PN. ACA-095
93106

APCP

Agricultural Production and Credit Project

مشـــــروع الانتـــــاج الزراعـــــى والائتمـــــان

APCP BASELINE SURVEY

VOLUME IV

USAID PROJECT NO.: 263-0202
CONTRACT NO.: HCC-263-0202-02

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CHEMONICS INTERNATIONAL CONSULTING DIVISION

OCTOBER 24, 1989

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١٢ ميدان الشيخ يوسف ــ جاردن سيتى ــ القاهرة ــ كيمونكس ــ تليفون : ٣٥٤٨٣٣٤ ــ فاكسيميلى : ٣٥٤٨٧٥٧ (٢٠/٢)

APCP BASELINE STUDY

WOMEN INTEGRATION
SMALL SCALE ENTERPRISES AND CREDIT PACKAGES

Zohra Merabet

NSCE
June 1989

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AKNOWLEDGEMENTS

This report was prepared under a contract with ATI, Appropriate Technology International within the framework of the Baseline Study for Agriculture Production and Credit Project (APCP), Egypt, carried out by Chemonics, the project contractor.

I wish to thank:

Mr. Mahmud Nour, Vice Chairman PBDAC, for his kind assistance in facilitating the field work and data collection.

Mr. John Foti, Director, Office of Agriculture Economics and Credit, USAID, Cairo, for his understanding and support regarding the importance of WID related issues.

Ms. Vicky Kunkle, WID Programme Officer, USAID, Cairo, for her encouragement initiating my participation in this mission and her support and guidance during the study.

Mr. Philip Boyle, Programme Support Department, WID Section, USAID Washington, for giving me the opportunity to participate in the mission.

Special thanks to **Mr. Fernando Bertolli,** Team Leader of the Baseline Study, Chemonics.

This report is the product of NSCE teamwork.

Zohra Merabet
Cairo, June 1989

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APCP BASELINE STUDY
WID SPECIALIST REPORT

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SUMMARY OF FINDINGS AND RECOMMENDATIONS

BORROWERS PROFILE

Composition per gender of the village bank borrowers shows that women make up 19.8% of the total. A slightly higher proportion of women borrowers can be noted in the non- project bank compared with the bridge and SFPP banks. This is not necessarily significant in the sampling conditions for the baseline study, however, it should prompt the APCP project management to investigate further whether a negative impact has been created by the project on women borrowers of the participating village banks.

Also the gap between the ratio of number of loans per borrower of each of the two groups is slightly lower in the non- project bank. This requires more attention in the future to ascertain that female borrowers have equal access to project facilities.

LOAN PORTFOLIO PROFILE

The overall profile of the loan portfolio shows that 51% of the borrowers take loans for traditional agricultural input, that 42% of the loans have an amount smaller than LE 200.-, and that 85% of them are short term loans. This indicates that the village bank is still largely a source of support for farmers in their seasonal agricultural production, rather than a lending institution for small and medium scale agribusiness enterprises.

The gender analysis of the distribution of loans per sector of activity, loan amount and type of loan does not show any major differences between male and female borrowers. Perhaps one could mention that 60% of loans to women are for the agricultural input, slightly higher than the overall percentage of 51%, while the percentage of loans to men in the livestock sector for meat and egg production is comparatively higher. The percentage of loans with an amount smaller than LE 200.- is higher for women borrowers, while the percentage of loans with an amount larger than LE 5,000.- is higher for the men.

WOMEN AS PROJECT BENEFICIARIES

Women beneficiaries, as family members of a male APCP participant, share with their relative the tasks and benefits of the loan funded project. They also participate in the decisions regarding use of the proceeds.

WOMEN AS DEPOSITORS

The majority of the customers' deposits (84%) in the bridge and SFPP banks are in the form of a normal saving account with 10% interest, with an average amount of LE 275.-. The ratio of women depositors (25%) is higher than the borrower ratio (19.8%). Also the absolute number of women depositors is 20% higher than the number of APCP women borrowers in the SFPP villages. The bridge village has the lowest gender- related borrower ratio (12.7%) with only 89 women APCP participants, but the highest gender-related depositor ratio (40%) representing a total of 782 female depositors. A more in-depth study of the characteristics of the depositors, such as age range, occupation and land tenure, is required before one can draw any conclusions about the relation between the group of women depositors and that of APCP participants. This study should help in defining a more flexible policy concerning the type of collateral, in which holders of a saving account without land title, especially those in the age group below 40 years, could qualify for an APCP loan.

