning, distortions of prices through unrealistic output price controls and subsidization of interest rates and other costs. A major goal of these policies is to increase agricultural production and reduce Egypt's reliance on imported foodstuffs.

Agricultural consumption continues to grow much more rapidly than production, spurred by 2.9% population growth rates and artificially low consumer prices. Crop production in contrast has hardly kept pace with population growth. Total agricultural imports in 1981 were \$4 billion and may reach \$12 billion by the end of the century if current trends continue. Cost of agricultural subsidies has soared as quota allotments of fertilizers and other inputs has increased. The cost to the economy for fertilizer in 1982/83 was approximately \$200 million. The GOE subsidies for agricultural credit increased from LE 40 million in 1980/81 to LE 59.9 million in 1982/83, or 50%. SFPP's goal of increasing small farmer productivity through lending at

market rates to buy inputs at market prices continues to be very relevant.

In November 1984, the increasing visibility and impact of SFPP led the GOE to announce plans for expansion into eight new governorates. The FBDAC has been assigned the responsibility for managing and directing the expansion; and a senior bank official has been appointed to oversee operations. Meetings have begun with governorate chairmen to introduce the project and planning for the expansion.

The GOE's acceptance of the pilot project and their willingness to replicate it nationwide stems from the demonstrated ability of the pilot project to test and implement the planned GOE approaches. Through participation and support of the expansion of the SFPP project, USAID has a major opportunity to continue to assist in addressing these significant issues.

V. KEY ASSUMPTIONS

All assumptions remain valid. For a significant number, GOE/MQA response has been much more positive than anticipated.

- | | |
|---|--|
| 1. Supplies available to Bank at correct time in amounts needed. | 1. Significant improvement made in timeliness and quantities though problem not totally solved. |
| 2. Transport to governorate shounas available. | 2. Problem no longer a common constraint. |
| 3. Bank remains willing to experiment with approaches and cooperate with extension. | 3. Experimentation and cooperation with SFPP have been very good. The Bank and MQA now want to expand SFPP throughout PBDAC system, apply project principles of lending and financial analysis to all loans except those for greater inputs. Banks receive data necessary to complete financial analysis for supplemental crop and farm enterprise loans from extension workers. |
| 4. High level policies continue to favor more open distribution of inputs. | 4. The stated policies clearly favor more open distribution of inputs; however implementation of these policies has lagged primarily because |

there is no clearly competent alternative to PBDAC distribution. The system has incorporated more private institutions, but these are still only a small part of the total. More inputs are now available than 5 years ago for fertilizer, chemicals, and machinery.

5. Farmers willing to participate even though capital and input costs are higher than their neighbors.

5. SFPP provides supplemental credit and inputs at market rates. 41,163 loans have been made as of January 31, 1985.

Assumptions for providing inputs:

1. Bank and Extension continue to provide personnel above normal staffing levels.

1. Bank and Extension are planning to expand personnel to SFPP levels throughout the PBDAC system as well as increasing the number of extensionists in each village bank area.

2. MOA continues to support growth of loanable funds.

2. MOA continues to support growth of loanable funds. Long term stability of the Bank is threatened by low capitalization and inadequate reserves for loss as well as the general use of long term funds for medium and long term lending.

Important Assumptions

Assumptions for achieving goal targets:

1. National price policies remain as are, or move closer to free market.

1. Most crops have been freed from price control. Set prices for wheat, maize, cotton and rice have been increased.

2. Demonstration effect and governorate district level changes provide

2. The Bank has expedited loan processing through verification procedures

significant benefit to farmers in non-project villages.

and in some governorates increased delegated authority to village bank managers. SFPF extensionists report interest in crop pkgs by other farmers & extension agents. Independent seed stores report demand from non-SFPF co-operating farmers for SFPF recommended inputs.

Assumptions for achieving purposes:

1. Bank employees will remain motivated to be responsive to small farmers needs.
2. Bank remains principle actor in input delivery system in near term.
3. New technologies exist and new ones will be developed that can be applied by farmers.
1. The personnel evaluation system which is the basis for incentive pay is a key motivating factor. The 13% interest and the 1% commission is profitable to PBDAC.
2. No private network exists comparable to PBDAC's distribution system; however, the project has encouraged start-up of small input business in villages through SFPF loans. Caution must be used in divesting PBDAC of its fertilizer distribution system to ensure that farmers will continue to have inputs readily and conveniently available.
3. SFPF coordination of subject matter specialists and extensionists provide continuous training and up-date of SFPF recommended packages.

VI. PROGRESS ON 1983 EVALUATION ON RECOMMENDATIONS

1. Collection Of Economic Data

The project has begun to collect data on crop production. These data are sufficient to show that co-operating farmers had yields higher than national averages, but not to measure the impact of different project components (e.g. credit, information and physical supply of inputs) or impacts of

different practices and technology in the packages. Analysis essential to project include:

- a) Measurement of overall input of project items, benefits and costs.
- b) Measurement of impact of different project component services.
- c) Measurement of contribution of different technological practices on production and farm income.

(This is discussed in detail in Annex I.)

Recommendation:

That methodology be developed and data collected which would begin to measure inputs and contributions outlined in a, b, and c above. To this end, it is recommended that a full time economist be supplied for the next 18-24 months under SFPP to assist SFPP and Agricultural Production Credit as it starts. Short term assistance should be provided to assist and review data collection methodology and analysis on an annual basis.

2. Input Supply and Distribution

The project has as one of its purposes to develop an improved input supply system relieving PBDAC of some of its non-banking responsibilities. The 1983 evaluation notes that except for some minor input supply operation under SFPP, no progress has been made on improved alternative supply systems. This is generally true in 1985. The project has made loans to 16 supply businesses for a total of LE 36,900. The project has also purchased equipment and made some loans to small scale machinery manufacturers in an effort to stimulate these businesses at the governorate and village level. Probably of most importance, it has made loans for machinery, much of which is used by the purchasing farmers to provide custom services to neighbors (8% of the loans).

Recommendation:

In the next credit project, major efforts should be made in developing private suppliers of production input services, with reservation of some funds solely for such private entrepreneurs.

3. The Farm Record Book has been modified several times in an effort to make it more useful for data collection.

4. The adoption of the accounting system proposed by Dr. El Maazawy has finally been approved by PBDAC.

Recommendation:

This must be carefully tested in the project before proceeding to implement it throughout PBDAC, it is recommended that the accounting EDP specialist with banking experience be included in the technical assistance team.

5. PBDAC has had impressive growth in current, term and savings deposits since 1976 measured in current LE. However, growth rate has slowed in recent years, measured in constant terms. It now approximately equals the rate of inflation. Thus undue optimism should be avoided about deposit growth. Interest rates for term and savings deposits at an average of about 10% are competitive with other banks, but not with traditional "reservoirs of value" such as livestock for which present values have increased relative to most other goods. Estimated returns on farm livestock enterprises range from 22.9% to 38.6%.

6. The project has taken the initial steps in including all banks in one district in each governorate in the project. District and village bank staff as well as extension agents have been trained in each governorate and training is continuing to introduce more advanced concepts to new and old village banks.

7, 8. Efforts to include women financial analysts and extension agents in project staff have been frustrated by dearth of qualified personnel in village bank areas. Qualified women are available in Cairo, but are unwilling to move to villages and to use motorcycles for transportation. The project expects to work with large numbers of women as the project is expanded to cover accountants. Concern that extensionists and veterinarians would not be welcome in village homes which house chicken batteries and other home based enterprises has proved unfounded. Women officially received 13% of all loans. How many more were for women with a man as nominal recipient is not known.

9. The present evaluation team disagrees with thrust of project in building additional PBDAC owned and operated facilities for storage.

Other areas of progress are:

1. Policies and Procedures Manual to standardize activities throughout districts has been completed and is being translated.

2. Training materials - The credit section of the manual has been translated and is being used with case studies recommended in 1983 for training.

3. Project has identified some sources of improved livestock

and is no longer making loans for traditional stock.

VII. INPUTS

	Implementation Target (type & quantity)
1. Technical Assistance	1. Approximately 600 work months.
2. Loan Funds	2. \$ 22,132 million (AID) \$ 14,830 million (GOE)
3. Training	3. Construction, participant training, in-country training contract
4. Storage Facilities and Equipment	4. New construction, land, handling equipment, repairs (140 units)
5. Building Program	5. Furniture and equipment for 38 bank buildings
6. GOE staff	6. 913 work years.

1. Technical Assistance

a. Technical Assistance Contractor

The initial principal inputs - U.S. supplied dollars and Egyptian supplied LE were obligated expeditiously. In 1984, the project was amended to provide an additional \$25 million from AID and a LE 10 million loan from PBDAC. The inputs financed with these funds include a contract with ACDI (Agricultural Cooperative Development International) signed in August 1980. This contract provided for 600 person months of long and short term technical assistance and the direct support of participant training. The contractor's performance has been superior in all aspects that can be appraised from this vantage point:

- Timeliness: The long term team arrived in Egypt within a month of the August 1980 contract approval.

- Responsiveness to Project Requirements: The personnel fielded for both long and short assignments conformed to requirements in terms of professional expertise. The concepts developed reflect established program priorities.

- Qualifications of Personnel: We can not make judgments about qualifications of team members no longer here, but the current team is well-qualified and particularly excel in sense of direction and purpose, dedication and ability to perform harmoniously with Egyptian co-workers and farmers.

b. Re-orientation of technical assistance team

Project success in working with GOE counterparts makes full time governorate staff unnecessary. A re-orientation of the technical assistance team is needed to complete project work and pave the way for large scale credit project.

2. The major input to the project is funds for loans. These have been made available as needed. Now however, with the project extended two years, and plans of the GOE to replicate the program widely, additional loan and training funds will be needed before the next agricultural credit project can be prepared, negotiated and signed, (about \$10 million is needed for the first year to expand farm credit and support agri-business). Funds were provided in the 1984 project extension for continuation of technical assistance and training for the next two years. It is clear that this input is urgently needed to maintain project momentum and prepare the expansion, recently announced by the GOE, which AID plans to support under the new agricultural credit program. An important deficiency in input mobilization has been the lack of well designed, scientifically based programs of economic data collection and analysis for guidance of technology choices and establishment of project priorities.

3. Training programs are an important input to the project. These have been well planned and executed, and meet SFPP needs to date.

4, 5. The construction program is about 1 1/2 years behind schedule due to land acquisition and performance problems with contractors.

6. On the Egyptian side, the project has had extremely strong and capable project direction and employed well qualified, hard working and dedicated staff at both headquarters and village levels. It has brought in capable local scientists from universities and research organizations to assist in design of technical assistance packages for farmers. A substantial part of the project success can be attributed to the leadership provided by Mr. Noor and Mr. Gollehon, the project leaders, and their close working relationship.

Recommendations:

1. Technical Assistance

a. AID should extend the ACIDI contract through the current PACD of July 1987. The contract now expires on July 31, 1985.

b. Some of the existing technical assistance team which

is currently based in the three project governorates should be brought in to Cairo. Egyptian counterparts are well trained and performing well. The technical assistance team should be re-oriented and expanded by 1 to 2 positions to serve the project work outstanding, support the Bank's expansion program and pave the way for a follow-on project.

Technical assistance should include:

- (1.) Team Leader - Credit Administration Specialist (65% SFPP, 25% Expansion and 10% contract administration)
- (2.) Senior Level Farm Credit Planning and Operations Specialist (50% SFPP and 50% Expansion); among other tasks work with PBDAC in planning, and organizing staff to serve expansion.
- (3.) Accounting Specialist to assist in implementing the El Maazawy or alternative accounting recommendations and initiate work in a comprehensive EDP accounting and information system (e.g. assist in preparation of concepts and RFP for a turn-key contract)
- (4.) Loan Quality Control Specialist to assist in development and implementation of a loan quality and classification system. A simple method of analyzing risk is needed for village bank use.
- (5.) Farm Services Development Specialist to assist in promotion and development of private agri-business to support production objectives. (75% SFPP, 25% Expansion)
- (6, 7.) Two Farm Management Specialists, possibly in Cairo to assist in result analysis and development of farm plans for all governorates. (75% SFPP, 25% Expansion) Short term consultants will also be needed in specialized areas, i.e. livestock.
- (8.) Training Specialist to develop training materials based on the policy and procedures manual and to assist PBDAC in planning and implementing training in the expansion.
- (9.) Facilities Development and Merchandise Specialist to assist in supervision of current construction activities and improvement of both public and private input distribution activities. This person should have a principal responsibility resolving current construction problems.
- (10.) Training Management Specialist to assist in development of a comprehensive staffing and personnel development plan. Such a plan can only be prepared with a great deal of input by PBDAC and SFPP top management.

Considerable short term assistance will be needed to work with PBDAC. Additionally, the Center for Agricultural Management Development can be used for general management training.

(11.) Economist to assist in development of data collection and analysis on returns to alternative programs, activities, practices and off-farm and agribusiness investments. This may be either an expatriate or local person; however, provision must be made for a one or two person team to assist in initial design of methodology and twice yearly to participate in analysis of results.

This is a total of 9 to 11 full time people for a total of approximately 20 person years, plus considerable short term consulting time. All the positions would serve the SFPP governorates and the expansion.

The above major re-orientation requires advance planning to recruit the appropriately qualified personnel and allow for overlap with the existing personnel. Although these proposals have been discussed and accepted by bank officials and project personnel, recruitment is handicapped by delay in renewal of the technical assistance contract. Unless action is taken very soon a major loss in project momentum will result.

2. Loans Funds: It is recommended that AID provide approximately \$10 million additional funds to the current SFPP to permit it to proceed in an orderly fashion in support of the GOE plans for replication of the project in 1985-1987.

3. Training: Funds should be allocated by AID to initiate the large in-country training program required by the PBDAC expansion using materials developed by the project and based on the SFPP Manual of Policies and Procedures. Additional funds should be made available to develop an overall personnel development plan with implementation funds available following approval of a plan. Participant training should play a secondary role and focus on management of PBDAC.

4. Storage and Bank Building Program: The project should complete construction of bank and warehouse facilities agreed to in the SFPP agreement. The only further AID support for construction should be modification of training facilities urgently needed during the next four to five years.

5. GOE Staff: The SFPP project has out grown its current staffing pattern which basically reflects needs established when the project was much smaller. The project director and team leader need understudies in credit and farm management to relieve them of daily operating responsibilities. Implementation of the accounting and loan classification program and extension recommendations will require additional

GOE staff. FBDAC expansion of this project with SFPP support will require expansion of FBDAC training department staff.

VIII. OUTPUTS

Magnitude of outputs:

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|---|--|
| <p>1. Improved Bank Management System</p> <ul style="list-style-type: none">a) Management information system operating;b) Staff more thoroughly trained | <p>1. Complete system implemented in 22 village banks and 3 district banks.</p> |
| <p>2. Improved Credit System</p> <ul style="list-style-type: none">a) lending interest rates at or near market rates;b) savings rates at or near market rates;c) studies completed on means to generate loan funds from the capital market. | <p>2. Village level system implemented in 11 village banks</p> |
| <p>3. Farm Management Systems Developed</p> <ul style="list-style-type: none">a) a wider variety of farm enterprises being undertaken in project area than elsewhere;b) advisory services being supplied by bank or in cooperation with extension services. | <p>3. 162 cooperating farmer groups (1,000 farmers) formed and assisted by 38 farm management teams.</p> |
| <p>4. An Improved Input and Storage Handling System operating in Pilot Districts</p> <ul style="list-style-type: none">a) incremental business operating at or near market prices;b) costs of storage being recovered from users. | <p>4. 140 storage facilities upgraded, 50,000 m²/ new facilities constructed.</p> |
| <p>5. An analysis done with respect to:</p> <ul style="list-style-type: none">a) comparisons of project area to control area;b) comparisons to other credit programs which lack provision of extension or farm management services;c) recommendation for organization | |

of national, cost effective, extension and credit and input systems.

6. An updated Training System Operating
 - a) women receiving training for skilled jobs;
 - b) better personnel records on skills existing. Those needed and plans to meet requirements in place.
6. 1 training facility up-graded, 50 village bank officials trained, 300 village bank employees trained.

Current Status

1. A management information system has been put in place for SFPP which includes monthly information from each participating village bank on numbers and amounts of loans made by term and purpose, collections, and status of repayment. These reports are all received in Cairo before the end of the following month. The information is received from all 38 banks in the project. This is a vast improvement on the PBDAC system which is only now (April 1985) receiving approved reports on operations for the last year (ending June 30, 1984). The staff of the 38 participating banks have completed their first round of training in the accounting and information systems used.

2. Uniform procedures are employed in all 38 participating banks :

a) Interest rates are 13% plus 1% service charge compared with money cost to village banks of 10%. This lending rate is about equal to commercial bank operations and compares favorably with 3.5 to 8% on other credit from PBDAC.

b) Savings rates are basically equal to those in other banking institutions ranging from 5 to 13% depending on amount and term.

c) Means of generating loan funds has been informally studied by the SFPP and the evaluation team but it has not been subjected to a "formal" contracted study.

3. a) In contrast with the output target of 4,000 cooperating farmers in 162 groups, there now are 28,000 farmers in 758 cooperating groups.

b) Farm enterprise guidelines on some enterprises have been available from the start of the lending program. In March - April 1985, the guidelines were substantially revised and updated and now cover all the major field crops plus citrus, bananas, tomatoes, lentils, beans and laying hens. (a copy is included as annex VII). The new guidance was issued to all participating village banks and higher level agencies on April 28, 1985.

4. The project initially planned construction of 140 storage structures at the village level and 38 banking facilities. There were substantial delays in obtaining sufficient funds for land purchases and the activity is about 2 years behind schedule. The total number of storage units has been reduced from 140 to 100. Issues were raised in the 1983 evaluation over the location of input storage facilities on agricultural land in villages and failure of the project to find private investors to borrow money, build facilities and lease them back to PBDAC. The present evaluators have reservations about inclusion of any funds for a general construction program. Use of a small amount of the building funds for rental of existing buildings and the major part as an addition to the loan portfolio would have been much better use of resources. Where the village bank was unable to rent facilities it might have used the opportunity to contract out the function to private individuals. In Egypt, given the benign climate, tarpaulin covered platforms could satisfy many seasonal storage requirements. The recommendation that the project finance private investors to build and lease to PBDAC in the project seems an unrealistic, difficult and unfruitful way to promote private enterprises. The idea of locating input warehouses outside the agricultural area is inconsistent with the farmer's need to have input supply within a short distance of the farm site.

a) Most incremental inputs under the project are sold at market prices, about double the PBDAC quota prices.

b) Costs of storage is included in PBDAC's overall calculations of costs which are basis for establishment of GOE remuneration. SFPP farmer prices are set with a view to recovering costs; they are set at about double the quota price. It is not clear what the arrangements will be for recovering costs of facilities financed by AID.

5. The studies and analysis that have been completed provide little information on the following areas identified for specified attention:

a) Project vs control areas

b) SFPP programs compared with other programs that "lack provision of extension or farm management services"

c) Recommendations for organization of national, cost effective, extension and credit and input systems.

6. Not just 1 but a total of 10 training facilities are being upgraded - three are in the process of reconstruction; another 5 are being equipped and 2 more will be equipped by the PACD. The project has exceeded the training target of 50 bank officials; a total of 38 village bank managers, and 36 district and other high bank officials have been trained and 190 others trained mainly in

accounting and financial analysis. All project personnel receive on-the-job training and have close supervision during the first several months on the project.

Recommendation:

1. The major recommendation with respect to outputs is that much more effort be made on economic analysis of all aspects of the project.
2. More study should be devoted to organizational and operational issues.
3. Particular attention is needed on means of stimulating more private agri-business initiative in support of the project.
4. SFPP expansion should continue in SFPP governorates in support of MOA/PBDAC policy.
5. Farm management advisory services should be expanded from the present two extensionists to as many as five depending on funds available from SFPP interest. Services should include livestock and dairy packages.

IX. PROJECT PURPOSE

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| <ol style="list-style-type: none">1. By 1988, effective system operating in 3 complete districts ready to be applied on a larger basis. | <ol style="list-style-type: none">1. Conditions that will indicate purpose has been achieved:
End of Project status by 1988<ol style="list-style-type: none">a) system enables farmers to increase yields and income by 10% by providing greater access to inputs, encouraging use of new technologies, and increasing farmer service by the bank and extension service. |
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Current Status:

As of the time of the evaluation, (April 1985) the SFPP had been expanded to the target of including all 22 village banks in 3 districts with full involvement of the respective district banks. The project also has been extended to 5 other districts, with 16 village banks. One of the new districts has only two banks, both now are in the project. Project activities are still concentrated in the original three governorates. The project has gained the experience and nucleus of trained staff to permit an accelerated rate of expansion. Recently, the government formally announced its intention of expanding the SFPP approach to eight new governorates in 1985-86 and to 192 new village banks over the next two to three years. AID is planning to provide support in this expansion of the program.

Prior to the 1984 amendment the EOPS indicated that the project would be expanded by 1985 to eight districts. The project has concentrated on that objective and now has achieved a presence in the eight districts, but it will be one to two years before all these new banks will be functioning at the desired levels of efficiency. The new emphasis on 100% coverage in the three initial districts will provide needed experience at the district levels where village bank supervision takes place. Until now the SFFP activities have operated parallel with regular PBDAC operations at the village bank level. This total district approach will permit the gradual change over to the SFFP approach in these three districts. The next AID agricultural credit project will support expansion of the program to as many of the planned 192 new village banks as feasible in 1985-86 and beyond that possibly to as many as 300 as rapidly as this becomes feasible.

The project purpose has been amended. The original statement of purpose was: "To develop in three governorates an improved PBDAC credit and input system to provide small farmers with access to agricultural inputs, including seed, fertilizer, cash, technological information and capital equipment."

It would have been better to broaden and clarify the statement of purpose rather than to narrow and obfuscate it. The project as currently operated does, in fact, adhere closely to this earlier statement of purpose. It should be made clear for this project and the next credit project that part of the purpose is to help bring about a significantly altered and improved system for distribution of production goods and services, one which will involve a very substantially increased role for private enterprise. The project has promoted and supported private initiative in this area, especially in distribution of poultry stock and support of machinery, and custom machinery operations; however, PBDAC is still the primary channel for input distribution. The project has been directly involved in some supplemental input distribution. If the SFFP approach is to be fully implemented in the three districts on a test basis and experience gained applied to other areas, then the project should now substantially increase its emphasis on and support of private agri-business. How this can be done and how far and how fast it can proceed is to be learned.

The PACD has been extended from July 1985 to July 1987. This should be sufficient to achieve the end of project status, including development of some alternatives and/or complementary means for distributing production inputs and services.

The two major linkages between purpose and goal continues to be appropriate. There are stable or improved price policies which will continue, and a demonstration spill over from the project will influence farmers outside the project area. A third implicit link is that faced with the favorable conditions provided under the purpose, farmers will opt to participate in use of production increasing practices and increased income will result from use of

these practices.

X. GOALS AND SUBGOALS

Project Goals	Objectively Verifiable Indicators
Increase productivity of small farms leading to greater small farmer income and employment.	<ol style="list-style-type: none">1. Cooperating farmers, initial 9 groups: 25%2. Remaining cooperating farmers in 38 villages: 20%3. Cooperating farmers in 18 villages: 15%4. Other farmers in 38 villages: 10%5. Farmers in remaining villages of the 8 project districts: 5%

The project lending rate is on target with respect to value of loans made and ahead in terms of numbers of farmers served. As of the January 31, 1985 loan funds advanced have been drawn almost to zero. The cumulative value of loans made was LE 33,893,867 with 41,163 total loans. The pace of lending has accelerated rapidly from 150 loans made per month in the first semester (11/81 to 4/82) to 1,500 per month in the last full semester (5/84 to 10/84) and 2,500 per month on the 3 months from 11/84 through 1/85. Data are not available on the impacts of the project on groups as indicated in the objectively verifiable indicators. Available evidence indicates the following keyed to the five groups.

1, 2, 3. The average number of farmers directly participating in the project have exceeded project targets. Livestock loans commonly involved introduction of a new farm enterprise, hence before and after comparisons of the enterprise are not possible. On average, returns on the livestock investments have been about 30%. Introduction of a small livestock enterprise (1-2 cows or 96 laying hens, etc.) on a 1-2 feddan farm increased the net income flow by about one third compared with income from traditional crops alone. Livestock has accounted for 80% of the total value of loans.

The increase in production on enterprises that have been financed generally came within a half year. Thus there is no significant difference among the early and later participants in increase in income, (ie groups 1, 2 and 3 from above).

4, 5 We do not have specific data on the amount of secondary or demonstration affects, although field observations indicate a considerable impact especially in a crop block situation.

Where a farmer has obtained credit for a mechanical improvement, he generally has leased it to other farmers for custom work. Thus 5 - 10% gains for other nearby farmers appears likely in areas where the project has been working a year or more.

The goal should be expanded to reflect the direct income and employment benefits which will come from expansion of private enterprise involvement in provision of production inputs, services, marketing and processing.

XI. BENEFICIARIES

The primary beneficiaries are the small, tenant and landless farm families living in the project area, an estimated 182,000 farmers in 38 village bank areas. Approximately 93% of all Egyptian farmers have holdings of less than five feddans and find it very difficult to satisfy PBDAC requirements for collateral. Tenant and landless farmers, two groups which could not have otherwise received loans, respectively received 22% and 2% of all loans to date. The total number of people benefiting directly is estimated to be about 25,000 to 28,000 families with a total of about 160,000 family members. By making credit accessible to these small farm families, the project can contribute substantially to improved development in Egypt.

SFPF farmers have benefited by crop yields that averaged more than 50% above national averages. Increases in income have been even greater due to a shift from low-return traditional crops to high-return crops.

Livestock enterprises accounted for over 80% of funds loaned. Analysis of livestock enterprises indicates that these provided high rates of return as well as increased meat, milk, and eggs for family consumption. Livestock are generally tended by unpaid household members, usually women and children, who might not otherwise find employment in income generating activities. These duties may relieve them of field work and as well as increase their activities at the homestead. Farm equipment loans (13%) may similarly relieve household members of hard field work as well as provide cash from custom hire service. Women were listed as the borrowers on 13% of all loans and are probably responsible for the management of the majority of livestock enterprises, no matter who was listed as the borrower. About 60% of the value of dairy, laying batteries, rabbit hutches, and similar enterprises were sold, thereby increasing funds directly available to women. Dairy enterprises (12% of the value of loans, but a much higher percentage of loans outstanding) may be particularly significant since milk can be processed into butter and cheese and sold at much higher prices.

To date the project has been unable to locate appropriately educated women living in the rural project sites and the qualified women from other areas would not relocate. This project has not encountered serious difficulty in having male personnel

work with women enterprise managers. The project is giving special emphasis to training women to manage the new accounting system.

The project has analyzed skills and areas of training required for employees sent for participant training, but does not maintain such records for all staff. This should be done by governorate level training specialists and assessed jointly with the project training specialist.

Agri-businesses received only one percent of total loans, but probably would not have qualified for regular PBDAC loans. * Studies by The Rural Non-Farm Employment Project suggest that micro-industries such as machine shops and agricultural implement manufacturers are limited in their ability to expand and modernize because of limited funds. The combination of financial analysis and funds provided under SFPP can provide important stimulation to non-farm enterprises in the long run.

XII. UNPLANNED EFFECTS

The project anticipated changes in bank procedures and policies as a result of the project, but changes have been much stronger than anticipated. Bank management was originally very skeptical about lending without heavy collateral, especially to landless and tenant farmers. Management's commitment to lending to this clientele is very strong as demonstrated by the decision to expand SFPP to all village banks. Furthermore, they believe that lending based on SFPP principles for all loans will greatly enhance the bank's role in developing agriculture. Productivity results achieved by pairing extension with credit and the support for extension services through bank incentives is the major GOE justification of market interest rates; nevertheless, interest rates have been criticized by the opposition and press. This combination of extension and credit, leading to increased productivity, is central to progress in raising interest rates on loans to cover real cost of operations and services.

The bank has modified some lending practices, such as reducing documentation needed for collateralized loans to expedite loan processing. In two project governorates, delegated lending authority equals or almost equals the amount SFPP managers can approve for loans. SFPP's intensive training program has changed attitudes throughout the bank about the need and benefits of training. Top management has been willing to participate in an executive training session and afterwards more willing to examine their own performance. This is a major breakthrough and paves the way for more management development activities in the remaining two years of SFPP and the proposed new agricultural credit project.

* Davies, et al., Small Enterprises in Egypt: A study of two governorates, Working Paper 16 (1984), pp. 51-58.

The bank management's views on management information systems and accounting have progressed also. In 1979, Price-Waterhouse made a major study of the Bank's accounting system, but their recommendations were rejected. The proposal coming out of a study by Dr. El Maazawy took two years to be approved, but now the bank is very interested in modernizing their system and computerizing accounting in the headquarters and governorates, using the El Maazawy study as a guideline.

Parallel with SFPP progress, certain other changes have been made. For example, SFPP incentives and bonuses are based on a careful quantitative evaluation of personnel performance. Next year PBDAC will switch to bonuses based on merit and performance. The bank began a significantly higher level of mid-term lending in the late seventies and has continued to expand funds in this area. Also they are now lending at interest rates equal to those of SFPP where their regulations permit.

XIII. LESSONS LEARNED

1. Farmers will pay substantially higher prices for incremental inputs than those charged by PBDAC when credit is available and the interest rate and investment profitable. With regard to interest rates, it is particularly significant that farmers will pay interest rates sufficiently above the cost of capital to allow a several percentage point spread.

2. That a virtually 100% repayment rate can be achieved on loans to small farmers where loans are for financially viable purposes and the lending institution has reasonable means for penalizing non-payment. Two methods may be employed. Farmers may be denied access to inputs until they repay and borrowers may be required to sign checks for the amount of loan and interest when loan is made. These methods are used by PBDAC for other loans. The project has benefited by the repayment discipline imposed by PBDAC's near input monopoly.

The principal characteristics of this credit project which distinguish it from many less successful or unsuccessful credit projects is the high repayment rate. A small interest subsidy is a bearable social costs for small farmers' credit, but no credit system can survive long when farmers find they can refuse to repay with impunity. In the project we find both high repayment and basically economic interest rates. Any new AID credit project designer should find it worthwhile to examine how this has been achieved.

XIV. SPECIAL COMMENTS

The announced policy of the GOE is to promote private enterprise; a policy also supported by AID. PBDAC has a dual role in development as a credit institution and since 1976, as the principal (in some cases monopoly) distributor of inputs. The PBDAC system has over 4,000 outlets, one for every 1,500 feddans. While there have been shortages at times, the system does provide

convenient access for small farmers with little transport. Several years will be required for an alternative system to evolve. In the meantime, private alternatives should be supported but progress in agriculture will depend largely on continuation of a basic supply service through PBDAC. As a target, however, expansion in input requirement and new products should go via private channels.

**ANNEX I FOR THE EVALUATION REPORT
ON THE
SMALL FARMER PRODUCTION PROJECT
AID GRANT NO. 263-0079**

**June 13, 1985
Cairo, Egypt**

3511

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ANNEX 1. ECONOMIC ANALYSIS

A. Summary:

Estimated Overall Project Rate of Return

Data are not available to estimate the internal rate of return for the overall project; however, project data and other studies (discussed in detail later) indicate rates of return before interest costs of at least 25% in the least profitable of enterprise categories supported by the project. For the highest return activities, the rate of return would be several times this level - eg. grain drills. A high percentage (80%) of loans are in the livestock area where farm level returns average about 31%. Excluding the construction, about 2/3 of the project funds are being used or will be used for lending activities. Thus the internal rate of return to the project probably is at least 20%. Return in the next credit project should be somewhat better with overhead costs a smaller part of the total. Returns for construction undertaken by the project (25% of the funds) will depend on methods of operations, margins allowed on inputs, and other aspects. The construction is just getting underway and adequate information is not yet available to estimate rates of returns.

B. Current Agricultural Situation:

1. Recent Trends In Production and Consumption

Agricultural consumption is growing much more rapidly than production, spurred by a 2.9% population growth rate, rapid growth in per capita income and subsidized consumer prices.

Per capita consumption of food has risen rapidly - wheat from 80 kg in 1960 to 170 kg in 1980 (now the highest in the world). Consumption of animal products, fruits, vegetables, fats and oils, food legumes and sugar also is rising rapidly. Crop production in general is not keeping pace with population growth. Thus, most of the increase in consumption must be imported.

Livestock production is growing slightly faster than crops and slightly faster than population, but consumption is growing even more rapidly and imports are growing. Since 1981 total import of agricultural products have been running between \$3 and \$4 billion per year.

A 1982 MOA, USAID, USDA report estimated that with the current trend, imports would reach \$12 billion by the end of the century. Though grains account for the major part of imported food, the list includes a wide variety of commodities. Imports account for 100% of tobacco consumed (By policy, none is produced), lentils, 90%; grain and vegetable oil, about 50%; and red meat and dairy products, about 33%.

TABLE I - 1
1984 AGRICULTURAL IMPORTS

Commodity	Total Import ('000 M.T.)	Import from U.S. ('000 M.T.)
Wheat and Flour	6,302	2,371
Corn	1,582	1,406
Lentils	44	-0-
Vegetable Oil	365	88
Tallow	273	245
Soymeal	225	22
Beef	163	NA
Chicken	67	2
Beef Liver	25	22
UHT Milk	67	NA
Cheese	38	4
Butter	24	3
Tobacco	44	17

Source: USDA report of February 28, 1985

2. Use of Production Inputs

Some data on Egyptian agriculture provide insight into the potential of Egyptian agriculture and the constraints to accelerated growth.

The total arable area is limited to slightly over six million feddan under cultivation. Irrigation water available from the Aswan high dam totals about 55,000 billion cubic meters or enough to provide about 2.3 meters per year over the entire area cropped. This is estimated to be at least 50% more than the annual pan evaporation rate which approximates plant use rates at the maximum growth stage, but most of the year plant demand is much lower. Since substantial amounts of water are added by drainage above the last barrage, the quantity of water available to irrigate is much greater. Application greatly exceeds needs leading to fertilizer leaching, water logging, salinity build up and reduction in yield.

Nitrogen fertilizer application currently is about 115k / feddan/year. Excluding berseem and other legumes and assuming two crops/year, it is about 80 kg (176 lbs) per feddan cropped. This should be sufficient to obtain very high yield but for several reasons this response is not achieved. Principal factors are poor water management which restricts crop growth and leaches nitrogen and other nutrient deficiencies - P, K, Zn, Mn.

As a rule of thumb, one kg each of P2O5 and K2O are needed for each 2 kg of N used, but actual N use is about 700,000 MT, P2O5 about 150,000 and K2O about 15 - 20,000 MT. Adjusting for P use on berseem, the ratio of N to P2O5 is about 6 to 1 and the ratio of N to K2O is about 50 to 1. Zinc deficiencies also are common. Other problems with nitrogen fertilizer utilization include improper placement and poor cultural practices which limit nitrogen use by the crop.

Despite existing high nitrogen use rates, the SFPP staff and ARC scientists recommend higher rates of use for maize. The quota is 120 kg, and SFPP adds 33 kg of N per feddan for a maize crop of about 15 ardab (80 bushels). This is almost twice the U.S. application rate for a 150 bushel yield. Some scientists estimate over 50% of the nitrogen applied is wasted. Actually, at these rates only about 20% of the nitrogen is used by the plant and recovered in the grain and fodder. Good corn practices should permit an uptake of 70%. Waste of 30 - 40% of the nitrogen at world market prices of about \$400/MT of N would mean an annual waste at current rates of about \$100 million per year. Yet Egypt is moving to expand nitrogen production and use. Current targets put consumption by the late 1990s at 50% over current rates.

The livestock population is high relative to production areas. The 1982 MOA, AID, USDA study estimated an average of about one animal unit for each feddan of cultivated land and, of course,

there is virtually no pasture or range land.

Although Egyptian crop yields are high relative to most developing countries, they are low considering the resource base which includes irrigation coverage of essentially the entire crop area with temperature and water adequate for 2 - 3 crops/year. The crop area is almost free of weather hazards - storms, hail, frost, high winds.

The 1982 MOA, USAID, USDA Study estimated long range potential for a 200 per cent increase in crop production.* This is borne out by yields in large numbers of on-farm demonstrations, mostly in 1980 - 82, which average 54 to 258% above national yield averages.

