

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Control
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| 1. PROJECT TITLE Small Farmer Production PD-AAA-947 XD-AAA-947A 263007A/15 161-34499 | 2. PROJECT NUMBER 263-0079 | 3. MISSION/AID/W OFFICE USAID/Cairo |
| 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) <u>83-6</u> <input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION | | |

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| 5. KEY PROJECT IMPLEMENTATION DATES A. First PRO-AG or Equivalent FY <u>79</u> B. Final Obligation Expected FY <u>79</u> C. Final Input Delivery FY <u>85</u> | 6. ESTIMATED PROJECT FUNDING LE 9,000 A. Total \$ <u>25,000</u> B. U.S. \$ <u>25,000</u> | 7. PERIOD COVERED BY EVALUATION From (month/yr.) <u>August, 1979</u> To (month/yr.) <u>March, 1983</u> Date of Evaluation Review <u>May, 1983</u> |
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B. 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., airgram, SPAR, PIO, which will present detailed request.) | B. NAME OF OFFICER RESPONSIBLE FOR ACTION | C. DATE ACTION TO BE COMPLETED |
|--|---|--------------------------------|
| 1. Carry out a second survey and compare results with baseline data collected in 1979-80 in order to establish clearer link between the project's processes and impacts. | M. Noor, MOA | December 31, 1983 |
| 2. Redesign elements of the project (along the lines recommended in the evaluation report) to enable improved verification of project processes and identification of most effective combination of interventions (in conjunction with #1 above). | Project Committee, USAID/Cairo | September 30, 1983 |

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

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

E. Martella, AGR/A *E. Martella*

A. Radi, AGR/A *A. Radi*

R. Fort, AD/AGR *R Fort 5/23*

R. Fraenkel, DPPE/PAAD *R Fraenkel 5/31*

N. Sweet, AD/DPPE *N Sweet*

M. Noor, MOA *Mahmud Noor*

12. Mission/AID/W Office Director Approval

Signature *M. P. W. Stone*

Typed Name M. P. W. Stone, Director

Date 5-31-83

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2630079/17

**EXTERNAL EVALUATION
OF THE
SMALL FARMER PRODUCTION PROJECT**

External Evaluation Report

USAID Project No. 263-0079

April 20, 1983

FORWARD

This evaluation of USAID Project no. 263-0079 was conducted by a five-member team during March 1983. The members of this team and their general areas of responsibility were as follows:

- John Penson - Team Leader and credit and information gathering and analysis sections
- Robert Morrow - Farm management extension, production inputs, and information gathering and analysis sections
- Diana de Treville - Social impact section
- Jocelyn Reed - Training section
- Richard Fraenkel - Storage and transportation section

The findings and recommendations presented in this report are based upon the team's collective assessment of the information obtained in interviews with farmers, Project personnel, PBDAC employees and others as well as the statistical information available to date. The results of the evaluation are presented in this report while specific background information is presented in the Annex to this report. The evaluation team presented its preliminary findings and recommendations in two separate presentations on March 31, 1983 to USAID officials and to PBDAC officials and other interested parties.

This report was submitted to USAID-Washington and USAID-Cairo on April 19, 1983.

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EXECUTIVE SUMMARY

The evaluation team strongly feels that the GOE and USAID should continue to support the Small Farmer Production Project. This Project has had a significant impact on the availability and productive use of short- and medium-term loan funds in Project areas. The Project has also shown that credit tied to an active extension program does result in increased farm production. To the extent that USAID financial resources are available to supplement PBDAC loanable funds, USAID will continue to find this a viable use of development monies. However, the evaluation team stresses that increasing reliance should be placed upon local resources in the longer run. The team also feels that the expansion of Project activity in all three governorates affiliated with the Project is preferred over focusing additional efforts primarily in one governorate. The more decentralized approach will lead to a wider variety of agricultural dev and credit experiences with less potential political risks, and thus will enhance the eventual adoption of the lessons learned under the Project by the PBDAC and other GOE agencies.

This report presents an evaluation of the progress made under the Project to date. Our evaluation focuses on how effectively the project is meeting its stated objectives, how effectively it is being managed, and what improvements can be made to improve the Project's impact. The evaluation team disaggregated their task along the following subjects: farm management extension, production inputs, information gathering and analysis, credit, social impact, training, and storage and transportation. The information used in this evaluation was obtained from a variety of sources, including team trips to the governorates of Kalyubia, Sharkia and Assuit, numerous meetings with PBDAC and Project leaders, and statistical data sup-

plied by various sources. Several specific recommendations of the team are summarized below:

1. The Project should determine if it wants to begin to seriously document the effects of the various modes of farm management extension and credit systems. The team views this test and demonstration effort as a major function of the project. Any expansion of current efforts, however, will require more staff and other resources.
2. Arranging for the supply of production inputs to Project farmers may be required on a case-by-case when demonstrating new farming practices. However, the major role of the project should be to feed information on production input problems encountered by farmers, technical assistance teams and village banks back to the PBDAC and private sector input suppliers so that the *input system* is modified. A related recommendation suggests that any future project amendments should address the financing of private input suppliers, particularly for durable inputs which will later require service and repair.
3. The initial development of general enterprise budgets and input requirements, which are needed to establish standards for local comparisons, should be spun off to another project. Instead, the farm record book should be designed to facilitate *follow up analyses* of the farmer's enterprises as well as analyses of whole farm profitability and financial position. Along these lines, the profit and loss statement in the farm record book (now ignored) should be modified to eliminate

- errors and completed to help Project farmers and Project management assess the profitability of current production efforts.
4. Adoption of the set of accounting statements proposed by Dr. El Maazawy should be hastened and consideration should be given to experimenting with the computerization of these accounts in a small district where all the village banks are affiliated with the Project.
 5. Increased efforts should be given to mobilizing savings to attract additional loanable funds. Consideration should be given to granting village banks affiliated with the Project access to their share of the PBDAC's loanable funds pool. Alternative sources of loanable funds should also be fully explored. The future mix of financing the Project's lending activities should contain funds from several sources, with the PBDAC becoming the major partner in this effort.
 6. Efforts to expand the Project to incorporate all village banks in select districts in each of the three Project governorates can be justified based upon accounting, personnel evaluation, and lending program reasons. The apparent marginal nature of the benefits from focusing the majority of any additional Project resources to completely saturate an entire governorate for demonstration reasons, however, must be weighed against the political risks and other costs involved.
 7. Extension services should be made available to women directly

involved in production activities. The Project should also encourage the decentralization of goals in an effort to come to grips with the *top down* management approach currently observed in the Project. This will facilitate a greater dialog between top, middle and lower management personnel as well as between farmers, extension agents and village bank personnel. This dialog would be furthered if American personnel developed a working proficiency in Arabic.

8. The Project paper, Contract, and Grant Agreement should be amended to address the need for training of female bank personnel and training information. For example, statistics on bank personnel skills should be kept and made available to the training department.
9. The PBDAC should use a variety of means to provide storage facilities, including leasing from the private sector and cooperative agreements with other governmental agencies in addition to direct ownership. This would permit maximum utilization of existing storage capacity and prevent construction of excess capacity. The PBDAC should negotiate rental contracts with the private sector to ensure that owners receive a fair return on their investment. Measures should also be taken to stimulate private investment in storage, including efforts to make potential investors aware of PBDAC programs.

INTRODUCTION

With the passage of Law no. 117 in 1976, the functions of short-term lending, production input supply and the collection of controlled crops passed from the existing cooperative societies to the Agricultural Bank, which was reorganized under the Ministry of Agriculture as the Principal Bank for Development and Agricultural Credit, or PBDAC. By mid-1977, the governorate and district banks of the PBDAC system were supplemented by a network of village banks that now numbers about 750 banks. The functions of the PBDAC and its village banks were later expanded to provide a repository for rural savings and a source of medium-term loan funds.

Despite the progress registered by the PBDAC in instituting a lending apparatus capable of meeting the borrowing needs of many farmers, serious problems remained. These problems included inadequate bank management, poorly-equipped offices and training facilities, unsuitable storage facilities, and a rationing of short- and medium-term loan funds to small farmers. The Ministry of Agriculture requested the assistance of USAID in addressing these problems and others related to the farm credit and input supply system in Egypt. In response to this request, the Small Farmer Production Project, or SFPP, was initiated in 1980.

The Project's activities are now well underway. The purpose of this report is to evaluate the progress and impact of the SFPP to date. The focus of this evaluation is on how effectively the Project is meeting its stated objectives, how effectively it is being managed, and what improvements -- if any -- can be made to enhance the Project's potential impact.

This report is divided into seven major components: (1) farm management extension, (2) production inputs, (3) information gathering and analysis, (4) credit, (5) social impact, (6) training, and (7) storage. An Annex

to this report presents several tables referred to in this report.

FARM MANAGEMENT EXTENSION

The first component of the Project evaluated in this report is the technical assistance provided to Project farmers by extension personnel. The discussion which follows presents the objectives of this component, the findings of the evaluation team, the implications for the future, and the team's recommendations.

Objectives

Farm management and extended technical advice tied to credit was seen as the means to achieving the Project's primary objective of increasing farm output and the income of Project farmers. It has often been asserted that if a linkage could be established between researchers and farmers through extension, Egyptian agriculture would exhibit significant growth. This Project proposed to tie extension to credit (and the technology embodied in the inputs credit finances) to increase production and thus demonstrate the effectiveness of credit and extension in stimulating agricultural growth.

A related objective of the Project was to test, demonstrate and document the effectiveness of the following combinations of credit and the technical assistance provided by a team of extension, credit, and subject matter specialists: (1) both additive credit and technical assistance, (2) technical assistance but no additive credit, (3) additive credit but no technical assistance, and (4) no additive credit or technical assistance.

The experimental nature of the Project and its operational research nature was also viewed in the Project paper as a principle objective. It is

clear that the Project has the potential to generate a great deal of information on the means of reaching farmers and the results from doing so. The experimental nature of the Project and the requirements to keep track of the findings of the experiment is more implicit than explicit in the Project's design. Yet there are references to this work. And prudent management of any development project would seemingly suggest the need to set up a system to analyze the project's results. References to this requirement can be found in the Project paper's logical framework and section 2.1 of the Grant Agreement. For example, the phrase "test and demonstrate" in section 2.1 of the Grant Agreement suggests such an approach. It is unclear whether the testing referred to focuses on system changes or farm technologies, or both. It is also left unsaid how rigorous this testing should be.¹

Findings

Although not without operational and conceptual problems, the findings from this evaluation and a prior internal evaluation both conclude that increased technical assistance, credit, and use of purchased inputs collectively stimulate agricultural growth. There are instances where one of these elements was not present and growth still occurred, but clearly the existence of all three elements enhances the rate of growth.

A significant number of different sizes and types of farming enterprises have been successfully initiated. Selected tables in the Annex to this report illustrate the types and relative importance of the enterprises

¹ In the AID approval cable dated July 2, 1979, it was mentioned that the Project's statistical and analytical requirements, to achieve policy and operational changes contemplated, were understated in the Project paper. However, changes in design were not insisted upon and the grant agreement and subsequent operations may still be understating and underaddressing these requirements.

funded by Project loans.

By early 1983, 4,785 farmers had received loans, thereby exceeding the end-of-Project target of 4,000 farmers.² Project data reveal that 5,942 farmers were recorded to have received intensive farm management assistance. It is not clear how many received loans but clearly the number of farmers being reached exceed the targets set forth in the Project paper.