WOMEN AS VILLAGE BANK STAFF

Women hold on average 17% of the staff positions available in the studied village banks. Their position is not only marginal in a numerical sense, but also in a professional sense: the vast majority of the female employees are clerks and none of them is member of the APCP committee, the organ that takes all decisions at village level on project activities. Their isolated position does not allow them to play an active role in disseminating project information among the female village population nor in selecting the project participants.

CREDIT NEEDS AND CONSTRAINTS

Results from the sub-survey on women's credit needs and constraints show that the majority of the women, whether they be APCP participants, beneficiaries or non-borrowers, would like to take a/another loan. The obstacle mentioned most often is the lack of a collateral such as land. However, in the case of the SFPP project, where other types of collateral have been introduced, the number of female borrowers remains low, which could indicate that the constraints to increase the number of women borrowers do not rest only with the question of the collateral, but also with the fact that information about project services does not reach the women.

SMALL SCALE ENTERPRISE

Collection of statistical data from the municipal registry and in-depth interviews were used to establish a profile of enterprises involved in the processing of agricultural products, a line of business which can offer good opportunities for women entrepreneurs. Particular attention was given to the sectors of dairy products, vegetable pickling and meat processing as they obtain their raw material from local sources.

Results of the survey reveal that this type of enterprises is concentrated in the small urban centers of the governorate. They have a relatively small fixed capital and a large working capital, of which 77% is used for purchase of the raw material. Among the interviewed enterprises, 71% plan to increase their production . Their credit needs are for cash (71%), equipment (71%) and additional space (57%).

A majority of the respondents, 58%, would prefer to deal with the village bank, because, as 72% of them indicated, the village bank is compatible with their type of business.

Opportunities for the majority of women to independently undertake a small to medium scale enterprise seem limited within the position of the woman in the rural family as a producer and reproducer. However, their integration as a family member to their family operated enterprise can offer a ground to develop their business skills and enhance their productive role provided that the nature and location of the enterprise are compatible with the fulfillment of their household duties.

CREDIT PACKAGES

Three credit packages , two for operation of a milk collection network and one for vegetable pickling, have been designed for village bank customers. They can offer opportunities to women to participate either as the owner of the business or as a family member.

The loan amounts vary between LE 3000.- and LE 37,000.- with a repayment period of 3 to 5 years. Analysis of the cash flow and balance sheet of each of these credit packages show that they keep a profit margin above 10% and that their rate of return is between 1 to 3 during the repayment period.

RECOMMENDATIONS

Within the general objectives of APCP to improve both the agricultural production and the bank operation, the project should develop an approach to increase the participation of women as borrowers and depositors. Such endeavors should not be viewed only as a means to increase women's participation in agricultural and rural development, but also as a marketing opportunity for the bank, which ultimately should seek an increase of the number of borrowers and depositors to reach a self-supported banking system.

Short term plans to increase the number of women as APCP participants should focus on the village bank, the active link between PBDAC and the bank customers, by:

- including women employees in the village bank APCP committee to promote their role in the dissemination of project information among the female population;
- supplying training in group dynamics to the village bank staff;
- organizing workshops for the village bank managers about " gender considerations in development";
- supporting the establishment of a WID unit within PBDAC to promote participation of women as borrowers and depositors of the village banks.

On the long term, an increase of the female staff of the the village bank should be an essential part of the APCP strategy for development of the bank personnel.

Regarding the development of new credit packages for small scale enterprises in the field of agricultural products processing, favorable conditions should be created within the village banks before the proposed credit packages can be introduced to the customers. The attitude of the village banks toward supply of credit for working capital should be addressed in the first place. In addition, training of village bank employees in basic economic analysis and business operation should be instrumental in the implementation of the credit packages by developing within the village bank a capacity for identifying and screening potential entrepreneurs.

APCP BASELINE STUDY

1. INTEGRATION OF WOMEN INTO APCP PROJECT

1.1. BACKGROUND AND METHODOLOGY

1.1.1. TERMINOLOGY

In order to assess the integration of women in the programs supplied by SFPP and APCP to increase agricultural production and economic development in rural areas, women who are related to the project are divided as follows:

- women who participate directly in the project activities by taking a loan are referred to as APCP participants in the report;
- women who have an APCP participant as family member, be it her husband, son or father are referred to as beneficiaries in the report.

1.1.2. SAMPLE

The survey took place in four villages of the Governorate of Qalubiya. General data are summarized in table 1.