CROP	INCREASE OF DEMONSTRATIONS OVER AVERAGES
Rice	54%
Wheat	65%
Maize	125%
Sorghum	63%
Citrus	250%
Tomatoes	258%
Potatoes	163%

* Strategy for accelerated agricultural development

Similar increases in livestock production are feasible especially if Egypt continues to mechanize tillage and substitutes high meat and milk breeds for current breeds of buffalo, cattle and for horses, donkeys and camels. General use of improved livestock breeds would permit increased output of milk and meat with less winter berseem, but summer green forage (e.g. hybrid forage sorghum) would be needed to provide adequate year round quality forage demanded by higher producing animals. A reduction in numbers to 2 - 3 million animal units could provide a major increase in total production if modern breeds and systems were substituted. Illustratively, 2 million cows at 6,000 kg each would provide 12,000,000 MT of milk (6 times current output) and probably 300 - 400,000 MT of meat, near the total current level. Current low international prices on surplus dairy products make a large scale shift of this type uneconomic, but movement in this direction should be made since there is no guarantee that low dairy prices will prevail in the future. EEC is striving to bring its excess production under control. Modern livestock and management systems should be introduced and tried on small farms.

3. Recent Production Gains

The three major crops have made modest gains in yield over the past 5 - 6 years with increases in nitrogen fertilizer and efforts on other fronts. These crops are maize: up from about 1.6 MT/feddan for 1978-79 to over 1.90 MT/feddan for 1982/83; cotton: up from slightly under 8 kantar/feddan to about 8.6 kantar (of 157.5 kg of seed cotton); and wheat: from about 1.4 to 1.55 MT/feddan.

Despite these yield increases, production has declined for cotton (a 100% quota crop) and rice (1.6 MT/feddan quota) while maize has increased about 12% with a price above the world market levels. Soybeans with attractive prices have doubled in production because of increased area, not yield. Under the impetus of free prices, yields in production of tomatoes and potatoes also have risen rapidly since 1978, yield up 15 - 20% and production up about 35%. Onions have been beset by disease problems and yields are low.

TABLE I - 2

YIELD PER FEDDAN
(Metric Tons)

Crop	1978	1979	1980	1981	1982	1983	1984
Barley	1.16	1.14	1.12	1.13	1.12	1.09	1.14
Broad Beans	0.97	0.95	0.87	0.87	0.95	1.02	1.00
Chick Peas	--	--	--	0.64	0.64	0.63	0.61
Cotton (metric kentar)*	7.38	8.09	8.50	8.47	8.65	8.55	--
Fenugreek	--	--	--	0.75	0.78	0.76	0.80
Flaxseed	0.52	0.50	0.50	0.51	0.49	--	--
Garlic	7.86	7.97	8.15	7.94	8.69	8.55	8.05
Hena	--	--	--	--	1.17	1.37	--
Lentils	0.44	0.41	0.43	0.43	0.48	0.49	0.59
Lupines	--	--	--	0.72	0.75	0.63	0.71
Maize (nili)	--	--	--	--	1.32	1.40	--
Maize (summer)	1.64	1.56	1.70	1.72	1.87	1.96	--
Winter Onions	7.66	6.77	8.49	8.33	8.13	8.58	8.44
Peanuts	0.83	0.87	0.90	0.90	0.82	--	--
Potatoes	6.05	7.17	7.26	7.50	7.74	--	--
Rice (nili)	--	--	--	--	1.05	0.92	--
Rice (summer)	2.28	2.41	2.45	2.34	2.38	2.41	--
Sesame	0.40	0.34	0.41	0.41	0.44	0.44	--
Sorghum (nili)	--	--	--	--	1.24	1.32	--
Sorghum (summer)	1.57	1.56	1.57	1.58	1.57	1.59	--
Soybeans	0.97	1.06	1.12	1.19	1.15	1.10	--
Sugarbeets	--	--	--	--	--	13.78	15.15
Sugarcane	33.51	35.35	34.14	35.08	34.42	--	--
Tomatoes	7.07	7.37	7.44	7.56	8.26	--	--
Wheat	1.40	1.33	1.36	1.39	1.51	1.55	1.54

Source: Agricultural Economics Office
MOA

Date: April 8, 1985

*Kentar = 157.5 kg of seed cotton

TABLE I - 3

PRODUCTION OF MAJOR CROPS
(000 MT except Cotton in Metric Kentar)

Crop	1978	1979	1980	1981	1982	1983
Barley	132	122	107	103	121	--
Broad Beans	231	236	213	208	260	--
Cotton (lint)	8,767	9,672	10,574	9,985	9,217	8,832
Garlic	--	--	--	--	--	116
Lentils	15	9	6	4	6	6
Maize	3,117	2,938	3,231	3,308	3,347	3,509
Onions	223	174	189	99	92	223
Peanuts	26	27	26	26	24	--
Potatoes	772	1,019	1,214	1,195	1,184	1,095
Rice	2,351	2,511	2,384	2,236	2,441	--
Sesame	9	12	15	16	20	--
Soybeans	79	106	92	130	166	--
Tomatoes	2,197	2,421	2,468	2,454	2,657	2,862
Wheat	1,933	1,856	1,796	1,938	1,938	2,017
Sugarcane	8,246	8,790	8,618	8,805	8,740	--

C. Project Activities:

1. Services Provided

The PBDAC has concentrated on distribution of production inputs (fertilizer and other chemicals) and provision of financing until harvest. Inputs are subsidized and made available based on quotas for individual crops which often are far from optimal for individual farms and fields.

Until 1979, very few PBDAC loans were made for purposes other than seasonal inputs and those made were based on land as collateral, not expected financial or economic returns on the planned investment. SFPP set out to change this in several significant ways.

- Additional supplies of various production requirements were made available at or near market prices, (eg. fertilizer with little or no subsidy which means about double the subsidized rate).

- Additional credit is provided at commercial interest rates to finance additional production inputs and investments, (14% compared with 3.5% and 7% previously).

- Loan approvals are based on enterprise returns not collateral.

Under SFPP, farm management advisory services are provided to farmers in planning and presenting their production plans to obtain credit. Project technical staff visit farms at least 2 to 3 times per year to provide this technical service. Loan approvals then are based on expected economic viability of the planned enterprise and investment.

SFPP has financed a wide variety of loans including investments on both crop and livestock production activities. It was anticipated initially that a high percentage of the financing would go for crop production purposes. But in the period from the start of the project in 1980 through December 1982, over 90% of the credit went for livestock and only 2.3% for crop production inputs. Most of the livestock credit went for broiler production and local milk cows, and buffalo. Efforts to redress this imbalance have resulted in about 18% of lending now going for crops. PBDAC's normal business emphasized short term credit for crops and provided little medium term or livestock credit until 1980. Thus there was a large latent demand for medium term credit and livestock credit when the project started. In addition to credit and technical advice, the project assisted participating farmers in arranging needed inputs. In part, this latter service was provided by helping business provide the service.

Questions have been raised at three levels with respect to the economic soundness of the project.

1. Are all three of the project elements essential to success of the project, ie. the provision of credit, the arrangement for inputs and the provision of farm management advisory service ? By implication might FBDAC and SFPF divest itself of non-banking functions and concentrate on financing farmers and agri-businesses?

2. Do the individual farm enterprises or increments to these enterprises financed provide an acceptable rate of return ?

3. Is the SFPF approach economically viable ? What should be priorities on further SFPF activities?

2. SFPF Funds and Fund Application

Total funds made available to SFPF under the agreement were U.S. \$ 49 million grant from AID, and LE 9.271 million grant from the GOE. In addition, LE 10 million was authorized for SFPF borrowing from FBDAC.

The grant in dollar equivalent was:

U.S.	49 million
GOE	11.2 million

Resources are budgeted as follows:

Total	60.20 million
construction	16.15

NET	44.05

The construction of buildings is a fixed investment which presumably is justified as an economic alternative to rental and hence stands on its own. The primary concern in SFPF and any follow-on credit project is rate of net return on money used for purposes other than construction as shown below. Loan use is shown in Table I-5.

Resources for non-construction use	\$44.050 M
Funds available for lending	28.397 M
Funds for support	15.953 M

Funds for lending make up 64.5% of the total grant resources, net of construction. The average rate of return on these as shown later is estimated to exceed 31%. Thus the overall project rate of return exceeds 20% ($0.645 \times 31\%$). Any follow on credit project should have a much higher average rate of return since technical assistance, training in the U.S., internal overhead, and commodities imported for tests and related costs are expected to be a much smaller part of the total.

Estimated effects on yields and net returns for different enterprises and investments are discussed in the following sections. The impact of economic pricing is considered and some suggestions are made for priorities on future SFPP activities.

TABLE I-5
SUMMARY OF LENDING THROUGH JANUARY 1985
(Millions of LE)

	Loans	value	% of Value
Crops	17,641	2,266	6.7
Meat, Breeding Stock, Dairy, Eggs and work animals	21,111	23,278	68.7
(of which work animals)	(491)	(391)	
Farm Equipment	4,947	3,946	11.6
(of which livestock)	(1,774)	(574)	
Land Improvement	794	1,589	
(of which is livestock)	(597)	(1,385)	4.7
Agri-business	284	297	0.9
TOTAL		33,894	
All Crop Elements			
Crop inputs		2,266	36.4
Work Animals		391	6.3
Equipment		3,372	54.1
Land Improvement		204	3.3

		6,233	18.4
All Livestock		27,364	80.7

3. Importance of Different SFPP Services

In 1980 pre-SFPP surveys were carried out in each district where the project was to be undertaken to establish baseline data on yields. Beginning in 1981/82, samples were selected in each village bank area from a list of all farmers participating in any of the SFPP activities. Results have been summarized by farm enterprises by practices and implicit services received from some sources. "Services Included":

SERVICES	CODING
Blocked Crop	(101)
Land Preparation Loans	(102)
Input Loans	(103)
Harvesting Loans	(104)
Soil Analysis	(105)
Mechanical Cultivation	(106)
Land Preparation	(107)
Improved Seeds	(108)
Herbicides	(109)
Insecticides & Fungicides	(110)
New Techniques of Irrigation	(111)
Foliar Fertilizing	(112)
Mechanical Harvest	(113)
Marketing Services	(114)

While the data show practices which may reflect a service provided, the data do not indicate the source of this service (eg. SFPP, PBDAC, MOA extension or other).

Table I-6 shows a break down of practice and services by crops as reported by farmers. In coding item 101-114 were combined into 8 groups for computer runs.

TABLE I - 6

GOVERNORATE

EL SHARKIA

DISTRIBUTION OF AREA ACCORDING TO CROPS AND PROVIDED SERVICES

CROPS	TOTAL	SERVICES		101		102		103		104		105		106		107		108		109		110		111		112		113		114	
		WITHOUT	WITH	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R		
1 CLOVER L	72 3 100.00	18 1 29 01	54 2 74.99	42 3 58.41	0 9 0.52	11 18 16.29	1 0 1.39	0 0 0.00	0 0 0.00	21 20 30.27	4 21 6.74	4 12 6.24	1 0 1.39	0 0 0.00	16 1 22.24	0 12 0.69	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
2 CLOVER S	47 19 100.00	19 0 39.78	29 19 60.24	27 1 56.58	0 0 0.00	1 0 2.09	1 0 2.09	0 0 0.00	0 0 0.00	0 10 0.87	2 21 6.02	1 16 3.49	0 8 0.70	0 0 0.00	1 16 3.49	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
4 GARLIC	1 21 100.00	0 23 51.11	0 22 48.89	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 22 48.89	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
7 B. BEANS	10 3 100.00	1 12 14.81	8 13 85.19	4 10 43.62	0 0 0.00	0 0 0.00	1 0 9.88	0 0 0.00	0 0 0.00	7 4 70.78	6 5 61.32	0 0 0.00	3 8 52.67	0 20 8.23	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
8 WHEAT	98 3 100.00	19 4 19.53	78 23 80.47	76 12 77.76	8 20 9.00	10 2 10.28	2 11 2.51	0 0 0.00	4 20 4.93	48 8 49.26	75 0 76.43	39 8 40.08	2 12 2.53	7 3 7.26	43 5 44.03	10 4 10.36	3 0 3.06	0 0 0.00													
9 OTHER WC	0 12 100.00	0 0 0.00	0 12 100.00	0 12 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
10 RICE	110 17 100.00	14 3 12.83	95 12 87.17	87 20 79.34	5 11 4.93	23 2 20.85	2 11 2.22	2 6 2.60	2 21 2.60	28 19 26.01	57 14 52.01	45 11 41.06	9 10 8.31	3 12 3.14	47 22 43.28	4 6 3.84	7 22 7.15	0 0 0.00													
12 DARAWA	4 8 100.00	3 4 73.08	1 4 26.92	0 4 3.85	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	1 0 23.08	1 4 26.92	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	
13 MAIZE 1	135 15 100.00	16 7 12.01	119 8 87.99	114 13 84.52	13 6 9.77	40 10 29.80	2 20 2.09	1 3 0.83	0 0 0.00	32 4 38.44	106 14 78.59	58 4 42.89	13 17 10.11	30 4 22.24	43 6 31.89	3 12 2.58	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
14 MAIZE 2	26 11 100.00	0 0 0.00	26 11 100.00	26 11 100.00	1 0 3.78	21 21 82.68	0 0 0.00	0 0 0.00	0 0 0.00	2 10 9.13	26 11 100.00	13 1 49.29	12 1 43.51	4 21 23.98	18 9 69.45	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
17 BOYBEANS	3 4 100.00	0 0 0.00	3 4 100.00	3 4 100.00	0 0 0.00	1 6 24.19	0 0 0.00	0 0 0.00	0 0 0.00	2 14 50.00	2 14 50.00	3 20 74.19	5 4 100.00	4 11 86.29	3 4 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
18 COTTON	70 13 100.00	6 17 9.51	63 20 90.49	59 10 84.23	11 2 13.71	32 10 43.95	18 1 23.58	1 0 1.42	0 0 0.00	4 9 6.20	14 13 20.61	8 12 12.03	10 17 19.30	3 3 7.38	3 11 7.74	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
19 OTHER SC	2 10 100.00	0 4 6.90	2 6 93.10	1 6 51.72	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	2 0 82.74	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
29 OTHER WV	1 11 100.00	1 0 68.57	0 11 31.43	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
31 POTATO S	0 12 100.00	0 12 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
32 CUCUMBER	0 10 100.00	0 0 0.00	0 10 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
34 TOMATO S	39 3 100.00	4 16 11.93	34 11 88.07	31 12 80.51	3 2 12.99	29 20 76.23	0 0 0.00	0 0 0.00	0 0 0.00	31 17 81.04	29 13 75.51	0 0 0.00	30 0 76.68	1 20 4.69	28 16 73.27	0 0 0.00	26 20 68.58	0 0 0.00													
36 CHILLI	0 10 100.00	0 10 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
38 MARICOT FASALIA	1 21 100.00	0 23 51.11	0 22 48.89	0 22 48.89	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
39 OTHER SV	2 23 100.00	1 3 38.03	1 20 61.97	0 3 4.23	0 0 0.00	1 17 57.75	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	1 7 43.66	1 7 43.66	0 0 0.00	1 17 57.75	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
41 CITRUS	0 12 100.00	0 12 100.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00	0 0 0.00		
TOTAL	673 1 100.00	108 9 17.12	524 16 82.88	478 1 73.52	45 2 7.12	173 10 27.39	28 19 4.35	4 9 0.69	7 17 1.22	203 9 32.10	330 1 52.14	177 10 28.03	92 6 14.57	60 6 9.52	210 18 33.29	18 10 2.91	77 12 12.24	0 0 0.00													

Thus impacts of SFPP can not be determined directly from these data. It may be possible to go back to SFPP individual farm records and determine exactly what service each farmer received, but even this may not be adequate. The information gained may not be worth the effort required. More insight may be provided from reports such as the excellent report recently produced on Assiut project operations by SFPP personnel.

Another problem in extracting data from these surveys is that when the data were assembled (1982/83) lending for crops was very small (2.3% of the total) plus 0.9% for draft animals and 5.4% for equipment. (90% of the loan funds went for livestock). In one governorate very little had been loaned for crop production through 1982. Yet virtually 100% of the farmers interviewed reported receiving services for one or more crops and in Kaluybia almost 100% of the farmers reported services for many of the crops they reported growing. Though there was no SFPP cotton package a high percentage of farmers reported receiving cotton services. The same was true for some other crops. Farmers were reporting these services from any source, not just SFPP.*

During the course of the project implementation, project administrators became concerned over the heavy broiler and livestock bias: for broilers, because of concerns over market saturation and ability of small operators to compete; and for livestock, because of questions over economics of milk and meat operations based on unimproved animals. As a result the emphasis was shifted to more crop loans. Table I-5 shows the cumulative lending through January 1985 by which time crop input loans had increased to about 7%, but still covered only a small part of total crops of individual SFPP farmers. Most of the inputs were still being provided by PBDAC's regular program.

The SFPP project was designed to provide three complementary functions - credit, advisory services and supply of intermediate production goods because it was felt that PBDAC with its built in rigidities could not meet credit and intermediate production needs and MOA could not adequately supply the technical information needs. The farm management survey data on those crops which have received most attention do not directly answer the question of relative importance of these three functions, but used with other data and field observations they help suggest answers to this question.

The answer, in large measure, is a function of the particular innovation or investment to be undertaken with project support. For larger items such as livestock, implements, and poultry facilities, credit with very few exceptions was a necessary

* Computer runs should be made selectively to compare situations with and without certain practices where there is a statistically relevant grouping of with and without eg., between 30% and 70% in either group. This operation will provide some indications of effects of each practice on yields.

condition. The rapid rate at which loans were made for local cattle and buffalo, especially in the early stages, bears this out. Almost half the loans through 1982 went for local livestock for which supplies and know how already existed in the farming community. About 35% went for broiler units where credit, technical information and help in arrangement for supplies, (eg. equipment, chicks, feeds) all were important. Crop input credit (2.3% through 1982) probably was helpful, but technical know how and supplies of special items were particularly important. For some, the specialized input was the key ingredient. Crop technical assistance appears to have been particularly helpful in shift to high value crops.

For crop equipment (10% of total as of January 1985) arrangements for supplies and services have been particularly important in success to date. As discussed in more detail in Section G: Mechanization, machinery supplies tend to respond slowly to demand. Machinery usually has not been stocked in local shops and machinery dealer showrooms are rare. The principal exceptions observed were water pumps. The project has been involved both in some direct arrangements of equipment and facilitating of private arrangements of larger investment items. For these items arrangements were most critical with credit second in importance. Opinions vary, but lean toward more support of private initiative and less direct project supply of inputs, etc. Field observations support the economics of this approach. Widespread private initiative in production and distribution of inputs, including equipment stimulated and supported by SFPP, will require some technical assistance to local businessmen as well as a substantial financing. Data presented later indicate very high returns to some types of mechanization and attractive returns to small farmer livestock enterprises.

Under the project, there have been a few land development and reclamation investments for which credit requirements are large. For some of these, technical help is critically needed; in other cases, help on arrangements for services required. Looking ahead, SFPP will need to provide all three services albeit not for every investment. SFPP and PBDAC should make increased efforts to develop private suppliers of production inputs and services and to cooperate with MOA in developing and utilizing its capability for provision of technical guidance to farmers. The recent Assiut report provides information on how the project in that governorate has combined the three project services.

D. Project Effects On Yields:

1. SFPP and National Yields

Major differences were found between SFPP and national yields for different crops in 1982-83. The largest difference was for tomatoes where SFPP farmer yields were 192% higher and garlic 176% higher. For cotton where SFPP had no package, SFPP participants had slightly lower yields possibly because they were

more sensitized to other opportunities. Difference for onions were only 11 % (higher for SFFP). SFFP yields were significantly higher for basic cereals - wheat, 26%; rice, 25%; summer maize, 46%; beans, 72%; and lentils, 73%.

TABLE I - 7

PRODUCTION
COMPARATIVE YIELDS PER FEDDAN, SFFP AND NATIONAL
(MT)

	1982 - 1983	1982 - 1983	
	MOA Average National Yields	Actual SFFP Yields	%
Broad beans	.95	1.63	72%
Chickpeas	.64	.77	20%
Cotton (Metric)	8.55	8.32	3%
Garlic	8.69	24	176%
Lentils	0.49	.85	73%
Maize (summer)	1.96	2.86	46%
Maize (Nili)	1.40	2.47	76%
Onions	8.13	9.00	11%
Potatoes	7.74	10.66	37%
Rice	2.41	3.01	25%
Sorghum	1.59	2.19	38%
Soybeans	1.10	1.33	21%
Tomatoes	8.26	24.16	192%
Wheat	1.51	1.90	26%
Unweighted average % increase, all crops except tomatoes.			58%

2. Current SFPP Farmer Yields and Base Year Yield

In order to measure project impact, a base year survey was conducted in governorates where the project was to start. This was to establish average yields per feddan before the project began to operate. Base year and 1984 crop season yields and changes from 1980 to 1984 are shown in table I-8.

Comparison of SFPP in 1984 with all yields on the base year (1980) show the large gains. The data show particularly impressive yield increases for some vegetable crops (e.g. tomatoes up 188% in Kalyubia, 422% in Assuit, and 432% in Sharkia). Many field crops also showed outstanding increases (maize, 80% to 134%; wheat, 52% to 113%; fava beans, 25% in Assuit and 203% in Sharkia). These base year and current SFPP yield comparisons should provide the more reliable measures of progress since the base data were obtained for areas where SFPP is functioning. There may be some bias in that better farmers are likely to take action to participate first. By 1984 some 20% of the farmers were participating so most of this bias, if it existed, should have disappeared.

3. Yields of all SFPP Farms and SFPP Farms Without Services

Yield data from the 1982/83 crop year SFPP annual farm management survey were compared to determine differences between farmers who receive one or more of the SFPP services for a particular enterprise and those who do not (though they participate in other enterprises). These comparisons show substantial differences, but much less than do the first two comparisons. The data suggest that, having participated in SFPP, the farmer becomes innovative, and applies improved technology to minor enterprises. Much of the technology is transferable: better irrigation, better seed bed preparation, better pest control and perhaps use of P and K with N fertilizer.

YIELDS OF ALL FARMERS IN SFPP SAMPLE AND YIELDS OF FARMERS WITHOUT ANY "SERVICE" 1982-83.

Crop	Kaluybia		Sharkia		Assuit	
	without	all	without	all	without	all
Wheat A	12.5	14.43	10.83	13.14	8.77	10.38
Maize A	15.2	17.78	15.99	18.93	15.10	16.26
Soybean T	1.31	1.60	*	*	1.00	1.05
Cotton K	9.49	10.32	7.78	7.73	5.67	6.92
G. Beans T	5.33	6.26	*	*	*	*
L. Clover T	*	*	24	25.2	*	*
Broad B. A	*	*	8.67	8.53	8.03	8.91
Rice T	*	*	2.93	3.01	*	*
Tomato T	*	*	17.21	25.11	*	*
Fasolia T	*	*	0.54	0.59	*	*
Lentils A	*	*	*	*	13.32	15.61

A - ardab - a unit of volume measure about 160 kg.

T - MT

K - Kentar - volume measure for seed cotton of 157.5 Kg.

* Numbers in sample either without any service or with any services were too small to be meaningful. (Time did not allow running statistical tests.)

4. Current SFPP and Governorate Yield Comparisons

Comparison of 1984 yields of SFPP farmers in each governorate for the same period are likely to show somewhat smaller difference than between base year (1980) and 1984 for the village bank areas, since some gains in yield have been made by farmers in general since 1980. These data support the conclusion that SFPP participants achieve substantially higher yields than other farmers. The data suggest as a policy that significant changes not be made in the approach and methods of SFPP as it is extended to other governorates. However, a more scientific approach to measurement of impacts of the various services provided will be needed.

Review of the yield effects of the individual practices and services, as listed on the farm management print out suggest that the most significant commonly encountered factor affecting yield in Sharkia and Kalyubia was improved seed. There were wide variations among farmers but SFPP farmers in these two governorates got about 2 ardabs more wheat and 3 ardabs more maize with improved seed. For rice, the difference was 200 - 300 kg /paddy. In Assiut, seed associated differences were generally smaller. Information was not available on drill or planter use with different types of seed. It is not clear specifically what

"improved" seed meant for different crops nor whether farmers made significant changes in fertilizer applications with improved seed.

E. Net Revenue:

1. Net Return During the 1982 Season

The SFPP project has assembled annual data on samples of participating farmers. Each farmer working with the extension worker made decisions on the types and levels of participation and the practices followed for the particular enterprise. Thus practices, types and levels of participation in SFPP varied widely from farmer to farmer and crop to crop. Table I-9 shows the rates of return by governorate and total for each crop grown by SFPP participating farmers regardless of the farmer's actual degree of participation for the particular crop.

Returns vary widely from one crop to another and even from one governorate to another. The highest return per feddan and per day of work are on products not subject to price control: citrus, summer tomatoes, summer potatoes, summer onions, green beans, garlic and grapes. The lowest returns per feddan and per work day were on cotton and rice (controlled price crops) and sorghum grain, soybeans (a relatively new crop), and improved maize.

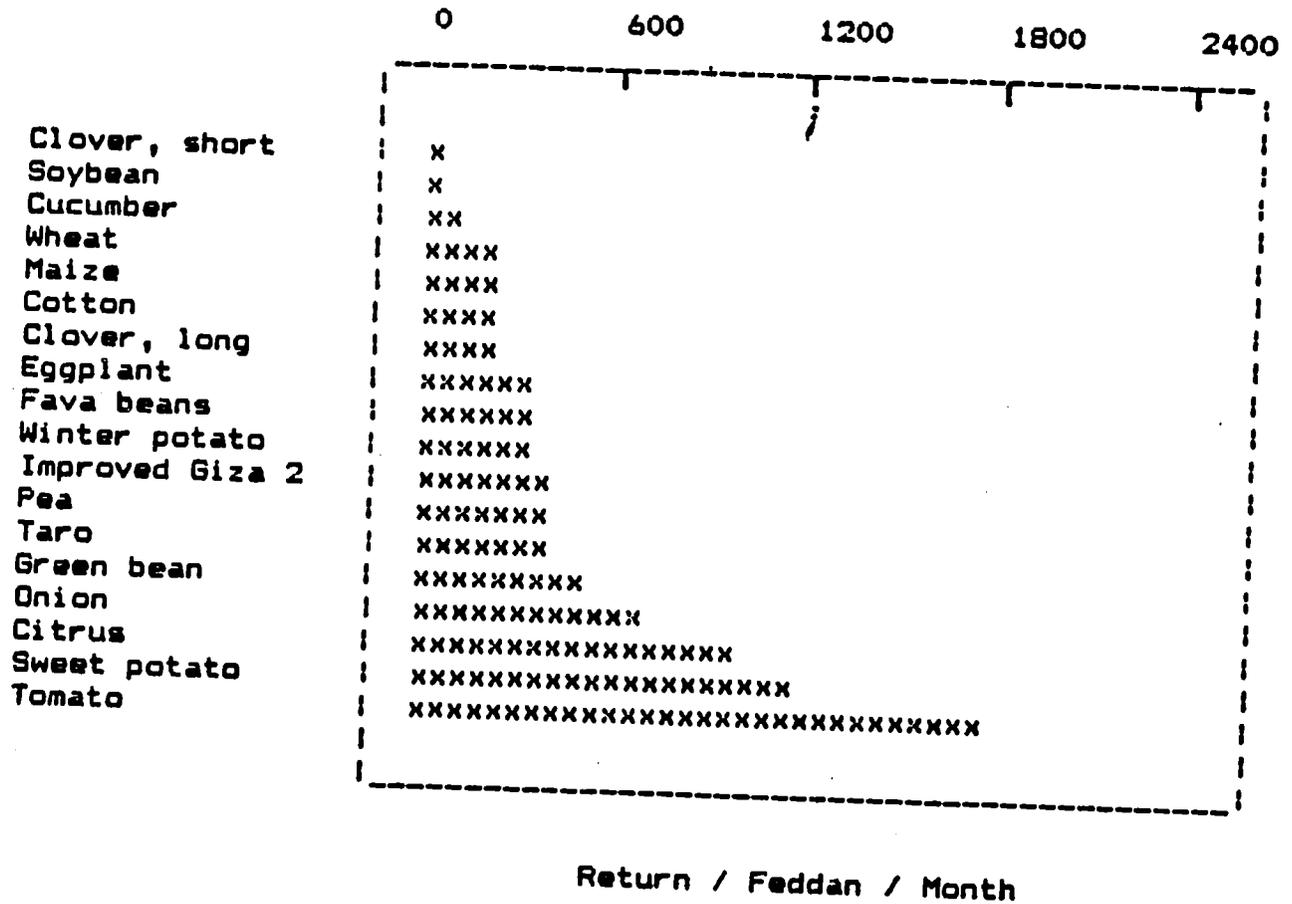
The highest net return per L.E. invested is for citrus with a return of LE 5.3 for each LE spent. Next best is garlic. Poorest were rice, sorghum, cotton and soybeans where returns were between 1.5 and 1.9. Had fertilizer and other inputs been priced at world prices and no change made on product prices, many of these crops would have shown returns of about LE 1 spent on inputs, labor and power. At world prices of inputs, potatoes which are not controlled would show returns of less than LE 1 for each LE 1 of variable costs. Onions, also an important export, would barely pay variable costs. At world market prices for products and inputs, cotton would be one of the more profitable enterprises. Citrus and tomatoes would still be best.

Since land is scarce and crop seasons vary widely, one needs to look at returns from the point of net revenue per feddan per month. Results of such calculations are shown in Figure I-1. Tomatoes turn out the best by far and soybeans the worst.

FIGURE I - 1

QUALUBAYIA 1983 NET REVENUE PER FEDDAN

Source Farm Record Books



(Data are only indicative as SFPP did not have a package for all these crops (i.e., cotton) and in some instances the number of farmers surveyed was small. Also yields vary widely by governorate.)

These return data are before land costs which are LE 50 - 80/feddan at official rents (7 x the land tax) or LE 100 - 200 /feddan at typical unofficial crop season rents. Opportunity cost of family labor may be substantially less than stated, especially for women and children. In these cases the farm enterprise provides the opportunity to use otherwise economically unemployed labor and increase income flow above the net return shown in the survey.

Technical assistance to farmers under the project has been heavily oriented to introduction of high value crops and crops with high returns per month it occupies the field. Returns from the project are substantially understated when only the increases in yields and revenue for similar crops are considered.

A shift within SFPP participating farmers from wheat to garlic would increase net revenue from about LE 257 to 692 per feddan and for grapes to 1439. Intercropping of grapes with tomatoes is being introduced - two high value crops. Of course, where farmers shift out of cotton, exports probably will suffer.

Rates of return are very high on technical assistance to help farmers shift from low to high value crops or to introduce a practice such as use of herbicides which cuts costs and increases yields. Illustratively, based on 1982/83 farm data, a shift from potatoes to tomatoes would have reduced costs from LE 623 to 543/feddan and increased revenue from 1336 to 2005 increasing net revenue per feddan by LE 755 per feddan. A technical assistance input of LE 20/feddan, which is a high estimate, would have given a benefit/cost ratio 37:1 or return of about 3700%.

The ability of the combined domestic or export markets to absorb large increases on high value crops will become a limiting factor if the project is expanded to cover the entire country. In estimating potential future rates of return, potential benefits should be based on potential increase in production by improving crops, but retaining present cropping patterns and by improving livestock and livestock production systems.

2. Potential Returns to New Packages

SFFP personnel were in the process of developing new packages for each of the principal crops. This exercise included estimates of costs of each input, total costs, total revenue and net revenues for each crop. Estimated total and net returns are shown on Table I - 10. The evaluation team reviewed these packages with SFFP personnel, and considers the estimates of yields and net revenues at current prices to be realistic for different packages. A possible exception is wheat, where evidence indicates differences between hand and machine planting are substantially greater

TABLE I - 8

SFPP CROP YIELDS PER FEDDAN (1)

CROP	UNIT	ASSIUT			GOVERNORATE			KAYLUBIA		
		1980	1984	% increase	SHARKIA 1980	1984	% increase	1980	1984	% increase
SUMMER:										
Raize (Commercial)	Ardab	6.57	15.40	134.40	10.30	18.60	80.58	10.74	19.35	80.17
Raize (Seed) (2)	Ardab	10.00	17.00	70.00	10.90	22.00	101.83	10.90	16.86	54.68
Rice	Ton				2.19	3.30	50.68		2.60	
Sorghum (2)	Ardab	8.00	15.20	88.12	10.50	12.50	19.05	9.85		
Cotton	Kantar	5.30	6.00	13.21	7.50	9.10	21.33	7.80	9.91	27.05
Soyabean	Ton		1.20			1.45			1.50	
Tomato	Ton	4.50	23.50	422.22	5.00	26.60	432.00	8.50	24.50	188.24
Cow Peas	Ton		0.97							
Squash	Ton						8.00	8.80	10.00	
Cucumber	Ton		22.20				3.00	6.42	114.00	
Egg Plant (3)	Ton	4.14	12.00	189.86				10.32	12.00	16.28
Sweet Potatoes										
Potatoes	Ton				14.50			12.00		
Onions (3)(1)	Ton	11.35	15.00					8.18	12.80	56.48
Peanuts					21.50					
WINTER:										
Wheat	Ardab	6.57	14.00	113.09	9.50	14.40	51.58	10.03	16.50	64.51
Fava Beans	Ardab	5.86	7.30	24.57	3.70	11.20	202.70	8.15		
Lentils (2)	Ardab		4.50		3.16	6.50	105.70	4.01		
Chick Peas	Ardab		4.80							
Sweet Peas	Ton				3.50			3.05	4.23	38.69
Potatoes	Ton		7.30		12.30			10.35		
Onions	Ton		14.60		19.10					
Garlic	Ton	6.00			9.50			3.30	7.00	112.12

(1) Unless otherwise footnoted all 1980 data taken from the SFPP Contracted Baseline Survey entitled "Socio-Economic Survey" by Dr. Osman A. El-Kholl and Dr. Mohamed Abbas

(2) 1980 data is average 1979 production from "Feasibility Study of an Agricultural Project", by Kh Abdel Fatah Khalifa, MOA, GDADA, RIFD.