Two significant findings under the approach taken by the Project are that: (1) traditional crops of corn, wheat, and cotton -- all large land users -- have demonstrated yield and income increasing potential, and (2) livestock, legumes and vegetable crops have also demonstrated production and income growth. It is not clear that the lower profit traditional crops will continue to command additional attention from farmers as each farm faces its own labor constraints, opportunities for other enterprises, and subsistence requirements. At the moment, wheat and corn prices are substantially above world market prices and, from a limited number of interviews, farmers indicate they will continue to plant wheat and corn using new technologies which increase yields between 30-50 percent. Time will tell if this use of improved technology will be widely adopted.

For the non-traditional crop and livestock enterprises, there is a strong demand for these products and for production inputs, so much so that the inputs issue will be addressed in a separate section later in this

² It is reasonably clear from page 17 of the Project paper that 4,000 farmers were to receive loans through the 27 Project-affiliated village banks. The Project paper, however, is less clear on other estimates of total beneficiaries. In the same paragraph, for example, the Project paper estimates that 124,000 small farmers will be the principal beneficiaries. Presumably the author was referring to the total farm population affected, but even here farm households would have to have an average of 31 members if 124,000 individuals were to be affected by loans made to 4,000 farmers. Indirect beneficiaries were estimated at 135,000, the size of the farm population assumed to be affected by better banking operations, the spill-over effects from extension activities, and better district storage.

report.

The central focus of increasing the income of Project farmers has been largely achieved. However, not much is known about how this was achieved or the costs involved. Nor do we know how much better off Project farmers are relative to non-Project farmers. The *analytical* aspects of the Project have been neglected, and extra resources would be needed at this stage if this assessment is to be completed in a satisfactory fashion. Several specific issues deserve mention here.

First, there appears to be little or no analysis of how much it costs to do business under the Project approach and hence there is little basis upon which to judge the cost effectiveness of replicating this approach and what it would take to recover the Project's costs.

Second, the provision of credit without much technical assistance and the provision of both technical assistance and credit have been co-mingled to the extent that analysis of their separate effects is not possible. This was probably inevitable in those village locations where the technical assistance team operates and since the village bank manager can hardly close a loan without extending *some* technical advice. The PBDAC's food security loan program, which is twice the size of the Project's lending efforts in the Project areas, makes loans similar to Project loans. This loan program provides a proxy for analyzing the effects of lending in Project areas *without* much technical assistance.

Third, the control group (no Project credit and little or no technical assistance) has not been resurveyed and actual measurement of crop yields has not been made. Thus, comparisons of production and income changes in Project villages relative to non-Project villages may not be very reliable. This topic will be addressed further in the section of the report dealing

with information gathering and analysis.

Fourth, in discussing Project extension with the ACDI and GOE staff associated with the SFPP, one is left with the impression that they contemplate a straight-forward duplication of the present effort -- with very substantial external assistance -- without varying the Project's experimental design or tapping the substantial resources available through the PBDAC's sources of new loanable funds. Better documentation and analysis of the Project's approach to credit and technical assistance might convince the PBDAC to participate to a larger degree. More will be said about this issue in the credit section of this report.

In summary, coupling technical assistance, credit, and production inputs apparently makes a substantial improvement to Project farmers' production and income. The Project, after roughly two and one-half years of operation, has already exceeded the targeted number of farmers. There remains, however, a substantial amount of analysis to be done to determine the longer run organizational and operational relationship between credit, extension, and input distribution. While these issues, on a national basis, are clearly beyond the scope of the Project, the design of the Project allows for significant input to these critical questions. Furthermore, contemplation of expanding the Project's operations to encompass an entire governorate as desired by SFPP leadership would demand a substantial contribution to some particular organizational form over a fairly long term.

Implications for the future

Since the removal of information and capital constraints have proven successful in the Project, these functions should obviously be continued. The question of what form these functions should take nationally and what

experimental forms should be followed by the Project must be addressed if the Project is indeed to be viewed as an experimental/developmental project.

There are a number of farmers who are self-financed, either by virtue of having sufficient or very insufficient resources, who would benefit from a national extension service. The experience of the Project also clearly underscores the virtue of an extension service working closely with the village banks. If one accepts as proven the point that extension, credit and inputs significantly assist farmers and are causal for agricultural growth, but adds the premise that over the long run there should be an improved and *separate* extension service, a *separate* credit service and a *mixed* private sector and PBDAC input retailing service, then the Project should expand its experimental design to test this and other models which may already be operating. This would require: (1) a commitment -- and corresponding resource allocation -- to the experimental design, data gathering, and analysis of the findings, and (2) a clear operational plan as to what is to be tested and tracked (i.e., costs, returns, problems, strengths, weaknesses, etc.).

It would appear that the Project, or perhaps alternative projects or other government investment modes, should:

1. Establish a significantly improved district extension service working with farmers under regular village bank operations. Perhaps this is being done in the IBRD Agricultural Development Project in Sohag and Menufia and to some extent in the USAID cereals Projects, but the formal evaluations vis a vis the linkage with credit and extension costs and its effectiveness may not be incorporated in those project designs.

2. analyze the effectiveness of the PBDAC's Food Security Development Loan program to ascertain any differences between these loans, where only *regular* extension services and credit are used, and the Project mode of combining technical assistance and credit.

3. try a variety of alternatives which may be cost-reducing to determine if extension-type assistance and other farm management services obtained in other ways can be as effective as the Project's relatively intensive team approach. This may entail providing the village bank manager with a fund that he can use to hire subject matter specialists or subsidize private input distributors to demonstrate their wares. A smaller team approach with emphasis in one case on farm financial analysis and in others on general farm management could also be considered.

Recommendations

The Project staff and PBDAC should determine if they want the Project to begin seriously documenting the effects of the various modes of farm management extension and credit systems already in place and to try a limited number of variations to these systems. Both evaluation teams (i.e., the internal team and this team) interpret this test and demonstration effort as a major function of the Project. However, expansion of current efforts along these lines will require more staff and other resources.

PRODUCTION INPUTS

This section evaluates the production input system Egypt both within and beyond the scope of the Project. Discussed below are the objectives of the Project, the team's findings, the implications for the future, and the team's recommendations.

Objectives

The Project design clearly recognizes that credit is only a facilitating input and that farmers generally must have the physical inputs available for anything significant to happen.³ A major purpose of the Project was to develop "an improved credit and *input system* to provide small farmers with access to agricultural inputs, including seed, fertilizer, cash, technical information, and capital equipment". Marginal improvements were also contemplated in the storage and transportation system which is addressed in a later section of this report.

Additional input-related objectives were that "inputs funded under the Project shall be sold at prices approximately FOB or CIF Alexandria or free market prices as determined to be appropriate in consultation with USAID (see Grant Agreement, section 5.3.b). The Project's production input objectives were clearly consistent with the general objective of testing what would happen if information and credit constraints were relaxed.

³ While there may be a few management changes which do not require purchased inputs, most changes in farming practices require purchasing technology. It is not just transferred by extension systems. Credit and the availability of the capital goods it purchases are generally major constraints to growth.^a

Findings

The Project has done a reasonably good job within a very imperfect input system of supplying Project farmers with required inputs.⁴ This is evidenced by: (1) general satisfaction with the Project, (2) repeat borrowers, (3) high repayment rates, and (4) field observations of changed production practices of traditional field crops, horticultural crops and a wide variety of livestock projects which generally requires new types and levels of inputs.

The Project itself has financed a number of excellent small-scale local input operations for breeding chickens, layer chick farms, rabbit stock enterprises, and seed multiplication enterprises. However, the improvements to the input system should be judged in a relative context. Significant improvements have been made, but the benefits have flowed primarily to Project farmers, and inputs are often arranged on a somewhat ad hoc basis. This is not to belittle the effort, but it is different from the fundamental systems improvements envisioned in the Project.

In retrospect, it is clear that any major improvements in the input system were beyond the scope of the Project because: (1) significant changes require major policy changes relative to public and private sector roles, (2) input systems are built somewhat from the center outward and require a developed infrastructure, and (3) a major commitment of capital and human resources is required.

Project related findings. The Project envisioned trying to supply most of the inputs needed at unsubsidized prices (or at no more than normal subsi-

⁴ The Project baseline survey reported only 6 percent of the farmers were satisfied with the amounts of fertilizer inputs and, while less unhappy with other input availability, most items were in very short supply.

dies). Additive fertilizer was to be sold in unlimited quantities at free market prices. And the cost of credit to finance additive fertilizer was to be much closer to market rates, which is substantially above the PBDAC quota input/credi system rates. Some additive fertilizer was sold when the black market price exceeded international values, but generally the black market price is lower than CIF Alexandria prices. So, farmers naturally prefer the black market even though it may not provide the quantities and types of fertilizer needed. From limited discussions with farmers in Project areas, black market activity still exists.

This has at least two serious effects on production. First, the user of the fertilizer may not be getting the quantity and type needed. Second, the seller is likely robbing some crop -- probably wheat in winter and cotton in summer -- of needed fertilizer.

There are some minor instances where inputs are subsidized under the Project; one being the sale of layer chicks at less than market value and the other being the "demonstration/rent" of machinery if it is rented at less than full costs (which should account for depreciation and return on capital as well as out of pocket costs). These may not represent major subsidies, but given the general propensity by the GOE to subsidize, any temptations along these lines should be avoided to save Project costs and avoid the shock to farmers if they later have to pay full costs only to learn they have chosen a financially non-viable enterprise.

Non-Project related findings. While the team's observations and discussions took place mainly within the Project area, some of the findings for inputs are of a more general nature:

1. *Fertilizer:* The Ministries of Finance, Supply and Agriculture tally the needs for fertilizer based upon consumptive plant

use, foreign exchange availability, and local budget resources. "Enough" fertilizer is either deemed available locally or is imported. But the system does not adequately account for inefficiencies in delivery, leaching due to irrigation practices, volatilization of urea, heavier than estimated plant populations, and increasing fertilization of weeds. There are probably more inefficiencies.

2. *Machinery*: There is a lack of machinery, both appropriate and otherwise. Thus, a need for additional machines exists, more than current plans account for.
3. *Feed supplies*: There is a lack of feed supplies of all types, both concentrates and forage. It should be recognized that feed crops are, and most likely will continue to be, a major land user and that they should be given appropriate attention in research, extension, and credit programs.
4. *Livestock*: There is complete concensus at the farm level that livestock enterprises will be with Egyptian farm families for some time to come. Surely the feed crops which occupy about 35-50 percent of available tillable land in any given season should be fed to efficient animals. Thus, livestock improvement also needs attention.

Implications for the future

As mentioned above, it is unrealistic to expect the SFPP per se to make major *systems* improvements to the existing inputs system. The Project,

however, provides an excellent vehicle to identify input problems for planning authorities and suggesting ways in which the PBDAC and perhaps the Project can finance private suppliers. Except as a last resort, the Project and perhaps the PBDAC should resist the temptation to go beyond input demonstration to becoming a wholesaler and retailer of inputs. An example is agriculture's rapidly emerging farm machinery needs, which the private sector might handle better.

Recommendations

Within the extension component of demonstrating new farming practices, arranging for the supply of production inputs to Project farmers may be required on a case by case basis. However, it is recommended that the major role of the Project should be to feed information from farmers, technical assistance teams and village banks on production input problems back to the PBDAC and to private sector input suppliers so that the input *system* is modified. Any future Project amendments should address the financing of private input suppliers, particularly for durable inputs which later servicing and repair.