Table 1. General data on selected villages

District	Village name	Status	Starting Date	Population	Area feddans
Toukh	Betmanda	Bridge SFPP APCP	06.87	36620	5132
Banha	Sandanhour	SFPP	03.81	27793	4627
	Sheblanga	SFPP	02.82	53829	5508
Qaliub	Sandiun	New APCP/Non project	03.89	38649	5132

1.1.3. METHODOLOGY

Three interrelated types of sub-surveys were carried out for the final analysis:

1. a systematic codification of village bank customers files was carried out to establish a database for gender-related analysis of the loan portfolio and APCP participants as borrowers;

2. interviews about APCP impact on the family and opportunities to become APCP participant were addressed to a sample of female APCP beneficiaries, i.e. relatives of male APCP participants;

3. interviews about credit needs and constraints were addressed to a random sample of female APCP participants and non-borrowers.

1.1.4. DESCRIPTION OF SUB-SURVEYS

1.1.4.1. Borrowers and loan portfolio database Files of all the APCP participants, from the date the village bank joined the project to the date of the Baseline Study, were systematically codified. Sixteen types of data were extracted from the banks' files and reported in predesigned forms. Data were entered into the computer, using dBaseIII+, resulting in a database of the loans issued by the bank during the entire project period.

In the case of Sandiun, a new APCP considered as a non- project village bank in the frame of the baseline study, a sample of the loan portfolio including all the borrowers from January 88 to April 89 was selected for comparison with the SFPP village bank loan portfolio. The poor condition of the files in the non-project village bank and the way in which the data was organized did not allow coverage of a longer time span for the sample within the time constraint of the baseline. Table 2 summarizes the period covered for each village and the sample size, referring to the number of loans.

Table 2. Project data for selected villages

Village	Status	Starting date	Sample size
Betmanda	Bridge	06.87	1065
Sandanhour	SFPP 1	03.81	2333
Sheblanga	SFPP 2	02.82	2671
Sandiun	Non project	01.88	769
Total			6838

1.1.4.2. Women as APCP beneficiaries A sample of 80 women, 20 from each village, were selected from the above-mentioned database. Beneficiaries were selected at random within each of the activity sector groups so as to give a representative coverage of the different activities. They were interviewed about their participation in the project funded by an APCP loan, its impact on the family and the conditions under which they themselves would become APCP participants. Data from the questionnaires were then codified and entered into a database comprising 49 fields.

1.1.4.3. Credit constraints and needs A sample of 160 women, 40 from each village, 20 APCP participants and 20 women who have never taken any loan were selected at random respectively from borrowers database (sub- survey 1) and from the village based on age criteria to reach an even age distribution. They were interviewed about their credit needs and constraints in obtaining credit. Data from the questionnaires were then codified and entered into a database which includes 62 fields.

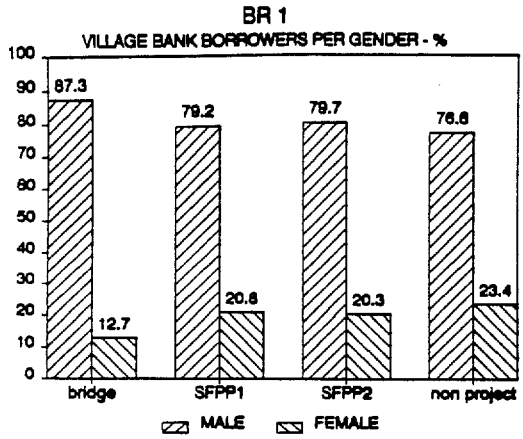
1.1.5. ANALYTICAL METHOD

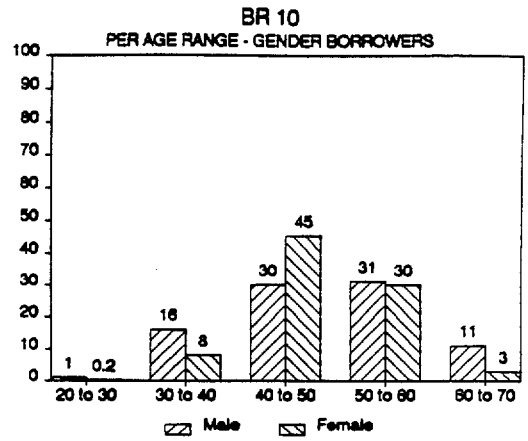
Reflex, an analytical database software package, was used to analyse data from the above mentioned databases and to carry out preliminary correlations. The results are summarized in the graphs presented throughout this report.

1.2. FINDINGS

1.2.1. BORROWERS PROFILE PER GENDER

1.2.1.1. Number of borrowers and loans The percentage of women borrowers in each village bank shows that the participation is highest (23.75%) in the non- project village and lowest in the bridge village (12.7%). The percentages in the two SFPP villages are roughly the same (20.8, 20.3%) and show little variation to the percentage of the total sample (19.8). The mean is of course more of the results of the larger size of the SFPP sample than really indicating a trend among the four villages. This average percentage of course reflects more closely the values in the SFPP villages, due to the larger size of their samples, and is therefore not a good indication for the values in the other villages.