(3) 1984 data is 1983 production from "Summary of SFPP Farm Record Books Winter 82-83, Summer 83"

TABLE I - 9

SUMMARY FROM THE SFPP FARM RECORD BOOKS WINTER 82-83 SUMMER 83

Crop	Area	# Farms	Feddun	Kirate	Product- tivity	Revenue	Labor			Total	Net Revenue	Net Revenue		Net Revenue /MD
							/Anical	Eq.	inputs			/LE	Man/Day	
CITRUS	Assuit													
	Kalubia	18	25.0	13	9.51	1668	111	97	158	366	1302	3.6	34	38
	Sharkia	1	0	12	10.00	1000	86	0	54	140	860	6.1	38	23
	Total	19	26.0	1	9.81	1334	99	49	106	253	1081	4.3	36	30
GREEN BEAN (Fasolia)	Assuit	3	1.0	18	4.12	462	130	40	61	231	231	1.0	63	4
	Kalubia	1		5	0.72	504	163	24	46	233	271	1.2	50	5
	Sharkia	4	1.0	21	0.57	370	85	46	72	203	167	0.8	33	5
	Total	8	3.0	20	1.80	445	126	37	60	222	223	1.0	49	5
TOMATO SUMMER	Assuit	2	2.0	12	6.60	1070	181	93	244	508	562	1.1	57	10
	Kalubia	13	8.0	5	23.89	2440	333	93	178	604	1856	3.1	107	17
	Sharkia	40	39.0	3	23.11	2486	209	157	152	518	1968	3.8	89	22
	Total	55	49.0	20	18.53	2005	238	114	191	543	1462	2.7	84	17
CUCUMBER	Assuit	1	0	22	4.36	873	128	93	85	306	567	1.9	43	13
	Kalubia	3	3.0	14	3.77	565	164	89	106	359	206	0.6	57	4
	Sharkia	1	0	10	5.32	552	96	53	76	225	327	1.5	32	10
	Total	5	4.0	22	4.55	643	129	78	89	297	367	1.2	44	8
POTATO SUMMER	Assuit	2	2.0	18	5.76	752	189	61	454	704	48	0.1	65	1
	Kalubia	6	10.0	16	13.20	1576	127	71	288	486	1090	2.2	40	27
	Sharkia	1	0	12	12.00	1680	100	70	308	678	1002	1.5	39	26
	Total	9	13.0	22	10.32	1336	139	67	417	623	713	1.1	48	15
EGG PLANT	Assuit													
	Kalubia	1		12	12.20	1000	348	180	80	608	392	0.6	89	4
	Sharkia													
	Total	1	0	2	12.20	1000	348	180	80	608	392	0.6	89	4
GREEN BEAN	Assuit													
	Kalubia	19	33.0	2	6.26	762	108	37	39	184	578	3.1	35	17
	Sharkia													
	Total	19	33.0	2	6.26	762	108	37	39	184	578	3.1	35	17
TARO	Assuit													
	Kalubia	1		12	24.00	960	227	44	194	465	495	1.1	75	7
	Sharkia													
	Total	1	0	12	24.00	960	227	44	194	465	495	1.1	75	7
POTATO WINTER	Assuit													
	Kalubia	2	3.0	18	10.85	918	96	83	335	514	404	0.8	30	14
	Sharkia													
	Total	2	3.0	18	10.85	918	96	83	335	514	404	0.8	30	14
PEAS	Assuit	1	2.0	9	5.00	1080	110	59	92	261	820	3.1	37	22
	Kalubia	17	15.0	2	4.01	766	179	33	97	311	435	1.5	52	9
	Sharkia													
	Total	18	17.0	2	4.51	923	145	47	94	286	637	2.2	44	14
COTTON	Assuit	81	102.0	6	6.92	476	181	59	86	326	150	0.5	63	2
	Kalubia	27	22.0	14	10.32	645	214	57	71	342	303	0.9	67	4
	Sharkia	72	70.0	13	7.73	563	177	52	59	288	275	1.0	65	4
	Total	180	193.0	9	8.32	561	191	56	72	319	243	0.8	65	4
SOYBEAN	Assuit	11	10.0	11	1.05	307	78	50	70	198	109	0.6	41	3
	Kalubia	18	28.0	4	1.60	414	106	67	79	252	162	0.6	34	5
	Sharkia	4	5.0	4	1.33	364	116	51	99	266	98	0.4	24	4
	Total	33	43.0	19	9.81	1334	99	49	106	253	123	0.5	33	4
IMPROVED MAIZE	Assuit	20	28.0	5	19.21	604	134	53	81	268	336	1.3	47	7
	Kalubia	7	6.0	10	23.38	700	96	57	102	253	445	1.7	32	14
	Sharkia	21	26.0	11	18.67	478	112	50	82	244	234	1.0	30	8
	Total	48	61.0	2	20.42	594	114	53	88	256	338	1.3	36	9
VALABY MAIZE	Assuit	49	78.0	4	16.26	492	119	57	79	253	237	0.9	41	6
	Kalubia	144	177.0	20	17.78	502	90	46	69	204	298	1.5	28	11
	Sharkia	114	135.0	15	18.93	462	82	46	58	186	276	1.5	26	10
	Total	307	391.0	15	17.66	485	97	50	69	215	270	1.3	32	9

Crop	Area	# Farms	Feddan	Kirate	Product- tivity	Revenue	Labor /Aniwal	Eq.	Inputs	Total	Net Revenue	Revenue /LE	Man/Day	Revenue /HD
ONION SUMMER	Assuit	1	0	12	15.00	900	144	30	151	325	575	1.8	48	12
	Kalubia	5	4.0	9	19.00	1201	149	13	305	467	734	1.6	45	16
	Sharkia													
	Total	6	4.0	21	17.00	1651	147	22	228	396	655	1.7	47	14
WHEAT	Assuit	73	110.0	3	10.38	404	77	51	51	179	225	1.3	26	9
	Kalubia	43	41.0	17	14.43	466	76	72	40	188	278	1.5	25	11
	Sharkia	84	98.0	3	13.14	427	59	59	40	158	269	1.7	19	14
	Total	200	249.0	23	12.65	432	71	61	44	175	257	1.5	23	11
BROAD BEANS	Assuit	62	102.0	10	8.91	476	97	48	58	203	273	1.3	34	8
	Kalubia	14	15.0	8	14.02	612	91	63	56	210	402	1.9	29	14
	Sharkia	14	10.0	5	8.53	344	56	50	43	149	195	1.3	21	9
	Total	90	127	1	10.49	477	81	54	52	187	290	1.5	28	10
CLOVER SHORT	Assuit	13	1.0	3	16.66	164	27	21	29	77	87	1.1	9	10
	Kalubia	26	26.0	3	12.56	218	27	13	19	59	159	2.7	9	17
	Sharkia	44	47.0	19	9.58	173	16	12	22	50	123	2.5	9	14
	Total	83	83.0	1	12.93	185	23	15	23	62	123	2.0	9	14
CLOVER LONG	Assuit	50	40.0	1	33.78	606	86	33	59	180	426	2.4	29	15
	Kalubia	41	35.0	20	24.88	474	82	24	32	138	334	2.4	28	12
	Sharkia	78	72.0	3	25.16	365	59	29	34	122	243	2.0	27	9
CHILLI	Assuit	2	1.0	12	24.00	304	62	20	46	128	176	1.4	21	9
	Kalubia													
	Sharkia	1		10	7.20	1000	103	91	120	314	766	2.4	38	20
	Total	3	1.0	22	15.60	692	83	56	83	221	471	2.1	30	16
FORAGE SORGHUM	Assuit	2	1.0	12	24.00	304	62	20	46	128	176	1.4	21	9
	Kalubia													
	Sharkia	11	4.0	8	39.35	372	45	45	78	168	204	1.2	21	10
	Total	13	5.0	20	31.68	338	54	33	62	148	190	1.3	21	9
RICE	Assuit													
	Kalubia													
	Sharkia	97	110.0	17	3.01	381	102	76	38	216	165	0.8	34	5
	Total				3.01	381	102	76	38	216	165	0.8	34	5
GARLIC	Assuit													
	Kalubia													
	Sharkia	4	1.0	21	24.00	849	81	26	70	177	692	3.9	30	23
Total				24.00	849	81	26	70	177	692	3.9	30	23	
GRAPES	Assuit	2	2.0	0	8.00	2400	419	98	444	961	1439	1.5	134	11
	Kalubia													
	Sharkia				8.00	2400	419	98	444	961	1439	1.5	134	11
MELONS	Assuit	2	2.0	16	6.75	450	167	82	48	297	153	0.5	54	3
	Kalubia													
	Sharkia				6.75	450	167	82	48	297	153	0.5	54	3
	Total				6.75	450	167	82	48	297	153	0.5	54	3
SORGHUM	Assuit	66	76.2	23	15.61	365	108	49	61	218	147	0.7	40	4
	Kalubia													
	Sharkia				15.61	365	108	49	61	218	147	0.7	40	4
LENTIL	Assuit	8	8.1	12	5.29	538	101	20	128	249	309	1.2	36	9
	Kalubia													
	Sharkia				5.29	538	101	20	128	249	309	1.2	36	9
	Total				5.29	538	101	20	128	249	309	1.2	36	9
CHICK PEA	Assuit	14	16.0	2	5.14	540	74	33	114	223	317	1.4	26	12
	Kalubia													
	Sharkia				5.14	540	74	33	114	223	317	1.4	26	12
ONION WINTER	Assuit	1	1.0	9	9.00	495	154	34	117	305	190	0.6	60	3
	Kalubia													
	Sharkia													
	Total				9.00	495	154	34	117	305	190	0.6	60	3

* Source: Data from 1982/83 SFPP Farm Record Books which included report of 20 farmers per village bank, 9 banks per governorate for a total of 340 farmers.

TABLE I-10

ESTIMATED NET RETURN IN LE/FEDDAN FOR SFPP CROP PACKAGE

(After all Land and Interest Charges)

	Total	Per Month
Citrus	1329	111
Bananas	7568	631
Cotton	258	30
Tomatoes	2091	416
Berseem	255	42
Sweet Peas	339	85
Fava Beans	91	15
Lentils	440	88
Seed Corn (open pollinated)	299	50
Hybrid Seed Corn	363	60
Market Corn (Stover=7% of value)	154	26
Wheat (straw=50% of crop value)		
Machine sown	414	69
Hand planted	397	66

These projections for future package reinforce the data on past experience with respect to large gains from shift to high return crops over traditional crops.

3. Effect of Different Treatment on Wheat Returns

A study was carried out in Assiut on the cost and returns of specific practices on wheat. Groups included a) control, b) use of foliar applied nutrients, c) use of herbicides for grass control and d) all outside farmers.

	Neither	Foliar Nutrients	Grass Herbicides	Outside Farmers
Yield - ardeb	11.54	13.33	15.44	9.41
Value of wheat	293	320	371	226
Value of straw	250	230	236	215
Total	543	550	606	441
Total cost (LE)	276.10*	250.87*	265.10*	257.10
Net Income	266.50	299.00	341.00	183.40

* Some of the wheat in the SFPP may have been drilled since seed costs were 25 to 50% of that outside SFPP.

These data suggest an almost doubling of net revenues under SFPP with grass herbicide compared with other farmers. Since other farm costs did not differ significantly, an extremely high rate of return was realized. Even if extension agent costs are included 3 - 4 days on one feddan, (LE 15 - 20), the net return on the incremental extension cost would be about 800% (160/20).

4. Returns on Lentils

Lentil production is of special concern as domestic production has been declining steadily and currently accounts for only about 10% of total consumption. Most lentils are produced in upper Egypt with Assuit accounting for 53% and Quena 43% in 1977.

A sample of farmers associated with SFPP was selected and compared with farmers outside the project to evaluate alternative technology for lentils. The total sample included 92 farmers inside and 41 outside SFPP. Results show SFPP participating farmers incurred LE 295.31 of costs per feddan compared with 263.93 for outside farmers (+ 31.38). The gross revenue of SFPP farmers was LE 502.67 compared with LE 362.10 for non SFPP farmers (+ LE 140.57). This gives a benefit/cost ratio of 140.57

----- = 4.5. Given that the crop requires six months or less, 31.38 the rate of profit on the increased investment was about 700% per annum.*

Source:

* Economic evaluation of the lentils production in SFPP
Faculty of Agriculture - University of Assuit
1985-1984, pp. 1-18.

The study attempted to evaluate the effects of individual practices on outputs and income. Results indicated that the highest net returns were achieved where a combination of practices was followed including a drill, inoculation with nitrogen fixing bacteria and use of a grass herbicide. The most important single factor appears to have been use of a drill which cut cost of seeds in half and increased revenue. The next most important factors appear to have been nitrogen bacteria and nitrogen fixing legume inoculant.

The survey also attempted to identify the major problems of farmers. Labor shortages were frequently mentioned, but one of the most common problems was fertilizer shortage. Another was spread of grass in lentil fields which can be controlled with herbicides.*

Op.cit., pp 19-20

TABLE I-11

Comparison between the net income per feddan for the lentil crop of small farmers in the project and outside the project in 1984.

Data	Net income (LE)		
	Inside the Project	Outside the Project	The Difference
Total farm income	502.67	362.10	140.57
Total farm costs	295.31	263.93	31.38
Net farm income	207.36	98.17	109.19

(Includes the value of the family labor calculated on the basis of the average wage of the hired worker in the different agricultural practices.)

5. Costs and Returns Under Traditional and EMCIP Demonstration Packages

The following table shows costs and returns under EMCIP versus traditional practices for four crops.

TABLE I - 12

CROP	YIELD		GROSS REVENUE		COSTS		NET REVENUE	
	MT T	MT D	LE/FD T	LE/FD D	LE/FD T	LE/FD D	LE/FD T	LE/FD D
Wheat	1.69	2.50	158	233				
Wheat (straw)	10	12	200	240				
TOTAL			358	477	209	267	149	210
Maize	1.92	3.30	192	330				
Stover (Price Not Known)								
TOTAL			192	330	168	230	24	100
Soybean	1.05	1.40	273	364				
Straw	4	4	20	20				
TOTAL			293	384	224	195	69	189
Lentil	.72	1.06	324	477				
Straw	7	9	140	180				
TOTAL			464	657	185	208	279	449

On these packages the following rates of returns are obtained.

	Marginal Cost	Marginal Return	Ratio (MR/MC)
Wheat	58	119	2.05
Maize	63	138	2.21
Soybeans	-29	91	*
Lentils	23	193	8.39

With costs lower in demonstrations, the soybean ratio of MR/MC is theoretically infinite. The major change for soybeans was substitution of inoculum for 90 kg of N and application of P205 at 25 kg versus 10 kg. Somewhat better seed bed preparation and better seed were reported with no change in cost. The inoculum at current world prices would cost \$1 to 2, the 90 kg of nitrogen \$35 - 40 and the 15 kg of extra p205 about \$6.00 for a net saving on these items of about \$40 per feddan. The increase of value in soybeans is about \$90 at economic prices. Thus the current return largely to extension of better technology is \$130/feddan. On other crops net gains (MR/MC) at financial prices ranged from LE 61 per feddan for wheat to LE 170 for lentils.

6. Impact of Economic Crop Pricing of Major Crops

Shifting from current pricing to economic pricing of major crops would have a major impact on rates of returns and relative rates of returns for major crops. Estimates of economic value of crops and value net of variable costs are shown below.

Crop	Assumption	Gross Value LE/feddan	Value Net of Variable costs LE/feddan
Cotton	Current yield	1718	1178
Maize	Yield of 3.0 MT	633	358
	Current yield	400	160
Wheat	Yield of 2.0 MT	712	479
	(with straw valued at 248) Grain only	466	233
Rice	Average yield (includes 36 LE for straw)	523	246

(Prepared by NAPP project committee and SFPP evaluators)

At economic pricing of outputs all of the above crops have improved rates of return since the ratio of financial to economic prices currently is below one for all these major crops:

rice 0.67, cotton 0.40, maize 0.89, wheat (new price) 0.69.

Cotton would become highly competitive with all crops even citrus and tomatoes, at economic prices.

The major cost increase at economic prices would be for fertilizer. Economic prices for inputs would not change net revenue greatly for cotton, but it would have a major impact on maize at current yields. Some of the vegetable crops also would be considerably less attractive at economic prices for inputs.

F. Returns On Livestock:

1. Returns to Large Animals

Data on returns from the 3 governorates on livestock enterprises, including a mix of cattle, buffalo, sheep and other animals, showed an attractive return. Net returns were generally in the range of LE 100 to over LE 300 per animal unit when all inputs including family labor and all outputs including consumed products and salvage value of animals lost were included. Increase in value of inventory at current prices accounts for a substantial part of the increased returns.

(Data collected under the project have not been correctly interpreted and it was not possible to obtain new computer runs. Hand tabulations may differ slightly from computer runs when carried out using correct procedures.)

Returns on total investment and amount of labor, inputs and other variable costs averaged 16% for Sharkia and 24% for the other two governorates. Returns based just on annual inventory value of livestock on farms were 23% for Sharkia, 34% for Kalyubia and 39% for Assuit. This would be more representative of returns on investments since farmers had an income flow each month which more than offsets monthly variable cost outlays. From the family point of view, results were better than this since mostly family labor was employed (usually women and children) and valued at market wage rates. The opportunity cost of this labor was probably near zero as women and children would not take off-farm employment. We have no way of knowing from the data the value of forfeited leisure or whether livestock enterprise labor was replaced by hired labor in the fields. These costs were probably insignificant factors but should be examined as the program proceeds. Clearly, animal enterprises increased family income very substantially. Further, most animals provided milk for the family diets, which otherwise would have contained little in the way of animal products.

Gross value of sales and home consumption including work and by-products average close to LE 500 per animal unit which is a significant contribution to total income for a family with one - two feddans. Gross revenue per feddan is well below LE 500 for many crops. Of course it is much higher for specialty crops - particularly fruits and vegetables, but then small farmers tend to have some difficulty marketing high value crops and produce more of traditional, low value crops - wheat, rice, and cotton. The evidence suggests that livestock is economical and should be kept as a part of the SFFP package but the large variations in results suggest that more effort is needed to provide improved livestock (better cows and buffalo) and improved management packages.

Table I-13 Average returns to livestock operations by Governorates 1982/83 (all data are in LE except number of animal units and percentages).

	Kaluybia	Sharkia	Assuit
Animal units	411	569	267
Beginning Inventory	227,176	357,218	160,156
Ending Inventory	254,943	397,967	222,385
Net Inventory change	+27,767	40,749	62,229
Cost of Operation	104,014	156,086	136,907
Sales & home cons.	157,296	266,133	160,901
Change in Inventory	27,767	40,749	62,229
Total value of product	185,063	246,882	223,130
Total costs	104,014	156,086	136,907
Net Returns	81,049	90,776	86,223
Net per annual unit	197.2	159.57	323

Net addition to family income flow:

Net revenue	81,049	90,776	86,273
Less Inventory change	27,767	40,749	62,229
	-----	-----	-----
Subtotal	53,282	50,047	23,994
Family labor	25,476	46,815	32,949
	-----	-----	-----
Net income flow	78,758	96,862	56,943

Rate of Return

on peak Inventory and costs *	23.6%	16.4%	24.0%
on peak Inventory **	33.8%	22.9%	38.8%

Family consumption as a percentage of total:

For milk	44	37	54
For meat	0.9	2.6	NA

SFPP Services Provided (number of families)

Improved Animals	0	12	9
Animal Credit	5	58	41
Vet Services	11	14	18
Concentrates	0	11	12
Extension Service	9	22	27

* Calculated on the basis of net revenue divided by the sum of peak inventory plus operating costs

** Net revenue divided by peak inventory.

Source: SFPP farm management survey in 27 village banks in 3 governorates; approximately 540 families.

2. Estimated Returns on Poultry

Egg Production

The project has introduced a small scale egg producing operation with 96 hens per unit. Capital requirement for equipment, layers and feed are expected to average about LE 480 over the year. At project rates of interest (13% interest plus 1% commission), interest costs are LE 67. Net returns above interest costs are estimated at an average of LE 256, without charging for family labor. The net return above all costs except capital is 67% and net above capital cost is 53%.

Production of Laying Hens

The project introduced a basic 7,000 bird unit producing laying hens of 140 days of age. Total capital requirements are about LE 61,500. Net income after labor and interest charges is estimated at 10,023 or about 16%. The net return before deducting costs of interest on 75% of the total resources is estimated to be 28% per annum.

Broiler Production

Broilers as an enterprise have been one of the largest early recipients of SFPP credit. However, lending activity in this area has been sharply curtailed recently because of concerns that the broiler market is becoming saturated and concern over the long term competitiveness of large versus small scale broiler enterprises.

A broiler operation with 5,000 chicks at current prices will have a fixed investment of about LE 30,000 plus about LE 7,500 peak requirement to finance variable costs. The return above interest costs is estimated to be LE 6,900 per year at current prices of LE 1.20/kg (about 44 US cents per lb.). This would give a rate of return on total investment of about 18%. If the farmer borrowed 75% at 14%, his return on his own resources would be about 30%. The labor cost are estimated at LE 2,400 per year. Much of this might be supplied by the family. The broiler operation would thus provide an opportunity to capitalize on family labor that otherwise might not be fully employed.

3. Financial vs Economic Price of Livestock Products

It is frequently stated that the high price of livestock products in Egypt seriously distort resources allocations, especially that it diverts land from traditional crops to berseem.

A 1977 survey of 175 farms throughout Egypt found that total value of livestock (excluding poultry) production averaged about LE 416 per farm and crops LE 599. For livestock value of output was divided approximately as follows:

Dairy products	38%
Power	29%
Manure	14%
Sale of animals	19%

In recent years sales of meat animals have become more important. In 1983 among SFPP farmers, inter-farm sales and sales for slaughter accounted for about 35% of revenue; milk, 55%; and labor and manure, 12%. Sales of animals for slaughter may now account for 35% of value of livestock output since meat prices have risen somewhat in real terms.

Calculations of total value of different crop and livestock products and inputs have been made to estimate value added by agriculture. These data show total value of crops to be LE 4,722 million and livestock LE 2,122 million. (LE 6,844 million total). Livestock accounts for slightly over 30% of total agriculture. Of this, dairy products were LE 745 million, slaughter animals LE 692 million, and imputed value of animal labor and manure 115 million. Clearly these estimates are quite judgmental. They suggest animal labor and manure are valued at only about LE 30 per animal unit per year. Assuming about 300 hours of work per animal/year, this is an imputed value of animal labor of only about 10 pt/hour. (See "Potential for On Farm Feed Production and Utilization", Winrock June 1980, P. 148.)

The milk price in Egypt is near the world market price as reflected in prices farmers in other countries receive. Highly subsidized export prices of cheese, butter and dried milk from EEC have virtually no relevance in this context unless we are prepared to assume this will be a permanent feature and Egypt can always buy in unlimited quantities at these prices. This is unlikely. The current Egyptian price of 30 - 35 pt/kg for cow milk is close to the US farm price of about \$12/cwt for grade A milk.

Estimates of local slaughter livestock and beef prices compared with world shadow prices vary, but seem to be between 150 and 200% depending on how you view local vs imported beef. Even assuming 200% on 35% of total livestock contribution this would put economic value of livestock enterprises at about 83% of the financial price. However, this is partly offset by rapid increase in mechanization with subsidized fuel (about 11% of the economic price) and subsidized fertilizer which have reduced the imputed value of power and manure. These outputs accounted for 43% of the value of livestock output in 1977. Considering these distortions both directions, it is likely that overall livestock is only slightly above world prices and large imports which were advocated to drive meat prices down probably would not alter land use very much.

Data indicates beef imports were about tripled in 1984, going from 54,000 MT to an estimated 163,000 MT (plus 25,000 MT of beef liver). Prices do not appear to have been significantly affected. It appears that the quantity sold at subsidized prices had little effect on price of local beef not subject to subsidy and price control.

The principal distortions now are those resulting from a) subsidy policy for qualifying larger livestock units (up to 75% feed subsidy) which may support inefficient feed using livestock production and b) the purchase and sale of some local and imported meat with high subsidies. (Imported beef is sold at LE 1/kg and local at LE 2140/kg).

1982/83 Value of Agricultural Production

(in LE million)

Crops	4,722
Livestock	2,122 (includes poultry and fish)

Total	6,844

Livestock Breakdown:

Dairy	745
Slaughter animals	692
Power and manure	115

Total	1,552

Farm Level Value per Head of Live Animals

The 1983 survey of SFPP farmers included data on livestock operations. Values of livestock from these surveys are shown in the Table I - 14. Opening inventories were largely made up of breeding stock - cows, buffalo cows and ewes. Purchases and sales generally involved some young animals. In general the data show prices that would be low per kg live weight compared with livestock in similar growing areas, e.g. (deficit areas in US and Europe, and North Africa).

Cows and buffalo in breeding herds in Egypt were only \$400 - 500/head; purchased animals typically \$300 to 500, and value of animals sold \$200 to 400 per head.

These data support the view that farm level livestock prices do not create major distortions in resource allocations, though the perceived and real role of livestock in the Egyptian farming system may create distortions. These perceptions on small farms where most of the livestock are found are not likely to change quickly. Thus the project needs to proceed with current livestock priorities of small farmers accepted as is.

TABLE I-14

VALUE PER HEAD OF LIVESTOCK IN 3 GOVERNORATES
(in L.E.)

	KALYUBIA	SHARKIA	ASSIUT
	(cattle)	(buffalo)	(sheep)
Inventory	530	857	51
Purchases	369	383	None
Sales	471	253	43
	SHARKIA		
Inventory value	467	776	63
Purchases	470	495	63
Sales	594	386	56
	ASSIUT		
Inventory value	662	626	79
Purchases	678	863	100
Sales	440	416	59
Governorate ranged in average value/head			
	Cows	Buffalo	Sheep
Starting inventory	467-662	626-857	51-79
Purchases	369-678	383-863	43-100
Sales	440-594	253-416	43-59

G. Mechanization:

1. Trends

Data are not available from SFFP on returns to possible mechanization options, although some are supported under the project; however, the AID supported mechanization project and other data give some indications of possible returns.

During the past 25 years, since tractors have been introduced, substitution of mechanical power for animal and human power has proceeded at a fairly rapid pace with apparently some acceleration taking place in the mid 1970's.

According to estimates prepared under the agricultural mechanization project, about 90% of the farmers use tractor tillage for some or all of their land preparation while pumps have been substituted for the sakia in part or total by almost 60% of the farmers. From 1960 to 1984, Ministry of Agriculture data indicate that the labor share of total farm costs has increased from 23 to 44%, while the draft animal share declined from 23 to 5%. Mechanization costs increased from 0 in 1960 to 6% in 1970 and 29% in 1984. As a percentage of total costs, these increased from 46% to 78% between 1960 and 1984. (Table I-15)

Data on labor requirements for different functions and incidence of mechanization indicate very little correlation exists between these two factors (Table I-16). The data suggest either that farmers have not considered labor requirements to be of prime importance in mechanization choices or that development of mechanical equipment (in design and production) have not been particularly responsive to labor requirements.

Several factors appear responsible for the structural changes which have taken place over the 20 years and, particularly, the acceleration in mechanization which has occurred in the past 10 years.

- Relatively higher wages in urban areas and availability of subsidized consumer goods and amenities have become more pronounced beginning in the 1970's.

- Labor opportunities in the Gulf area since the rapid petroleum price increases began in 1973.

Table I-15
 Change in Relative Cost Shares of Human Labor, Animal Draft, and
 Mechanical Energy in Egyptian Agricultural Production
 (Percent of Total Costs)

Year	Human Labor (HL)	Animal Draft (AD)	Machine Energy (ME)	Ratio AD/HL	Ratio AD/ME	Ratio ME/HL
1960	23	23	0	1.00	0	0
1970	34	17	6	.50	2.83	0.18
1977	35	9	23	0.26	0.39	0.66
1979	36	10	22	0.28	0.45	0.61
1982	38	8	27	0.24	0.30	0.71
1984	44	5	29	0.11	0.17	0.65

Source: Computed from Ministry of Agriculture Data

(Summarized by Sahrigi and Shepley)

TABLE I-16
LABOR REQUIREMENTS FOR MAJOR
FARMING OPERATIONS AND MECHANIZATION INCIDENCE

Operation	Labor Requirements without Machinery (per feddan) 1/	Incidence of Mechanization (% of sample)
Wheat planting	5.35	0.58 *
Wheat harvesting	55.87	1.38 *
Wheat threshing	19.45	95.63
Wheat winnowing	19.16	62.53
Rice transplanting	43.19	4.68 *
Rice harvesting	65.04	0.46 *
Rice threshing	32.40	90.01
Rice winnowing	14.32	82.35
Berseem harvesting	273.00	8.82 *
Cotton planting	15.00	0.00 *
Cotton pest control	67.74	58.51
Cotton harvesting	343.76	1.22 *
Cotton stalk cutting	22.00	1.94 *
Maize harvesting	35.00	11.50 *
Broadbean harvesting	57.70	1.62 *

1/ Person-hour equivalents per feddan: 1 adult male-hour = 1
 1 adult female-hour = 2/3
 1 child-hour = 1/2

* High labor demand/low mechanization incidence.

Sources: Hopkins et al, 1982 and
 The Egypt Agricultural Mechanization Project
 Farm Management Survey 1981-1982.

- Major structural changes in price relationships brought about by price management which has established combined machinery and fuel cost at below world levels while animal products have risen above world levels.

- Acceleration in construction in Egypt in recent years and preference of many workers for off-farm work compared with farm work.

The Agricultural Mechanization Project has attempted to assemble and analyze data on costs and benefits of 8 different machinery innovations. Results are summarized below:

2. Deutz - Fahn 980 Combine Harvester
3 meter cutting head powered by 81 HP diesel engine

This innovation was chosen because it has high labor substitution potential. For rice, 115.5 hours of labor and 3 hours of drum thresher substituted by 1.2 hours of labor and machine time. For wheat, the total was reduced from 102 hours of labor and 3 of drum thresher to 1.16 hours of machine time.

The innovation proved unacceptable for several reasons. Because of the higher cutting level, straw valued at LE 26.83 per feddan was left in the field (straw sells for about the same price/kg as wheat.) Grain harvest losses using mechanical methods proved to be the same as for traditional methods (7.9% for rice and 12.5% for wheat). The economic analysis showed essentially zero return to capital at financial prices and typical size fields and highly negative returns at economic price for both rice and wheat. Farmers considered the combine economic only where they had fields above 5 feddan. (S&S pp 23 - 32)

3. Agostini - Mower Binder

This machine reduced labor in cutting and tying from 55 to 2.4 hours. Farmers were split evenly over the desirability of the machine. Those opposed cited high straw losses. Maintenance and requirement for imported twine were other negative factors. The economic analysis showed the marginal efficiency of capital to be 18.9% at financial prices and 9.31 at economic prices under the circumstances encountered. With a number of operating improvements that may or may not prove feasible in practice, economic returns increased to 30% (Ibid. PP 32-38)

4. All purpose Thresher-Winnower and IRRI Modified Thresher

In contrast with the two innovations listed above, in 1982 the farm management survey found 95% of farmers used threshers for wheat and 90% for rice. Reasons for use included:

Quicker	89.5%
Cheaper	27.7%
Saves labor	69.2%
Increases yield	7.8%
Improves quality	20.5%

Source: Ibid, p. 39

The typical drum thresher used does not winnow and has been found to result in 9.6% grain loss with 500 kg/hour grain output.

The IRRI thresher was introduced with some modifications and produced 1,400 to 1,500 kg/hour throughput with 5% grain loss. It incorporated the winnowing function which otherwise takes 16 to 19 hours and costs about LE 10/feddan.

Economic evaluation relative to hand method

		Financial	Economic
Present Drum	Mec*	8	18
Modified IRRI	Mec*	11.6	15.7
B/C ratio, IRRI		1.27	1.44

(Grain losses were reduced to 4.6% with the modified IRRI)

* MEC Marginal Efficiency of capital

The new machine produced a very respectable benefit/cost ratio of 1.44 at economic prices (Ibid. pp. 33 - 43)

5. Grain Drill for Wheat

Hand seeding requires very little time as presently carried out (5 hours). Thus the labor cost savings were not expected to be great from use of mechanical seeders. The justification then hinged on increase in yield. Results are shown below:

	hand method	mechanical planter
seed used	83.37	50
grain (ardab) yield	9.9	13.8
Straw (MT) yield	4.4	5.6

The grain yield increased by about 50% with the mechanical planter.

Economic analysis showed the following:

Financial Price		Economic Price	
B/C	Mec	B/C	Mec
2.97	178%	2.77	128%

(Ibid. pp 43-55)

6. Mechanical Pumps

Estimates of numbers of farmers using mechanically powered water lifting range from 53 to 70%. Reasons for these preferences are:

Saves time, effort and cost	70%
Cheaper (only)	20%
Because of low water level	10%

An important time saving element is that many farmers share an animal powered sakia and much time is lost in carrying out sharing arrangements. Pumps commonly are individually owned, but also rented out. Output of a 5 HP pump was estimated at 113 cubic meters/hour (about 1.1 cu secs) compared with 49 from a sakia. The pumps proved to be more economical than animal power, given the assumptions made on the opportunity cost of animal labor. Based on survey data which suggested a cow on a sakia produced 0.8 liters less milk (a buffalo 1.0 liters less) per day, it was assumed that the opportunity cost of labor in terms of milk was about 56 piasters per hour. The price of milk used is above the farm price and translation of daily milk reduction to hourly reduction at a 1 to 1 ratio, which implies animals work only one hour per day, probably exaggerates animal labor costs.

7. Mechanical Tillage of Cotton

Over 90% of farmers use mechanically powered tillage for cotton usually 2 passes with a chisel plow and one with a harrow leveler. The study showed mechanical tillage produced .74 kentar (157. kg/kentar) more seed cotton which was valued at LE 44 at financial prices and LE 71 at economic prices. (The latest data shows financial prices are only 40% of economic prices. Thus the economic gain would be much greater than this.)

As an extension of the cotton tillage experiment, the project tested different tillage depths - 15, 22 and 30 cm and found no significant yield difference. (Ibid. pp 67-73) Thus additional energy and use of deep tillage tools can not be justified.

8. Cotton Stalk Cutter

Mechanical methods of cotton stalk cutting were introduced using a mower to substitute for hand cutting. Stalks are highly valued as home baking fuel. Results showed significant loss of stalk weight because of cutting above ground compared with below ground by hand, using a short hoe. With current management the MEC was 40% and B/C ratio 1.42 at financial prices and negative at economic price. With an improvement in the mower design, the economic return became positive.

9. Priorities

The evidence is quite clear from past adoption that farmers are very cost conscious in selection of mechanization. The first concern appears to be impact on production and revenue. Mechanization as a replacement of labor appears to have had low

priority up to now. There is considerable question whether the mechanization choices offered farmers to date generally reflect farmer preferences or economic prices.

Several priorities neglected should be given early on attention.

These include:

- Seeders and planters for all major crops similar to the wheat seeder which will permit precision planting in both wide rows (cotton, maize, food legumes, soybeans) and narrow rows (barley, wheat, sorghum and forage crops) and a transplanter for rice. These should be adapted to tractor, animal and human power.

Attachments for grain drills and planters to permit precise fertilizer banding at planting time and use of the same or similar equipment for precision below ground side dressing of nitrogen during the growing season.

Both these innovations should substantially increase yields while requiring less nitrogen. Other priorities include:

- more and better sprayers for application of pesticides and micro nutrients

- suitable implements for the fairly large numbers of tractors already in country

- production of the improved IRRI type thresher-winnower discussed above

- better low lift, water pumps

- small tractors of 5 - 20 hp with suitable implements for a variety of low power functions - precision planting and fertilizer injection, threshing, water pumping, transport and some tillage.

- backhoes used by custom operators for clearing and realigning smaller irrigation water conveyance structures

- instrumentation for better measurement of water application and soil moisture to reduce water and fertilizer wastage

10. Manufacture of Equipment

Egypt has one public and several private manufacturers of mechanical equipment that could provide the basis for a substantial expansion in private initiative in this area if properly supported. As Sahrigi and Shepley note, "For all its overall volume, even the manufacture of commonly used farm implements is essentially a made-to-order operation. Plants typically are little more than bigger workshops; few have modern equipment. Even the Behera Company -- the largest and the best equipped plant -- uses an overhead belt-pulley system for powering some individual machines, but has installed modern production line equipment over the past several years."

Egypt has neither a tradition of manufacturers moving ahead of immediate demand to build a stock of implements for take-home delivery to buyers nor significant market development. From lack of information about perspective demand, inadequate capital, or lack of experience which would build motivation for pressing supplies upon the market, individual plants seem willing to let the flow of cash-in-hand customers dictate the volume of their production. With most implements made only after firm orders are placed, there inevitably is delay in farmers getting any new or replacement item they may need."