INFORMATION GATHERING AND ANALYSIS

An important aspect of any development Project is the gathering of data on the costs and benefits of the approach taken and their analysis. This section focuses on the objectives, findings, and recommendations for the Project in this area.

Objectives

The objectives of the information gathering and analysis component was

to provide a quantitative and qualitative basis for analyzing the effects of the credit and farm extension components. There were several data requirements set forth in the Project. As a pilot Project, a baseline survey was called for to provide a knowledge base on how farming was originally practiced. This was to provide the basis for evaluating the Project's impacts on production and income and to determine if credit, information, and inputs are constraints to agricultural growth.

A major Project output was to be farm record book, which was seen as the centerpiece to the Project's data gathering efforts. The farm record book was to serve as a basis for deriving enterprise budgets, as a tracking device to show the changing financial status of farmers, and as support to the village bank's ability to plan its credit programs. Presumably the information could even be of use to the research department of the PBDAC.

Findings

It appears that the farm record book, the Project's principle information gathering instrument, is the source of considerable anguish and disutility at this time. There are a number of reasons for this.

First, the book may be attempting to serve too many purposes. Farmers need one set of information on a given enterprise before they commit resources to it and another set of information after the enterprise has been adopted. The financial analyst may want similar information, but in a somewhat different form. And there may be still other potential users of this data.

Second, the book is very complex. Most farmers would have extreme difficulty in maintaining the book. Outsiders are currently maintaining the book using farmer recall as to what took place, a procedure no doubt

fraught with error.

Third, there appear to be few if any stop watches or scales in the Project. This makes it difficult to measure and compare normal farming methods with demonstration enterprises. The accuracy of the information being gathered and subsequently passed along by the technical assistance team may contain significant error. It may not be the role of the Project to generate precise enterprise data, but someone should since it is fundamental to agricultural production and investment decision-making.

Fourth, one of the features of the farm record book is the whole farm assessment of the farmer's financial position and performance as measured by the balance sheet and profit and loss statement. The team agrees with the adoption of a current market value balance sheet on the grounds of simplicity. The team does question why prepaid expenses are not included as a current asset and why accrued rent payments and other accrued expenses are not included as current liabilities, however. With respect to the profit and loss statement, the team finds substantial errors with the non-cash adjustments used to determine the profits from the farmer's operations. For example, depreciation of machinery appears to be counted twice (once in the calculation of overhead and once again in the net change in capital equipment). In addition, changes during the year in the farmer's crop inventories, accounts receivable, cash invested in growing crops and accounts payable (all of which represent items in the balance sheet) are ignored in the non-cash adjustment process. Thus, the balance sheet and profit and loss statement are not internally consistent at the present time. Perhaps the most glaring omission, however, is the failure to account for the value of consumption of home consumption of farm production. If a small farmer and his family consume half of the farm's current production and

market the other half, the farmer's profit and loss statement would currently show the farmer suffered a loss from his farming operations. After accounting for the value of home consumption of farm production, however, it may be shown that the farmer's operations were in fact profitable.

Implications for the future

There have already been several conferences on how to improve farm information gathering and analysis, and still another may be needed. Given the variety of potential users, it may be worthwhile for these users to state their exact needs. This may help clarify how best to obtain and present the information to them.

Given the limited time and resources to address this broad issue, disaggregation of the effort is needed. Separating the farm enterprise analysis work, which needs to be done *before* farmers make production and investment decisions, from tracking the farm enterprise and whole farm performance after the enterprise has been initiated is one possibility. It appears the extension service and various USAID-assisted Projects need enterprise analysis budgets and input-output information. Unless already being done, this work should be contracted out to some group who can put people in villages to work with farmers on a regular basis. It is axiomatic that poor information can be misleading, so the need for accuracy cannot be stressed enough.

Some farm enterprise budgets are being developed. One technique being used is the "consensus budget" developed from group interviews or pooling of information from individuals. This approach might generate accurate information, but it would be useful to compare this data to objective measures taken of actual farm work based upon time and motion studies.

There are major differences in irrigation techniques and the amount of hand versus machinery work between areas and by crops, but sets of "standard" enterprise budgets should be prepared from objective measures. Users could then adjust them based upon local conditions.

Finally, the farmer's profit and loss statement provides a means of tracking the Project's effects on the profitability of farming operations. The fact that this financial statement is currently not being completed according to SFPP leaders is at odds with the objectives and experimental nature of the Project.

Recommendations

The initial development of general enterprise budgets and input-output data which are needed to provide standards for local comparisons should be spun off to another project. Instead, the farm record book should be designed to facilitate "follow up" analyses of farm enterprises as well as whole farm profitability and economic well-being. Along these lines, the profit and loss statement and balance sheet in this book should be modified as suggested above. Furthermore, efforts should be undertaken to see that the profit and loss statement, now being totally ignored, is completed to help Project farmers and the SFPP assess the whole farm profitability of current production efforts.

CREDIT

A central component to the SFPP is the extension of Project-type credit over short-, medium-, and long-term periods of time to Project farmers. This section presents the objectives, team findings, implications for the future, and the team recommendations.

Objectives

The objectives of the credit component of the Small Farmer Production Project include the improvement of banking administration, management and service capabilities and increasing the availability of short-, medium- and long-term loan funds in each of the three governorates included in the Project area. Each of these objectives are described in more

The first objective can be broken down into the following subobjectives: (1) delegate greater loan approval authority to village bank managers, (2) reorganize village banks as profit centers to give the village bank manager a greater understanding of his costs and the profitability of the bank's operations in order to help him plan needed changes in these operations and provide middle and upper management with a better basis for planning and evaluation, (3) provide calculators and other office equipment needed to function effectively renovate or newly construct bank facilities to improve work environment, (4) improve village bank public relations through the use of signs and symbols on documents, etc., and (5) mobilize local capital through village bank programs, including the use of promotional campaigns. These subobjectives are set forth on page 2 of the Grant Agreement, page 1 of Annex I of the Grant Agreement and Attachment no. 1 of Amendment no. 1 to the Grant Agreement.

The second major objective associated with the credit component consists of the following subobjectives: (1) increase the volume of loan funds in the three governorates in the Project by a total of LE 11 million, (2) address the shortage of short-term loan funds and the need for greater flexibility by providing farmers with access to additional credit and inputs, and (3) develop and implement medium-term loan procedures based upon need and the ability to repay the loan rather than strictly on colla-

teral. These subobjectives are set forth on page 2 of the Grant Agreement and pages 2-3 in Annex I of the Grant Agreement.

Findings

Under the SFPP, loan authority has been delegated to the village bank loan committee.⁵ This committee may in turn redelegate loan making authority within specific ranges to the village bank manager. The lending authority limits in one village bank in the Kalyubia governorate, for example, consists of the following:

1. *Loans up to LE 6,000:* Short or medium-term loans will be studied by the village bank manager and the financial analyst, and approved by the village bank manager,
2. *Loans between LE 6,000 and LE 8,000:* Short-, medium- and long-term loans will be studied by the loan committee and approved by the credit specialist counterpart, and
3. *Loans of more than LE 8,000:* Short-, medium- and long-term loans will be studied by the loan committee and approved by the implementation manager (who may be the credit specialist for that Governorate).

The exact value of these loan approval authorities depends upon the village bank manager's past performance. This delegation of lending authority to the village bank manager permits faster processing of loan requests from farmers in the village.

The Project was also to reorganize the village bank's accounting system in such a way that its operations are viewed as profit centers in a cost accounting system. This would enable management to understand the profitability of its individual operations. The managerial-oriented accounting system proposed by Dr. El Maazawy for incorporation in the village banks

⁵ In the Kalyubia Governorate, for example, the loan committee in each village bank affiliated with the SFPP consists of the village bank manager, the financial analyst, the counterpart to the credit specialist, and the U.S. credit specialist (who serves in an advisory capacity).

affiliated with the Project appears complete and should be implemented as soon as possible. Because of the time demands already placed upon the accountant and village bank manager, assistance will be needed to implement this extremely comprehensive set of accounts. Furthermore, demonstration efforts should be undertaken to program this set of statements for use on a microcomputer on an experimental basis for potential later adoption by the banks on a broader scale. In addition, all bank staff involved will have to be trained in the completion of these statements and what they mean in a management context if the full benefit of Dr. El Maazawy's outstanding efforts is to be realized.

Calculators, desks, file cabinets and other office equipment have been provided to the village banks affiliated with the Project. The bank facilities themselves, however, continue to be in need of renovation. Since many of these bank sites are rented from the Cooperative Society, the decision to construct new bank facilities was amended to the grant agreement. The sites on which this construction is to take place have been selected and bids for construction are currently being let. The completion of these facilities should give the village banks further visibility in the community and provide a better place in which to work.

From all appearances, the village banks affiliated with the Project are becoming well known in the village through the range of the banking and credit services they are offering. Currently, signs with logos and bank stationery with same are still in the planning stage.

While unaware of specific actions taken to promote thrift in rural areas, the growth of savings deposits at village banks both within and outside the Project in the last few years has been truly phenomenal. The level of savings deposits at an average village bank under the Project grew from

approximately LE 15,000 in 1978 to almost LE 60,000 in 1980. For the PBDAC as a whole, the number of savers jumped about 41 percent from June 30, 1981 to June 30, 1982. The volume of savings deposits increased approximately 82 percent over this same time period. When one considers that only a small percentage (15 percent) of the PBDAC's borrowers have savings accounts, however, additional efforts to mobilize savings in rural villages are likely to be profitable.

The LE 11 million increase in the volume of loan funds to be supplied under the SFPP by both USAID and GOE were to be distributed as follows: (1) LE 2.83 million in short-term loan funds to be provided by USAID, (2) LE 3.74 million in medium- and long-term loan funds provided by USAID, and (3) LE 3.74 million in medium- and long-term loan funds provided by GOE.⁶

The total number of loans made over the life of the Project by the end of 1982 was 5,653 while the total amount loaned reached LE 5.5 million. Approximately 32 percent of the total number of loans made were in the Assuit governorate, 23 percent were made in the Sharkia governorate, and the remaining 45 percent were made in the Kalyubia governorate. The distribution of the total volume of Egyptian pounds lent under the Project in these three governorates during this period was 27 percent, 41 percent, and 32 percent, respectively. The relative importance of the different types of loans made to date at the end of 1982 are summarized in the Annex to this report.

⁶ Short-term loans consist of loans for crop production, beef fattening, family living, broilers, egg production, and other loans for poultry and livestock enterprises, dairy, food processing, agribusiness, farm improvement and machinery. Long-term loans are made for land improvements, agri-storage facilities, food processing, orchards, machinery and agribusiness.

Short-term loans. These loan funds are designed to *supplement* the loan funds and in-kind credit currently being supplied to farmers under the PBDAC's existing programs. These funds have been loaned at an interest rate of 8 percent per year (recently raised to 10 percent) for periods of up to 14 months. Production inputs financed under this program must approximate free market prices as determined to be appropriate in consultation with USAID. Short-term loans made by the PBDAC under its existing programs continue to be made at terms determined by the PBDAC.