The ratio of number of loans per borrower differentiated per gender, table 3, indicates that the ratio in the SFPP and bridge village banks is higher, probably due to the longer period covered by the survey. However, the trend in BR1 is reinforced by the results on gender differential in loan/borrower ratio. This differential is higher in the SFPP2 village than in the non-project village. In the SFPP1 village a serious effort was made since 1988 by the bank manager to increase the number of female borrowers to respond to SFPP and APCP project management requests: the total number of loans issued by the bank to women borrowers, including APCP and non APCP, increased from 203 in year 87 to 768 in year 88.

Table 3. Ratio of number of loans per customer per gender

Village bank	Bridge	SFPP 1	SFPP 2	Non project
male borrowers	1.54	1.39	1.54	1.27
female customers	1.37	1.30	1.33	1.15
male/female diff.	0.17	0.09	0.21	0.12

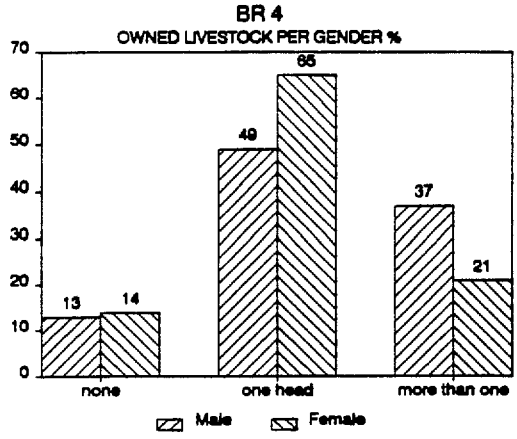
1.2.1.2. Age range The fact that 71% of the borrowers are over 40 years of age, with a slightly higher percentage in the female group, seems to be primarily related to the type of collateral required by the village bank, i.e. land tenure. Land is usually inherited at middle age or above. It is clear that the bank's rule to require land as collateral hinders the entrepreneurial capacity of the younger rural productive population. The sharp increase in the number of female borrowers in the age range of 40-50 could also indicate a trend in the female population to undertake productive projects once tasks related to their reproductive role in the family are diminished.

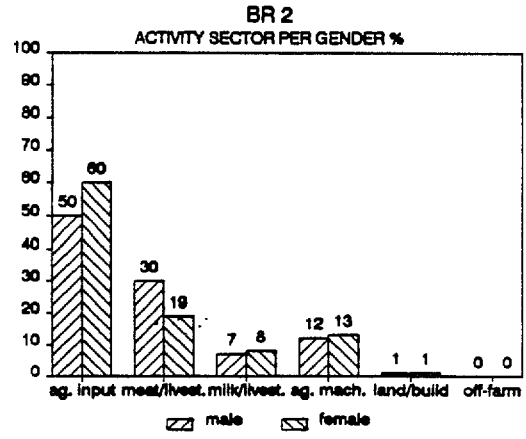
Table 4. Land ownership - percentage distribution by gender

Amount of land owned	Male	Female	Mean
Less than one feddan	13.00	17.00	13.00
From 1 to 3 feddans	41.00	44.00	42.00
From 3 to 5 feddans	26.00	22.00	26.00
From 5 to 10 feddans	4.00	1.00	3.00
From 10 to 50 feddans	0.14	0.00	0.11
More than 50 feddans	0.14	0.01	0.13
No answer	16.00	16.00	16.00
Total	100.00	100.00	100.00

Data about land tenure are not systematically recorded in the non-project village bank, thus preventing a consistent analysis of the land tenure pattern per gender. For the SFPP and bridge village banks, analysis of the land tenure data (table 4) shows that a large majority of the borrowers belong to the small farmers group owning less than 5 feddan. Although this

holds for both sexes, the higher percentage of women with less than 3 feddan and the subsequent lower percentage in all categories above that indicates that the female borrowers have smaller landholdings than their male counterparts. This probably reflects the long term effect of the muslim land inheritance regulations whereby women receive a share half the size of what men are entitled to.