Agricultural Implement Producers, By Type of Implement

Chisel Plows

Behera Company of Alexandria (public sector company)
Tanta Motor Company at Alexandria
Fahim Raghab Company, North Cairo
El Mansoura Company
Small Village Workshops throughout the country

Drum Threshers

Behera Company
Tanta Motor Company
El Mansoura
E.T. Trade
Numerous village workshops

Trailers

Behera Company
Tanta Motor Company
El Shiaty Company at Tanta
Sisman Company at Cairo
Sallam Works at Dar Es Sallam (near old Cairo)
El Nasr Automotive Company (NASCO) at Helwan
MICAR (Egypt Co. for Tools and Engineering) at Shubra,
North Cairo (a public sector enterprise)

Irrigation Pumps

Anwyler Company, km 20 on Ismailia Road
Helwan Diesel Company (Military Factory No. 909), at Helwan
Shubra Diesel Company at North Cairo
Tanta Motor Company
E.T. Trade in Cairo

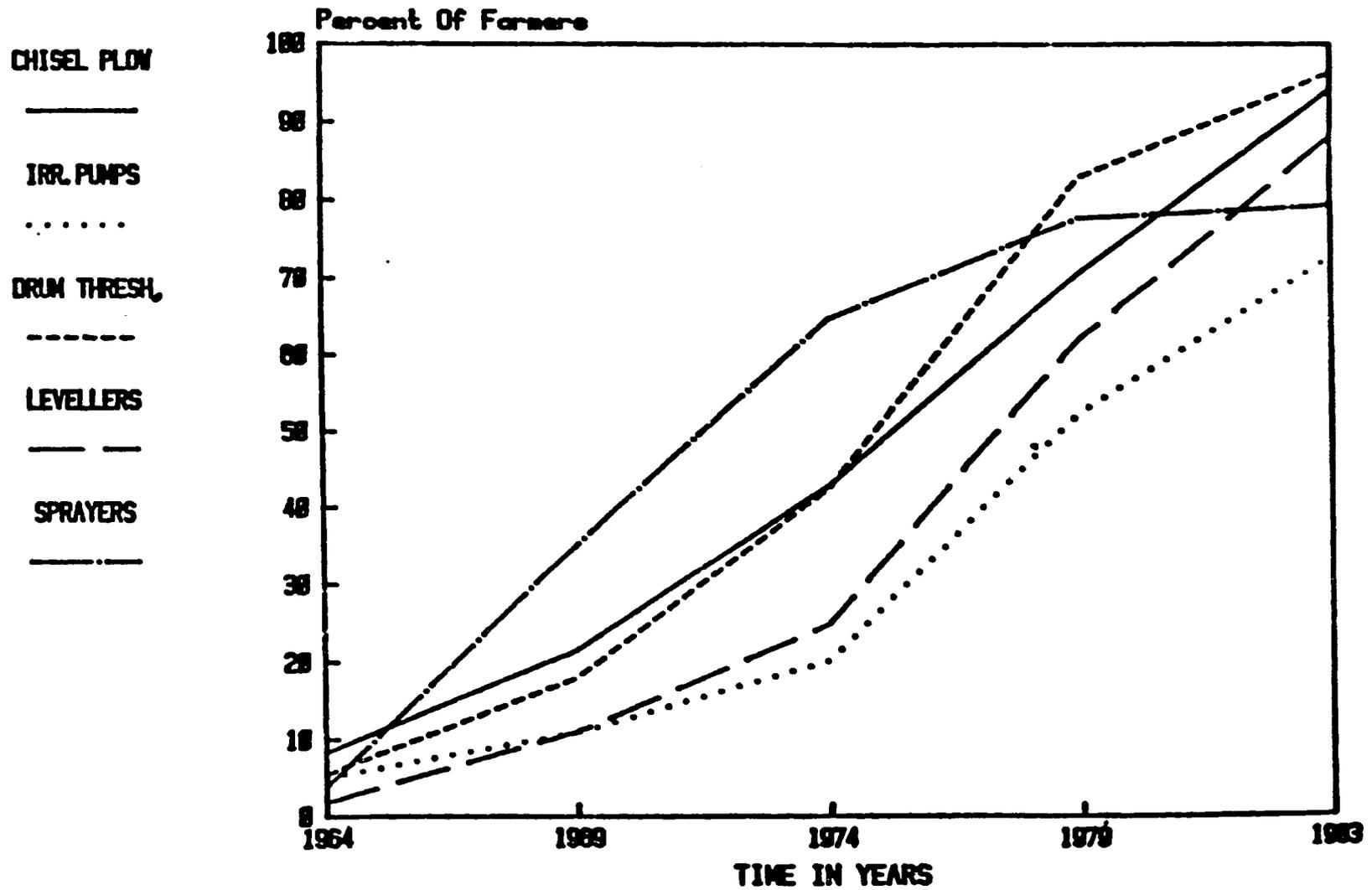
Levelers

Behera Company
Tanta Motors
Numerous village workshops

Source: Sahrigi and Shepley

FIGURE I - 2

FARM MECHANIZATION ADOPTION IN SURVEY VILLAGES



11. Economic Cost of Mechanization

SOME FINANCIAL AND ECONOMIC PRICES COMPUTED BY SAHGIGI AND SHEPLEY (in LE)

	Financial	Economic
East Bloc Tractors	6,000	9,658
Combine	44,000	53,659
Drill	4,015	6,463
Mower/binder	3,750	6,036
Thresher/winnower	4,000	5,280
5 HP water pump	950	1,529
Silage mower w/o furrow sodder	1,550	2,495

Fuel (liter)	.03	.2674
Oil (kg)	.763	.763
Grease (kg)	1.27	1.27

Where power use is heavy, the choice is sharply biased by fuel cost of 11% of the economic price.

H. DEVELOPMENT OF NEW LANDS

One of the alternatives that must be periodically appraised under the new credit project is development of new lands.

To date development of new lands in Egypt has progressed at a relatively slow pace because many donors consider returns to be potentially much higher in old lands. Available evidence tends to support this conclusion, that returns are potentially much higher on improvement in production efficiency and increase in yields in old lands. A study conducted by Pacific Consultants in January 1980 concluded that returns might be negative to efforts to colonize areas above the Nile. The reason generally given for this negative return was the high cost of lifting water some 30 meters to upper levels above the river valley. Yet in parts of the U.S. well lifts are as much as 500 - 600 feet, (150 - 175 meters.) In addition to the cost of the lift, the farmer must pay the cost of construction of the well which imposes a major capital investment.

The estimates of costs of lifting developed in the Pacific Consultants study appear very high. They do not appear to reflect possible minimum costs achievable with highly efficient diesel powered pumps operating in a well designed system. It should be possible to reduce costs substantially from estimated cost of over LE 40 per feddan. (1980 value of the LE)

The 1980 study also assumed an economic opportunity cost of water of LE 41 per feddan for surface (basin) irrigation methods.

If we assume instead a zero opportunity cost of water - otherwise flowing out to sea, and pumping cost of \$20, the net increases to \$46/feddan average for full project life and to \$61 at full production. Water is made available to farmers in other areas free of charge and evidence indicates water is used probably to the point of significant negative marginal value product on many farms. Future policy must be either to increase drainage with increased water added to the Nile supply or water application rates must be curbed. In the absence of one or the other or a combination, Egyptian land productivity inevitably will decline. Thus the logic suggests that for the near future (2 - 3 decades), additional water has little alternative opportunity cost.

One impediment to use of Nile water on higher lands is availability and application of highly efficient water management systems once the water has been lifted.

As the SFFP project is expanded into new areas, financing for development of new lands should be considered as one of the investment candidates.

TABLE I - 17

Economic Costs and Benefits for 5-fd Settlers Under Different Irrigation Systems

	<u>Sprinkler Manifold</u>	<u>Sprinkler, Farmer Pumps</u>	<u>Surface Irrigation</u>	<u>Drip Irrigation</u>
<u>Initial investments, LE/fd</u>				
Irrigation infrastructure	(979)	(722)	(923)	(695)
Roads & project-related buildings	(135)	(135)	(134)	(135)
Subtotal, productive infrastructure	(1114)	(857)	(1058)	(830)
Subtotal, housing & social inf., LE/fd ^{a/}	(1014)	(1014)	(1014)	(1014)
Total infrastructure, LE/fd	(2128)	(1871)	(2072)	(1844)
<u>Agricultural value added, LE/fd/yr</u>				
At full production: product value	503	503	503	503
Production inputs & labor (incl. irrigation labor)	(381)	(381)	(381)	(358)
Agricultural value added	122	122	122	145
Project average: product value	471	471	471	471
Production inputs & labor	(367)	(367)	(367)	(344)
Agricultural value added	104	104	104	134
<u>Other annual charges, LE/fd/yr</u>				
Irrigation costs: energy	(106)	(92)	(40)	(33)
maintenance	(12)	(7)	(2)	(3)
attendants	(4)	(2)	(2)	(4)
replacement (ave.)	(15)	(15)	(1)	(53)
Subtotal, irrigation costs	(137)	(116)	(45)	(93)
Economic water costs	(29)	(29)	(41)	(23)
Livestock replacements (ave.)	(12)	(12)	(12)	(12)
Administration (incl. vehicle replacement)	(11)	(13)	(13)	(13)
Maint. of roads and proj. buildings	(8)	(8)	(8)	(8)
Subtotal, other annual charges, LE/fd/yr	(199)	(178)	(119)	(149)
Net value added at full production, LE/fd/yr	(77)	(56)	3	(4)
Net value added, project ave., LE/fd/yr	(95)	(74)	(15)	(22)

^{a/} Composed of: beneficiary housing (353 LE/fd), housing for project personnel (91 LE/fd), housing for social services personnel (185 LE/fd), potable water, electricity, telecom schools, clinics and other social service buildings (385 LE/fd).

Source: PC Team

I. Farm Management Data Collection:

The SFPP Project assembles data annually on a sample of farmers participating in the project. Data are collected on each crop and livestock enterprise for each of the participating farm families. This includes land, labor, mechanical and animal power, other inputs and outputs sold, incorporated into other enterprises and consumed by the farm families. It was hoped that the data would permit disaggregation of contribution of various inputs and services provided by SFPP. However, neither the original design nor analysis lend themselves to this. Attempts have been made to disaggregate data; the results are disappointing in terms of what they are able to reveal.

In the next phase of the program a much better designed data collection is needed to permit any disaggregation of impacts of alternative services, but this may not be of key importance. Future project success will hinge on having a timely and reliable flow of data and analyses on the costs and returns of alternative enterprise packages and enterprise combinations. Data will be needed on marginal value product and marginal costs of alternative production factors and inputs.

Project staff need to know current and projected returns to different crop and livestock enterprises under different technology and levels of management as a basis for establishment of lending priorities. This will require carefully designed samples and precise measurement of outputs with different levels and combination of inputs.

Separation of impacts of services provided by SFPP, FEDAC, MOA and others from existing data will require going back to detailed SFPP loan records on each farmer to determine exactly what inputs and services each received and correlating this with yields and net revenue. Practically, the size of current sample may be too small to provide statistical significance among different services for various crops.

It probably will be more useful to take the available data and attempt to determine what the returns were to different combinations of practices, without regard to source. Some services or practices not included should be identified and evaluated, if possible (e.g. mechanical planting which has been shown from other data to have very high impacts on costs and yields of some crops). Information also is needed on types and amounts of inputs used. Additional analysis on the currently available data should emphasize yield and revenue comparisons for fields with and without particular practices.

In the future, the farm management surveys should be designed to provide comparative data on returns both to SFPP services and to specific practices. The sample will need to be scientifically designed to permit statistical measurement of yields and returns with and without specific services, use of specific practices and for different levels of inputs.

Where necessary, controlled experiments (or farm trials) need to be set up in collaboration with ARC to provide this information.

Controlled trials at farm levels to collect data for assessment of impacts of different practices need to be simple. In some cases it may be possible to use split plots in individual fields. In other cases it may be possible only to compare field of different farmers. Valuable information also may be obtained by comparing yield on the same field in consecutive years when a major change has been made in one practice and others basically held constant (e.g. when a drill has been introduced or NPK fertilizer application ratio changed).

With some ingenuity it should be possible to substantially increase the amount of data at little cost. Insistence on uniform crop packages in each area will complicate efforts to assemble such data for project guidance.

Up to the present, proposals for assignment of a full time agricultural economist on the project have been turned down. Such input should be provided in the future with either a qualified Egyptian employed or failing that a qualified expatriate. Another alternative is an Egyptian staff member with regularly scheduled visits of one or two expatriates with the same economists returning two to three times each year. Such short term input would be desirable in any case.

**ANNEX II FOR THE EVALUATION REPORT
ON THE
SMALL FARMER PRODUCTION PROJECT
AID GRANT No. 263-0079**

**June 13, 1985
Cairo, Egypt**

89A

ANNEX II. CREDIT

A. Background And Current Status:

The timely and constructive extension of credit to the small scale Egyptian farmer, coupled with farm management advice, continues to be the hallmark of this project. Previous evaluations have expressed broad general satisfaction with what is deemed to be a successful merger of these two elements at the farm level and the present evaluators have found no serious shortcomings or other failings which would alter that view. Indeed, continuing progress is apparent and general improvement in the credit delivery system can easily be determined through a number of factors which will be discussed in later portions of this report.

During the early months of 1983, two full scale evaluations were carried out, the first an internal PBDAC/ACDI effort and the second an external AID undertaking. At that time, project activities were being implemented in eighteen village banks, six each in the governorates of Assuit, Kalubayia and Sharkia, and it was contemplated that the total would expand to twenty seven village banks by the termination date of the project in 1985. In 1983, cumulative loans had reached a total of LE 5,788,863 made to some 4,785 farmers, and it was becoming apparent that U.S. and GOE credit funds committed to the project would be insufficient to carry its lending activities given the accelerating demand by small scale farmers. Subsequently, in August 1984, the project life was extended to July 31, 1987. An additional \$24 million was obligated at that time bringing total AID grant funding for the life of the project to \$49 million. Of this total, \$22,241,458 (LE 18,375,972) together with LE 33,585,472 committed by GOE constitute the fund resources for credit activities. An active and expanding credit operation continues in 27 village banks with a final 11 banks coming on stream making a total of 38 banks now within the program in the three pilot governorates. As an example, on a cumulative basis, at January 31, 1985, project records showed that 41,563 loans had been made for LE 33,893,867. During 1984 alone, 18,490 loans were made for LE 17,211,671., almost as many as were made in the previous three years.

Credit quality as reflected by loan repayment data remains exceptionally good, with SFPP records at January 31, 1985 showing a loan collection ratio of 98.04 by number and 99.13 by amount of total loans outstanding. The only small delinquency problem is in the Kalubayia governorate and is concerned with a village bank personnel problem now in hand and with some incidence of poultry disease in a heavily developed poultry area. Although not now considered a problem, as the overall loan portfolio continues to increase, attention will need to be given to evaluation and classification of loans as to risk in order to retain a high standard of quality.

As may be seen in the Loan Summary Report for January 31, 1985 shown as Table 1 in the Annex, loan volume has grown steadily in all three pilot governorates. Table 2, the Loan Purpose Summary, indicates a good diversity of loans with an increasing trend toward medium term financing for farm equipment and other items which the farmer is now prepared and willing to use in order to increase his production and income. Long term lending programs are at present the least developed part of the total project credit package.

Table 3 shows the source and amount of U.S. and GOE funds committed to this project as of January 31, 1985. It is interesting to note that with a combined total of LE 16,599,360 released to date, loans have been made for more than double that amount, this is made possible by revolving loan repayment into new loan activities. An additional LE 16,986,112 of committed but unreleased funds remain in the project to support its lending activities through July 31, 1987, its present termination date for AID support. It is understood by all parties that the activities will continue after that based on continued revolving of loan repayments.

During its life, this project has developed and successfully demonstrated a number of innovative techniques to increase credit programs and improve the credit delivery system in the rural village banks. These accomplishments have been exhaustively documented in various evaluation reports and project papers, and widespread publicity has been received both within Egypt and abroad. Among the most interesting and progressive changes are those which have tailored credit programs to meet the farmers' needs, a marked speed-up in the loan approval process, increases in loan approval authority at the village bank level, improved accounting and record keeping capabilities, revolving line of credit farm loans, and most recently, establishment of a revolving line of credit to the village banks from the governorates. This latter is in keeping with an expressed goal of ultimately establishing each of the nations village banks as a distinct profit center carrying out its own budgeting, lending and business activities. The project has clearly proven that that farmers can and will pay for credit at unsubsidized rates of interest when the advantages of participation in the credit program are seen clearly. Interest rates in this project are now at 13% plus 1% commission per annum and there has been no slacking in loan demand nor in repayment ratios despite existence of lending programs in PEDAC at rates as low as 3.5% per crop season.

B. Project Tasks Remaining:

On balance, the Evaluators believe that the basic credit goals which this pilot project set out to achieve have been largely realized. Yet, there remain several important areas of operation where changes and improvements must be made before the project has fully attained unqualified replicability. These tasks include achievement of a critical mass for improvement change in credit

policy, management, operations, and introduction of new systems of loan classification and evaluation, record keeping and accounting and in developing a capability to handle more medium and long term credit programs.

In the 1983 evaluations, stress was placed on the pressing need for the project to develop a uniform system within the three governorates for extension of credit. Toward that end it was recommended that a policy and operations manual be developed for use throughout the project area. A Village Bank Policy and Procedure Manual has been prepared and is now in process of being translated into Arabic for the guidance and use of all banks in the project. This manual, as it now exists, is considerably more comprehensive than the one recommended in the 1983 evaluation, covering not only credit, but all of the aspects of the entire project operations. As quickly as possible, the entire manual will become operational in the field. During the interim, selected portions are being implemented on a case by case basis though some review and amendment the manual will be needed periodically, this is a solid step forward in helping village banks carry on their operations in a uniform, consistent, and reliable fashion.

Previous project evaluations have pointed out the need for an improved accounting system throughout the village bank network. Also apparent has been and remains the fact that more uniform accounting practices and procedures must be put in place between the Principal Bank for Development and Agricultural Credit (PBDAC), the governorate banks and their branches. Early in 1983 Dr. M. A. Salem El Maazawy, Accounting Consultant to the PBDAC and SFPP completed an in-depth study of village bank accounting and savings procedures. As a result of that study, Dr. El Maazawy recommended a completely new but simple accounting system, the proposed system contains and utilizes as much as possible of the present system. The El Maazawy proposal received early approval by SFPP officials, but has only recently been agreed to by PBDAC. It is intended that a contract between SFPP and El Maazawy will shortly make it possible to begin training work with village bank accountants followed by system installation and testing in selected project branch and village banks. The evaluators consider improved accounting methods among the most essential ingredients in developing a viable and responsive credit system and encourage PBDAC and SFPP officials to give this activity their fullest measure of support.

With both short and medium term credit becoming generally available to the farmer the project should begin to develop and approve alternatives for longer term lending. Of the more than 40,000 loans made in the project through January 1985, only eight have been for a term longer than five years, all in the governorate of Assuit. Loan purposes have been for irrigation and land development, but there would appear to be some need for long term loans in land reclamation and development, farm mechanization and agricultural related business.

C. Project Direction and Administration:

SFFP is developing packages for some financing of banana plantations in Quena governorate through its facilities in Assuit. For this it is planned to use up to LE 3 million of project credit funds with the understanding that reimbursement will be made from resources supplied under a new AID Credit project. Written concurrence by AID and PBDAC should be obtained before mounting this program.

Substantial improvement since the last evaluation in availability and accuracy of credit information, loan and savings data, reports and other pertinent material. As a result much less time was required in field checks. Village and governorate banks and agri-business served by farms and farmers under the credit project were in all three governorates. Credit appears to be advanced in an acceptable manner in each of these areas.

An important change in project operations results from installation of a small computer in the Cairo headquarters of the SFFP. Several project activities have already been entered into the computer with the credit component scheduled for an early date. When this is accomplished, it will greatly enhance ability to store and retrieve usual data and will provide management with a useful tool in planning future project direction. As a matter Forward planning already occupies an important role in managing this project. Within the past few months PBDAC and SFFP officials in each of the three governorates have completed an intensive study of goals and projections, not only for credit but for other activity as well, that will see the project through to its present termination of AID support in 1987. These work plans have been agreed to and signed by competent governorate officials as well as the project directors in Cairo.

During the first several years of operation, the project Co-Directors were confronted with heavier than normal burdens of planning, direction, and administration. Lack of essential supporting staff in the Cairo office of SFFP compounded the problem and led to recommendations by previous evaluators that additional staff be employed to remedy the situation. The problems of 1983 have been moderated to a large extent through employment of two assistants who between them provide secretarial and administrative help including office accounting and work with the computer.

D. Project Replicability:

The growing maturity of this project and its increasing visibility and impact in the pilot governorates led the Government of Egypt in November 1984, to announce an expansion into eight new governorates. The stated intention of this extension is to replicate in detail the policies and procedures developed in the pilot project and to fund the activity with up to LE 100 million of loan funds provided to the village banks through PBDAC. The PBDAC has likewise been given the responsibility of managing and directing the expansion, and a

senior official of the bank has been appointed to oversee the operation.

The newly selected governorates are Giza, Beni Seuf, Fayoum, Menoufiya, Gharbiya, Kafr el Sheikh, Damietta and Dakahlia. As in the pilot project early plans are to select three village banks in each governorate and expand by the same number in successive crop seasons (2 each year). Thus, during 1985, twenty four banks will enter the program initially and expand to forty-eight by year end. This exceeds by ten banks the number now operating in the pilot area after five years of experience. The expansion in 1986, 1987, and 1988 will add forty-eight banks each year for an anticipated total of one hundred ninety two banks on stream after a four year period. It is likely that if the project continues its current levels of success, the remaining agricultural governorates will apply pressure to be included in the program. This large scale undertaking will severely strain the managerial resources of the PBDAC and its affiliated banks, and unless the program is well designed and managed could result in an unsuccessful effort in many areas. The expansion will benefit to a great extent by having tested, proven systems to follow in implementation. AID is planning to support expansion of the program under a new project. During the coming two years of the current project, it should continue to develop and test methodology and provide guidance in the expansion. This will significantly enhance the probability of continued success on a larger scale.

The expansion effort will require careful planning and much advance preparation and training prior to the actual beginning of loan operations. Also, it is appropriate to determine how best to support the PBDAC effort through use of the skilled Egyptian and American Specialists who together have achieved such success in the pilot project.

The pilot project has been a joint Egyptian - U. S. effort with direct project management responsibility staff. The SFPP has utilized the services of a number of American specialists domiciled both in Cairo and in each of the three pilot governorates. These specialists have cooperated closely and assisted Egyptian specialists. Together they have been at the leading edge of project development and have met and resolved most of the problems one might likely expect to be encountered in the expansion. American technical assistance has been provided on a contractual basis through AID; the present contract has only three months to run until its scheduled termination, July 31, 1985.

Several of the most critical activities of the project must be tested, refined and proven prior to project termination July 31, 1987. This will require extension of the current contract covering technical assistance for these activities through July 31, 1987 to coincide with the currently planned termination date of AID support for this phase.

E. Modification of Technical Assistance Team:

A modified approach in utilization of expatriate staff is needed to serve both expansion in the pilot and the new PBDAC governorates to be supported. One of the three existing field credit positions should be used to bring onto the contract team a broadly experienced EDP (Electronic Data Processing) **Accounting and Management Information Specialist**. The primary duty of this person would be to work in the design and implementation within the pilot areas of the El Maazawy Village Bank Accounting System and in the PBDAC to begin a study of how to identify needs and define methods and approaches for transforming their present hand accounting methods into a faster, and more accurate and responsive operations using available modern but simple and suitable technology. Without such input, serious and long range problems in this vital area of operations are likely. One of the outputs of this input would be a long range plan, with time phased inputs and outputs for adoption of the new and improved system. It is expected that specialized contractual assistance will be needed in designing hard and soft ware, procurement, installation and training. Definitions of these needs and preparation of an appropriate request for proposal would be one of the important outputs of this technical expert.

The second credit position should be used to field a senior level **Credit Planning, Management and Operations Specialist** to work both in the pilot project and in planning the PBDAC expansion. This individual would apply himself toward developing and improving management skills at Cairo and governorate levels with a particular role of helping develop coordination between the pilot and the expansion project.

The third position would be as a **Credit Quality Specialist** who would also work in both pilot and expansion projects. This person would help develop a loan monitoring and loan classification service to insure that ongoing lending operations are being carried out in conformity with approved policies and procedures. This person would also design and implement an appropriate simple system whereby project loans could be evaluated as to the risk factor and a reserve for losses program established to the degree necessary.

The present **Management Training Specialist** position should be maintained. However the time of this individual should split 50/50 current SFPP training and the PBDAC Training Department. Given the tremendous amount of training needed at the village bank level for the expansion, the second training specialist position should be established to help develop a senior management training and informational program at the Cairo and governorate levels.

The present position of **Commodity Storage and Transportation Specialist** should remain, but with some time (25%) devoted to assisting the PBDAC Storage Department in evaluation of problems and needs.

A new position of **Farm Related Services Specialist** should be added to support the growing demand in rural areas for a broader range of services and supplies. This individual would be concerned primarily with helping support private farm related business and farmer organizations in supplying production inputs and services. Development of this area could lead to growing markets within the private sector and gradually diminishing reliance on subsidized farm inputs.

Although not directly related to credit, the three governorate Extension **Farm Management Specialists** have been crucially important in helping develop the packages of technology which have made the use of credit more beneficial to the farmer. Undoubtedly these positions should remain but thought could be given to revising the general qualifications to call for highly skilled Subject Matter Specialists in Poultry, Crops and Livestock.

Finally, the position of **Team Leader and Co-Director of the SFPP** should remain. Due to the relationship of this person to the on-going pilot project and to his broad administrative responsibilities under terms of the Technical Assistance contract, most of his time will be devoted to the pilot operation. We would hope, however, as the senior American Specialist he would provide a full measure of support to PBDAC through coordination of the pilot and expansion activities and cooperation with the PBDAC official heading up the expansion effort.

In order to obtain the most benefit possible from the change of emphasis in make-up of the Technical Assistance team, these specialists should be domiciled in Cairo. Thus, they would be able to function in any of the eleven governorates requiring attention including the PBDAC as well. SFPP office space should be available for most of the staff but it is considered of significant importance that PBDAC allot adequate space in its headquarters building for up to five American specialists. Such space should be conveniently located to the offices of the bank official heading up the expansion except for one space which should be near the PBDAC Director of Training.

F. Coordination With PBDAC:

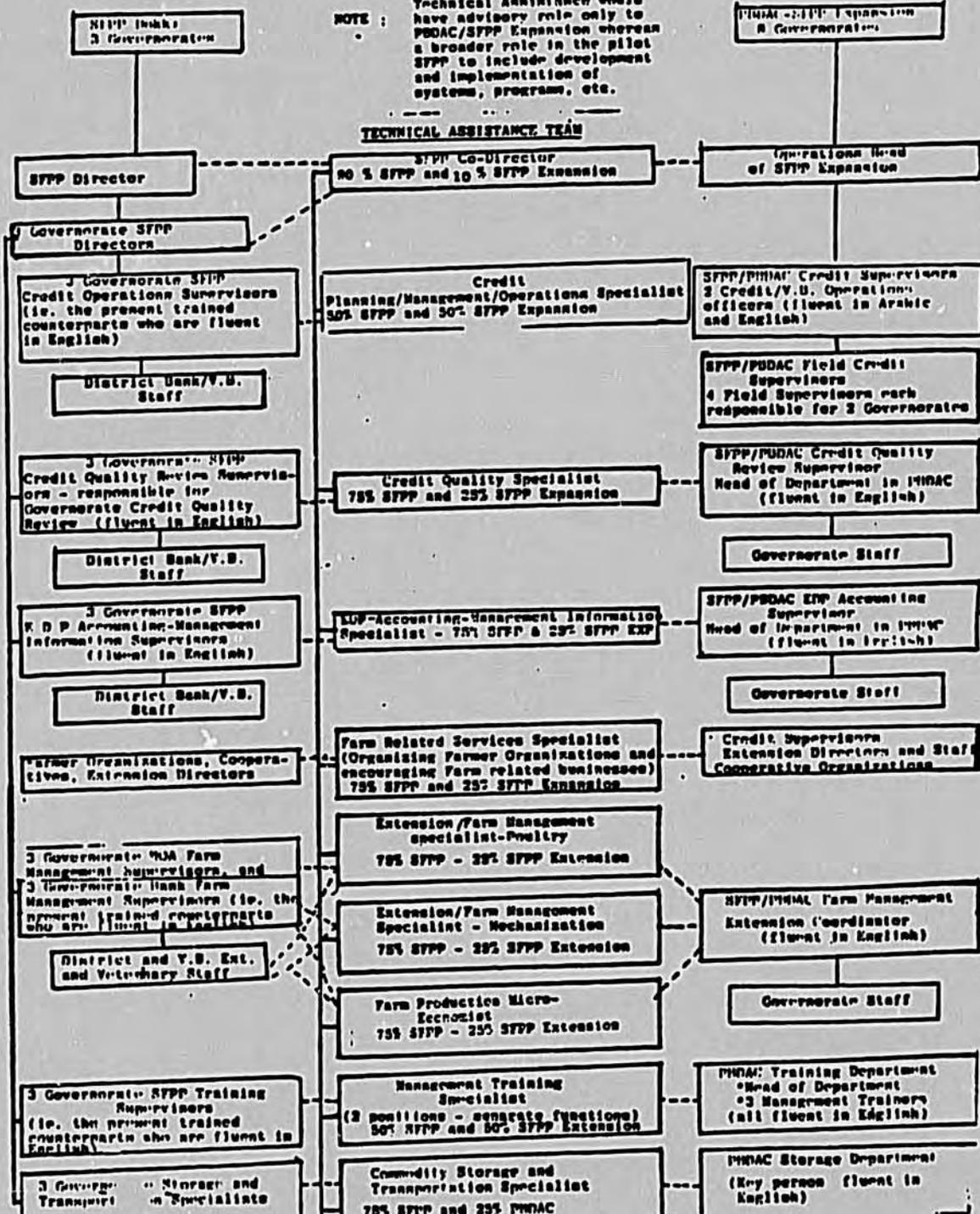
At the time the Minister of Agriculture made the decision relative to expansion of SFPP through the PBDAC, Mr. Fathalla Refat Mohamed, Chairman of PBDAC was appointed Executive Manager of the project with his counselor, Mr. Mohamed Kamel Nasser being designated its Operating Manager. The Minister also designated Mr. Mahmoud Noor, present Director of SFPP as a technical expert for the expansion. Mr. Nasser is moving strongly to prepare PBDAC and its affiliate banks for this large and nationally important assignment and has announced his intention to fully utilize existing departments of the banks including planning, training, financial, administrative and accounting, among others. The evaluators concur with this approach but believe very strongly

that to make his leadership most effective, the Operating Manager must have a small but highly effective staff of Egyptian bank specialists working under his direct supervision. Such a staff would logically consist of two Senior Credit Supervisors supported by four Field Credit Supervisors (each responsible for two governorates) and at least one Credit Quality Review Supervisor. This compact headquarters group together with necessary clerical and administrative personnel would provide the apparatus through which management of the expansion would flow and become the principal point of liaison with SFPP and the Technical Assistance group.

The following chart shows a plan for maximizing the efforts of all principals involved in both pilot and expansion projects and for obtaining the best possible benefits from coordination and cooperation.

**SPTT/PMDAC
TECHNICAL ASSISTANCE
JULY 1988 - JULY 1987**

NOTE: Technical Assistance would have advisory role only to PDAC/SPTT Expansion whereas a broader role in the pilot SPTT to include development and implementation of systems, programs, etc.



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Plans for expansion emphasize rapid undertaking of programs in 8 new governorates. This implies not only introducing new concepts and training of personnel in these new village banks, but also introduction of new concepts and training of personnel at various stages above the village bank level. Without full utilization of policies and procedures already proven under the project, expansion can fall into serious difficulties that will tarnish both SFPP and PBDAC.

We are aware of the commitment on the part of PBDAC and others to spread broadly the benefits of this program. Clearly the decision to expand can result in a great broadening of service into the rural areas with consequent beneficial impact on the economic well being of the farmer and rural villager alike.

Within the targets for new village banks, expansion should not be directed solely to new governorates. Experienced personnel in the pilot governorates should be alert to the possibilities of increasing the number of village banks in those areas through the same methods now employed and by providing funding through establishment of a revolving line of credit to the village banks from the governorates. Such an approach could nationalize SFPP at less cost and risk and help to develop an essential pool of financial resources at the governorate level.

G. Credit Funds Required For Expansion:

It is not possible at this time to estimate with accuracy the possible speed of sound PBDAC expansion nor the full need of funds for the credit side of the operation. In considering the possible credit demand in the expansion program at least three sets of conditions different than those actually experienced in the pilot project are likely to be encountered.

First -- lending activities were slow in developing due to the necessity of designing programs, initial selection and training of people and other activities before lending actually began. In the expansion with already proven methodology and well crafted technology packages, momentum in lending should develop more rapidly thus requiring more funding at an earlier date.

Second -- sharply increasing loan demand in some sectors caused concern that a shortage of loan funds would develop, leading project officials to impose a type of loan rationing both by type and amount. The expansion is not likely to experience this condition to the same degree, at least not in the early stages.

Third -- in the early stages of the pilot operation there was some initial reluctance on the part of the farmer to participate in SFPP and pay the required higher rates of interest. After experiencing the beneficial results of the SFPP project, the question became significantly less important to the farmer. It is not anticipated that loan interest rates will be a constraint in the expansion.

As stated earlier, 27 village banks have used LE 16,599,360 to make loans totaling LE 33,893,867 over an approximate four year period with most of the increase coming in the past two years. Using only the same rate of growth as in the pilot project but anticipating the same ratio of loan repayment, the PBDAC should be able to loan through its 192 expansion banks as much as LE 241 million by using the 100 million proposed by the GOE as initial capital. However, once PBDAC has set the expansion in motion it will be difficult to hold to the progression outlined above. Such limitations would make it particularly difficult to fully accommodate the increasing demand for capital in the medium and long term areas. Thus, it will need to look closely for additional fund resources.

The PBDAC's savings, current and term deposits have grown impressively from LE 16,889,063 in 1976 to LE 478,713,337 in 1983/84. Two factors discourage over-reliance on deposits growth to finance an expanded loan program. First, inflation has risen from 13% in 1976 to 17-20% in 1983/84. Until now deposit growth has exceeded the rate of inflation, but the decreasing rate of deposit growth suggests that this may reverse in the near future as shown in Table 6.

A review of deposit growth rates in all governorates and in SFFP participating village banks suggests that large yearly increases are impossible to sustain. In Damietta and Ismailia, which achieved increases of 68% and 62% in 1981/82, the current value of deposits have actually declined. Many of the banks included in the project had very high savings and deposit growth rates (ie. 166% to 75%) when they joined the project, but those rates have not continued. This indicates that savings campaigns may push up deposits, but that these dramatic increases should not be used for forecasting.

Savings plus borrowing from the Central Bank of Egypt can be utilized by PBDAC in the lending process and, of course, PBDAC can become a heavier borrower in the short term markets - especially in periods of easy money. It is likely the Bank will try to finance the expansion by short term borrowing in the commercial market unless other methods are developed. This latter course will make it vulnerable to sharp swings in the liquidity ratios of its commercial bank lenders. The PBDAC Capital and Reserve position has not grown at near the rate of its loan activities. Its equity position will likely continue to diminish, eroding the financial integrity of the institution unless necessary measures are taken.

Considering only the 192 village banks estimated to be included by 1988, and loans averaging LE 2.8 million per bank (the figure used most frequently when assessing loan requirements in SFFP) the total demand would be over LE 537 million requiring at least LE 200 million of seed capital, LE 100 million over and above that now planned for the expansion. In looking forward to the possibility of a new AID follow-on project to further expand the SFFP through PBDAC in 192 village banks, AID should plan to at

least match the GOE LE 100 million commitment to be used in lending operations. The intent would be to assist in the capitalization of PBDAC for the overall benefit of Egypt's farmers.

A nationwide replication of SFPP to the extent of developing loans to the extent of LE 2.8 million in each of 750 village banks over a period of ten years implies the need for LE 2.1 billion or LE 210 million per year less the small amount already drawn down in the pilot program. Even if as much as 60% could be mobilized from savings and commercial bank borrowing, the residual need would be LE 800 million.

The real input of funds over ten years would be about LE 100 million per year. If such funds were granted to PBDAC on a matching basis then the demand on GOE and AID would work out to something around LE 50 million each per year.

This broad calculation covers funding only for the SFPP expansion lending and does not include demands on PBDAC resources to meet its regular ongoing credit activities which undoubtedly will continue to grow. Nor does it include the cost of other factors, such as administrative expense and support items required by the expansion. At this early stage, it is difficult to determine the true magnitude of expense which will be involved in implementing the expansion. Major training activities, added village bank staff, incentive pay and necessary transport will require heavy initial and continuing expenditures. It is estimated that only individual village banks have been capitalized with grant funds and are mobilizing local resources will be fully self supporting.

The SFPP has arrived at a stage where it is worthy of replication. If PBDAC undertakes the decreed expansion in the true spirit as a replication of the pilot project, and attains the levels of funding required, it will have a high probability of being successful.

H. PBDAC:

The modern history of agricultural financing in Egypt effectively began in 1976 with the passage of Law 110 in which the functions of short-term credit provision and supply of agricultural inputs to Egyptian farmers passed from the trouble ridden cooperative system to the Agricultural Bank. This bank was then reorganized under the Minister of Agriculture as the Principal Bank for Development and Agricultural Credit (PBDAC). Shortly thereafter, the existing governorate and district banks were supplemented by a network of village banks which now serve the farmers of the country with increasing amounts of short, medium and longer term credit and with provision of much of their agricultural input needs.

The PBDAC has its head office in Cairo with four branches located in Cairo, Alexandria, New Valley and El Areesh. According to the Bank, nationwide credit and distribution activities are carried on through 17 governorate banks, 150 branch banks, 750 village banks and 4,304 agencies. The best current information indicates there are 35,300 staff members in this system of which approximately 3,300 work in the Principal Bank and its branches.

Because of its manifold operations on behalf of government, and its own widespread involvement in diverse agricultural financing activities, the PBDAC is a very complex institution with a complicated and unwieldy management structure.

The bank still functions with a hand accounting system and inadequate management information. As a result it is extremely difficult to obtain current reliable data as to the basis for a comprehensive view of the overall PBDAC operations. With the exception of a few odd bits of information, the data used in this report is for the 1982/83 fiscal year ending June 30, 1983. 1983/84 data for the annual report are still being compiled and may be ready for review by the Board of Directors at their April 1985 meeting. Thus Bank is experiencing a delay of some ten months before management has a full view of the operations for the preceding fiscal year, this obviously, causes great difficulty in accomplishing even adequate forward planning.