Short-term crop production loans are relatively important in number. The volume of loan funds associated with these loans, however, is likely much smaller than expected when the Project was first proposed. After other categories of short-term loans are accounted for, *total* short-term loans made during the 18-month period ending October 1982 represented 48 percent of all loans made and 45 percent of the total volume of loan funds extended under the Project.⁷

The extension of short-term loan funds is clearly what the village banks affiliated with the SFPP are most comfortable in doing, and do best. The concept of the village bank and extension personnel working with farmers is viable one; one in which each sees the role he or she is playing to promote the profitability of farming activities in their area. From a banking standpoint, several weaknesses in the current procedures are seen. For example, little is done to document the financial progress of the farmer over time. It was mentioned that the village bank manager and financial analyst know everybody in the village and their credit worthiness. That may

⁷ The short-term loan funds are kept in a revolving fund throughout the life of the Project to be reloaned to farmers. Repayment of medium- and long-term loans are integrated into the PBDAC's regular portfolio but cannot be used to amortize its debts.

be true, but committing this knowledge to a loan performance record which includes an historical balance sheet and income statement is critical for sound managerial decision making. One wonders how the bank's lending operations would be affected if its loan evaluation personnel were swapped with that of another village bank.

A lending procedures manual is needed which clearly sets forth the steps to be taken in (1) taking a loan application, (2) evaluating the application, (3) making or rejecting the loan, and (4) monitoring the borrower's financial position and performance after the loan has been made. Such a manual could be supplemented by a case study book which contains examples of different lending situations and how they should be treated.

The SFPP has recently proposed and received approval for a revolving line of credit program which it intends to offer credit worthy customers on a pilot basis. This effort is to be commended since it has the potential for consolidating the number of production loans needed by a farmer during the year under the PBDAC's regular lending program into one loan. Furthermore, the loan procedures appear to be much more clearly set forth for this lending program.

Medium- and long-term loans. A major thrust of the SFPP as originally designed was to provide medium- and long-term financing to those farmers who could justify the need and repayment capacity but who may not have qualified for the loan under the PBDAC's prescription lending practices. For the 18-month period ending in October, 1982, approximately 52 percent of the number of loans made by the village banks affiliated with the Project were classified as a medium-term loan (a loan with a maturity ranging from more than 14 months up to a maximum of 5 years). These loans are currently made at a 10 percent annual percentage rate. Almost 55 percent of the

monies lent by these village banks during this 18-month period were medium-term loans.

When one combines this medium-term lending activity with the short-term lending efforts by these banks, the total lack of long-term lending becomes clear. Only 0.2 percent of the total loans made under the SFPP and 0.3 percent of the total monies lent constituted a long-term loan. The reasons given by SFPP leadership for this lack of long-term lending are that: (1) the demand for long-term loans at the initial stages of the Project was not there--farmers were cautious in their initial dealings with the village banks affiliated with the Project and only wished to undertake short-term borrowing, and (2) now that the demand for long-term loan funds has begun to materialize, these village banks lack sufficient loanable funds to make these loans *and* continue to meet the demand for short-term financing over the remainder of the Project's current life. This is indeed unfortunate since one of the lessons to be learned under the "pilot" stage of this Project had to do with the evaluation, extension and servicing of long-term loan requests.

Each medium-term loan under the Project is initially evaluated for repayment ability. This is done by completing a farm plan document to assess the net income from the farmer's expanded operations. This is then compared to the size of the amortized loan payment. It is not clear that such a farm plan is completed for *each* year over the life of the loan and compared to that year's loan payment when examining repayment capacity in all three governorates. In one governorate visited, the farm plan is completed for the first year only. The level of net income available to repay loans is then assumed to remain the same in subsequent periods. Clearly this may not be true for some loan purposes that do not generate equal annual income

flows over the life of the loan. The size of the annual loan payment may also vary depending upon the method of amortization chosen (i.e., equal principal plus interest or merely equal principal) when determining the amount of interest owed annually. This procedure must be modified, particularly if and when these banks move into making long-term loans. An orchard, for example, generally does not begin to generate income until the fifth or sixth year after the seedlings have been planted.

Loan evaluation. It was not clear that the loan evaluation personnel clearly understood the role the balance sheet plays when it comes to assessing the repayment capacity of the borrower, at least in a formal context.⁸ Current and proforma balance sheets tell the lender something about the borrower's *liquidity*, or his ability to generate cash quickly with little or no disruption to the ongoing nature of his firm.

Another matter has to do with the use of five credit factors when evaluating the merits of a medium-term loan: (1) managerial ability, (2) financial position and progress, (3) repayment ability, (4) loan purpose, and (5) collateral. Under questioning about the relative importance of these five factors, the loan evaluation staff of a village bank visited by the evaluation team concluded after much discussion that the farmer's managerial ability and the purpose of loan were perhaps the two most important factors when assessing the merits of a loan. It is suggested that some thought be given to assigning percentage weights to these factors (and ranges with point values to each factor) in an effort to standardize the

⁸ It is clear by their practice of requiring the farmer to sign a pre-dated check for the amount of the loan payment that the village banks affiliated with the Project understand that other monies can be brought to bear to ensure loan repayment. Since writing a bad check in Egypt can result in a prison term, the farmer will be forced to convert other assets to cash to ensure the check is good.

loan evaluation process. Those borrowers who do not achieve a particular cut off score would merit intensive evaluation while others could be processed more quickly. Given its subjective nature and relative importance, more thought needs to be given to how the "managerial ability" credit factor is used in this process.

An issue related to the "purpose of loan" credit factor is the rationing of credit to small farmers who may wish to borrow funds to purchase an animal for subsistence reasons. The Project may wish to discourage this use of funds because it may not maximize either production or profits. The farmer, however, may be striving to maximize his utility, which is more than simply a function of profits. In denying this loan when it is feasible from a repayment standpoint, the Project runs the risk of alienating Project farmers. Page 21 of the Project paper clearly states that "Farmers will select the activities to be financed." Project management, in seeking to maximize growth, is somewhat at odds with the Project paper. It is not suggested that uneconomic loans should be made; all loans should have a determinable repayment capacity. Any extension of the Project should clarify this seeming conflict in objectives.

The team got the impression in at least one governorate, the *speed of loan repayment* was being maximized. If the farmer could possibly repay the loan in 3 years rather than 4 or 5, then the loan was made for 3 years. Some borrowers also cited pressures to repay loans *after* the loan was made. While this may be done for good reasons from the bank's perspective, consideration must be given to what this policy means for the borrower's liquidity position and the steady growth of his firm. Early repayment of a loan may translate into postponing the acquisition of another asset due to insufficient cash for a downpayment. The farmer, *if* he is a good manager,

should be in the best position to determine whether early retirement of the loan maximizes his financial position and performance.

Finally, a lending procedures manual with case examples illustrating how specific situations should be handled is needed in the medium-term lending area as well. Furthermore, as changes to these lending policies are approved, copies of these changes and perhaps examples of their applicability should be distributed to all banks under the Project for incorporation into the manual.

Training. With respect to the training afforded to financial analysis under the Project, the effort can be questioned both in terms of mount and orientation. In the Kalyubia governorate, for example, a prospective financial analyst spends 1-2 days at the governorate bank and one week in a village bank with an experienced financial analyst. During the first 1-2 day period, the trainee is introduced to the various forms that must be completed when evaluating a loan. Emphasis is on how to complete the form. Consequently, the prospective financial analyst learns "what to do" rather than "why he is doing it". Before the trainee is introduced to the full set of forms, time should be spent illustrating the concepts underlying each form and why these forms are important in a management context from both the bank's and the farmer's point of view.

Consideration should also be given to the potential information distortion which could occur over time by previous trainees training new trainees. A case study workbook complete with answers made available to financial analysts during their training period would help standardize instruction and perhaps help the trainee ask questions he might not otherwise have thought of. The concept of monthly meetings in this governorate to discuss a particular credit factor is a good idea and might be expanded

to cover other topics and a sharing of recent lending experiences.

Implications for the future

An important issue facing any bank is how it can obtain loanable funds in sufficient quantity to meet the Projected demand for loan funds at the going cost of capital. The PBDAC has several sources of loanable funds available to it: (1) the expansion of its deposits, (2) borrowing from commercial banks or the Central Bank, (3) grant and loan agreements with foreign countries and institutions, and (4) issuing debentures. Each of these alternatives are discussed in turn below.

Expansion of deposits. The PBDAC can draw upon the deposits of its customers when making loans to farmers. The more funds the PBDAC receives in deposits, the greater the pool it has to draw from when making loans. The Central Bank of Egypt requires the PBDAC to hold 35 percent of its deposits in reserve (vault cash or noninterest bearing deposits at the Central Bank). Thus, for every LE 1 of deposits in its consolidated pool of deposits, the bank can lend LE .65 to its borrowers. The pool of deposits referred to here consists of the deposits at all of the village banks in the system.⁹ The fundamental accounting relationship underlying the bank's balance sheet is clear; the greater the amount of funds the PBDAC receives in the form of deposits, the more funds it has to make loans. Efforts therefore to promote thrift in rural areas in an effort to increase savings deposits at village banks will have a direct effect on the availability of

⁹ A review of the asset side the consolidated PBDAC balance sheet curiously shows no line item for total reserves and its distribution between required reserves and excess reserves. Thus, it must be assumed that the bank either ignores the requirement and has used any and all idle deposits to either make new loans or investments or else this transaction has been somehow netted from the balance sheet.

loanable funds to the PBDAC as a whole. The PBDAC of course decides on how these loanable funds are distributed to each of the governorates.

Borrowing from other banks. A second major source of loanable funds available to the PBDAC is its ability to borrow from commercial banks at rates below the discount rate charged when borrowing from the Central Bank, an option also available to the PBDAC. The interest rates charged by commercial banks are further softened by a subsidy from the Ministry of Finance if the PBDAC uses these borrowed funds to lend to farmers for specific agricultural production purposes. This source of loanable funds can be counted on as long as there is sufficient liquidity in the economy as now appears to exist. At current rates, the cost of loanable funds for non-subsidized lending activities such as the loans made under the Project would not differ appreciably from the rates now paid by borrowers for Project-type loans. Should the economy experience a period of tight money with its attendant high interest rates, the availability and the desirability (from the Ministry of Finance's viewpoint) of these loanable funds may be altered.

Grant and loan agreements. There have been a wide variety of foreign countries and institutions which have supplied grants and loans to the GOE for one purpose or another. The current agreement between US-AID and the GOE to supply loanable funds along with technical assistance to the PBDAC is an example of such an agreement. This source of loanable funds obviously cannot be counted on to be continuous in nature over time.

Issuance of debentures. Technically, the PBDAC can also acquire loanable funds by issuing debentures. This authority given to the PBDAC was most recently expressed in Law No. 117 (article 7.2). The PBDAC and its predecessor agency have not used this authority since the early-sixties, how-

ever, when LE 20 million in debentures were issued. These debentures were purchased by the GOE. It has been suggested by several individuals interviewed that this alternative source of loanable funds is politically unavailable at this time.

Meeting the SFPP's future needs. There have been several assessments of the amounts of loanable funds that should be made available to the Project if the Project were to be extended and certain objectives are to be met. The SFPP leadership has suggested two such alternatives; the difference being the degree of intensity of the lending efforts in the village banks affiliated with the Project (to say nothing of a difference in funding needs of over LE 100 million). No doubt several other alternatives will be proposed for consideration if the Project is extended before a final decision regarding the level and mix of alternative sources of loanable funds is reached.