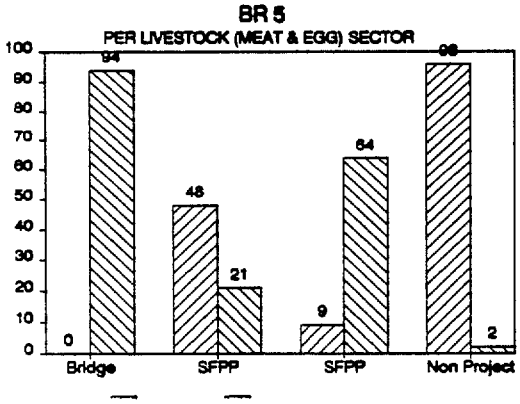


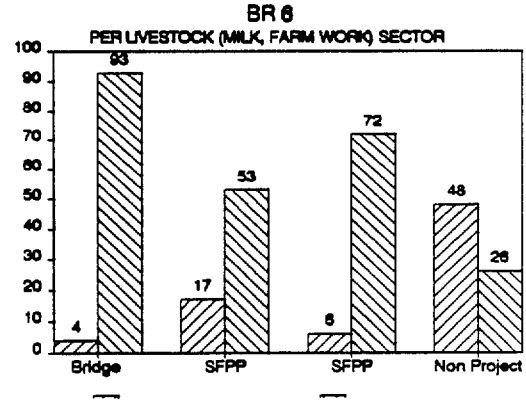


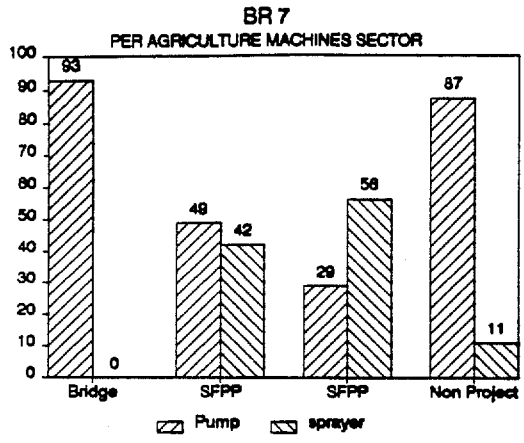
1.2.1.3. Cattle ownership Graph BR4 about cattle ownership shows that 51% of the borrowers own one head of cattle and 13% does not own any. This confirms the finding that APCP participants are mostly small farmers. However, the large difference in the percentage distribution of cattle ownership between male and female borrowers, whereby men are much more likely to own more than one head, could indicate that the female group has on average a lower socioeconomic status.

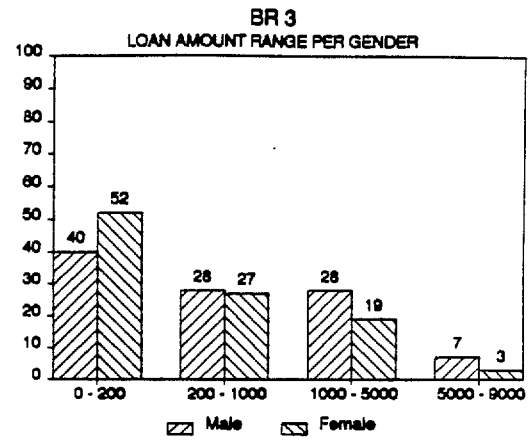
1.2.1.4. Loan portfolio per activity sector A majority of the loans for both sexes are used for agricultural inputs, though the percentage of number of loans in this sector to female borrowers is higher than that to male borrowers (resp. 60% and 50%). Apart from that sector, the bulk of loans is concentrated in animal production, 37% for male borrowers and 27% of female borrowers (graph BR2). Proportionally male borrowers are concentrated in the meat and egg production, involving schemes such as cattle fattening and modern chicken farming, both with high returns but also high risks in terms of feed supply. Female borrowers take relatively more loans in milk production, a traditional women's activity. Graphs BR5 and BR6 in the Women Borrowers profile section, representing the share of certain subsectors in the two animal production sectors, show that loans taken by women are predominantly for cattle. There are few loans for small animals such as goats or sheep in the SFPP village banks, and hardly any in the other two villages.

The percentage of loans for women in the agricultural machines sector is also slightly higher than for the men as shown in graph BR 2. The loans to women are divided between tractors (1%), generators (5%) and beehives (3%), the rest is taken up by the small machine sector. A proportion of the total number of loans to male borrowers are also in the small machines sector, however, 10% of the loans are for tractors and agriculture machines such as threshers.