The PBDAC also appears to have problems with its internal communications, and Even though there may be a fair measure of information passing among some of the senior officers, formal communications do not appear to be looked upon as being of major importance in the overall scheme of things. Among and within departments the understanding by staff members of what others are doing, how particular operations related to others and to the functions of the Bank as a whole often are not clear.

It is evident from our work in the Bank, and while on field trips with senior officers of PBDAC, that there is a growing awareness within management of the many problems it faces and a willingness to come to grips with them. A desire to streamline and improve general operations also is clearly evident, especially in accounting and management information systems. Management is enthusiastic about providing a better, more decentralized credit service to its farmer clients and is moving increasingly toward many of the lending concepts which have been successfully tried in the Small Farmer Production Project. On two occasions, the Evaluators were able to attend indoctrination sessions held by PBDAC for key people involved in the expansion of SFPF, and came away impressed with the obvious sincerity of the Bank in undertaking this program and with its intention to attain a full and successful replication of the pilot program.

In order to place the operations of PBDAC in focus it is important not only to look at its growing credit activities but also to its work in the distribution and sale of agricultural inputs. For these purposes, we have developed a body of data

using the most reliable sources available to us. That one will find in this data some differences and/or distortions is inevitable given the several sources from which it was gathered.

From the Summary of Loans Granted by Term and Purpose, shown as Table 7, it will be seen that PBDAC has been steadily increasing its lending activities. From 1979 through June 30, 1983 total lending had grown from LE 211 million to over LE 650 million per year, with informal indications that during 1983/84, lending was over LE 700 million with continuing growth in sight.

Within the overall 1979/83 figures, short term loans had increased from LE 193 million to more than LE 481 million with the most dramatic change coming from livestock and poultry which increased over 139%.

Medium term loans moved sharply from LE 17.6 million in 1979 to Le 168 million at June 30, 1983. Again, the dramatic change was in livestock and poultry which posted a gain in volume of 515%. Interestingly, is a pattern.

Long term lending has also increased from LE 139 thousand to Le 584 thousand.

Table 8 Number of Borrowers by Farm Size, indicates a fairly stable pattern over several years and indicates particularly that the Bank's operations are geared largely to subsidized lending for purposes mandated by government. While the general pattern of land holding is not expected to change materially, the volume of credit advanced to tenant farmers and to those farmers holding five feddan or less in land will increase sharply as the Bank moves into the expansion of the SFPF approach.

According to Table 9 Income and Expense of the PBDAC and its Subsidiary Governorate Banks, total income for the year ended June 30, 1983 amounted to almost LE 226 million of which only LE 52 million or 23% represented earnings from purely credit operations. An additional LE 22 million was derived from payments by government to cover the difference in interest rates charged to borrowers (subsidized) and the rates authorized for normal lending, plus 1/2% for administrative overhead. Even with this addition, however, Bank income from credit operations appear as a whole come to but 33% of total income. The remainder came from margins of input distributions.

It is not possible from available data to break out the cost and revenue to the Bank of its credit and banking activities, and its other operations. Both credit and inputs are heavily subsidized and PBDAC does turn back most of the substantial net above operating costs to the treasury. What would happen to PBDAC economic viability if its non banking functions were curtailed would depend on government discussions in margins on remaining businesses and on staffing and other costs.

It might not be an economically viable institution if incorrect decisions were made. As lending operations continue to expand, and a reasonable spread between interest cost and income is allowed, it should be possible for PBDAC to be economically viable as banking institutions.

Savings generated throughout the PBDAC system have been increased in recent years but with a somewhat lower rate of growth in 1983/84. The PBDAC believes that as it expands the SFFF nationwide, farmers savings levels will register sharp gains. The Evaluators agree that such increases may well result, but over-reliance on savings as a major source of loan funds cannot realistically be guaranteed. Large scale expansion of credit will require not only such resources as savings and use of the Central Bank but, a far greater use of short-term borrowing from Commercial Banks. The equity position of the Bank is showing some erosion at its present level of lending and any large scale increase in borrowing will further widen its debt to equity ratio. Action to broaden the PBDAC capital and reserve position should be considered as a high priority item if it is to remain a viable institution having ready access to Egypt's commercial financial resources.

PBDAC recognizes a need to modernize its operations and approach to management and planning. At its last meeting, the Evaluators understand, the Board of Directors took under consideration a plan to substantially re-order the table of organization so as to simplify operations and remove overlapping areas. This new plan may be finalized within the next month or so. Strong support should be given any assistance requested in its efforts to improve both its financial and operating capability.

In their work with PBDAC, the evaluators spent considerable time in gathering and analyzing data. Previous evaluation groups have gone through the same process, but the amount of useful material available was very limited. A comprehensive body of base data should now be developed, computerized and maintained on a regular monthly basis. This could best be done by developing standard forms and assigning responsibility for data gathering to one office or preferably, one person. Such data should include all financial and credit operations including borrowings of the PBDAC and, if possible, its non-banking business as well. All operations of the pilot project for SFFF should also be tabulated and maintained monthly. Not only would this bank of data be useful to AID and PBDAC as a resource tool, but the Evaluators were told it would be welcomed by the MOA as well. It would be an invaluable asset to future evaluators of projects which might flow through various channels of the Bank. Ultimately, as PBDAC improves its capabilities, this bank of data could be folded into its management information system.

I. Conclusions:

During the last week of February and the month of March, 1985, an evaluation of the Credit Component and the Training Component of the Small Farmer Production Project (SFPP) was conducted by a team of two evaluators. Additionally, the team undertook to determine the technical administrative and financial capability of the Principal Bank for Development and Agricultural Credit (PBDAC) to replicate and expand the SFPP on a national basis.

The team spent considerable time in the Cairo headquarters of SFPP, PBDAC, and in Village Bank and Governorate offices of PBDAC. Discussions were held with pertinent officials as well as senior officials of the Ministry of Agriculture (MOA). Periodic progress reports were made to appropriate officers of USAID/Cairo.

The evaluators are pleased with the continuing success of the pilot SFPP in developing programs and demonstrating that carefully combined packages of technology and credit will be accepted by Egypt's very small farmers with measurable positive impact on their economic well being. We are also impressed that the farmers can and will pay for credit at generally unsubsidized rates of interest when he clearly sees it is in his financial interest to do so. Interest rates in SFPP are now at 13% + 1% administrative cost per annum for all loans (up from an original 8% short term and 10% medium and long term rate) and there has been no slackening in farmer loan demand nor in extraordinarily high ratios of loan repayment.

The SFPP has developed and successfully demonstrated many innovative techniques to improve the credit delivery system in the rural village banks. Among the most interesting and progressive changes are those which have tailored credit programs to meet the farmers' needs, decentralization and speed-up of the loan approval process, revolving line of credit farm loans, and most recently, establishment of revolving lines of credit to the village banks from their governorate bank. This is in keeping with an expressed goal of ultimately establishing each of the nations village banks as a distinct profit center carrying out its own budgeting, lending and business activities. On balance, the Evaluators believe that the basic credit goals of the pilot project have been largely realized.

Internal operations of SFPP have improved markedly during the past few years, and the Evaluators express general satisfaction with the great majority of administrative and management functions which they explored. An increase in number and quality of SFPP headquarters administrative staff and the use of a small computer have been most beneficial to the project.

Of particular importance to the SFPP pilot project and to its nationwide expansion are two major unfinished undertakings. SFPP has recently completed preparation of a comprehensive Policy and Procedure Manual covering all aspects of project operations. This

manual is now being translated into Arabic, following which it will be introduced into the Village Banks as a primary management and operations guide. Also, the El Maazawy village bank accounting plan should soon be field tested in selected pilot areas. Following the testing, the new system should be installed in village banks as quickly as possible. Finally, before SFPP termination in July 1987, work should be undertaken to develop procedures and criteria for making long term loans. To accomplish these important final goals at SFPP, the Evaluators believe it essential that the technical assistance contract with SFPP be extended to July 31, 1987 to coincide with the project activity completion date.

The present pilot project of SFPP has arrived at a stage where it is worthy of replication. The growing maturity of this project and its increasing visibility and impact in the pilot governorates led the Government of Egypt in November 1984 to announce an expansion into eight new governorates. This means that eleven of the seventeen agricultural governorates will soon be using the SFPP approach to small farmer lending and that the expansion will become nationwide as quickly as it can be managed.

The stated intention of the expansion program announced by GOE is to replicate in detail the policies and procedures developed in the pilot project and to fund the activity with up to LE 100 million of loan funds provided to village banks through FBDAC. FBDAC has been given responsibility for managing and directing the expansion effort.

FBDAC plans call for twenty-four village banks to enter the program initially and expand to forty-eight banks by the end of 1986. This will exceed by ten banks the number now operating in the pilot governorates after five years of experience.

If FBDAC is to be successful, careful planning and a great amount of advance preparation and training must be carried out prior to the actual beginning of loan operations. Also, the Evaluators believe it is appropriate to determine how best to support the FBDAC effort through use of the skilled Egyptian Specialists who have worked to develop the pilot SFPP. During this important transition period a new approach of serving expansion both in the pilot and FBDAC governorates must now have overwhelming priority while also offering already trained counterparts an opportunity to operate more actively. Accordingly, we offer a plan to adjust and augment the composition of the U.S. Technical Assistance team so as to provide a service more nearly related to the new national character of the SFPP. Details of the plan will be found on the chart shown on page 15 of the report.

The FBDAC, through whose facilities the expansion will take place, is a large and complex institution which carries on manifold operations on behalf of government as well as for itself. More than 50% of its income is derived from non-banking sources, yet it is the only financing institution which reaches completely down to the farm level. The bank finances most of its

regular credit operations with short term borrowings from Commercial Banks, and with the rapid growth in the past few years of these operations, the addition of the SFPP expansion could place an unduly heavy burden on its financial resources.

There is an inherent danger that the PBDAC may become over exposed in mounting ever growing credit programs and cause severe erosion to its capital structure and equity position. This is particularly true if it must use commercial bank borrowings to cover most of the cost of a large expansion in medium term lending. Consideration should be given by both GOE and USAID to the provision of grant funds to assist the Bank in covering the demand for credit which is expected to develop from expansion of medium term lending. Action to broaden the PBDAC capital and reserve position should be considered a high priority item if it is to remain a viable institution having ready access to Egypt's commercial financial resources.

PBDAC's operations are handicapped by its complex management structure, by the cumbersome accounting system, and by the lack of a modern management information system. This has made it difficult to obtain timely and fully reliable and consistent operating data. Bank officials recognize that these are problems which tend to impede operations and are beginning to move toward corrective actions. It would be profitable for PBDAC to engage a small team of specialists to conduct an in-depth study of the PBDAC banking and credit functions, including an analysis of non-banking operations to establish that a data bank be maintained on a regular basis in the offices of PBDAC and USAID/Egypt.

Recommendations:

1. That the termination date for the Technical Assistance Contract with SFPP be extended so as to coincide with termination of the project itself on July 31, 1987.

Action

Time Frame

USAID

April, 1985

2. That the composition of the Technical Assistance team be adjusted and augmented as proposed in the Conclusions and in the narrative of the evaluation report.

Action

Time Frame

USAID/ACDI/PBDAC

April/June 1985

3. That SFPP and PBDAC move strongly to field test and implement the Village Bank Policy and Procedure Manual and the El Maazawy Village Bank accounting program.

Action

Time Frame

SFPP/PBDAC-SFPP

April 1985/June 1985

4. That a Data Bank for gathering analysis and retention of PBDAC and SFPP statistical and management data be established and maintained on a regular basis.

Action

Time Frame

USAID/SFPP/PBDAC

Immediately

5. PBDAC with support of USAID/Egypt employ a highly experienced agricultural banking specialist and an experienced statistical and accounting specialist to conduct an in-depth study of the PBDAC with particular reference to its banking and credit functions. If possible the study should include an analysis of PBDAC non-banking operations.

Action

Time Frame

PBDAC/USAID

June/August 1985

6. That a new GOE/AID project be developed to further the national expansion of SFPP and enhance the capabilities of PBDAC both financially and operationally through provision of grant funding and technical assistance.

Action

Time Frame

USAID/GOE/PBDAC

1985/1986

J. Annex Tables:

Table 1.	SFPP Loan Summary Report for January 31, 1985
Table 2.	SFPP Monthly Loan Purpose Summary
Table 3.	Summary of Loan Funds - SFPP Life of Present Project
Table 4.	SFPP Loan Data Summary - Six Month Intervals
Table 5.	SFPP Loan Data Summary - Total Loans
Table 6.	Savings and Deposit Growth and Forecast
Table 7.	PBDAC - Summary of Loans by Term and Purpose
Table 8.	PBDAC - Number of Borrowers by Farm Size
Table 9.	Consolidated Income and Expense of the PBDAC and its Subsidiary Governorate banks
Table 10.	PBDAC - Table of Organization - March 1, 1985
	PBDAC - Annual Report and Attachments 1982/83

LOAN SUMMARY REPORT FOR SFPP - 27 VILLAGE BANKS
Beginning of Project to January 31, 1985

ITEM	QUALUBAYIA	SHARKIA	ASSIUT	TOTAL
NO FARMERS SERVED				
Tenant farmers	7,710	6,027	10,696	24,433
Landless	2,864	682	1,852	5,398
Female	37	55	312	404
	1,395	969	921	3,285
NO DISBURSEMENTS				
Loans made	15,590	12,311	16,876	44,777
Loans outstanding	14,331	10,378	16,454	41,163
	7,489	3,419*	8,495*	19,403
VOL. DISBURSEMENTS				
Loans closed (face amt.)	12,375,537	13,772,368	7,745,962	33,893,867
Loans outstanding	12,505,401	14,176,842	7,825,126	34,507,369
	3,644,201	4,587,376	4,557,549	12,789,126
REPAYMENT AMOUNT-P	8,731,938	9,184,993	3,188,425	21,105,356
REPAYMENT AMOUNT-I	457,128	422,952	545,138	1,425,218
DELINQUENCY				
Number	253**	15	52	320
Amount	91,268**	12,219	7,683	111,170
% Loans outstanding No.	.034**	.004	.006	.016
% Loans outstanding Amt.	.025**	.003	.002	.009

* To be confirmed by audit
** Qualubayia has averaged less than one half of one percent delinquency for four years and in October 1984 had .007 delinquency by number and .008 delinquency by amount. Personnel and management problems in one normally stable village bank account for an increase of 85 loans in the amount of 32,463 LE. The balance of the increase is a result of poultry disease problems currently in Qualubayia.

LOAN CATEGORY	PURPOSE	NO. OF DISBURSEMENTS	NO. OF UNITS FINANCED	1/ AMOUNT DISBURSED	
CROP	Fertilizer				
	Seeds and Plants				
	Chemicals				
	Other crop-related				
	TOTAL CROP	17,641		2,286,012.4	
MEAT AND EGGS	Calves	2,514	7,494	2,215,593.0	
	Sheep	1,159	3,595	879,715.0	
	Chickens for meat (unit)	3,985	10,864,174	8,649,735.0	
	Chickens for eggs (battery)	1,596	315,705	1,214,395.9	
	Feed, Supplies, Services	3,746		6,024,171.0	
	Other	114		69,043.0	
	SUB TOTAL	13,114		9,052,652.9	
	BREEDING, STOCK, DAIRY, AND WORK ANIMALS	Buffalo, Baladi	3,418	4,604	3,038,031.0
		Buffalo, Improved	475	1,527	337,477.5
		Cow, Baladi	256	436	227,250.0
Cow, Improved		239	350	249,145.0	
Goats, Baladi		176	2,154	157,290.0	
Goats, Improved		39	83	6,130.0	
Sheep, Baladi		2,655	25,590	2,203,686.0	
Sheep, Improved		90	394	35,671.0	
Camels		488	526	389,200.0	
Donkeys		3	3	1,580.0	
Pabbits		60	1,379	44,007.0	
Pigeons		4		2,140.0	
Feed, Services, Supplies		27		24,530.0	
Other		37		26,528.0	
SUB TOTAL		7,997		6,743,573.5	
FARM EQUIPMENT	Tractor	166	124	664,770.0	
	Implements	353	221	489,668.0	
	Irrigation Pumps	1,193	1,188	1,276,592.0	
	Sprayers	819	826	67,106.0	
	Generators	259	228	270,078.0	
	Trucks	63	63	240,505.0	
	Dairy Equipment	194	194	35,108.0	
	Poultry Equipment	1,297	1,856	256,444.0	
	Money Box Cells	284	7,600	282,810.0	
	Repairs	126	21	131,093.0	
	Other	193	3	181,396.0	
	SUB TOTAL	4,947		3,945,570.0	
	LAND AND IMPROVEMENTS	Farm land	5		7,400.0
Non-farm land					
Irrigation Well		38	36	62,114.0	
Building for Animals		25	24	63,900.0	
" " Chickens		559	501	1,215,905.0	
" " Pigeons		3	5	5,000.0	
Other Buildings		17	16	31,300.0	
Repair/Renovation		109	15	140,830.0	
Other Improvements		38	11	62,600.0	
SUB TOTAL		794		1,589,049.0	
FARM-RELATED BUSINESS	Custom Operator	5			
	Processing	36		35,940.0	
	Marketing	160		110,695.0	
	Supply	16		36,900.0	
	Other	67		104,775.0	
SUB TOTAL	284		288,310.0		
OTHER					
GRAND TOTAL	44,777				

1/Amount Disbursed shown in two places must be the same totals. It may be disbursements for loans made during the month or for loans previously reported.

Loan Type	No. of Loans	1/ Amount Disbursed
RLOC	489	1,534,054
SHORT	28,365	19,890,756.9
MEDIUM	12,401	12,426,506.9
LONG	8	42,550.0
TOTAL	41,263	33,893,867.8

SFPP LIFE OF PRESENT PROJECT
AS OF JANUARY 31, 1985

Budget Year	SOURCE & AMOUNT				TOTAL LE
	USAID		GOE LE		
	US \$ OF LE	= LE			
1980	275,000	(.7) 192,500	250,000		442,500
1981	650,000	(.7) 455,000	500,000		955,000
1982	1,900,000	(.83) 1,580,192	1,000,000		2,580,192
1983	4,007,000	(.83) 3,332,542	1,578,000		4,910,542
1984	3,409,458	(.83) 2,835,578	1,881,500		4,717,078
TOTAL	10,241,458	8,395,812	5,209,500		13,605,312
SUPPLEMENT CONTAINS:					
1985 - Received	3,600,000	(.83) 2,994,048	- 0 -		2,994,048
1985-Not Received	1,800,000	(.83) 1,497,024	5,000,000		6,497,024
1986 " "	6,600,000	(.83) 5,489,088	5,000,000		10,489,088
1987 " "	- 0 -	- 0 -	- 0 -		- 0 -
TOTAL SUPPLEMENT	12,000,000	9,980,160	10,000,000		19,980,160
TOTAL SFPP	22,241,458	18,375,972	15,209,500		33,585,472

Total funds received = 16,599,360 LE
 Funds received from USAID = 13,841,458 USD of LE = 11,389,860 LE
 Total funds issued to Governorates = 14,607,982 LE
 Balance of funds in Cairo Accounts = 1,991,378 LE
 Loans outstanding to borrowers = 12,789,128 LE
 Balance of funds in Gov./V.B. for lending = 1,818,856 LE

Funds available for lending divided by 38 Village Banks = 47,864.63 LE per V.B.

Loan portfolio size - average in each of 27 Village Banks = 473,671 LE per V.B

TABLE 4

SFPP LOAN DATA SUMMARY
FROM BEGINNING OF PROJECT TO JANUARY 31, 1985

Time Period - Six Month intervals (with last one 3 months)	Loans Rejected	Loans Made								Total Loan Repayment
		Short Term		Medium Term		Long Term		Cumulative		
		No.	Amount	No.	Amount	No.	Amount	No.	Amount	
May. thru Oct. 81	18	299	234,861	31	27,545	1	1,200	331	263,606	21,650
Nov. 81 thru Apr. 82	45	554	676,332	377	526,469	3	11,750	934	1,216,551	431,223
May. 82 thru Oct. 82	28	1,333	1,214,724	1,915	2,034,963	1	1,400	3,249	3,251,087	937,006
Nov. 82 thru Apr. 83	50	2,143	2,103,780	1,584	1,430,988	0	-0-	3,727	3,534,768	2,213,961
May. 83 thru Oct. 83	28	4,680	2,996,467	1,816	1,736,363	1	8,200	6,497	4,741,030	3,010,686
Nov. 83 thru Apr. 84	88	6,475	4,863,924	2,441	2,718,025	2	20,000	8,918	7,601,949	4,154,578
May. 84 thru Oct. 84	NA	7,230	5,838,254	2,935	2,841,063	-0-	-0-	10,165	8,679,317	5,347,324
Nov. 84 thru Jan. 85	NA	6,140	3,494,469	1,202	1,111,090	-0-	-0-	7,342	4,605,559	4,988,688
Project Total		28,854	21,424,811	12,301	12,426,506	8	42,550	41,163	33,893,867	21,105,356

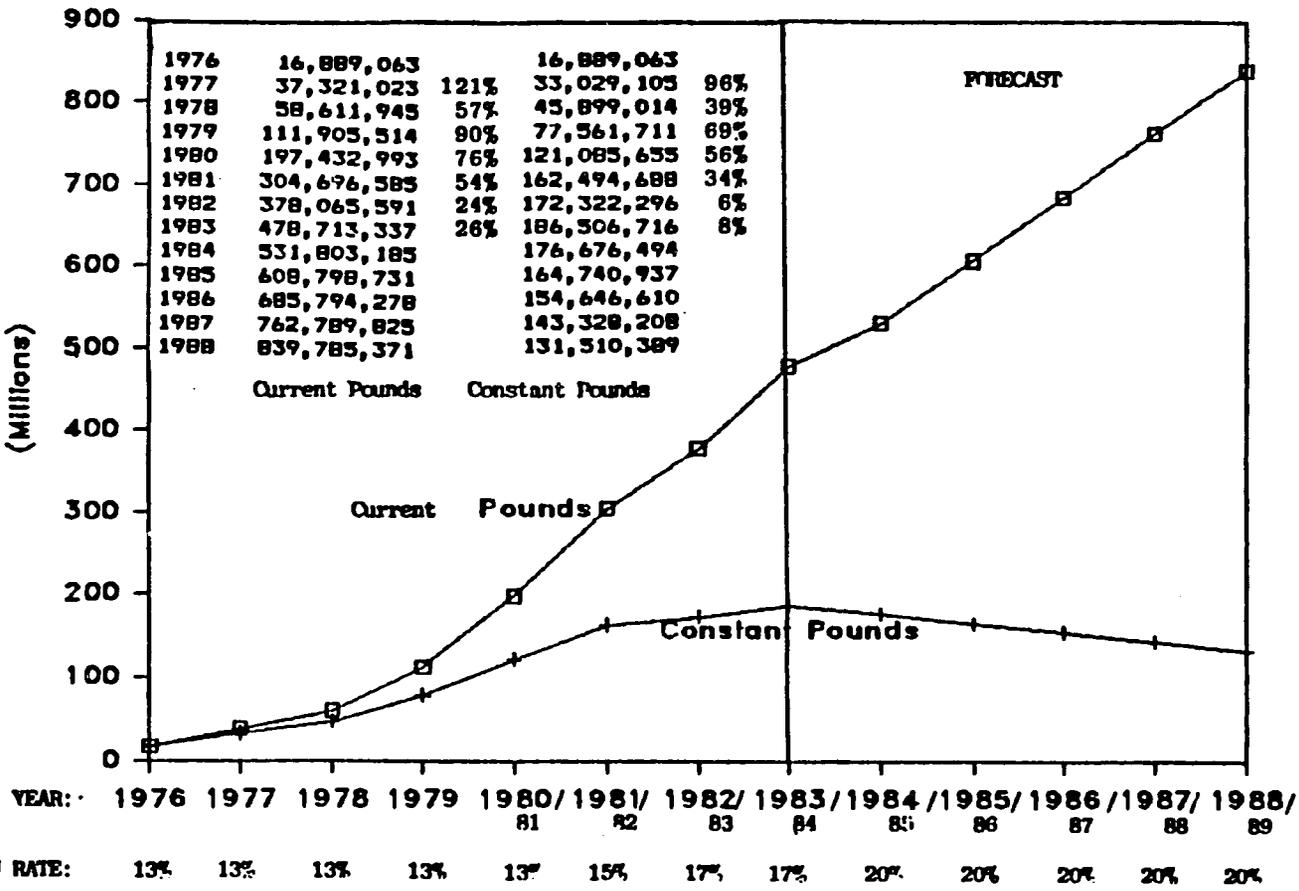
TABLE 5

RPPP LOAN DATA SUMMARY

TOTAL LOANS - from beginning of project to January 31, 1985

Governorate	SHORT TERM		MEDIUM TERM		LONG TERM		AGGREGATE		REPAYMENT (Principal)
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Sharkia	6041	9,433,542	4337	4,338,826	-0-	-0-	10,378	13,772,368	9,184,993
Qalubayia	11,129	9,027,212	3202	3,348,325	-0-	-0-	14,331	12,375,537	8,731,938
Assiut	11,864	2,964,057	4762	4,739,355	8	42,550	18,454	7,745,962	3,189,425
TOTAL	29,854	21,424,811	12,301	12,426,506	8	42,550	41,163	33,893,867	21,105,356

TABLE 6
SAVINGS AND DEPOSIT GROWTH (1976-1983/84)
AND FORECAST
(Millions)



TERM/PURPOSE	Summary of Loans Granted by Term and Purpose						TABLE 7	
	1979		1980/81		1981/82		1982/83	
	LE	Percent	LE	Percent	LE	Percent	LE	Percent
<u>Short Term Loans</u>								
Total	193,444,796	100.00	269,529,964	100.00	373,022,601	100.00	481,658,539	100.00
Crops	168,245,150	86.97	200,315,570	74.32	233,678,482	62.64	303,144,411	62.94
Livestock & Poultry	23,045,737	11.91	64,886,130	24.07	127,886,130	34.28	165,265,844	34.31
Digging Drainage Ditches	687,557	0.36	469,875	0.17	500,000	0.13	675,415	0.14
Fruits & Vegetables	390,984	0.20	505,016	0.19	940,000	0.26	550,462	0.11
Others	1,075,368	0.56	3,353,373	1.25	10,017,989	2.69	12,022,407	2.50
<u>Medium Term Loans</u>								
Total	17,599,306	100.00	91,013,698	100.00	138,303,616	100.00	168,049,462	100.00
Farm Mechanization	8,290,194	47.11	30,696,101	33.73	32,107,475	23.22	42,156,098	25.09
Livestock & Poultry	5,338,539	30.33	42,181,505	46.35	73,647,382	53.25	103,479,631	61.58
New Orchards	305,370	1.74	595,727	0.65	600,000	0.44	2,658,303	1.58
Apiaries	731,140	4.15	1,057,254	1.16	900,000	0.65	1,540,299	.92
Others	2,934,063	16.67	16,483,111	18.11	31,048,759	22.44	18,215,133	10.84
<u>Long Term Loans</u>								
Land Reclamation	139,979	100.00	325,031	100.00	620,543	100.00	584,034	100.00
TOTAL LOANS	211,184,091		380,868,693		511,946,760		650,292,035	

Source: Statistical Department - PEDAC

TABLE 8

Number of Borrowers by Farm Size

FARM SIZE (FEDDAN)	1979/80				1980/81				1982/83			
	Borrowers	Percent	Feddans	Percent	Borrowers	Percent	Feddans	Percent	Borrowers	Percent	Feddans	Percent
One and less	1,424,870	49.18	915,642	16.90	1,459,388	49.16	942,936	17.50	1,466,314	48.94	930,127	17.04
More than 1 to 3	966,671	33.36	1,561,616	28.83	1,003,001	33.78	1,601,979	29.73	1,012,100	33.78	1,618,533	29.66
More than 3 to 5	306,622	10.58	1,037,302	19.15	302,341	10.18	961,280	17.84	308,703	10.30	1,013,867	18.58
More than 5 to 10	128,538	4.44	776,008	14.32	131,144	4.42	776,319	14.41	130,764	4.38	763,887	14.00
More than 10 to 15	37,961	1.31	433,150	8.00	41,416	1.40	437,610	8.12	46,106	1.54	450,158	8.25
More than 15 to 25	22,440	0.77	372,358	6.87	21,470	0.72	365,193	6.78	22,708	0.76	377,695	6.92
More than 25	10,415	0.36	321,488	5.93	10,158	0.34	302,785	5.62	9,704	0.32	303,564	5.56
	2,897,517	100.00	5,417,564	100.00	2,968,918	100.00	5,388,102	100.00	2,996,399	100.00	5,457,831	100.00

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Source: Statistical Department - PEDAC

Table 9
 CONSOLIDATED INCOME AND EXPENSE
 OF THE FBDAC AND ITS SUBSIDIARY GOVERNORATE BANKS
 (LE 1000)

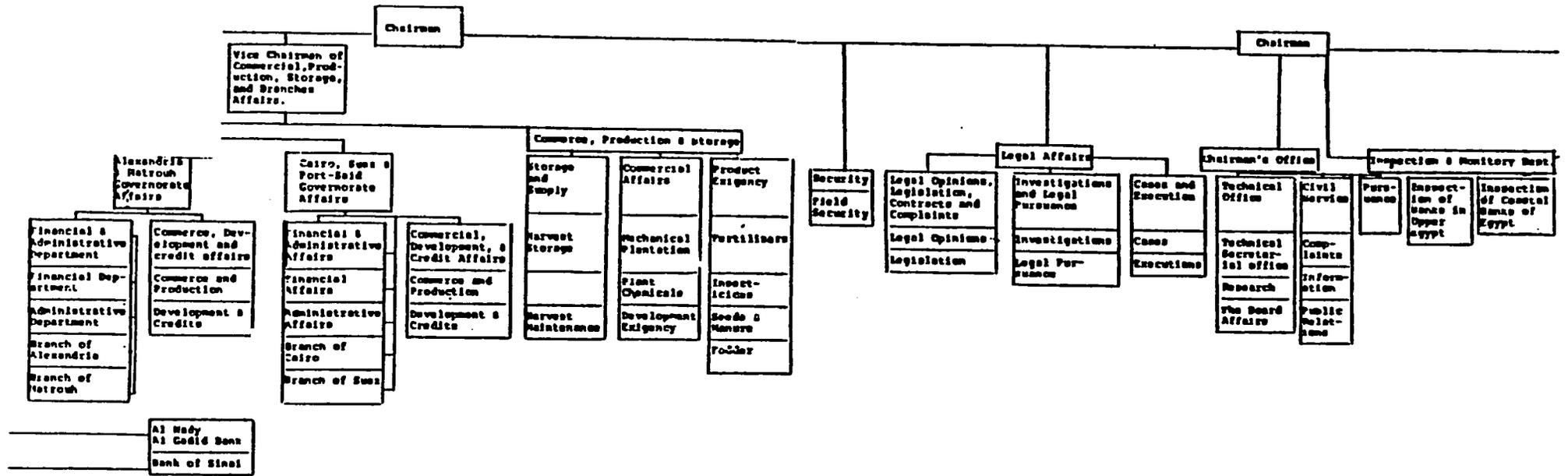
INCOME	1980 (6 mos)	1980/81	1981/82	1982/83
Interest received from borrowers	15.448	23.062	32.483	52.319
Fertilizers	12.241	26.610	39.621	42.447
Supply operations	4.014	11.501	13.468	17.399
Seeds and grains	.943	2.106	2.546	2.613
Fencing materials	.878	5.603	7.062	6.103
Feeds and oilcakes	1.293	5.356	5.132	4.712
Insecticides	3.714	14.648	15.576	14.374
Cooperative marketing	.198	1.318	1.657	1.472
Crop protection	.259	.607	1.011	.859
Spare parts for pest control equipment	.460	1.112	1.426	1.483
Banking operations	2.816	10.105	13.938	22.271
Subsidies	-0-	40.014	53.611	59.888
Sub Total	42.264	142.044	187.531	225.940
GENERAL EXPENSES				
Salaries and wages	15.628	40.947	59.968	66.489
Water, electricity, stationary	.327	.718	.913	1.037
Transportation and printing supplies	1.760	4.734	6.524	6.907
Interest and finance charges	7.256	26.946	46.765	60.325
Depreciation	.471	1.147	1.528	1.831
Provisions	2.205	7.560	3.094	3.736
Others	.904	1.386	1.257	1.262
Sub Total	28.551	83.438	120.049	141.587

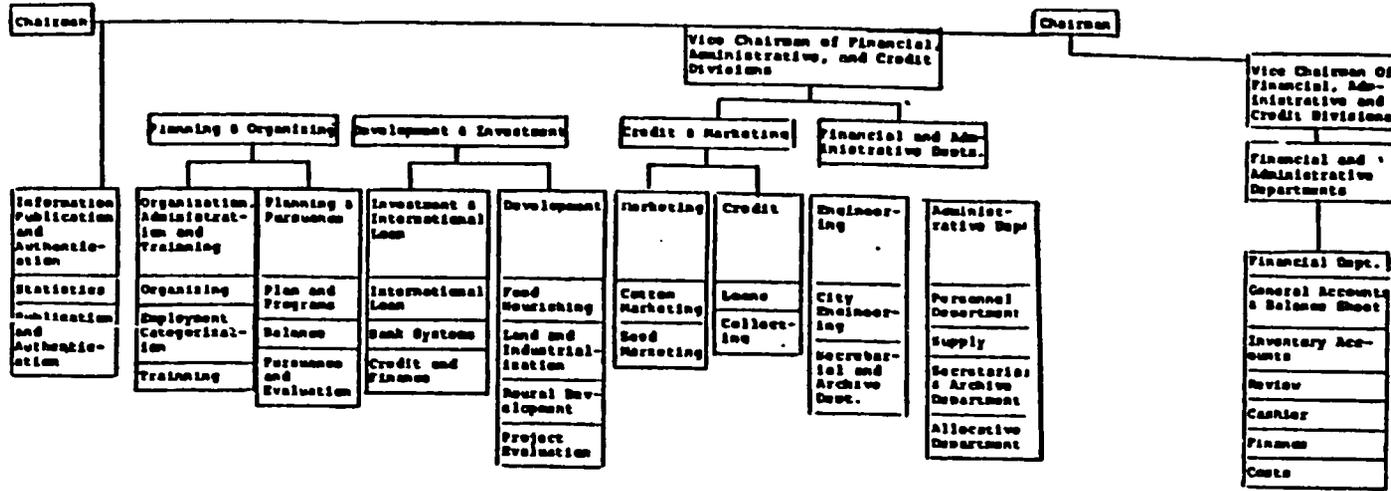
Gross operating profit	13.713	58.606	67.482	84.353
Other revenues (net profit for 17 subsidiary governorate banks)	5.279	7.467	3.058	4.039
Net profit before tax	18.992	66.073	70.540	88.392
Income tax	5.923	21.224	26.943	32.846
Net profit after taxes	13.069	44.849	43.597	55.546
Net profit after taxes	13.069	44.849	43.597	55.546
Net revenues relating to previous years	8.033	14.987	9.404	9.066
Surplus	21.102	59.836	53.001	64.612
Distribution of Surplus	17.075	56.826	21.866	26.834
Undistributed Surplus	4.027	3.010	31.135	37.778

- Due to change of financial year, 1980 covers only a period of six months.

- Some changes in the contents of several accounts have taken place from the year 1981.

Source: PBDAC





PBDAC
Memo I - Board of Directors
Financial Consultant Office

To: Board of Directors

RE: Authorization of PBDAC budget for fiscal year
7/1/82 to 6/30/83

Article (18) of Law (117) 1976 for PBDAC stipulating the preparation of the following, 6 months prior to the end of the fiscal year -

- A) annual bank budget according to financial accounting methods, including reserves and specific expenses
- B) profit & loss account for previous fiscal year in accordance with the rules used by commercial banking systems

The Chairman will present to the board the annual report of his activities including the volume of these activities. The board will also receive the control audit authorities accounting report.

Therefore we present to the board the PBDAC and its branches Balance Sheet accounts for fiscal 7/1/82 to 6/30/83 including all legal statements, profit & loss statement, annual bank activities report, and the report received from the central audit authorities.