Restricting the present discussion to the *mix* of financing to be used, it is the belief of the Team that the mix of loanable funds sources should be comprised of more than one of the sources of loanable funds described above. This would help mute the perception by farmers of the Project as being "that American Project", and will allow the leadership of the PBDAC to assume the role of a senior partner in the continued application of Project-type lending methods. Again, if the Project is extended, it is the hope of the Team that the funding decision can be handled in such a way that farmers in those areas where the Project is active will not lose confidence in the continuity of their bank's services.

Finally, several additional measures should be considered in an effort to aid the village banks affiliated with the Project to make the longer-term loans envisioned in the Project's design and to enhance the loanable

funds these banks have to work with. First, consideration should be given to placing the principal payments for medium- and long-term loans in a separate revolving fund for further lending under the Project as is now being done for short-term loan payments. Currently, the principal portion of medium- and long-term amortized loan payments are returned to the PBDAC's general pool of loanable funds. Second, consideration should be given to the managers of the village banks affiliated with the Project that they will be entitled to their share of the PBDAC's total pool of loanable funds as suggested by the village bank's percentage contribution to the PBDAC's total deposits. This would give the enterprising village bank manager and his staff the added incentive to promote thrift in the area, an objective set forth in the original Grant Agreement. Given the statistic that only 15 percent of village banks customers have a savings account, this could result in a considerable source of loanable funds to the bank. This step would also enable the village bank manager to get a better idea of the minimum amount of loanable funds available to his bank and to plan accordingly as any banker traditionally must do.

Recommendations

Efforts should continue to facilitate the adoption of the set of accounting statements proposed by Dr. El Maazawy and consideration should be given to experimenting with computerization of this set of accounts in a small district where all village banks are affiliated with the Project.

Increased efforts should be given to mobilizing savings in Project villages as a means of attracting additional loanable funds. Consideration should also be given to granting the village banks affiliated with the Project access to their share of the PBDAC's loanable funds pool.

The Project should examine all means possible to become more active in the evaluation and completion of long-term loans. If the completion of long-term loans is not possible now, such efforts should be undertaken if the Project's life is extended.

A loan procedures manual should be finalized complete with examples and appropriate actions. This manual should be standardized across all Project banks and updated as new procedures are developed.

Efforts should be strengthened to track the changing financial position and performance of borrowers. Notes should be made explaining the reasons for any deviations from current expectations or norms to differentiate between events that the borrower had control over versus those events that were beyond the borrower's control.

Alternative sources of loanable funds should be carefully explored. The future mix of financing the Project's lending activities should contain funds from several sources, with the PBDAC becoming the major partner in this effort.

SOCIAL IMPACT

This section contains a summary of the responses by farmers interviewed on the impact of the Project, the implications their perceptions have for the future, and the team recommendations.

Farmer profile

Throughout the course of this evaluation, 92 farmers were interviewed in the three governorates of Sharkia, Kalyubia and Assuit. The majority (60 percent) fall into the age range 40-60. Given the family productive life cycle in Egypt, this is to be expected. That is, the farm family labor unit

is at its most productive during the period when children are capable of assisting in farm related activities and at a time when parents have consolidated both land and home holdings. Family size averaged between 4-7 children. And while 60 percent of farmers had schooling not above the sixth grade, many were proud to point out that sons were continuing through high school. This increased emphasis on education is surely a contributing factor to increased labor shortage on the farm. All but six were full time agriculturalists.

In Egypt, the combined ownership/renting of five feddans constitutes control over a considerable size of land. This is borne out by our sample, in which the average amount of land owned was between one and two feddans and the average combined (rented and owned) amount of land was also between one and two feddans. Only four people were landless and these individuals had taken out loans for livestock. Two people taking out gamusa loans had simultaneously rented a small parcel of land on which to grow clover for feeding their new animal(s).

Loans. A total of 91 loans were taken out by the farmers interviewed. Of these, 55 were livestock loans, the largest number being 23 for water buffalo followed by 14 for calves (calf fattening). Twenty loans were for preharvest and production loans and 16 represented equipment loans. The majority of water buffalo loans were made in Kalyubia. Equipment loans were popular in Assuit. This coincides with the perceived manpower shortage now currently observed in Upper Egypt. Indeed, when asked what were major farming problems in the area, all farmers in Assuit brought up the problem of labor shortage and the corresponding need for farming equipment. Preharvest loans were popular with farmers who otherwise would have to either borrow from local money lenders or sell their crop at a reduced price prior to

harvest.

All farmers were impressed with the manner in which the program addressed their credit needs. Many commented that they would have been unable to obtain the inputs without this Project. Some comments made include the following: "Before credit was blocked and it took a long time to get", "now credit for farm tools is available and it wasn't under the old program", "there's more credit now and I can get a loan when I want", "The credit comes right away now", "Now there is credit available for the small farmers", "the Project makes it easier to get credit", "now, we just take the credit and go". Clearly, the Project has addressed satisfactorily one of the major goals: increased access to financial resources.

Perceptions of the bank. From the farmer's point of view, a second major Project goal specifically addressed has been the easing of lending procedures. All but one farmer were unanimous on the point loan formalities are generally completed within one day. Some remarks along this line include the following: "We can get what we need right away", "the organization is better now", "the organization of the loans is faster", "the procedure is easier for the small farmers now", "credit is available and easier to get", "the accounts are more accurate", "the procedures are easier", "before, the bank would tell me come back tomorrow -- and tomorrow...", "I couldn't get credit before", "there wasn't a Project to provide my inputs", "no credit was available for small improvements", "I wasn't able to get a gamusa before with a loan".

Perceptions of extension services. Along with the Project's major goal to increase the production and income of small farmers, the role of the Project extension agents has been significant. There are two areas from the farmer's point of view in which agents have had a significant impact: (1)

improvements of traditional crops (2) movement into nontraditional crops.

Improvements to traditional crops have been particularly important for those farmers having adjoining blocks. Production of wheat, for example, has increased in some blocks from 8 to 12 ardab a feddan. Farmers the team spoke to in Kalyubia who were part of a wheat block expect this season a 6 ardab increase in production, as a result of ground preparation, use of a seed drill, and regularized pest and weed control. The benefits from use of these inputs are readily apparent to farmers, who made remarks such as the following regarding the quality of information given by the extension agent: "He's better trained than the others", "he has more information", "he provides me access to machinery so I produce more", "he gives advice on spraying, fertilizing and organization that has increased my (wheat) yield", "he gives good advice and I have more profit".

With respect to movement into cash crops, the Project seems to be providing not just technical assistance to farmers, but also acting to 'legitimate' this transition; a transition which represents a risky venture for subsistence-oriented farmers. The Project is able to supply these farmers not only with needed credit, but also with the needed advice on just *how* to proceed with these new cash crops, most of which are vegetables. Along these lines, farmers made comments such as the following: "before, I grew cotton, maize and clover. Now, he helps me with vegetables", "before the Project, I didn't grow vegetables. He examines them and tells me what to do", "I formerly grew vegetables only rarely -- he's given us an idea of vegetables and now we're growing more", "Any new thing he tells me about -- I grow a new tomato strain now", "I grew new crops and I increased my (overall) profits".

Farmer participation. According to the Project paper, a major goal of the

Project is to include farmers in the selection of activities to be financed and see to it that farmers participate in the management of central Project components (p. 21). Here, the Project has reorganized emphasis from a devolution of authority to farmers's selection of desired inputs, to encouraging farmers to participate in specific farming and planting activities *chosen by top management*. This top-down approach, which frequently stresses macro-level planning goals and restraints, is in conflict with many of the micro-level demands of farmers.

This is particularly evident in livestock loans. Farmers are anxious to obtain greater numbers of loans for water buffalo. From the micro or household productive unit perspective, this makes good sense. In a period of increasing food prices and inflation, gamusa offer a ready form of investment that provides dairy products both for family consumption as well as for sale. It also provides labor, fertilizer, even fuel, and calves that can be sold. In short, a water buffalo is a comprehensive insurance policy that acts as money in the bank for farmers. But a shortage of food concentrate, coupled with the competition between clover and other crops, has recently encouraged Project management to discourage loans for the purchase of water buffalo. These loans are not seen as *productive* loans for the agricultural sector. Nor are they seen as addressing the goal of increasing net farm income. For the subsistence or semi-subsistence farmer, nothing could be more faulty.

The conflict in views identified above result in large part from differing interpretations of what constitutes a *productive* use of credit as discussed earlier in the Credit section of this report. This underscores the potentially conflicting goals of viewing Project success from (1) a macro, state-policy (food security) perspective versus (2) the micro level

needs of farmers, who are located at various points along a continuum between subsistence and cash crop production.

Implications for the future

An important role of the Project has been to assist farmers in moving into new farming activities and to apply new and more effective farming techniques. Here, considerable success has been made. But an important factor in determining if a farmer desires a *productive* loan is the extent to which his subsistence needs have already been met. Without the latter being secured, small farmers who are operating in a partly monetarized economic system will be unlikely to take the risks necessary in moving into cash crops or experimenting with new techniques on traditional crops. Those farmers in the Project who have moved into nontraditional crops certainly have not been from the bottom quartile. They are farming families who already have a certain degree of both crop and intrafamily employment diversification. Hence, the risks can be absorbed by the larger productive family unit.

It is important that the Project realize that different packages will appeal to families at different socio-economic levels. Care must therefore be taken to see that farmers in the lowest quartile -- in many cases representing families who will be seeking the "one gamusa" loan -- are not in the future neglected in favor of the petty entrepreneur moving into or improving existing nontraditional enterprises such as cash crops or broiler houses.

There appears to have been little attempt to address the role of women in either extension or loan activities despite the fact that women are largely responsible for the care of poultry and livestock, the two largest

areas of past Project activity. Income from dairy products and poultry are traditionally considered a women's income and are central to the maintenance of household expenditure patterns. There is the danger of undercutting this important income source in Projects such as the chicken batteries, where women continue to care for the poultry but both extension and marketing operations are handled by the male head of household. Here, women are being cut out of the development process.

A disturbing and frequently met phenomena is reference to the Project as the *American Project*. It is on this basis that, for many farmers and some extension agents, the Project has gained its legitimacy. If steps are not taken to *internalize* the Project and make it an *Egyptian Project*, there will be obvious problems in the future.

In the broad terms, this, as any Project, is only as effective as the constraints placed on its operating structure. Here, responsiveness to farmers demands by agricultural agents appear to be curtailed by the top-down approach to both planning and implementation. A goal of the Project is, as stated in the Project paper, decentralization of decision making. While this goal is being realized in the village bank's loan approval process, there is still considerable room for improvement regarding interaction between the extension agent and the farmer. The traditional role of the extension agent in Egypt has been largely one of *watch dog* over crops such as cotton. It is therefore understandable that farmers approach the new role of extension agents with caution, but with increasing good will. It is commendable that Project extension agents have gained the confidence they have with farmers. But improvements must continue to be made in creating a dialogue; moving away from a passive receptive role on the part of farmers to a dynamic exchange between extension agents, farmers, and the

village bank.