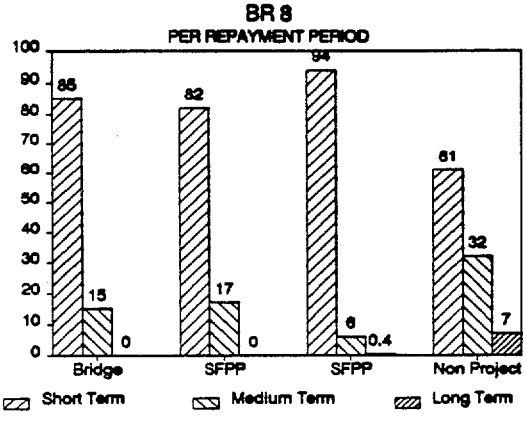
The fact that the percentage of loans for pumps from the bridge and non project villages to female borrowers (graph BR7), is significantly higher than those in the SFPP villages could indicate, as suggested during interviews with the village bank managers, that SFPP has covered the basic mechanization needs of the farmers with pumps and tractors while in the bridge and the new village the borrowers still need to buy essential farm equipment.

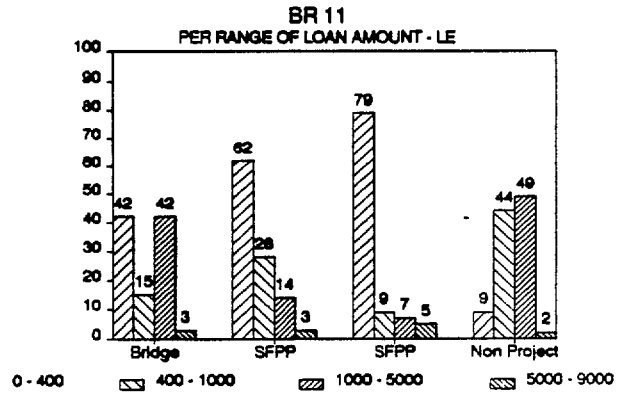
1.2.1.5. Loan range Distribution of the loan amount shows that more than 90% of the borrowers take loans of less than LE 5.000.- and 79% of the women of less than LE 1.000.- as compared to 68% of the men. This might indicate a cautious attitude on behalf of the borrowers but also on behalf of the bank. A majority of the female participants and beneficiaries interviewed during the survey expressed the wish to obtain a larger amount for the activities they were currently implementing in order to "make a real project out of it".

The percentage of loans with amounts exceeding LE 9.000.- (maximum LE 33.000.-) is low for both sexes, but the percentage of male borrowers is double that of the female borrowers (resp.7% and 3%). However, it is worth mentioning that there is little difference between the maximum amount of loan taken by males and female borrowers in each range of loan amount. This could lead to the conclusion that among those who take large loans the women are just as much entrepreneurs as their male counterparts.

In the women borrowers profile section, graph BR11, distribution of borrowers per range of loan amount and village bank, shows that the percentage of women borrowers with loans bigger than LE 1.000.- is significantly higher in the non-project village than in the bridge and SFPP villages. This pattern is also found among male borrowers and does not necessarily indicate an impact of the project but could also be related to the geographical location of the non project village, 15 kms from the boundary of the suburb of Cairo. Proximity to the urban center has increased the number of loans for agribusiness enterprises at the expense of loans for agricultural input and for purchase of cattle.

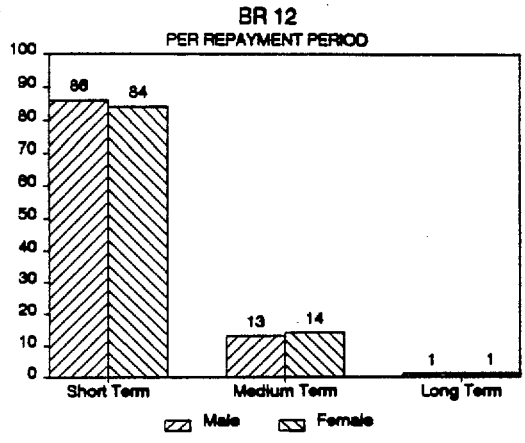
This trend is also found in the repayment period of loans, graph BR8. There is a concentra-

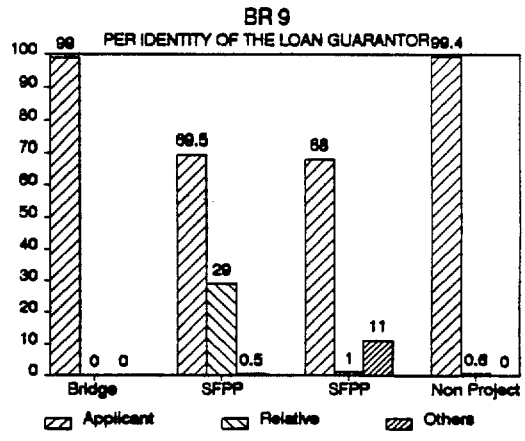




tion of short term loans in the SFPP and bridge villages tied to the sectors of agricultural input and meat and egg production, while the non- project village has a relatively higher percentage of medium term loans tied to the supply of loans for agricultural machines and agribusiness.