We request authorization of the following:

- 1) PBDAC budget and final accounts for fiscal year from 7/1/82 to 6/30/83.
- 2) PBDAC personnel bonuses according to authorization by the Chairman, which have been taken into consideration in the final accounts and the balance sheet accounts.
- 3) PBDAC personnel incentives from profits as was done for the banks, but not to exceed LE 100.
- 4) Incentives report for Chairman and his board, guest at this meeting, participating institutions, and requesting the Chairman to determine value for each.
- 5) The board will attest its completion of business for fiscal year from 7/1/82 to 6/30/83.

Date: 4/28/84

Chairman of the Board

Report on
FBDAC Budget and Activities results for
Fiscal year ending 6/30/83

During 1982/83 the bank has achieved most of its objectives in agriculture development in general, in accordance with the national development plan for improving agriculture by use of capitalistic methodology. This year's major achievement was the procurement and presentation of various financing and banking methods to participate in fulfillment of the agricultural policies strategy and sustain its aims, in order to reach proposed results. The achievements in the years that followed Law (117) / 1976 concerning improving agricultural credit systems and supporting confidence in it, changing it to a proper banking system were in participation with the World Bank and the Agency for International Development. These achievements were the first step in a consecutive set of steps leading to true coalescence with the national agricultural plan which has even greater aims and objectives of its own.

The major field of participation was in capitalistic development, where efforts were not spared to provide seeds of high productive yield for the major crops especially rice and corn, and their needed inputs such as fertilizers and chemicals needed for cultivation, maintenance and growth to maturity.

In agricultural mechanization the bank extended its efforts to supply cash and value financing for various agricultural machines. This extended even to total mechanical servicing for all phases of cultivation. Financing services were extended to co-operatives specializing in ag/mechanization by providing complete mechanized units. This will all lead to improved agricultural methods, and aid in the jump from hand labor to mechanized service especially after the noticeable decrease in rural labor and its increasing costs.

In traditional production inputs the bank increased its provisions of fertilizers and foliar nutrients, improved seed for vegetables and corn and rice, nitrogen based phosphorus, and potassium based fertilizers.

In support of the national effort to regain the rural villages role of production, there began this year the preparation of a plan for several villages in Upper and Lower Egypt to implement a program for rural production, manufacturing, and investment of village resources, with an organized financing plan to procure production requirements for livestock, poultry, fish, etc. This plan will need constant care and evaluation to achieve this productive unit in order for it to become self-sufficient in consumer products and have enough surplus for urban consumers.

The bank also achieved excellent results in internal and

international banking services during 1982/83. Other than increasing the clientele savings accounts, in internal banking, it also issued ag. development bonds to support its financial status. The bank was careful in issuing and covering the first set of bonds and will continue to issue a second set in different denominations to further increase clientele faith in the banking service, and to further the tie between the development bank and the farmer clientele to insure national economic stability. As for banking services on the international level, whether in foreign currency or in procurement of leniencies in favor of ag. economy, the following was achieved -

a) Preparation of a correspondent network abroad, with the help of several banking specialists consultants who compiled a system of funding procedures and documentations and training for it. Some of this procedure has been initiated through the network, and we hope the bank will expand it to help in achieving ag. development objectives.

b) Expansion in international relations with either World Bank, Commonwealth, EFAD, etc. or with those countries providing lenient aid to Egypt, all under and with the assistance of the government institutions dealing in these matters for the benefit of agricultural economy.

The different bank activities, and financial results achieved during this fiscal year are shown in the Balance Sheet and Final Account Statements to be giving an increase in the surplus which supports the bank reserves and increases the net values owing to the Ministry of Finance. The following is an analysis of these activities during the past year and the final accounts for the year ending 6/30/83.

Audit Report from Central Audit/Accounting Authority

The cooperation between the members of this agency; headed by senior Ministerial Secretary Mr. Helmy Riad, and Mr. Mostafa El Gindy, Vice-Director and the supervisory and audit personnel, and the finance and accounting departments at the PBDAC and branches is to be commended.

The routine reports and the budget audit report were studied carefully by the follow-up team of this agency; selected by the PBDAC Board of Directors, and most of the attached remarks were implemented and taken into consideration especially those effecting the final account results or the financial status of the bank. Due to taking by tests remarks some amendments were made in the Balance Sheet and the Profit & Loss Statement to insure it becoming an accurate and correct picture of the bank's financial state and to the final account results.

The financial department of PBDAC also studied the balance values of the debtor and due sections as in the reports of last years audit and it became possible to reach positive results as shown below - please note we have excluded balancing the debtor/due

budget due to its being usually balanced after initiation of the fiscal year books for 1983/84.

Item	82/83	81/82	Reduction (LE)
debtor balance	10,363,553	57,495,970	46,623,417
due balance	44,031,783	61,129,399	17,097,617

Other remarks that this agency found to be incorrect administratively or incorrect credit form, were studied jointly with the finance and credit department of FBDAC, after which this agency explained its views and what steps were taken towards these remarks, as shown in detail in the reply to the budget report.

Our reply also contains the report of the finance department results as to their study of the remarks and steps taken in the accounting procedures or the banks explanation of these remarks.

Branch Activities

The branches are sparing no effort in the investment and banking sectors, over and above their normal duties, and its responsibilities towards the governorate banks in acceptance of subsidy crops, imported production inputs, and distribution of production factors according to plan with accuracy. We must, no doubt, re-organize the structure and plan of these banks due to their growing responsibilities to ensure better administrative and technical management through greater efficiency and effectiveness in participating in development and in financing its activities and in providing enough cash flow to finance Governorate banks. After completion of a detailed study of the activity column of the Branches, it was possible to promote the Banks of Cairo & Alexandria to the "General Provincial Level" of the FBDAC (ie. centralized management level) and promotion of their sub sections to "Managerial" levels where each became a self-contained economical unit ... El-arish & El-Wadi (New Valley) were re-organized and promoted to FBDAC provincial manager levels instead of control units, and the sub sections of these two branches were promoted to controller units. These changes were authorized by the Board of Directors at the 4/26/83 meeting.

The increased activity volume should no doubt be followed by an improved accounting system to make each branch a self-contained economic unit, with a separate budget and set of final accounts through which we can define the results of each branch unit to inter-compare with other similar units. This new accounting system has been set up and will be initiated on July 1st. 1984 after the training sessions prepared for the banking and accounting staff have been completed.

The following table covers the most important activities of the branches during fiscal 1982/83, compared to fiscal 1981/82.

After the comparative study we can define a decrease value of LE 5,981,298; due to

a) decreased livestock investment of LE 4,029,891.

This decrease was mainly in Alexandria and New Valley, and due to the cessation of expansion in sheep loans until a result survey could be done for 1981/82 loans especially in Marsa Matrouh. The credit plan for these loans will be set on receipt of these survey results.

b) decrease in non specific investment by LE 4,995,976; due to ceasing to work in non perishable produce.

The 9 million LE decrease of the stated two types was almost half replaced by the increase in poultry loan investment which was at LE 921,392 and by mechanization which was at LE 2,122,277.

Seasonal Credit

Due to the small size of the arable area covered by the branches, seasonal credit is not a major factor effecting the final accounts. Total loans were LE 1.97 million compared to LE 1.63 million. Most were in Alexandria, LE 1.78 million compared to LE 1.72 million.

Banking Operations

The branches were active in this area during 1982/83, as can be seen from the savings/deposits columns on 6/30/83 compared to 6/30/82.

	6/30/83 (thousand LE)				6/30/82 (thousand LE)			
	Current Accts	Term Dep.	Savings Accts.	Total	Current Accts.	Term Dep.	Savings Accts.	Total
FBDAC	15054	19861	2043	36957	44745	13652	1294	59692
Cairo Br.	10069	12803	510	23382	11416	5523	362	17300
Alex. Br.	5582	13140	583	19305	5506	2667	266	8439
New Valley	1717	299	304	2320	622	281	197	1098
El Arish	1162	65	53	1281	714	281	37	1033
TOTALS	33583	46168	3493	83245	63003	22404	2155	87562

By studying the value on the table we can see:

a) that total deposits and savings on 6/30/83 for FBDAC & Branches were below those on 6/30/82 by LE 4.317 million, due to the decreased deposit volume at FBDAC by LE 22.735 million which

was caused by the decreased volume of current accounts, where as term deposits and savings accounts increased.

b) the decrease in deposits values at PBDAC was balance by the increases accomplished by all the Branches which is valued at 66% or LE 18.418 million.

- c) comparing the balance of each type we find that
- current account balance decreased by LE 29.4 million
 - term deposits increased by LE 23.8 million
 - savings accounts increased by Le 1.3 million

Analysis of Final Account Results

A. Current Activities

Total revenue was LE 31,950,685 compared to LE 9,979,455 - an increase of 45.4% over last years (1981/82) 33.5%.

B. The total revenue was LE 39,840,473 compared to LE 23,596,206 - an increase of LE 16,244,267 or about 68.8%, where as the 1981/82 figures were less than those of 1980/81 by LE 3.45 million.

C. Total expenditures were LE 22,238,107 compared to LE 18,268,460, an increase of Le 3,969,647 or 21.7%.

If we compare total expenditures to total revenues we find that expenditures were 55.8% of revenues, where last years was 77.4%. This leads us to believe that expenses ratio has decreased and the revenues have increased due to better investment and increasing activities volume. This can be seen in the newer activities such as commercial banking and investment credit.

D. The fiscal year 1982/83 ended with a total net profit of LE 17,602,266 compared to LE 5,327,745, an increase of LE 12,274,621 or 230%. Last years (1981/82) was less than 1980/81 by LE 237,967

We therefore consider 1982/83 a record year in total net profit values compared to previous values and years. But even so, we encourage achievement of this record value in the fiscal year 1983/84. This presumption is built upon the factors we have found during follow-up procedures through March 1983/84.

PBDAC Surplus Utilization

This surplus is chiefly from two sources:

I. Net Activities Revenues	LE 17,602,366	LE 5,327,745
II. Allotment quota from BDACs	LE 29,951,676	LE 28,807,097
	<u>LE 47,554,042</u>	<u>LE 34,134,842</u>

This surplus was utilized in:

	1982/83	1981/82
commercial profit tax	LE 6,275,590	LE 3,500,000
general reserve	LE 3,500,000	LE 4,500,000
Surplus quota for Natl treasury	LE 37,778,453	LE 26,134,842
	<u>LE 47,554,043</u>	<u>LE 34,134,842</u>

PBDAC and Governorate BDACs Surplus Utilization

The surplus for PBDAC & Govn. BDACs at the end of fiscal year 1982/83 was LE 97,458,333 compared to LE 79,944,705 for 1981/82, an increase of LE 17,513,628 or 22%. This was distributed in the following manner:

	1982/83	1981/82
Commercial profit tax & duties	32,845,618	26,943,530
Reserves to stabilize financial status	16,231,692	16,722,936
Naser bank quota	1,597,521	1,492,037
Physical training	261,708	250,818
Personnel - services & cash	8,743,342	8,398,140
National Treasury quota	37,778,452	26,134,842
Profits not distributed		2,402
	<u>LE 97,458,333</u>	<u>LE 79,944,705</u>

We can thus see that the National Treasury quota from the surplus for fiscal 82/83 was LE 70,624,070 compared to LE 53,078,372 ie. a total of taxes and quotas. The PBDAC and Govn. BDACs are an important revenue source for the National Treasury.

Personnel Bonuses

Personnel must be rewarded for their record breaking results and efforts. We therefore recommend a bonus value of nine months salary for all PBDAC and Branches personnel, according to the salaries of June 1983. In addition, to LE 325,000 - which was their share in the profits, maximum portion of LE 100. There is no doubt that this bonus will be a great incentive for greater efficiency, effort and perserverence towards even greater achievements in revenue and investment gains.

We hope this presentation is successful in showing the results of our work at the end of fiscal year 1982/83, for the Board of Directors authorization of the Budget and Final Accounts.

Chairman of the Board,

Fathalla Refat

INCOME 1962/83

EXPENSES 1962/83

Compared to 1961/82	Item	Partial	Total
	Activity Income:		
11,756,140.598	Ag Credit	14,292,379.725	
39,620,866.315	Fertilizer	42,447,021.569	
2,546,299.869	Seed	2,612,895.821	
15,575,613.401	Insecticides/ Pesticides	14,373,774.323	
1,425,733.099	Spare Parts & Pest Control Equipment	1,482,501.181	
13,467,748.273	Subsidy Supplies	17,399,003.311	
5,132,299.336	Feed	4,712,005.881	
7,062,552.927	New Sacks	6,103,423.282	
1,857,027.471	Co-op Marketing	1,471,554.617	
1,011,108.867	Crop Maintenance	859,039.073	
13,937,595.884	Banking	22,271,909.180	
20,727,563.806	Investment Credit	38,027,335.187	
133,920,549.846			166,052,843.130
53,611,333.977	Subsidizing		58,888,331.425
	Other Income:		
256,000.505	Bonds	218,865.823	
578,655.100	Owed Interest	576,683.348	
131,425.828	Owed Rent	181,580.654	
40,022.503	Difference in Rent	57,892.235	
15,089.088	Capitalistic Profit	-0-	
	Other	3,394,768.863	
10,886,768.587	From Previous Years	12,535,825.154	
14,139,594.661			16,975,805.977
201,671,478.584			242,916,980.532

Compared to 1961/82	Item	Partial	Total
	Salaries:		
21,297,708.356	Salaries & Bonus	22,932,835.003	
20,380,250.992	Bonuses	22,552,521.222	
9,630,722.504	Wages & Reimbursements	10,276,453.171	
813,844.257	Value Incentives	858,006.567	
7,845,841.733	Cash Incentives	9,868,808.647	
59,968,367.842			66,488,624.610
	Current Expenses:		
913,310.849	Customer Goods	1,037,311.175	
6,523,855.537	Customer Services	6,997,422.391	
7,437,186.486			7,944,733.566
	Non Specific Stable Expenses:		
217,099.177	Tax	134,575.670	
883,348.218	Rent	1,088,685.153	
40,022.503	Rent Differences	57,892.235	
46,704,952.787	Financing Interest	60,265,069.295	
195,533.468	Investment Expense/ Loan Interest	343,622.948	
60,000.000	Interest on Bonds & Shares	60,000.000	
1,527,587.708	Depreciation	1,830,974.543	
74,032.387	Other	15,417.329	
49,702,586.246			63,796,337.171
	Specific Stable Expenses:		
15,201.750	Donations	15,050.000	
528.750	Grants	6,100.000	
3,093,727.397	Other than depreciation	3,735,779.513	
215.760	Real Estate Tax	-0-	
1,490,153.302	Previous Years Expenses	3,470,178.973	
26,617.519	Other	1,843.336	
4,626,444.478			7,228,951.822
121,734,565.052	Total Liabilities		145,458,647.169
	Total Profit Before Industrial Tax:		
5,327,745.026	FEDAC & Branches	17,002,366.119	
74,609,168.506	Govn. EDAC	79,855,967.244	
201,671,478.583			97,458,333.363
			242,916,980.832

CONSOLIDATED PROFIT/LOSS STATEMENT
FOR FEDAC & GOV. EDAC
9/30/83

Compared to 1981/82	Item	Partial	Total	Compared to 1981/82	Item	Partial	Total
79,936,913.532	Net Amount Income	97,458,333.363		1,492,037.026	Navr Bank Allocation	1,597,521.610	
7,791.602	Previous Profits	-0-		26,943,530.262	Industrial Tax	32,845,617.999	
79,944,705.134		<u> </u>	97,458,333.363	250,817.675	Physical Training Allotment	261,707.945	
				16,722,936.369	Reserve for Financial Stability	16,231,691.663	
				8,398,140.120	Personnel (Cash & Services)	8,743,341.618	
				26,134,842.276	Gov. Share in Profits	37,778,453.526	
				2,401.386	Profits Not Distributed	<u> </u>	97,458,333.363
<u>79,944,705.134</u>			<u>97,458,333.363</u>	79,944,705.134			<u>97,458,333.363</u>
				<u>79,944,705.134</u>			<u>97,458,333.363</u>

CONSOLIDATED CURRENT ACTIVITIES ACCOUNT
FOR PEDAC & GOV. EDAC
6/30/83

CURRENT ACTIVITY INCOME

CURRENT EXPENDITURES

Compared to 1981/82	Item	Partial	Total	Compared to 1981/82	Item	Partial	Total
13,193,418.824	Ag Credit	13,880,200.741		335,748.536	Seed	-0-	
17,127,417.447	Fertilizer	18,249,341.538		581,478.549	Co-op Marketing	309,474.080	
6,441,425.752	Subsidy Supply	9,783,388.961		-0-	Crop Maintenance	8,852.538	
-0-	Seed	189,648.836		917,227.085			318,026.616
2,718,368.835	New Sacks	1,766,632.940		67,206,281.024	Activity Trade Results		83,914,213.775
2,092,238.988	Feed	1,871,987.306		68,123,508.109			84,232,240.391
6,972,818.991	Insecticide	6,946,908.815			Final Account to 6/30/83		
-0-	Co-op Marketing	-0-			Investment Expense		
299,046.645	Spare Parts/Spray Equip.	564,509.902		191,784.638	Loan Interest	337,510.866	
6,906,928.320	Banking	7,931,878.885		1,490,153.302	Previous Expenses	3,470,178.973	
99,183.460	Crop Maintenance	-0-		1,681,937.940			3,807,689.839
12,274,668.847	Investment Credit	23,267,742.467			Fiscal Profit before Bank Nasr Share & Physical Training Share		97,458,333.363
<u>68,123,508.109</u>			<u>84,232,240.391</u>	79,938,913.532			<u>101,266,023.202</u>
67,206,281.024	Activity Trade Results	83,914,213.775		81,618,851.472			
3,510,712.783	Different Income	4,700,704.988					
10,886,768.587	Previous Year Income	12,535,925.154					
15,088.098	Other Interest Debts	95,507.600					
-0-	Differential/Rent	19,671.685					
<u>81,618,851.472</u>			<u>101,266,023.202</u>				

CONSOLIDATED BALANCE SHEET
FOR PEDAC & COV. EDAC
6/30/83

LIABILITIES 1982/83

ASSETS 1982/83

Compared to 1981/82	Item	Partial	Total	Compared to 1981/82	Item	Partial	Total
18640888.000	Capital		18640888.000				
	Reserve:				Cash:		
5825449.621	Legal Res.	8497001.813		184126.519	In Funds	272653.419	
5377882.639	Govn. bond Res.	7824377.549		1535811.463	In Commercial Banks	1010817.552	1282870.971
5358496.388	Asset Inflat. Res.	7928048.660			Debtors:		
14944391.634	General Res.	23481426.483		90886051.350	Govn. Accounts	86654707.482	
11395114.345	Other Res.	12534008.017	60244862.601		Company & Institution Accounts	35529615.215	
26134842.278	Ministry of Finance Surplus		37778452.526	183415848.270	Others	142039280.884	264223603.581
32964787.894	Specific		34786140.627	54469949.271	Crops & Subsidy Supplies		49057445.527
	Loans: Local				Credit:		
287565932.689	Commercial Bank Accounts	260257482.688		183824753.171	Seasoned Ag. Loans	189957114.967	
983606.100	National Investment Bank Loan	1052476.100		336154778.785	Investment Loans	415702462.978	605659577.945
4251477.491	Investment Expense Loans	4802977.491	266112936.289	27779131.743	In Storage:		
	Foreign Loans:			212820482.860	Bank owned mds.	22715187.112	
4762196.750	830 World Bank Loan	8945027.342		77547651.840	Mise. owned by others	188252127.527	210867314.639
1703857.480	U.S.A. Loan	1503404.567		5160985.250	Authorization to buy mds.		74019516.404
1479457.262	988 Agro Industry Loan	2450217.409		4505904.358	Financial Investment:		
1214823.841	French Loan	881884.152	13780533.470	13025118.902	Shares/Participation	7141995.000	
151820999.853	Lenient Credit & Authorized Documents		110204171.143	13501753.790	Ministry of Finance Securities	6837227.817	13979222.817
81128394.226	Owed to:			1204812346.001	Projects under Implementation		12282650.551
232874560.680	Govn. accounts	61443145.443		143140546.643	Stable Assets		18274423.981
	Companies	6646458.140		\$40096.12			1249746626.376
150350365.858	Others	249573101.097	317662704.680		Audit Administration	221519182.096	
153350687.485	Current Accts. & Deposits:					\$44287.56	
12586131.529	Co-op & Institutions	150485127.206					
1204812346.001	Deposits & Savings	225813511.016					
	Pension bonus Accts.	14257298.817	390535937.039				
143140546.643	Audit Administration	221519182.016	1249746626.376				
\$40096.12		\$44287.56					

ANNEX III THRU VIII FOR THE EVALUATION REPORT
ON THE
SMALL FARMER PRODUCTION PROJECT
AID GRANT NO. 263-0079

June 13, 1985
Cairo , Egypt

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ANNEX III. ANALYSIS OF DEPOSITS AND LOANS

A. Savings Accounts, Term and Current Deposits

1. PBDAC Deposits

Current accounts, term deposits and savings accounts are an important source of funds for PBDAC as the bank does not have to observe commercial banking regulations and can lend 100% of these deposits. Funds available to the PBDAC from these accounts have grown impressively from LE 16,889,063 in 1976 to LE 478,713,337 in 1983/84. Particularly outstanding is the growth of savings accounts from LE 114,212 in 1976 to LE 123,515,612 in 1983/84 as shown in Table 1. All types of accounts have shown a dramatic increase in the number of depositors. Savings accounts and term deposits have shown a gradual increase in pounds per account, but current accounts have decreased in average value per account as shown in Table 2.

Total value of these accounts has increased annually, but the rate of increase has decreased from 121% between 1976 and 1977 to 26% between 1982/83 and 1983/84. Inflation has risen from 13% in the late 70's to above 20% in 1984. Projections shown in Table 6, Annex II suggest that the bank cannot depend on substantial increases of accounts to finance a real increase in credit funds if current methods of increasing deposits and depositors are used.

2. Interest Rates

PBDAC currently pays the maximum permitted by the Central Bank for all types of deposits as shown in Table 3. A contributing factor to slowed deposit growth rate is probably inflation. Currently inflation is over 20% and will probably accelerate as the government of Egypt attempts to reduce subsidies throughout the economy. Thus all accounts earn a negative rate of return in real terms. The World Bank estimated in 1975 that estimates of the opportunity costs of capital are seldom less than 8% in real terms, or approximately the level required to mobilize savings effectively.*

Given the low rate of return from deposits, farm families may prefer productive investments such as livestock where returns are approximately 36%. Efforts to increase deposits may have to focus on individuals who are holding short-term money before making an investment rather than long-term savers.

* World Bank, Agricultural Credit Sector Policy Paper, (May 1975, New York). p. 10

3. Savings Accounts

Passbook savings accounts were introduced at the village level in 1976. All deposits and savings accounts are exempted from taxes regardless of the amounts deposited. Also they cannot be attached or seized for any reason, including non-payment of bank loans or debts.**

During 1977-78, mass media campaigns advertised these accounts stressing the security of deposits and interest earned. Since then, the bank has set general target for the governorate banks and village bank managers have tried to reach them through personalized marketing efforts to bank clientele. The gradually declining rate of increase in deposits suggests that the bank may have to undertake more focused efforts to maintain growth of deposits.

4. SFPF Village Bank Deposits

For Village Bank level data, SFPF collected information from the banks participating in the project covering 1981 - 1984. Analysis of the data shows that performance of village banks in mobilizing deposits varies tremendously. For example, the average deposit in 1981 was LE 301, but the high was LE 1,110 and the low, LE 23. In 1984, the average had risen to LE 390, with a high of LE 1,733 and low of LE 84. Savings as a percentage of total funds loaned rose from 24% in 1981 to 27% in 1984, however, savings was 47% of total loans in Nusha and only 3% in Ibrehemia. The tremendous dispersion of figures makes predictions using averages exceedingly unreliable. Furthermore, correlation between funds loaned and deposits was very weak (Table 8), even when deposits were correlated with funds loaned the previous year. This suggests that deposits do not rise "automatically" and that specific marketing efforts will have to be undertaken to mobilize local funds. Table 6 shows that in 1983-1984 approximately two thirds of village banks showed a decline in the growth rate of deposits and depositors.

It is important for bank managers to concentrate on wealthier individuals in their community. For example, Al Mansara has 2,243 depositors (79% of farmers) of LE 308,093 for an average account size of LE 137. Al Moutia has only 388 depositors (10% of farmers) but twice as much money, LE 672,501 and an average account of LE 1,733. Thus to generate deposits, the target market should first be larger accounts. These larger account holders may well be influential village leaders and recruiting them as depositors may serve as a positive example to other villagers.

The average deposit size in Assiut is LE 663, while that in Sharkia and Qualubayia is much lower at LE 277 and LE 180 respectively. According to Dr. Al Maazaway's "Village Bank Accounting & Savings Study", the ratio of PBDAC banks to competitive banking units is 3.4 in Assiut, 4.3 in Sharkia and

** Attia, Nagib, "Agriculture Credit in Egypt", (speech) p. 19

2.3 in Qualubayia; however, the proximity of Sharkia and Qualubayia to Cairo may mean PBDAC is competing with larger metropolitan banks for larger accounts.

5. Strategy for Increasing Deposits in Village Banks

These data suggest that a program to increase savings and deposits will be needed if village banks are to effectively mobilize local resources.

Before a marketing strategy can be developed some basic information must be obtained.

a. Survey existing depositors to determine characteristics of current clientel, especially current account holders. This would be a useful exercise for bank managers to focus their attention on the characteristics of their clientel. Depositors at banks may not even be farmers, but could be tradesmen, employees, etc.

Survey should include information on size of account, sources of income, approximate income, as well as why depositors chose the village bank, problems encountered as well as additional services desired. A more detailed survey conducted by interviewers should focus on larger depositors as well as holders of term deposits and current accounts since these receive less interest.

b. Cash Flow Analysis

The accounts of depositors should be analyzed to determine cash flow and seasonal demands so that village bank management can anticipate cash flows and demand. Discussions with village bank managers revealed that village banks only keep on hand a relatively low fixed amount of cash. A better system of cash to be kept on hand should be developed that takes into consideration total deposits and seasonal demands. Banking services must be convenient and depositors will be discouraged if they cannot have immediate access to their money.

c. Survey Potential Depositors

Initially, surveys should concentrate on upper income groups since a few hundred large accounts can deposit more than thousands of small ones. The survey should obtain information on banking attitudes and practices as well as desired services.

d. Train Village Bank Managers

With the above information, a detailed marketing strategy can be developed and a training program developed for account marketing. An effective program may require that bank managers market to a group or class with which they are

unfamiliar and they will need information about target groups and services desired by that group.

e. Adjust Personnel Policies

To motivate Bank Managers, realistic general targets should be set for all village banks and for each village bank based on the particular potential of the area. Achievement of targets should be reflected in performance evaluations and incentives or bonuses.

SFFP should begin the above during the next two years; however, a follow-on project should assist PBDAC in developing marketing capability so that it can continue to mobilize rural resources effectively. An Agricultural Credit project should set up a marketing department to carry out surveys, identify markets, develop services and train village bank managers with the assistance of the training department.

Implementation of this strategy will require technical assistance as well as equipment. While the PBDAC has expanded aggressively into activities that will earn additional commissions, their monopoly on fertilizer distribution has given them a large captive clientele; consequently, the bank has not done much in the area of marketing. Setting up a marketing department will require a major effort in personnel recruitment and training since marketing in general is not very developed in Egypt and banking staff are primarily accountants. Marketing research is a specialized area requiring careful questionnaire design, trained interviewers, and use of computers to fully analyze research results.

B. Loans

The PBDAC has done a remarkable job of providing institutional agricultural credit to Egyptian farmers. SFFP participating village banks report that an average of 94% of all farmers receive some credit. (See Tables 9 - 10) This figure is very impressive compared to an average of 15% for 32 countries cited by the World Bank.* The only country with comparable success in reaching farmers was Taiwan. Of village banks reporting both number of loans and amount loaned, farmers received 1.3 crop loans/borrower or client; the average crop loans ranged between LE 33 and LE 39 between 1981 and 1984 reflecting the heavily subsidized prices of fertilizer. Assuming one loan per client, only 5% of borrowers received other types of short term credit and only 4% received medium term loans in 1984 as a result lending based heavily on collateral. This is an improvement over 1981 when only 3% of borrowers received short term credit and only 2% received medium term credit. Increases in the number of short and medium loans reflect the expanding funds available as well as a liberalization in the documentation of collateral required. Formerly, PBDAC required:

* World Bank, op. cit, p. 71

- 1) certificate of land ownership and its registration,
- 2) certificate to verify the owner had not sold the land, and
- 3) certificate of land dimensions.

Following submission of this documentation, loan processing took one to three months. Currently, PBDAC only requires a certificate of tax payment and evidence of ownership. In two governorates where SFFP has been operating, village bank managers have received increased delegated authority so that loan applications take less time to process.

SFFP was designed to provide a system of loan evaluation and documentation so that loans could be made to small farmers without land based collateral. In 1984 the ratio of clients to loans is 9:1 for short term credit and 21:1 for medium term credit. This compares with a ratio of 24:1 for short term credit and 18:1 for medium term credit for the bank's regular lending portfolio.

SFFP has not only been able to extend credit to small farmers, but the high average repayment percentage rate (99%) equals or exceeds the bank's repayment record. This has kept costs significantly lower than for most other small farmer lending payments. The 1975 World Bank Agricultural Credit Sector policy Paper figures indicated that in most programs delinquency rates are frequently as high as 50% and even these figures may be low as rescheduled loans are not counted. However, bank assisted projects have fared better with losses seldom exceeding 5% of loans outstanding. In comparison SFFP personnel report that serious arrearages are less than .1% and outright losses even lower. SFFP has some areas where repayment record has been weak, primarily in chicken batteries. Many battery loans were made when the price of eggs was about 10 piasters, but the price has since dropped several times to 5 piasters, below breakeven. Current egg prices are about 7 piasters, a price at which a profit can be made with good management.

PBDAC provides crop, short and medium term credit through village banks. The banks average/borrower for short term loans has been rising and for medium term loans declining. This is a consequence of the Food Security loan program which promoted sizable investments in large cattle fattening and poultry operations. The program impact can be seen in the 1981 medium term lending of the bank and in the subsequent rise in short term lending to finance on-going operations. The bank has not reduced lending as a consequence of SFFP and SFFP activities have expanded bank lending programs. The average SFFP loan/borrower is appropriately lower than comparable figures for PBDAC's regular lending program as small farmers are less able to assume large, high risk projects.

2. Consolidation of Regular Bank and SFPP Lending

There is an urgent need to adopt uniform policies of lending for all village bank loans in SFPP banks. SFPP has a specific procedure to ensure repayment. This includes financial analysis of the proposed investment and total farm enterprise, on site inspections to verify use of loan funds, and use of predated checks instead of collateral. In village banks, SFPP criteria for making loans may spill over to regular bank lending. Without SFPP procedures, risk to PBDAC's regular lending portfolio may rise significantly. At one village bank, where a few loans were surveyed SFPP loans appeared in good order; however, casual examination of non-SFPP loans showed several made to small farmers without normal bank or SFPP safeguarding procedures. For example, a farmer who owned 6 karats of land and a long standing lease on 15 karats had borrowed LE 500 for a baladi cow. The bank manager said that he knew income from this farm was more than adequate to ensure repayment and besides this farmer always marketed his crops through the bank so that if necessary the bank could deduct the amount due. This is probably true, but this farmer should at least have been required to deposit a predated check. This use illustrates how over reliance on PBDAC's role as marketing agent and input distributor may lead to problems as the private sector begins to play a greater role.

In the follow-on agricultural credit project consideration must be given to assure that small farmers have funds available. Loans to large farmers entail less risk and supervision costs so that some mechanism must be used to ensure small farmers receive a proportionate share of funds.

3. Village Bank Efficiency

SFPP experience indicates that village banks can become considerably more efficient. As a rough indication, total loan volume in SFPP participating banks has increased by 108% and number of loans by 24%. The figure of village bank employees includes the agency employees who manage warehouses. A rough estimate of agency employees can be obtained by subtracting the number of agencies in 1984 from total bank employees in both 1981 and 1984. Using these figures, the number of loans has increased by 25% and volume by 141%. Of course, the number of agencies in a village bank area may have increased and the number of employees working primarily in the area of input distribution may be greater. Accurate figures need to be obtained from SFPP village banks in order to develop a model of autonomous village bank operations as well as assess village bank and SFPP cost of lending.

4. Interest Rates

PBDAC has several types of subsidized loan programs. Ranging from 3.5% for crop loans on fertilizer to 8% and 1% administrative charge for machinery loans. The difference between cost of money and subsidized interest received is paid the bank by the

government of Egypt at the end of the year. PBDAC can also make other types of loans at interest rates up to 17% or more. Currently, SFPP loans carry an interest rate of 13% interest and 1% administrative charge. (See Table 4)

Information on the informal lending market is very limited, but farmers in several governorates reported to Nadim * paying interest rates between 25% and 75%. Other farmers reported advance sales of crops to merchants; which probably contain an implicit interest charge. These high interest rates from non-institutional sources may be an important factor in ready acceptance of the effective 14% interest charged under SFPP.

5. Data

SFPP banks were requested in November of 1984 to complete forms to provide data for this study; however, the last forms were not received until late March 1985 and many were incomplete or contained errors. This suggests that the project has a way to go in developing reporting capability of village banks.

C. Conclusions

1. Savings

a. The bank has enjoyed rapidly rising deposits; however, continued growth of deposits in real terms will require a marketing strategy and programs.

b. SFPP should begin to develop a program and strategy for mobilization of rural resources for use nationwide as described in section A 5.

2. Loans

a. The PBDAC has an impressive record of serving and a high repayment rate of 94% of all farmers with some credit; but collateral requirements restrict farmer access to credit to approximately 5% of farmers. Data provided are distorted by the Food Security loan program which has been phased out. Increased lending in these two types of loans shows that PBDAC is using SFPP funds to complement their current portfolio.

b. SFPP has shown PBDAC that lending to small farmers can be done with high repayment percentages, enhancing overall village bank efficiency.

D. Recommendations

a. SFPP must work with SFPP participating banks to improve reporting.

* Asaad Nadim, "The Role of the Village Bank in the Rural Community", April 1979, Cairo: Al Azhar University p. 19

b. SFPP should implement the strategy proposed for improving the capacity of village bank managers to mobilize local resources.

c. The follow-on Agricultural Credit Project should include as a component development of marketing capability in the central institution to provide direction to village banks.