Recommendations

To begin with, extension services should be made available to women who are directly involved in production activities traditionally handled by women. Two such examples are womens' involvement in chicken and cattle production. In line with the findings of the USAID-funded Michigan State University Project on the increasingly important role of off-farm employment, the Project should encourage loans made to this sector to foster the growth of such jobs as milk separators and machinery repairmen. Finally, the Project should encourage the decentralization of goals to come to grips with the *top down* approach currently observed. This will facilitate a greater dialog between top, middle, and lower management personnel as well as between farmers, extension agents, and village bank personnel. This dialog would be furthered if American personnel developed a minimum level of proficiency in the Arabic language.

TRAINING

During the course of this evaluation, the team became convinced that, although the training component of the Project had gotten off to an "inauspicious start," the Project is beginning to meet the terms of the Project Grant Agreement and Contract Agreement. This is not say that the language contained in these Project documents should not be altered if the Project is extended to address certain oversights which the team noticed. These issues will be discussed in the latter portion of this report.

Objectives

The Statement of Work in the Contract (as amended) between ACIDI and the PBADC, contains the following language regarding training (Page 3, Article 1, paragraph 2): "The six¹⁰ principal components of assistance to be provided under the contract include *advice and training* to Bank management and staff at headquarters and to the three governorate banks and selected district and village branches on (1) administration, management and services, (2) use of loan funds, (3) extension and demonstration, (4) input delivery and handling, (5) training and methods and equipment, and (6) participant training in the United States.

Stated in general terms, "advice and training" were to be provided in these areas.

Findings

To understand the training needs of the individuals involved, the relevant duties of the agricultural credit specialist, farm management specialist, and management training specialist must be considered.¹¹

Agricultural credit specialists. The relevant duties and responsibilities of an agricultural credit specialist in following: "Provide training and advisory assistance in the redesign of all loan making, servicing, and collection functions of the Village Bank System" (Section II, Page 8).

These duties have been carried out by the contract team on both informal (one-on-one) and formal (short course) bases. Interviews with the Egyp-

¹⁰ Amendment no. 6 to the Contract changed the number of components from five to six.

¹¹ Since the Project activities description in the Grant Agreement more or less correspond to duties and responsibilities in the Contract, conformity will be judged against the Contract.

tian counterparts, Project staff, and bank financial staff in Project banks¹² indicate that all have received some training, either informally and formally.

Formal coursework has included short courses in credit factors and credit policy (administration, financial position, loan papers, ability to repay, and collateral), farm records, and calculators. Three of the counterpart credit specialists and one bank manager have also participated in a month-long training program in the U.S., where they worked with the Production Credit Association and other credit organizations.

Many of the counterparts, staff, and bank financial personnel have also attended short courses in technical areas, in order to better understand what the improved input packages contain, so that they might be more responsive to the loan needs of the clientele.

Informal training activities have also been carried out by the credit specialists on a regular basis. All of those interviewed indicated that the credit specialist visited them and advised them *at least* once every two weeks. In most cases the frequency of visits was once or twice a week. This informal training has been enthusiastically received by staff and bank Personnel.

In general, most of those interviewed thought that their training had been sufficient in improving their skills to meet the needs of their jobs. All of those interviewed, however, said that they would like to receive additional training in more advanced techniques if and when procedures were changed to require new skills.¹³

¹² Seven interviews were conducted; two in Kalyubia, two in Sharkia, and three in Assuit. American staff were also interviewed.

¹³ See the Credit section of this report for recommendations on improvement of Credit training.

Farm management specialist. The relevant duties of a farm management specialist include "Travel with and guide/teach/counsel the Governorate counterpart staff as well as normally minimum bi-weekly visits of the nature and with Village bank Extension personnel to Project farms/farmers and other activities. During these visits, training and advice will be given to Egyptian Project staff and farmers, and any practices and problems are observed. Any matters which cannot be resolved on the visit will be resolved by follow up with appropriate team members or resource persons." In addition, the farm management specialist is to "Assist in developing systematic coordination and cooperation among agricultural research, university staff, the extension service, and the Governorate BDAC."

As with the agricultural credit specialists, the farm management specialists have conducted training in both an informal and formal setting. Formal training of extension staff and counterpart staff has included short courses in small animal production, livestock production, soil science, vegetable production, mechanization, weed control, pest control, field crops, bees, farm records, aquaculture, farm management and poultry production.¹⁴ Six of the counterparts and extension agents have participated in a month-long training program in the United States, where they worked "on-the-job" with U.S. extension service agents.

Informal training of farm management counterparts and extension personnel has included consultation with the American farm management specialists, Ministry of Agriculture research specialists, and university specialists, who provide expert advice on specific technical problems.¹⁵

All of those interviewed thought that the American staff was doing an

¹⁴ See Annex H to the Internal Evaluation, pages 78-82.

¹⁵ See Annex J, Page 84, Internal Evaluation for list of experts.

excellent job of providing this informal training on a regular basis.¹⁶ However, though the interviewees felt that cooperation with research and university specialists had improved (it was nonexistent before the Project), many felt that the technical specialists were not making *enough* regular visits, or spending *enough* time when they came, to provide as much expert advice as was needed, and that their *level of effort* needs to be substantially improved.

Management training specialist. The management training specialist has had, by far, the most complex and difficult set of duties and responsibilities to carry out as far as training is concerned. As noted on page 85, paragraph 2 of the Internal Evaluation, the "...time was not right for the development of a comprehensive management training program with the PBDAC..." at the start-up of the Project activities in 1980.

The specific duties of the management training specialist were also expanded and more clearly defined by Amendment no. 6 to the contract, which lists the following duties:

1. Plans for and directs the development and implementation of programs, utilizing local and TDY specialists, for the training of Project staff and/or selected farmers,
2. Assists Project staff in planning for, designing and implementing programs to be carried out by the credit, farm management, and storage advisors in the governorates, including additions to the farm record book and related record keeping systems,
3. Assists the PBDAC training staff to develop programs and to field test existing training programs that will facilitate the implementation of new policies and management programs to be tested in the Project areas.
4. Advises on the availability and utility of overseas training

¹⁶ Three interviews were conducted in Kalyubia, four interviews were conducted in Sharkia, and five interviews were conducted in Assuit. American farm management specialists and university specialists were also interviewed.

programs for Project staff and coordinates the development and implementation of such programs, and

5. Assists in upgrading PBDAC and Project BDAC training facilities and in the selection of appropriate training equipment.

Given the slow start and difficulties in obtaining data (for example, statistics on staffing patterns for the village and governorate banks are extremely hard to obtain), the management training specialist has made remarkable progress in a relatively short period of time. Training equipment has been purchased and is in place at the main governorate banks.¹⁷ Training facilities at the PBDAC in Cairo have been upgraded. Plans have been made to upgrade the facilities at the bank in Benha. Ten farm management and credit personnel have received training in the United States. A second group of ten farm management and credit personnel will leave for training in the United States following language testing in April 1983. Two storage and transportation specialists from the PBDAC and four computer training personnel from the Project will be accompanying this group. An executive study tour is scheduled to take place in September 1983, and will include 15 senior level officials from the PBDAC, three governorate banks, and three governorate Ministries of Agriculture. The three governorate training specialists are currently in language training to prepare them for overseas training. Short courses in technical specialties and credit are being scheduled on a monthly basis and will be repeated as necessary. English language training is being encouraged or provided for all potential overseas participant-trainees. A public relations/publicity effort is being developed to help familiarize farmers in the governorates affiliated with the Project. Forty-two participants have been selected for training by the World Bank in project analysis and design.

¹⁷ See Annex I, page 83, Internal Evaluation for description.

It appears that the most difficult task to implement for the management training specialist is in assisting the PBDAC training staff in developing and testing training programs. At present, the training system in the governorates follows organizational chart preciseness; the needs assessments are collected by the governorate training specialists by questioning departmental supervisors. The supervisors select the personnel to be trained and do the actual teaching. The governorate training specialist then becomes a facilitator for the supervisors. He sets the time, obtains any outside lecturers, designates specific hours for each subject, budgets within very limited means, and calls the course to order. His participation consists mainly of the bureaucratic or paperwork aspect of the training effort.

The management training specialists, in recognition of the limited background of the governorate training specialists in teaching techniques, have designed a work plan to upgrade professional capabilities in this area by *training the trainers*. This work plan has gradually been put into use over the past year and is expected to result in substantial improvements in the performance of the PBDAC's training department. It is anticipated that this improvement in skills will ultimately result in the development of the governorate training specialists into

" ...providers of training modules, training aids and finally as inspectors for the training department. This will be done by raising their professional competence to a much higher level, by enabling them to know and to properly use the equipment that has been purchased by the SFPP for the bank and by enabling them to be able to judge the quality in the teaching of others.

Technically, the system to be employed in achieving this is core group building: the three governorate training specialists will be formed into a loyal, excellence-oriented, task-capable group-concerned with improving the competence and capability of the department. Once the main types of education to be used is effective; cognitive competence will develop from the production of training aids, modules and eventually operating manuals. By the

end of two years, the department should be well on its way to having the beginning of such a core group."

To date, governorate training specialists have received training in audio-visual training aid use and preparation (overhead projectors and flip charts). A 12-day governorate training specialist training Review course has been given and the training specialists from *a//* governorates (including those outside the Project) were encouraged to attend. The subject matter of this course included training theory, methodology, and administration. An proposed overseas participant training program has been designed for training specialists, which will include three weeks of work with the Farm Credit Banks in Omaha, Nebraska, in the progress and mechanics of centralized training programs.¹⁸

The American management training specialist has been working closely with the training director for the PBDAC to develop the various programs described above. A strong, mutually supportive relationship has been developed during the Project between the three governorate training specialists and the PBDAC training division. This increase in cooperative effort has facilitated the development of more effective training programs in the various governorates.

Training for women. An examination of the Project paper suggests that the "ongoing social analysis under the Project" to "examine the role of women in farm management and identify medium-term loan opportunities that would increase the income of women" was not provided for in either the Grant Agreement or the Contract. In fact, even the "Socio-Economic Survey" or the baseline survey funded by the Project totally neglects the role of

¹⁸ A total of eight women from the Cairo Branch have have participated in these courses in audio visual aids and training review. Two of these women are receiving training in the English language in preparation for participant training overseas.

women in Egyptian agriculture. In Sharkia, for example, where 80 percent of the farmers own small flocks of chickens, one might conclude from the survey that most of the care of these flocks was provided by men, and that benefits from the flock were accrued by men. This, in fact, is not the case, since most small flocks are cared for by women, who also derive most of the economic benefit from the flocks. It is apparent therefore that no social analysis on the role of women has occurred, and is not likely to occur until the Grant Agreement or Contract are amended to conform with the Project paper.

The Project paper also contains a paragraph pertaining to female employees of the PBDAC. In this paragraph, it is established that (1) 8.5 percent of the PBDAC staff are women, (2) most of these women occupy clerical positions, (3) much of the calculations involved in carrying out the bank's business are done by women (by hand), and (4) many of these women have the academic preparation needed to handle responsibility. The statement is also made that, as the Project mechanizes calculations and upgrades their positions, they will be given the opportunity to handle greater responsibility and work more professionally. Though the number of women employees to benefit will be small (perhaps 75 in the Project areas), they will provide needed role models for women in rural areas where few women work off the farm, and will pave the way for a larger role for women in bank management.

The above assertions that women will benefit from the Project are not founded in reality. Neither the Grant Agreement nor the Contract contain language which guarantees that women will be either trained or given more responsibility. As yet, no female employees have received the calculator training that might upgrade their positions. Indeed, the fact that men and

not women receive this kind of training puts female employment in the bank in jeopardy since women are not being trained in what will become a required clerical skill. Clearly, this issue needs to be addressed in the Grant Agreement and Contract if the Project is extended.