1.2.1.6. Collateral The nature of the collateral system has been analyzed through the relation of the borrower to the guarantor. In the case where the borrower is guaranteeing herself, it means that she owns land, in other cases the collateral could be supplied by a relative, either in the form of land, salary or other.





Graph BR9 indicates that the bridge and the non project bank maintain a rigid collateral system through land; in 99% of the cases the borrower guarantees herself with land as collateral. The SFPP village banks also have a significant number of loans with land collateral, but they are supplemented by guarantees from relatives or from other sources. However, with reference to the percentage of female borrowers per village bank, as shown in BR1, where the bridge village has the lowest and the non project village has the highest percentage one could not, at this stage, make any conclusions about the correlation between the nature of the collateral and the percentage of women customers. The survey should be extended to cover the period prior to SFPP in the two participating villages in order to conclude about a possible correlation.

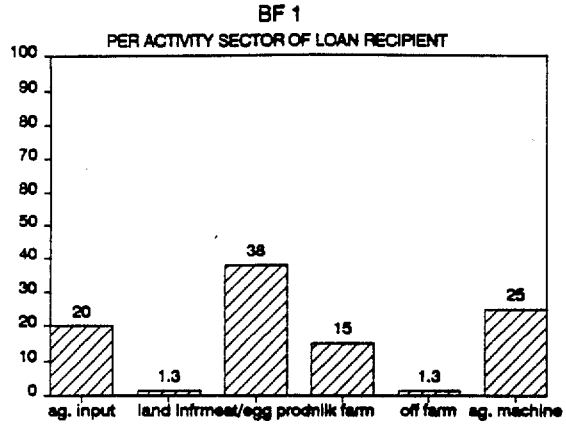
Nonetheless, the majority of women who did not take credit and who were interviewed during the survey, indicated lack of land registration as their main obstacle for access to credit. Therefore if the bridge and non project/new APCP village bank would review their policy for supply of collateral and would support it by a reasonable information system, the number of female participants should significantly increase.

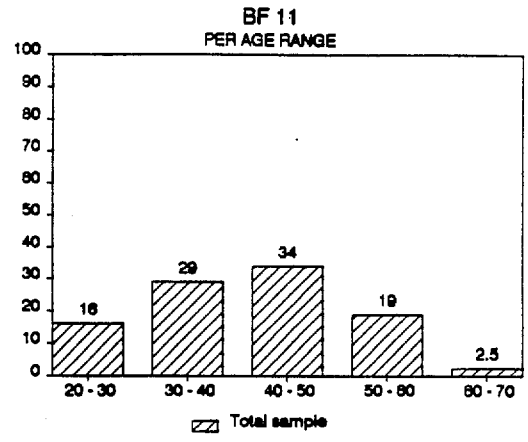
1.2.2. WOMEN AS BENEFICIARIES

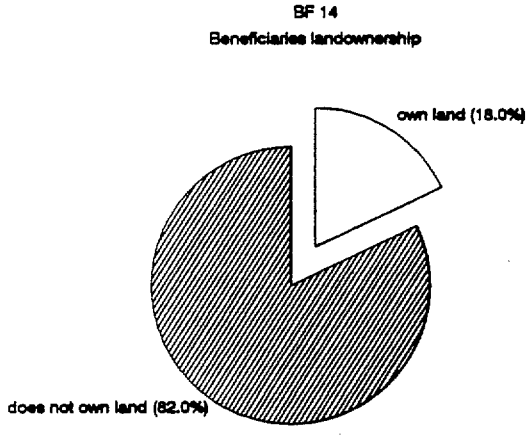
1.2.2.1. Description of sample Selection of women as beneficiaries was dictated by the need to cover all the sectors of activity. However, the resulting sample (graph BF1) is not representative of the overall distribution of loans per activity sector (graph BR2). The agricultural input sector is underrepresented in the sample for this sub-survey.

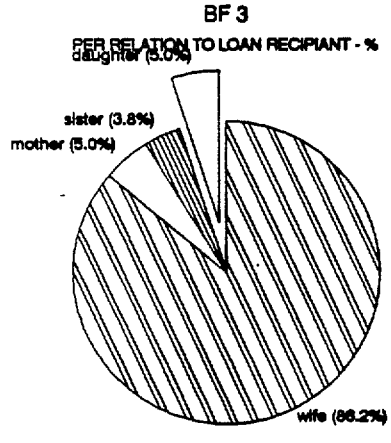
The age distribution of the interviewees also proved to be different from the borrowers profile, since 45% of this sample are younger than 40 and in the reproductive phase of their life, while the same age group represents only 8% of the group of the APCP participants. In some ways, the group of women beneficiaries complements the APCP participants.