E. Annex Tables:

- Table 1. The Current Accounts, Deposits, Savings and Number of Depositors During the Period From 1976 - 1984
- Table 2. Average Size of National Current, Term and Savings Deposits
- Table 3. Structure of Interest Rates
- Table 4. Loan Charges Made by FBDAC System
- Table 5. Village Bank Depositors by Number and Amount 1981 - 1984
- Table 6. % Change in Deposits and Values
- Table 7. Average Value of Deposit/Depositor
- Table 8. SFFP Village Bank Deposits/Total Loans
- Table 9. SFFP Participating Village Bank Data (4 pages)
- Table 10. SFFP Village Bank Lending (2 pages)
- Table 11. Estimate of Employee Efficiency

TABLE 1
THE CURRENT ACCOUNTS, DEPOSITS, SAVINGS AND NUMBER OF DEPOSITORS
DURING THE PERIOD FROM 1976 - 1984

YEARS	CURRENT ACCOUNTS		DEPOSITS		SAVINGS		TOTAL	
	No. of Depositors	Balance						
1976	4,500	16,534,851	30	240,000	3,200	114,212	7,730	16,889,063
1977	9,529	33,108,697	223	2,350,878	51,122	1,795,448	60,874	37,321,023
1978	22,442	47,713,496	1,333	4,836,137	95,750	6,062,312	119,531	58,611,945
1979	34,622	81,824,870	4,236	14,842,029	227,183	15,238,615	266,041	111,905,514
80/81	52,847	134,636,137	8,980	32,763,332	365,138	30,033,505	426,965	197,432,993
81/82	40,956	182,967,230	49,982	67,397,602	439,101	54,331,753	530,039	304,696,585
82/83	102,084	169,390,378	43,054	119,824,365	505,486	88,850,848	650,624	378,065,591
83/84	144,850	178,062,414	57,895	177,499,311	554,601	123,151,612	757,346	478,713,337
12/84	156,944	195,680,779	63,639	194,726,864	588,212	133,889,388	808,795	524,297,031

Table 2
Average size of
National Current, Term and Savings Deposits

YEAR	CURRENT ACCOUNTS	% Change	TERM DEPOSITS	% Change	SAVINGS ACCOUNTS	% Change	TOTAL DEPOSIT AVERAGE	% Change
1976	3,674		8,000		36		2,185	
1977	3,481	5%	10,542	32%	35	2%	613	7%
1978	2,126	39%	3,628	66%	63	80%	490	20%
1979	2,363	11%	3,504	3%	67	6%	421	14%
1980/81	2,548	8%	3,648	4%	82	22%	462	10%
1981/82	4,467	75%	1,348	63%	124	51%	575	24%
1982/83	1,659	63%	2,783	106%	176	42%	581	1%
1983/84	1,229	26%	3,066	10%	222	26%	632	9%

Table 3
Structure of Interest Rates

	1975 %	1/1 1976 %		1/3 1977 %		17/6 1978 %	1/1 1979 %	7/3 1979 %	1980		1/1 1981 %	1/8 1981 %	1/7 1982 %	1/2 1985 %
		April %	June %											
Central Bank														
Discount rate	5.0	6.0		7.0		8.0	9.0	9.0	10.0	11.0	12.0	12.0	13.0	
Commercial Banks														
Time & Savings														
Deposits Rate														
7 days	-	-		-		-	-	4.0	4.5	4.5	5.0	5.0	5.0	5.0
15 days	2.0	2.0	2.0	2.5	3.0	4.0	5.0	5.0	5.5	5.5	6.0	6.0	6.0	6.0
One month	2.5	2.5	3.0	3.0	4.0	4.5	5.5	5.5	6.0	6.5	7.5	7.5	7.5	7.5
3 months	3.0	3.0	4.0	4.0	5.0	5.5	6.0	6.0	7.0	7.5	8.5	8.5	8.5	8.5
6 months	3.5	3.5	4.5	4.5	5.5	6.0	6.5	6.5	7.5	8.0	9.0	9.5	9.5	9.5
One year	4.0	4.0	5.0	5.0	6.0	6.5	7.0	7.0	8.0	9.0	9.5	10.0	11.0	11.0
Two years	4.0	4.0	5.0	5.0	6.0	7.0	7.5	7.5	8.5	9.5	10.5	10.5	12.0	12.0
3 years	4.0	4.0	5.0	5.0	6.0	7.0	8.0	8.0	9.0	10.0	11.0	11.0	12.5	12.5
5 years	4.0	4.0	5.0	5.0	6.0	7.0	8.5	8.5	9.5	10.5	11.5	11.5	13.0	13.0
Savings	4.0	4.0		5.0		5.0	6.0	6.0	7.0	8.0	8.5	8.5	10.0	10.0
Lending Rates														
Industrial & Agricultural Sector														
MINI	6.0	7.0		8.0		9.0	10.0	10.0	11.0	12.0	13.0	13.0	-	3.5
MAXI	7.0	8.0		9.0		11.0	12.0	12.0	13.0	14.0	15.0	15.0	15.0	13.0
Service Sector														
MINI	6.0	7.0		8.0		9.0	10.0	10.0	11.0	12.0	13.0	13.0	13.0	13.0
MAXI	7.0	8.0		9.0		11.0	12.0	12.0	13.0	14.0	15.0	15.0	15.0	15.0
Business Sector														
MINI	6.0	7.0		8.0		9.0	10.0	10.0	11.0	12.0	13.0	13.0	16.0	17.0
MAXI	7.0	8.0		9.0		11.0	12.0	12.0	13.0	14.0	15.0	15.0	-	-

Deposit interest rates before 1977 were subjected to taxes. Since 1977, interest on deposits has been exempted. Current accounts earn no interest.

Table 4
LOAN CHARGES MADE BY PBDAC SYSTEM
AS OF FEBRUARY 1985

	<u>CREDIT CHARGES</u>	<u>DUE DATE</u>	<u>PAST DUE BEGINS</u>	<u>PENALTY A MONTH</u>
Winter loans	35 Mms a pound	Dec. 31st	Jan. 1st	-----4.2 Mms a pound-----
Summer loans given before June 30th	40 Mms a pound	Dec. 31st	Jan. 1st	
Summer loans given after June 30th	25 Mms a pound	Dec. 31st	Jan. 1st	
Pest Control (summer)	40 Mms a pound	Dec. 31st	Jan. 1st	
Sugar cane (contracted) til June 30th	55 Mms a pound	May 31st	June 1st	
Sugar cane (contracted) after June 30th	40 Mms a pound	May 31st	June 1st	
Sugar cane (non-contracted) til June 30th	55 Mms a pound	Mar. 31st	April 1st	
Sugar cane (non-contracted) after June 30th	40 Mms a pound	Mar. 31st	April 1st	
Citrus, bananas, Nili potatoes	40 Mms a pound	Mar. 31st	April 1st	

Subsidized Development Loans

1. Food Security loans after approving by food security committee 7% + 1% administrative charges
2. Fatening loans in accordance with the plan----- 7% + 1% administrative charges
3. Machinery loans----- 8% + 1% administrative charges

Investment Loans

1. Agricultural and Industrial-----14%
2. Service sector-----15%
3. Business sector-----17%

Table 5

VILLAGE BANKS	1981		1982		1983		1984	
	# Depositors	LE Deposits						
Entering 1981								
Abu Tiq	187	150,668	519	248,947	897	387,638	1,690	450,997
Abnoub	510	220,000	641	255,150	700	400,675	900	515,308
Al Moutiaa	88	97,651	200	166,554	288	266,574	388	672,501
Aslougi	470	165,488	845	338,262	1,133	472,671	1,210	447,583
Kafr Ayoub	353	62,446	689	126,924	694	155,707	955	173,932
Ibrehimia								
Sandahour	1,247	156,435	1,388	186,901	1,521	192,820	1,680	304,780
Tersa	1,890	130,678	2,237	186,867	2,413	256,410	2,671	409,592
Kaha	1,031	50,193	1,149	133,391	1,227	157,463	1,324	180,655
Entering 1982								
Al Hasan	80	45,912	112	111,294	165	192,190	569	258,851
Mosha	298	154,296	388	223,846	415	355,052	672	512,741
Al Makila		68,840		92,287		166,129		219,758
Bordeen			1,464	209,321	1,933	381,643	2,166	419,219
Shobra el Makla	1,197	119,203	1,610	139,301	1,764	179,006	1,996	234,655
Mobasher			440	206,940	518	306,749	633	418,987
Sheblanga	650	140,008	812	229,195	960	254,520	1,100	323,047
Aghar	1,012	178,407	1,530	172,251	1,675	229,653	1,914	357,387
Entering 1983								
Al Maasara	850	78,000	1,258	190,000	1,790	270,000	2,243	308,093
Rifa	149	156,144	196	206,916	228	276,640	315	330,266
Bowina	246	5,613	317	30,563	422	64,386	698	229,588
Zankalon	1,155	145,537	1,596	118,269	1,933	211,903	2,457	206,071
Mehia	531	110,646	562	166,155	676	234,636	750	324,905
Balashon	312	25,291	397	37,110	582	133,404	545	168,753
Kafr el Arbain								
Kafr el Bazar	432	33,450	750	75,640	1,019	85,465	1,250	109,701
Beltan	1,109	128,564	1,685	145,608	1,858	184,466	1,993	265,207
Ikiad Beqwa	1,234	184,087	1,234	105,544	1,500	295,334	2,500	390,043

Table 6
% CHANGE IN DEPOSITS AND VALUES

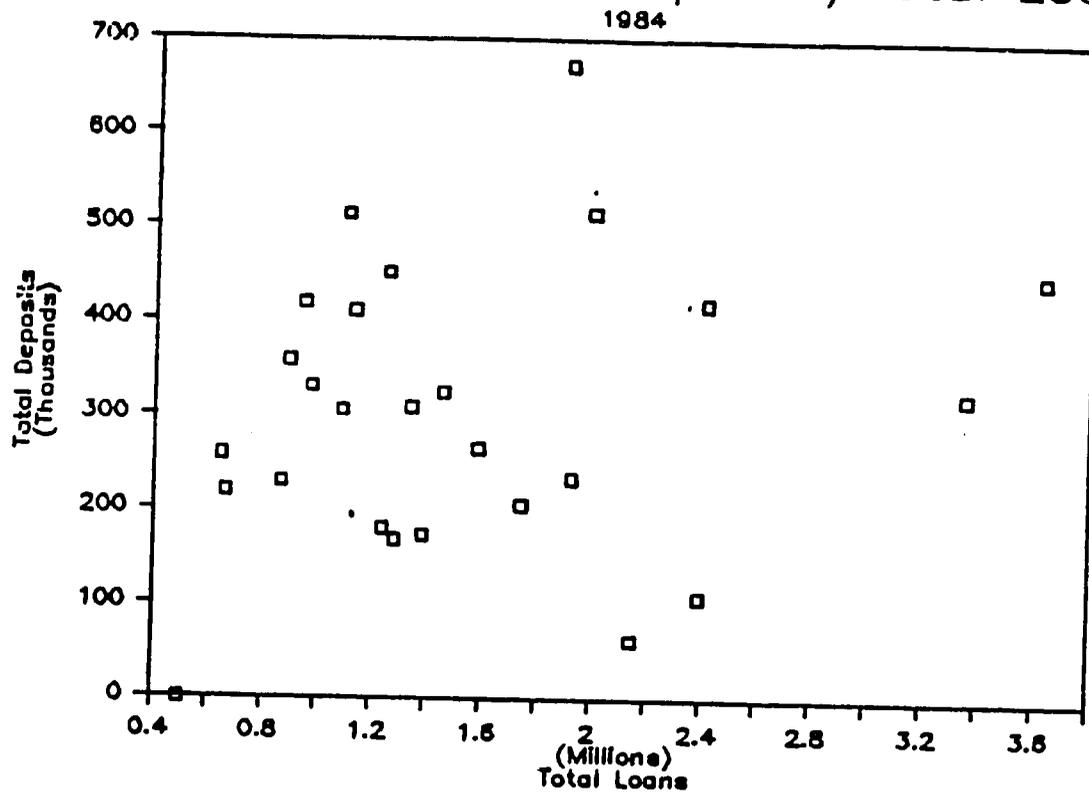
VILLAGE BANKS	Z CHANGE IN DEPOSITORS			Z CHANGE IN DEPOSITS				
	1981-1982	1982-1983	1983-1984	1981-1982	1982-1983	1983-1984		
Entering 1981								
Abu Tiq	178%	73%	88%	65%	56%	16%		
Abnoub	26%	9%	29%	16%	57%	29%		
Al Moutiaa	127%	44%	35%	71%	60%	152%		
Aslougi	80%	34%	7%	104%	40%	-5%		
Kafr Ayoub	95%	1%	38%	103%	23%	12%		
Ibrehinia								
Sandahour	11%	-10%	10%	19%	3%	58%		
Tersa	18%	8%	11%	43%	37%	60%		
Kaha	11%	7%	8%	166%	18%	15%		
	Average	68%	23%	28%	Average	73%	37%	42%
	Minimum	11%	1%	7%	Minimum	16%	3%	-5%
	Maximum	178%	73%	88%	Maximum	166%	60%	152%
Entering 1982								
Al Hanaa	(1)	40%	47%	245%	142%	73%	35%	
Mosha		30%	7%	62%	45%	59%	44%	
Al Nekila					34%	80%	32%	
Bordeen			32%	12%		82%	10%	
Shobra el Makia		35%	10%	13%	17%	29%	31%	
Mobasher			18%	22%		48%	37%	
Sheblanga		25%	18%	15%	64%	11%	27%	
Aghar		51%	9%	14%	-3%	33%	56%	
	Average	35%	20%	55%	Average	50%	52%	34%
	Minimum	25%	7%	12%	Minimum	-3%	11%	10%
	Maximum	51%	47%	245%	Maximum	142%	82%	56%
	Average less (1)	35%	16%	23%				
Entering 1983								
Al Maasara		48%	42%	25%	144%	42%	14%	
Rifa		32%	16%	38%	33%	34%	19%	
Dowina		29%	33%	65%	445%	111%	257%	
Zantaion		38%	21%	27%	-19%	79%	-3%	
Mehia		6%	20%	11%	50%	41%	38%	
Balashon		27%	47%	-6%	47%	259%	26%	
Kafr el Arbain								
Kafr el Bazar		74%	34%	23%	126%	13%	28%	
Beltan		52%	10%	7%	13%	27%	44%	
Ikiad Degwa		0%	22%	67%	-43%	180%	32%	
	Average	34%	27%	29%	Average	88%	87%	51%
	Minimum	0%	10%	-6%	Minimum	-43%	13%	-3%
	Maximum	74%	47%	67%	Maximum	445%	259%	257%

Table 7
AVERAGE VALUE OF DEPOSIT/DEPOSITOR

VILLAGE BANKS	VILLAGE BANK AVERAGE DEPOSIT			
	1981	1982	1983	1984
Entering 1981				
Abu Tieg	806	480	432	267
Abnoub	431	398	572	573
Al Moutiaa	1,110	833	926	1,733
Aslougi	352	400	417	370
Kafr Ayoub	177	184	224	182
Ibrehinia				
Sandahour	123	135	127	181
Tersa	69	84	106	153
Kaba	49	116	128	136
Average	390	329	367	449
Minimum	49	84	106	136
Maximum	1,110	833	926	1,733
Entering 1982				
Al Hamaa	574	994	1,165	455
Mosha	518	577	856	763
Al Mekila				
Bordeen		143	197	194
Shobra el Matia	100	87	101	118
Mobasher		470	592	662
Sheblanga	215	282	265	294
Aghar	176	113	137	187
Average	317	381	473	382
Minimum	100	87	101	118
Maximum	574	994	1,165	763
Entering 1983				
Al Maanara	92	151	151	137
Rifa	1,048	1,056	1,213	1,048
Dawina	23	96	153	329
Zankalon	126	74	110	84
Mehia	208	296	347	433
Balashon	81	93	229	310
Kafr el Arbain				
Kafr el Gazar	77	101	84	88
Bullaa	116	86	99	133
Ikiad Dequa	149	86	197	156
Average	112	119	174	219
Minimum	23	74	84	84
Maximum	208	296	347	433

Table 8

SFPP Village Bank Deposits/Total Loans



Deposits	Total Loans
450,997	1,252,957
515,308	1,987,258
672,501	1,900,151
258,851	645,418
512,741	1,100,296
308,093	1,340,820
330,266	977,327
229,588	869,708
219,758	664,501
447,583	3,632,402
173,932	1,386,261
63,378	2,144,820
419,219	2,405,503
234,655	1,922,786
418,987	945,782
206,071	1,739,841
168,753	1,284,807
265,207	1,583,249
324,905	1,455,935
304,780	1,086,530
409,592	1,130,043
180,655	1,241,421
323,047	3,353,461
357,387	891,834
109,701	2,389,819

Table 9
SFPP PARTICIPATING VILLAGE BANK DATA

VILLAGE BANK	#FEDDAMS	#FARMERS	AVERAGE # OF FEDDAMS/BORROWERS FARMER	% OF FARMERS BORROWING	% FARMERS BORROWING	CROP LOANS:							
						# Loans	1981 LE	# Loans	1982 LE	# Loans	1983 LE	# Loans	1984 LE
1. Aslougi	6,875	6,614	1.04	5,595	84.39%	5,800	193,107	5,933	248,094	6,100	201,390	6,300	241,487
2. Borden	8,899	7,158	1.24	6,933	96.86%			14,195	260,410	14,321	302,134	15,061	398,629
3. Zenkaton	5,200	4,478	1.16	4,379	97.79%	7,200	145,793	7,390	183,675	7,450	171,075	8,200	189,112
4. Hehia	9,173	8,146	1.13	7,699	94.51%	10,637	218,889	10,899	268,641	11,306	245,264	11,680	322,236
5. Kair Ayob	8,854	6,264	1.41	5,664	90.42%	10,028	297,300	10,720	302,339	11,150	307,245	11,271	397,812
6. Shobra el Nakla	6,540	5,058	1.29	4,286	84.74%	9,274	207,816	9,468	261,478	9,406	265,905	10,397	284,338
7. Dalashon	4,759	4,374	1.09	3,820	87.33%	6,481	150,640	6,719	178,480	6,828	191,735	6,963	218,136
8. Mobasher	3,716	2,600	1.43	2,511	96.58%			1,785	111,786	1,711	119,578	1,765	152,580
9. Ibrehonia	8,613	7,791	1.11	6,160	79.07%								
10. Sandahor	4,561	4,920	0.93	3,765	76.52%	3,073	96,033	3,180	108,748	3,610	120,855	3,721	137,688
11. Sheblanga	6,421	5,606	1.15	5,606	100.00%	5,000	169,606	5,400	190,084	5,800	191,020	5,606	193,716
12. Kair el Arbaia	1,807	1,857	0.97	1,857	100.00%								
13. Kair el Bazar	4,457	5,761	0.77	5,600	97.21%	5,492	159,451	5,510	160,549	5,580	162,743	5,600	185,654
14. Tersa	4,689	4,738	0.99	4,738	100.00%	3,532	55,604	3,260	62,604	3,233	105,386	3,411	157,707
15. Kaha	6,257	3,581	1.75	3,526	98.46%	3,486	143,169	3,744	160,756	3,476	134,149	3,465	173,627
16. Aghor	4,835	5,218	0.93	4,045	77.32%	3,880	121,297	3,915	123,908	4,020	154,447	4,200	154,762
17. Bellan	6,842	8,100	0.84	8,100	100.00%	7,840	104,550	7,950	154,878	8,003	173,901	8,100	179,813
18. Ikiad Dagna	5,885	6,262	0.94	5,100	81.44%								
19. Abu Tieg	9,793	5,030	1.95	5,030	100.00%								
20. Al Mouliaa	6,588	3,775	1.75	3,775	100.00%								
21. Anob	10,386	6,540	1.59	6,540	100.00%	5,600	368,012	5,950	526,535	5,860	456,755	5,600	348,720
22. Al Maan	4,200	2,350	1.79	2,350	100.00%	1,400	204,993	1,520	231,764	1,600	284,393	1,800	265,750
23. Mosha	7,199	2,350	3.06	2,350	100.00%	2,100	304,372	2,360	372,335	2,360	425,153	2,540	451,531
24. Al Maasara	5,680	2,852	1.99	2,852	100.00%								
25. Refa	6,361	3,339	1.91	3,339	100.00%								
26. Dowina	6,721	3,100	2.17	3,100	100.00%	3,100	124,640	3,100	153,231	3,100	174,038	3,100	185,105
27. Al Mekhila	5,050	2,219	2.28	2,219	100.00%								
TOTAL	170,369	130,081		120,939		93,923	3,065,272	112,918	4,059,715	114,922	4,267,166	118,780	4,637,603
% CHANGE								20.2%	32.4%	1.8%	5.1%	3.4%	8.7%
VB AVERAGE	6,310	4,818	1.43	4,479	94.19%	5,525	180,310	5,943	213,669	6,049	224,588	6,252	244,084
VB MINIMUM	1,807	1,857	0.77	1,857	76.52%	1,400	55,604	1,520	62,604	1,600	119,578	1,765	137,688
VB MAXIMUM	10,386	8,146	3.06	8,100	100.00%	10,637	368,012	14,195	526,535	14,321	456,755	15,061	451,531
AVERAGE/BORROWER							33		36		37		39
% CHANGE								10.2%			3.3%		5.2%

Table 9, p. 2

VILLAGE BANK	SHORT TERM LOANS:											
	1981			1982			1983			1984		
	# Loans	LE	Average	# Loans	LE	Average	# Loans	LE	Average	# Loans	LE	Average
1. Anlougi	25	114,860	4,594	213	914,650	4,294	410	1,393,400	3,399	453	1,809,077	3,994
2. Bordein				169	444,385	2,629	180	592,700	3,293	200	1,006,750	5,034
3. Zentalon	78	101,615	1,303	111	447,830	4,035	125	446,750	3,574	150	763,900	5,093
4. Mehia	71	42,605	600	99	85,110	860	80	110,750	1,384	158	377,600	2,390
5. Kafr Ayob	32	40,880	1,278	43	47,097	1,095	65	64,414	991	133	158,210	1,190
6. Shobra el Makia	37	32,225	871	27	68,000	2,519	58	162,200	2,797	142	392,700	2,765
7. Balashon	18	62,880	3,493	21	98,400	4,686	35	109,000	3,114	52	183,650	3,532
8. Mobasher				45	814,101	18,091	98	108,400	1,106	130	259,400	1,995
9. Ibrohesia												
10. Bandahor	150	428,101	2,854	155	596,296	3,847	162	174,761	1,079	170	206,521	1,215
11. Sheblanga	80	297,435	3,718	124	2,285,128	18,428	212	2,964,773	13,985	340	2,293,601	6,746
12. Kafr el Arbain												
13. Kafr el Bazar	492	125,514	255	511	127,612	250	524	128,480	245	595	130,500	219
14. Tersa	990	139,279	141	1,019	138,424	136	1,180	123,953	105	1,214	111,013	91
15. Kaba	18	188,069	10,448	40	483,888	12,097	34	363,934	10,704	40	420,335	10,508
16. Aghor	105	114,110	1,087	135	339,480	2,515	115	157,650	1,371	110	182,620	1,660
17. Beitlan	65	298,600	4,594	89	400,700	4,502	224	636,475	2,931	250	655,300	2,621
18. Ikiad Degwa												
19. Abu Jieg												
20. Al Moutiaa												
21. Abnab	200	228,866	1,144	120	169,911	1,416	80	139,250	1,741	110	155,200	1,411
22. Al Haana	98	78,285	799	143	146,615	1,025	6	6,920	1,153	14	18,020	787
23. Mosha	55	26,220	477	78	25,820	331	92	37,550	408	107	221,629	2,071
24. Al Maasara												
25. Refa												
26. Bowina												
27. Al Mekhila												
TOTAL	2,514	2,319,544		3,142	7,633,447		3,680	7,741,360		4,368	9,339,026	
% CHANGE				25.0%	229.1%		17.1%	1.4%		18.7%	20.6%	
AVERAGE/BORROWER		923			2,429			2,104			2,138	
VB AVERAGE	157	144,972	2,353	175	424,080	4,598	204	430,076	2,966	243	518,835	2,962
% CHANGE				11.1%	192.5%		17.1%	1.4%		18.7%	20.6%	
VB MINIMUM	18	26,220	141	21	25,820	136	6	6,920	105	14	11,020	91
VB MAXIMUM	990	428,101	10,448	1,019	2,285,128	18,428	1,180	2,964,773	13,985	1,214	2,293,601	10,508
TOTAL	2,514	2,319,544		3,142	7,633,447		3,680	7,741,360		4,368	9,339,026	
LESS PORTFOLIO(S) WITH	(18)	(188,069)		(124)	(2,285,128)		(212)	(2,964,773)		(40)	(420,335)	
AVERAGE(S) > LE 10,000	2,496	2,131,475		(45)	(814,101)		(134)	(363,934)		4,328	8,918,691	
PER LOAN				(40)	(483,888)		3,434	4,412,653				
AVERAGE/BORROWER			854		4,050,330				1,381		1,285	
												2,061

Table 9, p. 3

VILLAGE BANK	MEDIUM TERM LOANS:											
	1981			1982			1983			1984		
	# Loans	LE	Average	# Loans	LE	Average	# Loans	LE	Average	# Loans	LE	Average
1. Aslougl	6	55,300	9,217	12	132,897	11,075	5	22,700	4,540	8	189,687	23,711
2. Bordein				10	62,526	6,253	4	19,623	4,906			
3. Zenkalon	1	4,700	4,700	4	17,025	4,256	1	1,450	1,450	3	22,983	7,661
4. Nehia	12	48,498	4,042	4	12,174	3,044	3	18,000	6,000	1	7,600	7,600
5. Kafr Ayob	3	10,900	3,633	5	15,553	3,111	9	24,147	2,683	21	41,110	1,958
6. Shobra el Nakla	11	8,629	784	5	27,675	5,535	9	31,305	3,478	16	18,725	1,170
7. Balashon	12	32,216	2,685	14	35,491	2,535	15	36,865	2,458	19	39,145	2,060
8. Nobasher				8	38,360	4,795	4	26,640	6,660	1	900	900
9. Ibrehemia												
10. Sandahor	130	58,922	453	111	38,423	346	102	17,855	175	109	48,169	442
11. Sheblanga	160	12,752	80	350	20,950	60	430	42,033	98	400	60,324	151
12. Kafr el Arbain												
13. Kafr el Bazar	489	860,348	1,759	578	915,950	1,585	598	885,348	1,481	650	1,259,554	1,938
14. Tersa	125	179,186	1,433	234	277,392	1,185	150	56,635	378	113	107,252	949
15. Kaha	23	1,300,000	56,522	40	420,864	10,522	17	65,785	3,870	22	117,229	5,329
16. Aghor	60	139,131	2,319	45	114,052	2,534	18	37,348	2,075	15	19,177	1,278
17. Daltan	307	1,216,300	3,962	361	1,451,509	4,021	97	64,971	690	120	93,800	782
18. Iktad Beyna												
19. Abu Tieg												
20. Al Moulina												
21. Abnob	30	86,860	2,895	50	250,170	5,003	60	233,739	3,896	400	741,671	1,854
22. Al Haman	40	25,429	636	56	74,562	414	63	64,262	1,020	240	157,390	656
23. Masha	26	198,353	7,637	18	43,092	2,394	74	218,270	2,950	135	271,768	2,013
24. Al Maasara												
25. Refa												
26. Dowina	211	250,340	1,186	379	346,123	913	467	363,256	778	1,100	400,081	364
27. Al Nekhila												
TOTAL	1,646	4,488,064		2,408	4,294,788		2,126	2,232,232		3,373	3,596,565	
VB AVERAGE	97	264,004	6,114	127	226,041	3,662	112	117,486	2,610	8	189,687	3,379
% CHANGE				46.3%	-4.3%		-11.7%	-48.0%		58.7%	61.1%	
VB MINIMUM	1	4,700	80	4	12,174	60	1	1,450	98	3	22,983	151
VB MAXIMUM	489	1,300,000	56,522	578	1,451,509	11,075	598	885,348	6,660	1	7,600	23,711
AVERAGE/BORROWER			2,727			1,784			1,050			1,066
TOTAL	1,646	4,488,064		2,408	4,294,788		2,126	2,232,232		3,373	3,596,565	
LESS PORTFOLIO(S) WITH	(23)	(1,300,000)		(12)	(132,897)					(8)	(189,687)	
AVERAGE(S) > 10,000	1,623	3,188,064		(40)	(420,864)					3,365	3,406,878	
AVERAGE/BORROWER			1,964	2,356	3,741,027	1,588		1,050			1,012	

Table 9, p. 4

VILLAGE BANK	TOTAL LOANS:							
	1981		1982		1983		1984	
	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE
1. Aslougi	5,831	363,267	6,158	1,295,641	6,523	1,617,490	6,761	2,240,251
2. Borden			14,374	767,321	14,505	914,457	15,216	1,405,379
3. Zenkaton	7,279	252,108	7,502	647,950	7,576	619,275	8,353	975,995
4. Hebha	10,720	309,992	11,002	365,925	11,389	374,014	11,839	707,436
5. Kafr Ayob	10,063	349,080	10,768	364,989	11,224	395,807	11,425	597,132
6. Shobra el Makla	9,322	248,670	9,500	357,133	9,473	459,410	10,555	695,763
7. Balashon	6,511	245,736	6,754	312,371	6,878	337,600	7,034	440,931
8. Mubasher			1,758	964,247	1,831	254,618	1,896	412,880
9. Ibrahemia								
10. Sandahor	3,353	583,056	3,446	743,467	3,874	313,471	4,000	392,378
11. Sheblanga	5,240	479,793	5,874	2,496,162	6,442	3,197,826	6,346	2,547,641
12. Kafr el Arbain								
13. Kafr el Gazar	6,473	1,145,313	6,599	1,204,111	6,702	1,176,571	6,845	1,575,708
14. Torsa	4,647	374,069	4,513	478,420	4,563	365,974	4,738	375,972
15. Kaba	3,527	1,631,238	3,824	1,065,508	3,527	563,868	3,527	711,191
16. Aghor	4,045	374,538	4,095	577,440	4,153	349,445	4,325	356,559
17. Beltan	8,212	1,619,450	8,400	2,007,087	8,324	897,347	8,470	928,113
18. Ikiad Dequa								
19. Abu Tieg								
20. Al Moutiaa								
21. Abnah	5,830	683,738	6,120	946,616	6,000	829,744	6,110	1,245,591
22. Al Hanan	1,538	308,707	1,843	452,941	1,669	355,575	2,034	434,160
23. Mocha	2,181	529,145	2,456	441,247	2,526	680,973	2,782	944,928
24. Al Maasara								
25. Refa								
26. Dowina	3,311	374,980	3,479	499,354	3,567	537,294	4,200	585,186
27. Al Nekhila								
TOTAL	98,083	9,872,880	118,468	15,987,950	120,746	14,240,759	126,476	17,573,194
% CHANGE			20.8%	61.9%	1.9%	-10.9%	4.7%	23.4%
VD AVERAGE	5,770	580,758	6,235	841,471	6,355	749,514	6,657	924,905
VD MINIMUM	1,538	245,736	1,759	312,371	1,669	254,618	1,896	356,559
VD MAXIMUM	10,720	1,631,238	14,374	2,496,162	14,505	3,197,826	15,216	2,547,641
AVERAGE/BORROWER		101		135		118		137
% CHANGE				34.1%		-12.6%		17.8%

Table 10
SFPP VILLAGE BANK LENDING

VILLAGE BANK	SFPP SHORT TERM LOANS:								SFPP MEDIUM TERM LOANS:								
	1981		1982		1983		1984		1981		1982		1983		1984		
	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	
1. Aslougi	64	153,930	269	936,561	270	621,637	613	1,244,090	10	24,550	48	70,800	46	31,790	153	148,061	
2. Bordein			210	284,850	328	483,332	470	742,780			130	175,680	220	66,295	357	257,344	
3. Zankalon					123	112,772	324	584,454					76	59,745	178	179,392	
4. Nehia					64	107,175	513	426,219					127	124,190	471	322,280	
5. Kafr Ayob	39	10,010	80	51,862	130	79,760	268	259,577	19	25,937	115	67,732	145	73,175	352	429,547	
6. Shobra el Makia			41	91,908	322	400,830	419	876,543				90	65,700	105	153,300	204	350,480
7. Balashon					92	159,396	246	451,835					67	89,641	423	392,041	
8. Nobasher			15	9,200	161	62,168	172	209,412				99	94,250	107	94,430	292	323,490
9. Ibrehenia	15	23,353	39	73,222	107	111,312	428	344,606	17	9,900	99	109,950	186	99,930	336	298,925	
10. Sandahor	85	57,358	269	219,201	509	432,842	329	546,190	5	13,250	113	206,967	119	160,356	153	149,962	
11. Sheblanga			156	107,070	856	548,299	548	715,160				119	147,421	44	68,177	121	90,660
12. Kafr el Arbain			300	97,553	650	238,257	470	222,365				75	183,425	100	189,424	152	188,714
13. Kafr el Bazar					224	269,259	557	679,590					123	160,431	186	134,521	
14. Tersa	45	42,549	357	99,745	415	397,388	635	615,133	7	4,950	201	153,851	215	173,088	136	138,948	
15. Kaha	18	16,211	149	132,380	1,068	357,647	512	374,942	8	11,788	48	43,096	82	52,080	85	93,288	
16. Aghor			84	20,748	500	305,060	493	399,228				172	186,562	300	182,693	218	136,007
17. Beltan					228	292,758	503	557,876					75	62,053	73	97,260	
18. Ikiad Deqwa					280	216,197	606	624,126					103	114,594	89	82,548	
19. Abu Tieq	41	17,660	105	23,525	237	78,204	556	275,789	32	25,200	132	120,100	57	96,900	187	150,376	
20. Al Mouliaa	93	57,933	368	170,894	669	225,682	889	283,395				155	174,362	59	41,861	121	94,060
21. Abnab	60	30,294	43	27,015	518	45,057	529	70,247	49	86,985	411	506,062	297	321,318	566	671,419	
22. Al Haman			7	3,850	202	27,831	505	48,368				349	272,295	327	197,723	193	162,890
23. Mosha			79	11,115	237	31,899	438	114,823				86	75,100	83	59,713	33	40,545
24. Al Maasara					170	55,493	785	643,050					442	421,370	134	177,969	
25. Refa					619	53,654	630	124,231					260	192,119	144	122,925	
26. Dowina					176	7,398	600	62,916					271	289,858	232	221,606	
27. Al Nekhila			19	1,230	208	34,207	373	60,463	26	29,150	60	45,340	68	53,197	38	31,241	
TOTAL	460	411,306	2,590	2,361,929	9,373	5,755,514	13,411	11,559,408	173	231,710	2,502	2,498,693	4,106	3,629,453	5,631	5,466,499	
% CHANGE			463.0%	474.3%	261.9%	143.7%	43.1%	100.8%			1346.2%	1064.7%	64.1%	34.5%	37.1%	58.6%	
VB AVERAGE	51	45,701	144	131,218	347	213,167	497	428,126	19	25,746	139	149,927	152	134,424	209	202,463	
VB MINIMUM	15	10,010	7	1,230	64	7,398	172	48,368	5	4,950	48	43,096	44	31,790	33	31,241	
VB MAXIMUM	93	155,938	368	936,561	1,068	621,637	889	1,244,090	49	86,985	411	506,062	442	421,370	566	671,419	
AVERAGE/BORROWER		894		912		614		862		1,339		1,079		884		971	
% CHANGE				2.0%		-32.7%		40.4%				-19.5%		-18.0%		9.8%	

Table 10, p. 2

VILLAGE BANK	SFPP LONG TERM LOANS:				SFPP TOTAL LOANS:											
	1981		1982		1983		1984		1981		1982		1983		1984	
	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE	# Loans	LE
1. Aslouqi									74	180,488	317	1,007,361	318	653,427	768	1,392,151
2. Borden											340	460,530	548	549,627	827	1,000,124
3. Zenkalon													199	172,517	502	763,846
4. Mohla													191	231,365	984	748,499
5. Kair Ayob									58	35,947	195	119,594	275	152,935	620	589,124
6. Shobra el Makla									0		131	157,608	427	554,130	623	1,227,023
7. Balashon													159	249,037	669	843,876
8. Mubasher											114	103,450	268	156,598	464	532,902
9. Ibraheima									32	33,253	138	183,172	293	211,242	764	643,531
10. Sandahor									90	70,608	382	426,168	628	593,198	484	696,152
11. Sheblanga											275	254,491	910	616,478	669	805,820
12. Kair el Arbain											375	280,978	750	427,681	622	411,079
13. Kair-el Gazar													347	429,690	743	814,111
14. Tersa									52	47,499	558	253,596	630	570,476	771	754,081
15. Kaha									26	27,999	197	175,476	1,150	409,727	597	470,230
16. Aghor											256	207,310	800	487,753	711	535,235
17. Beitan													303	354,811	576	655,136
18. Ikiad Degwa													383	330,791	695	706,674
19. Abu Tieg									73	42,860	237	143,625	294	175,104	743	406,165
20. Al Moulisa					1	10,000			93	57,933	523	34,255	729	777,543	1,010	377,455
21. Abnob	2	3,700	2	4,400					111	120,979	456	537,478	815	366,375	1,095	741,667
22. Al Hamao											356	276,145	529	225,554	698	211,258
23. Mosha											165	86,215	320	91,612	471	155,368
24. Al Maasara							2	20,000					612	476,863	921	841,020
25. Refa													879	245,773	774	247,156
26. Dowina													447	297,256	832	284,522
27. Al Mekhila									26	29,150	79	46,570	276	87,404	411	91,704
TOTAL	2	3,700	2	4,400	1	10,000	2	20,000	633	646,716	5,094	4,754,022	13,480	9,394,967	19,044	17,045,909
% CHANGE			0.0%	18.9%	-50.0%	127.3%	100.0%	100.0%			702.2%	635.1%	164.6%	97.6%	41.3%	81.4%
VB AVERAGE	2	3,700	2	4,400	1	10,000	2	20,000	58	64,672	283	264,112	499	347,962	705	631,330
VB MINIMUM	2	3,700	2	4,400	1	10,000	2	20,000	0	27,999	79	34,255	159	87,404	411	91,704
VB MAXIMUM	2	3,700	2	4,400	1	10,000	2	20,000	111	180,488	558	1,007,361	1,150	653,427	1,095	1,392,151
AVERAGE/BORROWER		1,850		2,200		10,000		10,000		1,018		933		697		895
CHANGE				18.9%		354.5%		0.0%				-8.4%		-25.3%		28.4%

ESTIMATE OF EMPLOYEE EFFICIENCY TABLE 11

VILLAGE BANK	TOTAL LOANS (SFPP + REGULAR)						Bank Employees less Agencies		
	1981			1984			1984	1981	1984
	# Loans	Amount	# Employees	# Loans	Amount	# Employees	# Agencies		
1. Aslouqi	5,905	543,755	23	7,374	3,484,341	21	0	15	13
2. Bordein									
3. Zenkalon	7,279	252,108	24	8,677	1,560,449	23	10	14	13
4. Mehia	10,720	309,992	31	12,352	1,133,653	29	11	20	18
5. Kafr Ayob	10,121	385,027	29	11,693	856,709	23	0	21	17
6. Shobra el Makia	9,322	248,670	19	10,974	1,572,306	18	3	14	13
7. Balashon	6,511	245,736	18	7,280	892,766	17	4	14	13
8. Mobasher									
9. Ibreheia									
10. Sandahor	3,443	653,664	23	4,329	938,568	23	7	16	16
11. Sheblanga	5,240	479,793	19	6,894	3,262,801	21	6	13	15
12. Kafr el Arbain									
13. Kafr el Bazar	6,473	1,145,313	29	7,402	2,255,298	24	8	21	16
14. Tersa	4,699	421,568	18	5,373	991,105	19	5	13	14
15. Kaha	3,553	1,659,237	20	4,039	1,088,133	19	5	15	14
16. Aghor	4,045	374,538	18	4,818	755,737	19	7	11	12
17. Beltan	8,212	1,619,450	24	8,973	1,485,989	21	9	15	12
18. Ikiad Degwa									
19. Abu Tieg									
20. Al Mouliaa									
21. Abnob	5,941	904,717	26	6,639	1,315,838	26	5	21	21
22. Al Hamam	1,536	509,707	15	2,559	482,528	15	2	13	13
23. Masha	2,181	2,115	14	3,220	1,059,751	17	2	12	15
24. Al Maasara									
25. Refa									
26. Dowina	3,311	374,980	17	4,800	648,102	17	3.00	14	14.00
27. Al Mekhlia									
TOTAL	98,494	10,356,400	367	117,396	23,784,126	354	105	262	249
VB AVERAGE	5,794	609,200	22	6,906	1,399,066	21	6.18	15.41	14.65
VB MINIMUM	1,536	245,736	14	2,559	482,528	15		11	12
VB MAXIMUM	10,720	1,659,237	31	12,352	3,484,341	29		21	21
AVERAGE/EMPLOYEE	268	28,219		332	67,187				
% CHANGE				23.6%	138.1%				
AVERAGE/EMPLOYEE LESS AGENCIES	376	39,528	15.41	471	95,519	14.65			
% CHANGE				25.4%	141.6%				

ANNEX IV. TRAINING

The training component of the SFFP is expected to meet the specific training needs of the project (participant and in-country training) as well as assisting the central training unit of FBDAC.