USAID has recently begun to put a great deal of emphasis on the impact of its development efforts on the economic, social, educational and nutritional status of women. The Project paper, Grant Agreement, and Contract Agreement have skirted the issue of the Project's impact on women. The Project paper states that the woman's role in animal husbandry, field work, food processing, and marketing touches many of the areas where Project efforts to raise income and production will be made. The apparent inability of male extension workers to provide extension services to women poses a significant barrier to the adoption of new technologies in production. The Paper goes on to say, however, that while this problem *cannot be addressed* in the context of this Project, and will require a larger effort, *an ongoing social analysis under the Project will examine the role of women in farm management and help identify medium-term loan opportunities that would increase the income of women, including such ventures as poultry and livestock fattening, collection and marketing of produce, and improvements in home storage facilities.*

To begin with, the statement that the provision of extension services to female farmers "cannot be addressed" by the Project favors an inequitable distribution of training in the newly available improved technologies. Farm women have taken over responsibility for small chicken batteries and improved livestock with loans funded under the Project, purchased by their husbands but there has been little, if any, interaction between these women and extension personnel. The assumption is made that women already know how to take care of chickens and cows and further training is therefore not

necessary. Experiences in small scale livestock enterprises in other countries, however, have shown this assumption to be false. Disease transmission, for example, is heightened by confinement of animals in close quarters--such as placing four chickens in a cage only 18" x 18" x 12" in size. Without proper training in disease prevention, the owner of a small 96-bird battery could find herself wiped out almost overnight, with disastrous consequences (at LE 3.5 per bird, the cost of restocking alone would be LE 336, a substantial sum to an Egyptian farm woman).

Skill profiles. One of the most serious impediments to the development of a long-term, comprehensive training program in the PBDAC is a lack of readily available data on current skills levels of bank employees by governorate and by gender. Even the most competent training specialist is hard pressed to design an efficient skills improvement program when there is no clear idea of what the current levels of skills are.

The problem arises from the fact that one department in the PBDAC maintains the personnel files, and thus has control over the personnel data base, while another department has responsibility for improving personnel skills (i.e., for making decisions based on currently inaccessible information.) A system needs to be devised wherein the personnel department reviews each file, and assigns a skills code, regional code, and gender code to each individual. Numbers, not names or other confidential information, could then be provided to the training office which would give them the data base they need to make assessments of both long- and short-term training needs, and design specific programs to meet those needs.

Recommendations

It is recommended that if the Project is extended, the Project paper,

Grant Agreement, and Contract Agreement should address the needs of Egyptian farm women for extension services to decrease the comparative advantage male farmers gain through their relative access to extension personnel. An amendment to the ACDI/PBDAC contract, for example, could make the following change in the Scope of Work (page 3, paragraph 2, item c): "improvement of small farmer management and production through coordination and improvement of credit and extension services, development of credit and extension services to meet the specific needs of female farmers, and establishment of cooperating farmer groups to test and demonstrate the production increasing potential of the increased credit and inputs together with new technologies."

The evaluation team also recommends that the Project paper, Contract, and Grant Agreement be amended to address the need for training information if the Project is extended. For example, statistics on bank personnel skills by governorate and gender must be kept and be made available to the training department.

STORAGE AND TRANSPORTATION

The storage and transportation component of the Project is the last component evaluated in this report. The discussion which follows presents the objectives of this component, the findings of the evaluation team, and the team's recommendations.

Objectives

The Project's description of the storage and transportation component set forth in Annex I of the Grant Agreement calls for three major improvements to the transportation and storage of inputs:

1. Improved procedures to control the flow of inputs to farming areas are to be designed and implemented. Direct delivery to agency storage facilities is to be favored over delivery of inputs to district storage facilities. Along these lines, improved handling procedures and equipment are to be adopted and greater supply inventories at the agency level are to be achieved.
2. Agency storage facilities are to be upgraded. The Project is to construct some agency storage facilities to be owned by the PBDAC while other storage facilities are to be constructed by the private sector for later lease to the PBDAC. A special loan fund was to be set up to finance this construction effort.
3. Local transport capacity for the delivery of goods to agency storage facilities is to be upgraded. A loan fund was to be established to finance the purchase of transport equipment.

Article I of the Statement of Work in the Contract also calls for improvements to the farm input and handling capabilities at the local level. And Article II of this Contract outlines the duties of the commodity storage and transportation expert. This individual is to work with the PBDAC's staff in monitoring the present system at both the agency and district levels, advise on potential improvements to this system, and advise on both the design and selection of warehouses and procurement of handling equipment.

Findings

The storage component of the Project is focused on the replacement of all existing agency storage facilities currently used by the village banks affiliated with the Project. The target is to build some 150 new agency buildings. The design and construction of these new structures is not complete, however. Construction specifications are just now being completed. And the land for approximately one-half of these agency storage facilities has been purchased, and the remaining sites are currently being acquired. Construction is expected to start in June 1983.

Local agency storage facilities are used to handle production inputs, including fertilizer and agricultural chemicals. The new storage facilities are being designed with the following characteristics and results in mind: (1) better floors, doors, ventilation and higher ceilings, (2) more fertilizer kept under cover rather than stored in the open, (3) direct delivery from the factory to the local level without unloading and reloading at the district level to minimize the breakage of sacks, and (4) application of the *first in - first out* principle.

These new facilities will be built on scarce, highly productive agricultural land. While this is at odds with national policy to preserve farm land, permission has been granted to the Project to build on existing farm land. If all the agency facilities are built as planned, 33 feddans will be needed Project-wide. The Project is having to pay very high land prices for this land. It does not appear that the Project has given consideration to locating these new facilities on more marginal land near the desert fringe.. The rationale for having agency storage facilities in close proximity to where farmers live and work is becoming obsolete as motor vehicles for hauling become more common.

A problem faced by the PBDAC in three village areas is that the cooperative society is said to want to take over facilities currently leased by the society to village banks to start its own program of input distribution. Such bureaucratic competition will not increase the amount of production inputs used by farmers in these areas. Nor will the need for input storage increase. Unfortunately, new storage facilities to be constructed in this area will duplicate existing storage capacity.

Another issue concerns the lease versus purchase of storage decision from the financial perspective of the PBDAC. At Tahaweya (Kfir Ayoub village bank area), for example, the Project will build a new agency at a total cost of LE 64,000 (LE 58,000 for construction plus LE 6,000 for land). The storage facility to be replaced is currently being leased from a private owner for LE 3 per month. Assuming for the moment that both facilities will perform the same storage functions and ignoring the time value of money, it would take 666 years before the cost of leasing would exceed the cost of purchasing. Thus, at current rental rates from the private sector, buying instead of leasing storage facilities does not appear to be a productive use of funds.

Official Project documents give special emphasis to private ownership of storage to be constructed with PBDAC financing. The Project paper takes one tack, stating that private ownership will be the norm and PBDAC the exception.

"Construction of storage facilities by local entrepreneurs or farmers will be financed by a loan fund to be managed by the village bank. The facilities will be rented to the bank at a fair market value." (p.12)

The Project paper also states, however, that:

"... if the Project is unable to identify a private individual or group willing to undertake construction in a given village, consideration will be given to constructing the facility for ownership by the bank directly." (p.12)

The Project description in Annex I to the Grant Agreement seemingly reverses the order of priority set forth in the Project paper by stating that:

"The Project will construct some agencies to be owned directly by the Bank. The remainder will be constructed by the private sector, for rental to the Bank." (p. 3)

Both of these official Project documents envision the mixed ownership of storage by the private sector and the PBDAC, with the exact proportion to be determined during the Project's implementation. During actual implementation, however, *no role has been given to private sector ownership of storage facilities*. All agencies to be constructed will be owned and operated by the PBDAC. This emphasis given to public ownership seems to imply that storage is somehow an inherently public sector function, much like roads and public education. This result is certainly not caused by a lack of private investors willing to invest in storage as a service to be marketed. This decision appears to overlook the potential efficiency that can be achieved by the private ownership of storage facilities.

The sack and open storage methods used to store and handle grains and fertilizer are responsible for major losses and damage to these goods. No private firm would tolerate losses of the magnitude observed. The PBDAC recognizes these problems and is apparently prepared to address this problem in its storage planning and investment program.

Construction is only one facet of a storage and distribution improvement program. The Project and Contractor have a clear and distinct mandate

to introduce and upgrade the quality and quantity of improved handling equipment and procedures. The contractor for the storage and transportation component (PB Sabbour) does not have materials handling expertise. Manpower training is generally considered to be another component of a storage and distribution improvement program.

The ACIDI's own work plans identify two new technologies for potential adoption in the commodity storage and distribution system in Egypt. One is the suggestion to introduce *bulk handling* of commodities on an incremental basis (see the Beginning-of-Project Report, p.10). The second was to examine the use of ultra-violet resistant plastic material for fertilizer sacks (1981 Activity 101). The second possibility was discussed with the fertilizer companies. Neither suggestion has gotten off the ground. Another source of technical information is supplier representatives. But they are apparently told that the Project is not doing any importing of equipment.

One senior official of the PBDAC is not in agreement with the project design for storage facilities. He favors a 60/40 ratio of district to local level location of storage facilities while the current Project design calls for 100 percent emphasis given to local storage. Although the Project's design assists in efforts to maximize net farm income by holding down farm transportation costs, the official expressed interest in the EEC's storage project which will construct district level storage and handling facilities.

The Project is based on a narrow diagnosis of existing storage and transportation problems. Based upon the premise that local input storage capacity is not sufficient at peak periods during the year, the Project focuses on expanding local input storage capacity. However, the major losses in agriculture are occurring at the district level with the storage

of domestically-produced grain. Both Project and PBDAC have indicated they agree with this assessment.¹⁹

Recommendations

The PBDAC should use a variety of means to meet its responsibility of providing storage facilities, including leasing from the private sector and cooperative agreements with other governmental agencies as well as the direct ownership approach now totally favored. Such an approach would permit maximum utilization of existing storage capacity and help prevent the construction of excess capacity where it is not needed. As a governmental agency with sector-wide responsibility, the PBDAC should negotiate rental contracts with the private sector to ensure that private owners receive a fair return on their investment. Measures should also be taken to stimulate private investment in storage, including efforts to make potential investors aware of PBDAC programs.

The problems of post-harvest and other commodity losses in the present storage and distribution system are far too serious to continue to be ignored even though potential remedies may not be consistent with the current focus of the Project. It is recommended that the Project undertake a comprehensive study of alternative designs for an inland commodity storage and distribution system that focuses on inputs *and* outputs.

¹⁹ The recent ACIDI internal evaluation urges that more attention be given to the handling and storage of crops. Rough handling resulting in broken bags and spillage, deterioration from moisture, and damage inflicted by insects, rodents and birds is at unacceptable levels. Their report urged the installation of suitably-sized metal grain storage silos to minimize storage losses and improve handling efficiency.

Table 1. Percentage distribution of amount and number of loans made by the SFP.

| Type of loan | Percent of total | |
|--------------------------|------------------|--------|
| | Amount | Number |
| Crop production | 2.23 | 30.92 |
| Broilers | 34.88 | 11.04 |
| Egg production | .53 | .16 |
| Cattle feeding | 7.27 | 6.39 |
| Sheep feeding | 1.74 | 2.14 |
| Pigeon feeding | .03 | .07 |
| Buffalo/Cow - milk | 33.52 | 33.54 |
| Buffalo/Camel - work | .83 | 1.01 |
| Sheep breeding | 4.21 | 5.93 |
| Rabbit production | .08 | .14 |
| Bee farming | 1.35 | .95 |
| Donkey/goats | .01 | .02 |
| Farm equipment | 5.36 | 4.71 |
| Buildings | 6.96 | 2.26 |
| Family living/education | .01 | .11 |
| Farm related development | .91 | .62 |
| | 100.00 | 100.00 |
| Total | 100.00 | 100.00 |

SMALL FARMER PRODUCTION PROJECT
LOANS BY TYPE

Beginning of project through December, 1982

SHARKIA

KALYUBIA

ASSIUT

TOTALS

| TYPE OF LOAN | NUMBER | AMOUNT | NUMBER | AMOUNT | NUMBER | AMOUNT | NUMBER | AMOUNT | PERCENT OF VOLUME |
|-------------------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|-------------------|
| CROP PRODUCTION | 55 | 659 LE | 1,334 | 78,557 LE | 359 | 49,373 LE | 1,748 | 128,589 LE | 2.3 |
| BROILERS | 440 | 1,437,750 LE | 180 | 486,205 LE | 4 | 6,900 LE | 624 | 1,930,855 LE | 34.9 |
| EGG PRODUCTION | 3 | 14,000 LE | 5 | 14,000 LE | 1 | 1,400 LE | 9 | 29,400 LE | .5 |
| CATTLE FEEDING | 105 | 129,650 LE | 158 | 194,988 LE | 98 | 77,650 LE | 361 | 402,288 LE | 7.0 |
| SHEEP FEEDING | 11 | 6,850 LE | 7 | 4,265 LE | 110 | 84,950 LE | 121 | 96,065 LE | 1.7 |
| PIGEON FEEDING | ---- | ----- | 4 | 2,140 LE | ---- | ----- | 4 | 2,140 LE | .1 |
| BUFFALO/COW MILKING | 395 | 321,128 LE | 641 | 566,426 LE | 860 | 967,932 LE | 1,896 | 1,855,486 LE | 33.5 |
| BUFFALO/CAMEL WORK | 29 | 17,650 LE | 6 | 3,800 LE | 22 | 24,700 LE | 57 | 46,150 LE | .8 |
| SHEEP BREEDING | 33 | 18,733 LE | ---- | ----- | 302 | 214,549 LE | 335 | 233,282 LE | 4.3 |
| RABBIT PRODUCTION | 3 | 2,000 | 2 | 1,450 LE | 3 | 800 LE | 8 | 4,250 LE | .1 |
| BEEKEEPING | 21 | 18,750 LE | 30 | 52,890 LE | 3 | 3,000 LE | 54 | 74,640 LE | 1.3 |
| DONKEY WORK | 1 | 180 LE | ---- | ----- | ---- | ----- | 1 | 180 LE | .1 |
| FARM EQUIPMENT | 129 | 136,256 LE | 94 | 110,018 LE | 45 | 50,218 LE | 268 | 296,492 LE | 5.4 |
| FAMILY LIVING/EDUCATION | ---- | ----- | 6 | 700 LE | ---- | ----- | 6 | 700 LE | .1 |
| BUILDINGS | 59 | 160,600 LE | 68 | 221,480 LE | 1 | 3,000 LE | 128 | 385,080 LE | 7.0 |
| FARM RELATED DEV. | 0 | 17,600 LE | 22 | 32,550 LE | 1 | 200 LE | 32 | 50,350 LE | .9 |
| TOTALS | 1,293 | 2,281,806 LE | 2,550 | 1,769,469 LE | 1,809 | 1,484,672 LE | 5,652 | 5,535,947 LE | 100.0 |

Percentages rounded to .10

Extracted from Governorate Monthly Reports.

Data not verified; use only for an overview of major lending programs.

Compiled by the Evaluation Team, February 22, 1982.

Best Available Document

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TABLE 1 - DEVELOPMENT LOANS MADE BY THE P.B.D.A.C. SYSTEM AND THE SMALL FARMER PRODUCTION PROJECT IN SIX VILLAGE BANKS IN ASSUIT, KALYUBIA, AND SHARKIA GOVERNORATES.

| YEAR | TOTAL NO. OF FARMER BORROWERS | P.B.D.A.C. NON-CROP LOANS | | S.F.P.P. DEVELOPMENT LOANS | | |
|--------|-------------------------------|---------------------------|--------------|----------------------------|--------------|--------------|
| | | NO. OF LOANS | LOAN AMOUNTS | NO. OF FARMERS | NO. OF LOANS | LOAN AMOUNTS |
| 1977 | --- | --- | ----- | --- | --- | ----- |
| 1978 | --- | 562 | 128,357 LE | --- | --- | ----- |
| 1979 | --- | 205 | 208,781 LE | --- | --- | ----- |
| 1980 | 22,609 | 388 | 436,703 LE | --- | --- | ----- |
| 1981 | --- | 882 | 1,135,293 LE | 1,944 | 297 | 260,922 LE |
| 1982 | --- | 1,241 | 1,047,405 LE | --- | 1,854 | 1,477,878 LE |
| TOTALS | NA | 3,278 | 2,956,539 LE | 1,944 | 2,151 | 1,738,800 LE |

ASSUIT

| | | | | | | |
|--------|--------|-------|--------------|-----|-------|--------------|
| 1977 | --- | 33 | 38,860 LE | --- | --- | ----- |
| 1978 | 34,604 | 95 | 85,791 LE | --- | --- | ----- |
| 1979 | 33,866 | 136 | 127,423 LE | --- | --- | ----- |
| 1980 | 33,999 | 230 | 262,078 LE | --- | --- | ----- |
| 1981 | 33,952 | 830 | 1,392,261 LE | 144 | 184 | 250,848 LE |
| 1982 | 35,163 | 1,675 | 2,740,768 LE | 741 | 1,109 | 2,030,557 LE |
| TOTALS | NA | 2,999 | 4,643,181 LE | 885 | 1,293 | 2,281,405 LE |

SHARKIA

| | | | | | | |
|--------|--------|-------|---------------|-------|-------|--------------|
| 1977 | 21,489 | 390 | 110,567 LE | --- | --- | ----- |
| 1978 | --- | 546 | 244,300 LE | --- | --- | ----- |
| 1979 | --- | 579 | 344,741 LE | --- | --- | ----- |
| 1980 | 24,897 | 787 | 637,767 LE | --- | --- | ----- |
| 1981 | --- | 1,300 | 3,137,327 LE | 123 | 133 | 160,638 LE |
| 1982 | 24,144 | 1,834 | 5,676,125 LE | 1,833 | 2,208 | 1,609,836 LE |
| TOTALS | NA | 5,436 | 10,148,327 LE | 1,956 | 2,421 | 1,770,474 LE |

KALYUBIA

| | | | | | | |
|--------------|----|--------|---------------|-------|-------|--------------|
| GRAND TOTALS | NA | 11,713 | 17,748,047 LE | 4,785 | 5,865 | 5,790,679 LE |
|--------------|----|--------|---------------|-------|-------|--------------|

INCREASES IN SAVINGS IN SIX VILLAGE BANKS WITHIN EACH OF THE THREE GOVERNORATES

| YEAR | ASSUIT | | SHARKIA | | KALYUBIA | |
|------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| | NO. OF DEPOSITORS | AMOUNT OF DEPOSITS | NO. OF DEPOSITORS | AMOUNT OF DEPOSITS | NO. OF DEPOSITORS | AMOUNT OF DEPOSITS |
| 1977 | ---- | ----- | 176 | 8,864 LE | 168 | 27,333 LE |
| 1978 | 521 | 221,141 LE | 707 | 97,408 LE | 693 | 86,321 LE |
| 1979 | 1,125 | 367,571 LE | 4,114 | 346,597 LE | 4,619 | 214,073 LE |
| 1980 | 1,797 | 655,091 LE | 7,224 | 394,320 LE | 5,491 | 243,868 LE |
| 1981 | 2,471 | 822,144 LE | 4,052 | 580,293 LE | 6,253 | 841,403 LE |
| 1982 | 3,193 | 1,315,550 LE | 5,473 | 891,933 LE | 7,597 | 1,005,731 LE |

SOURCE: S.F.P.P. VILLAGE BANK RECORDS AND S.F.P.P. GOVERNORATE P.B.D.A.C. RECORDS.

LOANS BY FARMER TYPE
Beginning of Project through December, 1982

| | COOPERATING FARMERS | | | | PARTICIPATING FARMERS | | | | TOTALS | | | | FARM RELATED |
|----------|---------------------|---------------|------|---------------|-----------------------|-----------------|--------------|-----------------|-----------------|-----------------|--------------|-----------------|--------------|
| | SHORT | MEDIUM | LONG | TOTALS | SHORT | MEDIUM | LONG | TOTALS | SHORT | MEDIUM | LONG | TOTALS | |
| ASSUIT | | | | | | | | | | | | | |
| LOANS | 255 | 63 | 0 | 318 | 514 | 1,266 | 14 | 1,794 | 769 | 1,329 | 14 | 2,112 | 3* |
| AMOUNT | 52,299 LE | 72,852 LE | 0* | 125,151 LE | 280,222 LE | 1,481,146 LE | 15,385 LE | 1,784,753 LE | 338,521 LE | 1,555,998 LE | 15,385 LE | 1,909,904 LE | 1,200 LE |
| KALYUBIA | | | | | | | | | | | | | |
| LOANS | 395 | 41 | 0 | 436 | 1,220 | 729 | 0 | 1,949 | 1,615 | 770 | 0 | 2,385 | 4** |
| AMOUNT | 72,605 LE | 45,763 LE | 0 | 119,568 LE | 758,965 LE | 894,372 LE | 0 | 1,653,337 LE | 831,770 LE | 941,135 LE | 0 | 1,772,905 LE | 8,155 LE |
| SHARKIA | | | | | | | | | | | | | |
| LOANS | 95 | 23 | 0 | 118 | 534 | 567 | 0 | 1,101 | 629 | 550 | 0 | 1,219 | 3*** |
| AMOUNT | 39,843 LE | 19,324 LE | 0 | 59,167 LE | 1,436,500 LE | 588,315 LE | 0 | 2,024,815 LE | 1,476,343 LE | 607,639 LE | 0 | 2,083,982 LE | 3,100 LE |
| TOTALS | | | | | | | | | | | | | |
| LOANS | 745 | 127 | 0 | 872 | 2,268 | 2,562 | 14 | 4,889 | 3,013 | 2,689 | 14 | 5,716 | 10 |
| AMOUNT | 164,947 LE | 138,939 LE | 0 | 303,886 LE | 2,481,687 LE | 2,965,833 LE | 15,385 LE | 5,462,905 LE | 2,646,634 LE | 3,104,772 LE | 15,385 LE | 5,766,791 LE | 11,455 LE |

GRAND TOTALS
LOANS 5,726
AMOUNT 5,778,246

* Unknown, Rabbit hutches.
** Sewing Machine, Vet. Supplies, Carpet Weaving, Commercial Seed Dealership/Supplies.
*** Chicken Hatchery Operating Expense, Carpet Weaving, Basket Making.
Source: S.F.P.P. Records (Governorate Monthly Reports)

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