A. Participant Training:

The project has had an active participant training program since mid-1982 when the contract with ACDI was amended and funds authorized for this purpose. Between the Fall of 1982 and 1984, six groups (116 people) have gone to the U.S. on month long observation tours. Project personnel included were farm management (extension specialists and research analysts), project accountants, training specialists, financial analysts, and village bank managers. Participants came from all levels of the FBDAC (Governorate, District, and Village Banks) as well as the central FBDAC training unit. Seven veterinarians were also sent on a specialized course.

The project dropped the English proficiency requirement when it became apparent that even the best staff could not maintain their performance and study English intensively at the same time. The need for translators has been met by sending a mix of English speaking participants and translators. In some areas, ACDI has also found American-Egyptian agricultural experts who covered specific topics.

The SFFP local and ACDI Washington orientations prepare participants for the U.S. and reading of the evaluation files indicate that the participants have had only typical tourist difficulties. This is a remarkable feat considering most of the participants come from rural areas and have never traveled.

The ACDI training specialist and Washington staff have done a good job of preparing information on each participant and his particular training needs and forwarding this information to all major stops. By utilizing its member organizations, ACDI is able to tailor training courses to participants needs and to show how farm credit banks and extension services really work in the U.S. Judging from a review of evaluations in the files, participants learned a lot from their trips.

Participants were sent to three particularly interesting training courses in 1983 and 1984: a U.S. VIP trip, an Arthur D. Little course on Strategic Planning for Management in Agribusiness, and an Entrepreneurship Development workshop in India. The Arthur D. Little course was attended by three upper level managers at the FBDAC. The course was designed to improve forecasting in the agribusiness area as well as planning and execution of new projects. This type of course should prove useful in broadening the perspective of Principal Bank managers.

The Entrepreneurship Development workshop hosted by the Center Entrepreneurship Development, Ahmedabad, India was sponsored by AID and fits particularly well the needs of village bank managers. Courses such as this should increase the skill and confidence of village bank managers and help them to increase the variety of rural enterprises. Evaluators were shown areas where increased production has created a demand for agribusiness services and processing. Village bank managers who had participated in this course were giving SFFP loans to small businessmen to help them start up or expand. This is the logical private enterprise growth area for an agricultural country.

The proposed increased involvement of SFFP with the PEDAC should be reflected in participant training of VIPs and mid-level managers in areas most affected by SFFP activities (accounting, planning and budgeting, personnel, financial analysis, and auditing). Sending mid-level managers to short substantive courses could play an important role in upgrading managerial skills at the bank; however, exceptional care needs to be taken in selection of candidates and evaluation. Participants should be selected only on the basis of merit. The Evaluators noted that participants in the Arthur D. Little course did not file an evaluation. In addition, the project needs to make arrangements to receive an evaluation of the participants, even if grades are not given. Mid-level managers should clearly understand that an assessment will be made of their performance and that this will be forwarded to their superiors. Evaluations will also enable SFFP to appraise the suitability of the course and prevent poorly performing participants from being sent more than once.

B. Farm Management Skills Development Courses:

Farm management course scheduling has been taken over by the Project Director and his staff. Difficulties in scheduling subject matter specialists made coordination with the training department awkward. Subject matter specialists teams are assembled for each SFFP package and hold an annual review of technological improvements for current extensionists and those joining the project. Thereafter, skills sessions tend to be conducted at the field site where actual problems can be discussed.

SFFP now has illustrated booklets on banana production, tomato nurseries, and peas. They have produced video films on bananas, tomatoes, and poultry batteries; and are planning others. These films can be used to train extensionists and arrangements have been made to show these programs on TV in agricultural areas. This is impressive and development of materials on SFFP packages ought to be continued.

The Project Director and his staff depend heavily on subject matter training and personal example to demonstrate the role of the extensionist. This combined with close follow-up, facilitated by the extension workers farm record book and the VB incentive payments has proven to be a very effective system; however, as

the number of extension workers expands under SFPP and in the new Egyptian program, more formal training will be needed. The project director and his staff should work with the SFPP training specialist to develop and assemble materials to train extensionists on their role. Training of extensionists should be carried out by the project and the MOA, rather than PBDAC.

C. Staff Development:

The 1983 Evaluation team recommended that policies and procedures be incorporated in a manual. This manual was completed in January 1985 and has been submitted to PBDAC. The SFPP has translated the credit portion and is using it to train village bank and district personnel added to the project this year. Case studies have also been developed to use in studying the various types of loans and the problems they present.

Conversation with the PBDAC credit specialist in Sharkia and the American Farm Credit Specialist in Qualubayia revealed that each had developed additional materials for teaching village bank managers and financial analysts. While the manual represents an important step in standardizing SFPP procedures, the management training specialists need to assemble these materials so they can be shared.

The projected large scale expansion of the project presents the SFPP training department with the important task of assembling and packaging the SFPP training program for use by the PBDAC training department. The completed manual should be translated as soon as possible and visuals, lesson plans and a teaching guide, as well as a workbook for trainees with calculator and interest rate calculation problems, examples of forms with detailed explanations and case studies and supplementary materials should be compiled. Without such material provided by SFPP, the PBDAC will find it practically impossible to replicate the SFPP successes.

The SFPP training specialist must consult with the governorate staff to assemble materials and a program for training district bank staff. The manual concentrates on the work of the village bank staff and the roles and responsibilities of the governorate staff have not been spelled out. An assessment of the training requirements and development of appropriate materials has yet to be done. Appropriate materials also need to be developed for governorate level staff who will be supervising district and village bank staff and will need basic information as well as indepth understanding of project concepts and goals.

Training materials cannot substitute for one-to-one training and the project must make available their experienced personnel to assist in training and follow-up in the expansion. The SFPP project should identify their outstanding banks so that the project can send village bank managers and financial analysts to work at these banks for one to two weeks as appropriate. Experienced personnel will be extremely important in training

additional governorate staff as well as new village bank managers, financial analysts, and extensionists. Staff should be increased in the governorates currently working with the project so that staff can be released to help FBDAC without losing momentum in the project areas.

In 1984, the SFFP training specialist developed a brochure on the project. While this is useful, the GOE commitment to expand the project nationwide has created a critical "information gap". Project and PBDAC staff agree that most people have now heard of the project, but that only a small percentage have any detailed information. This situation also exists in the governorate and district banks where SFFP has been working. The evaluators attended two sessions led by FBDAC top management in which it was clear that implementation of SFFP principals and procedures were viewed only as a stepping stone to change of FBDAC from an input distributor and lender by prescription to a bank. These sessions were effective in generating enthusiasm and commitment and a principal topic in discussion was a request for in-depth information and materials. If these materials are not developed by personnel associated with the project, it is highly likely that lack of depth and inaccuracies will make dissemination of project concepts and replication of the project's success impossible. USAID's goal is not merely a successful project and while development of this type of material is not spelled out in the project paper, it is a prerequisite for achievement of the project policy goals.

The project training specialist working with the staff and FBDAC training department should develop an introduction and mini-series on project components to educate bank and MOA employees about SFFP goals, successes, and departures from traditional policies and systems.

Finally, the compilation of the manual took two years. In development of these training and informational materials, timeliness is of the utmost importance.

D. FBDAC Staff Development:

A group of senior officials from PBDAC participated in a seminar held at the Center for Agricultural Development and prepared by the Management Development Consultants of Westinghouse Electric Corporation. The five day course was intended to focus on SFFP expansion using various management techniques. The participants enthusiastically praised the course as helpful to general management assesment, but the Evaluators note that little work was achieved relative to SFFP. First, the participants didn't have sufficient knowledge about SFFP to work on planning and the senior officials from the Bank and MOA most familiar with the project and responsible for its implementatin did not attend full time. Second, the time which was supposed to have been devoted to SFFP planning (6 to 8 p.m.) was preempted for discussions with AID, SFFP and PBDAC officials. Consequently, the in-depth planning relative to SFFP did not take place. In-country courses

for management development offer advantages such as lower cost and the possibility to emphasize particular areas of need. Future sessions should not try to combine too many objectives at one time. For practical planning to succeed, participants must have sufficient knowledge and be led by the officials responsible for expansion implementation.

E. Management Development Plan:

The PBDAC should develop a comprehensive management training plan which should include an assessment of management needs, and proposals to meet them through in-country and participant training, especially for senior officers. The goal of the plan should be to strengthen management as well as providing skills and staff development courses appropriate for junior staff. The Training Department is interested in developing such a plan but lacks resources in terms of staff, funds and expertise required. Under the existing project, additional funds should be allocated so that such a plan can be developed. Expertise and technical assistance can be supplied either through a second management development training specialist or through a contract with the Center for Agricultural Management Development or both.

F. PBDAC Training Department:

The Management Training Specialists duties include assisting PBDAC's training department. Both in 1983 and 1984, two day training sessions were held with governorate training specialists. A training policy has been developed and adopted by the Bank.

In the 1983 evaluation, the evaluators noted the cordial cooperation between the SFPP training specialist and the PBDAC staff. This has been maintained despite a change in the head of the Training Department.

The current training manager has improved the department's efficiency by introducing detailed job descriptions, monthly performance reports and evaluations and getting the printing press running. They currently run short courses on topics such as feasibility studies. The equipment donated by SFPP is properly stored in a clean room and used with some sophistication. For example, in a recent two week course, instructors were video taped and the play back used to critique their performance. Several of the training staff including the manager have gone on participant training courses. The facilities for training are quite limited, but bank plans for remodeling are complete. As the contract has not yet been bid, it will be some time before the department has adequate facilities. Even after remodeling, the PBDAC's facilities will still be quite limited in space. All in all, this department is in fairly good shape.

The training department faces a major challenge in training staff for the Egyptian expansion of SFPP, but it's capacity to perform is hampered by poor interbank communications and lack of

information. For example, they have not yet been told who they will have to train for what positions. Eager to get started the department held a two week course to teach candidates from each new governorate to be trainers, but these people may not even be participating in the SFPP.

The manager also lacks knowledge about SFPP. The department has not yet received the manual which is the basis of credit training and they have not visited the governorates to learn about SFPP, observe SFPP training sessions and familiarize themselves with the materials available. The department should send the team who will be working on the SFPP to see what is going on and should utilize the skills of the SFPP training specialist when developing their plans.

The Training Department currently gives short term training courses on separate topics and they are not experienced in the type of long term training required for SFPP. The SFPP approach is a radical departure for the traditional system of collateralized loan and prescription lending currently practiced by the bank. Rapid expansion into uncollateralized lending could result in financial disaster for the bank and small farmers unless the system is properly put in place and personnel adequately trained. Currently, the PBDAC is organizing for expansion and holding introductory meetings and in fact beginning to make loans especially medium term loans; however, very little training and no formal training has taken place.

Training Department plans are still in the outline stage and are far from being ready to implement and there appears to be little coordination between the expansion staff and the Training Department. This is potentially a very serious situation.

The Training Department with the SFPP training specialist need to organize training along slightly different lines for the expansion and follow-on project. In the early years of the project, governorate staff training was handled on a one-to-one basis by Egyptian counterparts assisted by American specialists. Now that SFPP systems have been developed such intense collaboration is not needed, but appropriate materials and training courses need to be developed for this level staff who will need basic information about the project as well as indepth understanding of project goals and concepts.

Governorate and district staff will have to be trained practically simultaneously with Village Bank personnel and will not have the indepth knowledge of SFPP to train others. Training should be centralized so that course material and content will be standardized. SFPP policies and procedures are specific and not amenable to casual improvement and improvisation by partially trained staff. Many policies such as credit and personnel are radically different from the standard Bank procedures and necessitate change of attitudes as well as mastery of procedures. Because of the sophistication of SFPP compared to the typical formula loans made by the bank, effective training will require

an initial session followed by additional sessions to reinforce initial learning and introduce new concepts. Thorough training is absolutely essential to the expansion and success of the USAID follow-on project. Poor performance as a result of inadequately training staff would have broad repercussions on the bank's willingness to introduce innovative programs and relationships with AID. USAID through SFPP should provide sufficient funds to rent adequate residential training facilities and prepare adequate training aids, and train teaching staff. The training department should be strengthened and expanded so that it can serve the long term needs of the bank.

Informational materials about SFPP should be utilized to introduce SFPP to bank personnel so that in the future staff will at least be familiar with the concepts and approach of SFPP.

6. Conclusions:

1. A comprehensive management training plan should be developed for PBDAC through the Training Department with funds and expertise provided through SFPP. The plan should include an assessment of management needs and propose a program of in-country and participant training to address them.
2. One SFPP training specialist should spend 50% of his time with the PBDAC training department to plan and implement the Bank expansion. Training is a critical component of a successful effort. The PBDAC training department has not had experience with long term training programs, and have not received or studied the substantive content, materials, and methods used in the project's training program. Expansion to all village banks will take at least 10 years and training should be set up properly from the beginning.
3. Based on the the SFPP manual, training materials must be assembled and developed for use in the SFPP expansion. This should include course outline, visual aids, workbooks, case studies, and lesson plans. This will have to be updated as new topics such as the revolving loan fund, budgeting, and loan classification are developed by the project.
4. Informational materials about SFPP project principals, systems and project successes as well as an in-depth series on certain aspects such as the new accounting system, and the role of the financial analyst, should be developed. Audio visual presentations as well as printed materials should be used in familiarizing bank staff with the project.
5. The focus of participant training should shift to the headquarters bank and ought to include at least one VIP tour to familiarize Managers with modern farm banking.

The Entrepreneurial Development Workshop appears very relevant in training village bank managers to develop entrepreneurial talent as increased agricultural production creates opportunities.

The successful short U.S. participant training course for SFFP should be continued and consideration given by AID and GOE officials to participant training for the bank personnel with the expansion.

6. The present project budget provided only the minimal training required by a project in the process of winding down. The replication of SFFP will require increase in the training budget.

Such support should not be delivered until the next phase of AID support is signed.

H. Recommendations:

1. A comprehensive personnel study and staff development plan should be prepared by PBDAC. Establish a second management training position to focus on management development through participant and local training.

2. The SFFP training specialist should work at least half his time with the PBDAC training department to help plan and implement the training program for SFFP expansion.

3. A complete "package" of training materials based on the SFFP manual should be developed and tested for use in the expansion program.

4. Informational materials about the project concepts and systems and a mini-series on particular areas such as accounting should be created and used to introduce bank personnel to project principles and methods.

5. Participant training should focus on:

- a VIP tour
- Entrepreneurship Identification courses
- Short substantive courses for mid and upper level management
- continuation of the successful short U.S. participant training course for VB and governorate personnel

ANNEX V. IMPACT ON WOMEN

In the Fall of 1983, Howard-Merriam and Saleh surveyed 180 women farmers with SFPF loans and a control group of 180. The results of this survey confirm the project's success in increasing farm women's incomes. Cooperating women constitute 72% of those earning LE 100 or more per month. Although the difference in the proportion of the women managing some family income was not significant, 27% of SFPF women managed LE 150 or more per month as compared to 4% of the control group. The major part of this income (75%) is derived from project promoted activities in livestock and poultry. Of women expressing satisfaction with their incomes (46%), 57% were cooperating women. Of cooperating women surveyed, 47% had savings as compared to 30% of the control group. The general satisfaction of women with the project is indicated by the desire of cooperating women (58%) for additional projects. Cooperating women (98%) were satisfied with project extension and veterinary services, as compared to only 70 - 86% of non-cooperating women.

A. Analysis of Data

The Howard-Merriam and Saleh analysis of the data is incomplete in several aspects. Analysis was made on a governorate level only so that slight differences between the SFPF and control group in age and marital status appeared more important than when data was aggregated. Aggregate data do not show significant differences in the major demographic characteristics.

Data were analyzed using percentage calculations of governorate aggregate data so that significant differences in the control and SFPF samples may be disguised. For example, significantly greater SFPF families owned land, particularly in the 3 - 5 feddan category. SFPF family income was significantly greater, but using aggregate data it is impossible to say whether this was due to increased production or to livestock and poultry projects.

Disaggregation of data and regression analysis should be able to clarify these relationships. The survey represents a tremendous amount of work and questions asked covered a tremendous range of information and could produce a gold mine of information with more exhaustive analysis, particularly on rural incomes, standard of living and women's involvement in agriculture.

B. Survey Recommendations

The major recommendation focused on the need to improve contacts between project personnel and farm women as the major way to increase participation and increase productivity and included:

1. Publicity
2. Employment of women financial analysts to reach women farmers
3. Provision of more veterinarian assistance to women

4. Further statistical analysis of reasons for not wishing to engage in projects

5. Cultural training.

C. Current Status

1. Publicity. The project has not undertaken publicity particularly aimed at women, but 13% of all loans have been made directly to women. The primary source of information about the project was relatives for cooperating women and friends for non-cooperating women. Other sources were extension agents, veterinarians, and bank officials. Of the non-SFPP women surveyed, only 9% had not heard of the project.

The major types of projects desired were livestock and poultry, and the project has decreased lending in these areas for several reasons. For livestock, the volume of loans threatened to deplete funds available and the project was intended to promote a variety of enterprises and provide supplemental crop credit. Also earlier economic analysis suggested that livestock might be uneconomic for the country as a whole, although financial rates of returns were high. Thus the project decided primarily to fund loans for improved breeds which are in somewhat short supply. Finally, the highest economic rates of return are achieved when improved technology is provided with credit and SFPP does not currently have a livestock package. For poultry, there is concern that the market may be reaching saturation level, especially for eggs. The price of eggs has declined from a high of 10 piasters to around 7 piasters. High concentrations of poultry enterprises have increased incidences of disease. This is the one loan area where delinquency has been a problem. As a result of these problems, SFPP is also decreasing the number and value of loans in poultry.

Thus publicity could have exacerbated problems and raised expectations which funds could not meet.

2. Employment of women financial analysts to reach women farmers.

Employment of women financial analysts has proved very difficult since appropriately trained women often cannot be found in villages and are unwilling to relocate. While financial analysts require less mobility than extension agents, they too use motorcycles which are not appropriate for use by women in rural Egypt. However, transportation policy is being adjusted so that the project can reimburse an employee for use of a personal car.

While promotion of women to the position of financial analyst is certainly desirable, gender does not appear to be a major consideration to farm women. Rural women were more concerned with good service and access to information, rather than the gender of the extension agent. Of those expressing a preference, 37% preferred a woman, but 40% said they preferred a man or that

it didn't matter. This suggests that gender is not a serious obstacle to adequate extension to women managed enterprises.

Finally, availability of women financial analysts appears not to be a critical factor for women to benefit from SFPF. Even though a loan may be in a woman's name, she may not go herself to the bank. A male relative may take her stamp to the bank. In view of the high illiteracy rate (80%) and familiarity of male family members with the bank (crop loans for fertilizer), it is not surprising that men often take out loans which women manage. The study found that younger, more educated women tended to go directly to the bank. It would be interesting to know if continuing participation in the project and increased familiarity with the bank would make women more apt to take out loans themselves.

Rural Egyptian society is very conservative and a tremendous effort would be needed to place women financial analysts in even a small percentage of village banks and the impact on women and women's incomes limited.

3. Provision of more and appropriate veterinarian assistance to women.

The project has worked hard to provide veterinarian assistance in the area of poultry; however, very few veterinarians in Egypt are poultry specialists and thus have had to be trained in this area.

4. Statistical analysis of women not wanting projects. Projects were desired by 64% of the 360 women surveyed. For a village bank with 5,000 farmers, this would imply that 3,200 women would like projects. With an average size loan of LE 971 for livestock or poultry battery, this would require LE 3.1 million per bank. SFPF funds are not available for lending on this scale even if markets for substantially increased production existed.

5. Cultural training program. While there may be many under-employed agents, retraining in areas such as home economics appears outside the scope of the project.

D. Project Activities and Women

SFPF provides three services under the project: credit, extension/veterinarian to inform loan recipients about technologies for their crop or enterprise and assistance in obtaining inputs as necessary. Survey data indicate that SFPF women's income comes from poultry and livestock enterprises which comprised 24.7% of loan funds. Thus women may benefit substantially from loans to men which women manage.

1. Poultry

About 50% of total loan funds has gone for poultry projects: 45% for meat and 6% for small laying batteries. The laying batteries are generally located in a spare room in the household and managed by women who sell the eggs out of the home to neighbors. Chicken for meat operations are generally much larger and require a larger investment in buildings and birds. Women participate but generally do not manage these enterprises.

The project has done the following to assist start-up and assure good management of egg batteries by the following:

- a. Locate fabricators of cages.
- b. Ensure supply of improved layers and chicks and assisted providers of these birds with funds and veterinary services.
- c. Provide veterinarian and extension agent to assure quality disease-free birds are sold to battery operators and follow-up to ensure proper vaccination, etc.
- d. Encourage local suppliers of seeds to also stock vaccines and chicken feed.
- e. Set up an insurance fund to reduce risk to individual operations. Laying hens produced by project breeders can be sold with adequate margins at substantially less cost than the market price, so the project added another 50 piasters per bird to start an insurance fund.

These services substantially reduce the risk and improve enterprise management for a better rate of return. The project has analysed larger operations and found that smaller enterprises have lower costs because of lower capital costs and because anticipated savings due to good management and efficiencies of large scale operations often do not materialize. Veterinarian and extension services also provide continued training to the female manager so that she is better able to operate efficiently and reduce disease.

The majority of poultry projects have been in Qualubayia and Sharkia governorates. Assiut women and project loan volume suggests that poultry is relatively undeveloped in Assiut. The project should increase poultry projects in this area using package developed in these two governorates. However, estimation of demand needs to be made to avoid over expansion.

2. Livestock

Project loans for dairy animals has accounted for 11.5% of total loan funds and other animals (goats, sheep, rabbits and pigeons), 7.2%. However, credit available for this type of loan has been rationed by the project as mentioned earlier. Survey data showed

women have the primary responsibility for management of farm animals as 90% of feeding and 96% of milking was done by women.

Despite the large number and value of loans for livestock, there is no extension/veterinarian program or improved technological packages. For traditional animals - "baladi" breeds, high rates of return suggest that substantial know-how exists at the farm level; however, farm management experts have noted that improved breeds have not produced as well as expected and that increased milk production could be achieved with even simple measures such as frequent watering of animals. Other problems are more complicated such as the limited food supply during the summer. Thus a livestock "package" could substantially increase rates of return, but require extension/veterinarian services as well as introduction of high yield fodder crops.

The project personnel have said that livestock extension is more difficult to manage because each household has only one or two animals, but are considering village or neighborhood meetings on a weekly basis. Because of the important role of women in caring and managing these animals, it is critical to have meetings at times and locations suitable for them. Women should be surveyed, even informally, so that an appropriate time can be chosen.

The project has made video films on some packages and plans to show them on national TV. The SFPP Women In Development survey showed that 72% of 360 women surveyed had a TV in the home so that this is a good medium to reach farm women with technical information. The prevalence of livestock projects suggests that this would be a topic of interest to many rural women and care should be taken that any program or series is aired when women can watch. A TV series on SFPP livestock packages could spread benefits to women far beyond the project area.

3. Other Enterprises

While the project has a great number of crop packages, SFPP has only poultry packages in the area of enterprises managed by women.

Newberg's analysis of livestock and poultry enterprises confirmed that these can have a significant impact on rural household incomes as well as provide a steady positive monthly cash flow. Household enterprises use labor of women and children who would not seek off-farm employment. Further, 59% of women with SFPP enterprises said that they desired additional projects if they were available. The small farmer who has diversified sources of income, i.e. crops, a cow and a laying battery is more financially secure. Decline in loans for poultry and livestock will restrict women's access to enterprises, unless off-set by funds and packages in other areas.

The project has made loans for a variety of projects, including rabbits, pigeons, and beekeeping; however, project personnel are really unsure the extent of involvement of women in these

projects. The project extension agents and veterinarians should survey existing enterprises to determine which projects are primarily managed and the produce sold by women. These projects should be analysed by the farm management specialists and the project economist to determine:

- financial and economic rates of return
- capital costs
- space requirement
- local demand and market absorption capacity
- possible improvements in existing practices to increase the rates of return

An ideal women's project is household based, involves small units of produce which she can market herself, is efficient in space required, and has better than average rate of return. Household enterprises surveyed in the Rural Non-Farm Employment project uniformly had low rates of return per family hour (LE 0.10). * A household based enterprise typically requires less capital investment in land and buildings and is small enough so that the woman can manage it entirely on her own. This allows the male farmer to concentrate on field work. From the point of view of the project, the demand for goods produced must be substantial enough that the enterprise can be replicated widely without saturating the market and so that extension services can be cost effectively supplied. Time required is also a factor and should not exceed 5 hours a day and preferably take only 1 to 3 hours per day.

Projects need not necessarily be limited to raising animals, but could include farm related enterprises.

(1) Household dairy. Surveys done by the Rural Non-Farm Employment project showed that household dairy operations to produce butter and cheese are the largest type of household or micro enterprise (58% of enterprises located) and 92% were managed by women. The returns to labor were quite low (LE 0.08), but the number of family members involved means that the total contribution to family income could be significant to low income groups with limited employment opportunities.

* Stephen Davies, et. al., Small Enterprises in Egypt: A Study of Two Governorates, Working Paper 16, Rural Non-Farm Employment Project. (Cairo: 1984), pp. 61-68

"Modern" dairy operations in comparison had a return of LE 1.38 per hour.* These operations collect milk from nearby households and make full cream cheese with the help of only one or two hired helpers and sell groceries in governorate capitals or wholesalers in Cairo. While capital costs are negligible for household dairy operations, "modern" dairy operations often involve a substantial investment and land and buildings but a low capital cost of LE 672. **

The Rural Non-Farm Employment Project survey found that dairy operations were one of the few household and micro enterprises where demand was not considered a problem and where technology (i.e., cream separators) was available that would increase the rate of return and decrease labor required. *** SFPP has in fact made a number of dairy equipment loans particularly in the village of Mobasher in Assiut governorate. The project could study these enterprises to see if this activity can be improved and an improved technological package provided to SFPP women. A package in this area would complement nicely a livestock package.

(2) Rabbits. This enterprise was mentioned by a number of women surveyed and may represent an opportunity for an SFPP package since the price of rabbits is currently greater than chickens, and rabbits are slightly less disease prone in small numbers.

The project need not necessarily develop all packages promoted by the project. A variety of household enterprises are being developed by other organizations (ie. Catholic Relief Services) and eventually may be replicable and useful to SFPP as it expands.

E. Women's Participation in Agriculture

Further analysis of SFPP data should provide more information on the impact of SFPP on women's activities. For example, it may be possible that as women undertake household based enterprises they are less involved in field work. SFPP packages generally include herbicides which reduce time needed for weeding.

A survey by the Egyptian Major Cereals Project **** found that 50% or more of women participate in fertilizing, crop weeding, harvesting, sacking, storage and marketing.

* Ibid, p. 64

** Ibid, pp. 78 & 91

*** Ibid, p. 70

**** Istak, Dr. Yeldez, et al. Role of Women in Agriculture. Cairo, May 1984.

Project activities have focused primarily on increasing production; however, these gains cannot be realized as income unless harvest and post harvest losses can be minimized. Post harvest losses for vegetable crops made at the farm level averaged 5.2% for potatoes, 10.8% for tomatoes, and 4.5% for grapes. Survey results showed that damaged goods sold for at least one third less. Other studies have shown very high harvest losses and that damage could be significantly reduced through more careful handling and packing. This area should be of considerable importance to SFPP families since much of the real increase in farm incomes has resulted from switching farmers from traditional to cash crops. If the project enters this area, success will depend on effective extension to women farmers.

Conclusions

1. The critical factors affecting project benefits to women are:

1. Funds available for projects women can manage.
2. Availability of inputs (chicken feed, improved breeds of cows and buffalo, etc.)
3. Extension and veterinarian services.
4. Improved technology to increase rate of return and reduce risk.

2. The decreasing amount of funds available in livestock and poultry will adversely affect women unless other packages are developed taking into consideration their specific needs. Additional household projects should be developed by SFPP and should meet the following criteria:

1. Household based
2. Limited space required
3. Time required 1 - 5 hours per day
4. Small units of produce which the woman can market herself
5. Better than average return to labor
6. Appropriately supplied extension and veterinary services
7. Available inputs.

Recommendations

1. Develop packages for enterprises managed by women, ie. livestock, rabbits, etc. Publicize packages using mass media.
2. Analyze impact of dairy equipment loans in Mobasher and develop a "package" to spread this technology.
3. Spread poultry batteries to Assiut and other areas. Estimate demand to avoid over saturation of market.
4. Analyze survey data in greater depth.

ANNEX VI. SCOPE OF WORK

1. Farm Credit and Banking Specialist

The farm credit specialist will review the new credit and bank management system developed under the pilot project and assess, with a systems perspective, whether and how the system would be replicated nation-wide. He/she will review project work plans, reports, accounting audits and other material. He/she will carry out an evaluation of the capital structure of the FBDAC and three Governorate Banks in which SFPP operates, to ascertain the present soundness of capital structure and then determine the following:

- a) To what extent can the Bank system, without weakening its capital structure, obtain capital for lending on its own?
- b) Are such funds available, from what sources, on what terms and rates?
- c) What capital for loan funds should be provided by USAID on grant and/or loan basis for replicating the project in new areas of Egypt?
- d) The project has restricted and/or excluded several loan purposes in the past in order to assure availability of adequate loan funds for priority purposes (i.e., soundest investments with highest returns, which to date have been improved livestock, additive loans for field and vegetable crops, as well as high-value crops). What purposes should be stressed or restricted in replication?
- e) After evaluation of the credit aspects of the SFPP and the above evaluation of the Bank system, determine and recommend any necessary structure, management systems, training and personnel needs, and operational procedures which should be implemented or changed in order to provide improved service to Egyptian agriculture.

2. Farm Production Micro-Economist

Farm record data collected over the Winter 81/83 and Summer 83 cropping seasons in the pilot area have recently undergone data processing and tabulation and summarization. Costs and returns, labor requirements, area and other data have already been tabulated, summarized and processed for some 20 crops and 500 farmers. The Farm Production Micro-Economist will examine this data in close collaboration with the project directors, Egyptian agricultural economists working with the project, and the computer center. If necessary, in the course of analysis he will direct the computer center to carry out new analyses of the data.

Using the farm record data, as well as additional project data made available by SFPP personnel and from field visits to project areas, the farm production micro-economist will ascertain, to the best extent possible, the degree to which the following elements provided under the project are critical for improving farm incomes and productivity: increased credit availability; farm advisory services; and input availability. Specifically, he/she will examine effect on farm income of farmers inside the pilot area (in comparison to a control group) of the following services and loan activities provided under the project: block farming, land preparation loans; input loans; harvesting loans; soil analysis; mechanical cultivation; land preparation; improved seeds; herbicides; insecticides and fungicides; new irrigation techniques; foliar fertilizing; mechanical harvesting; and marketing services. He/she will be guided in the above analysis and review of project information by the following questions: a) What farm income/productivity improvements appear to be dependent upon provision of financial capital, i.e., which enterprises are more capital-dependent than others? b) Which appear to be a function of merely ensuring that the various physical inputs are available to farmers? c) Which appear to be dependent upon availability and quality of extension assistance? d) What is relationship between rate of adoption of different production-and-income-increasing practices and provision of credit, advisory services and inputs?

Emphasis in the above analysis should be placed upon input provision for crops under the SFPP program. After the review of farm record and other project data, the production economist should pay particular attention to how inputs are gotten to the farmer who participates in the project, and estimate by crop enterprise the approximate amount, price, and provenance of inputs purchased by farmers with credit provided under the SFPP program, in relation to inputs which are purchased with credit through the traditional PBDAC program. Relationship of input prices to local market, as well as subsidized levels, should also be examined. He/she should then assess, to best extent possible, areas where private sector input provision has been successful and where it could be strengthened under the project. Past and potential role of the project in encouraging private sector marketing of outputs should also be examined.

3. Consultant for Financial Analysis of Loans and Saving. Women in Development and Training

1. Savings Study - evaluate PBDAC, BDAC and Village Bank savings inside pilot project area, and compare to the savings data in non-project area. Data will be derived from the project, village banks, governorate banks and PBDAC. Analysis will be carried out on the SFPP computer with assistance of SFPP staff.

2. Loans Study - evaluate FBDAC, BDAC and Village Bank loans inside pilot project area, and compare to the loan data in non-project area. Data will be derived from the project, village banks, governorate banks and FBDAC. Analysis will be carried out on the SFPP computer with assistance of SFPP staff.

3. Review SFPP Women in Development studies, present activities related to women's participation in SFPP, and document any observations appropriate for the SFPP evaluation, and those which could be helpful for the NAPP or Credit II programs.

The consultant will assist other primary evaluators in the following:

a). Provide assistance in all aspects of the evaluation of the Credit Component of the project and in analyses of Bank or Project data with guidance of Credit Specialist.

b.) Provide assistance to micro-economist in analyses of pertinent data and review, discuss and participate in the writing and compilation of the evaluation.

ANNEX VII. LIST OF AGENCIES AND KEY INDIVIDUALS INTERVIEWED

The team would like to thank for their cooperation the following:

Principal Bank for Development of Agricultural Credit (FBDAC)

Mr. Kamal Nassar

Mr. Abdel Khader

Mr. Mouktar Fayik

Mr. Lotfi Kafoury

Mr. Mohammed Sabaiy

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Ministry of Agriculture (MOA)

Dr. Abdel Rahin Shehata, Agriculture Research Center

Ms. Salwa Soliman Saleh, Agriculture Research Center

Dr. Osman El Kholi, Dean of Faculty of Agriculture, Minufia University

Eng. Mostafa Mazan, Board for Rationalization of Fertilizer Prices.

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