A majority of the interviewed beneficiaries, 86%, are wives of the APCP participants, the remainder is made up of mothers, daughters and sisters. It is clear that in the context of the Egyptian extended family, each of these can be a significant beneficiary and participant to the project, leading to the conclusion that a larger group of women can be considered beneficiaries of the project. However, for practical reasons, interviews focused on wives who







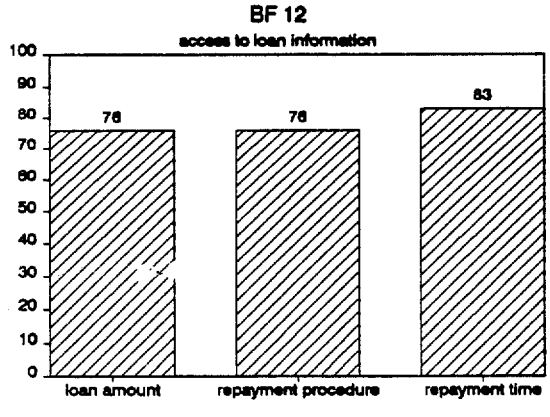


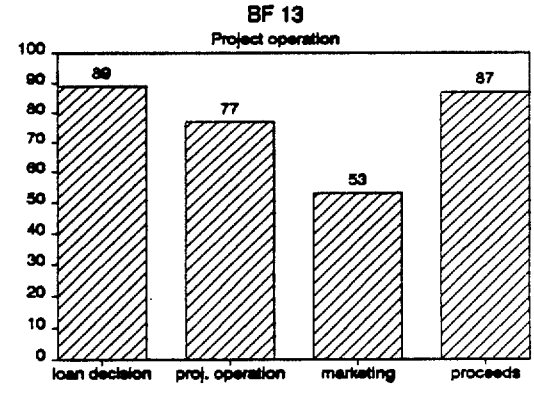
can be considered the member of the family closest to the APCP participant and whose role is most likely to exceed the role of beneficiary only.

The majority of the interviewed beneficiaries, 82%, do not own land, as shown in graph BF14. This is not necessarily representative of the land tenure pattern among beneficiaries appeared to be the case in the sample of the survey.

1.2.2.2. Participation to project Most of the beneficiaries, 89%, took part in the decision to take the loan, however, only 76% of them know the exact loan amount and repayment procedure. To 83% the repayment period is known (graph BF12).

The loan funded project is usually operated by the family and 77% of the women beneficiaries participate, as shown in graph BF13. Their participation in the livestock breeding funded by the project comes naturally as part of their traditional task in the farm. In the case of agricultural machines that are used to run a rental service, the woman is usually involved in operating the customers service from her home, i.e. receiving requests, coordinating with her husband in the field and in some cases receiving the payments too.



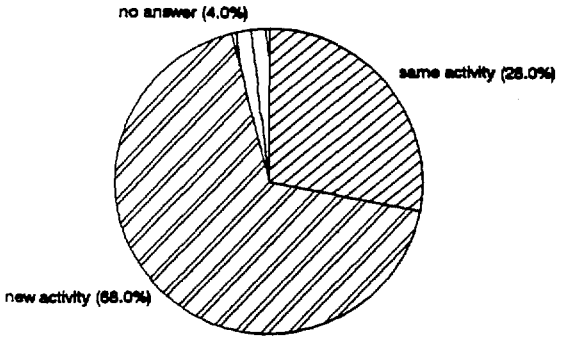


The percentage of women who participate in the marketing of the product or of the services is considerably lower, 57%. This could be due to the fact that 53% of the loan funded projects are related to livestock and that marketing of cattle produce, except the milk, is traditionally carried out by men.

At the end of the project operation, 87% of the beneficiaries share in the decision over the use of the proceeds from the project.

BF 7

ACTIVITY FOR NEW LOAN - SINGLE ANSWER



1.2.2.3. Opinions about new loans While 96% of the interviewed beneficiaries indicated that they would like their relative to take a new loan, only 28% of them would like him to take the same type of project, while 68% of them would like him to take another activity (graph BF7). A cross tabulation of the existing activity and the new one, table 5, shows that in the three major activity sectors, beneficiaries have a desire to change. Most of those would like to shift to milk production.

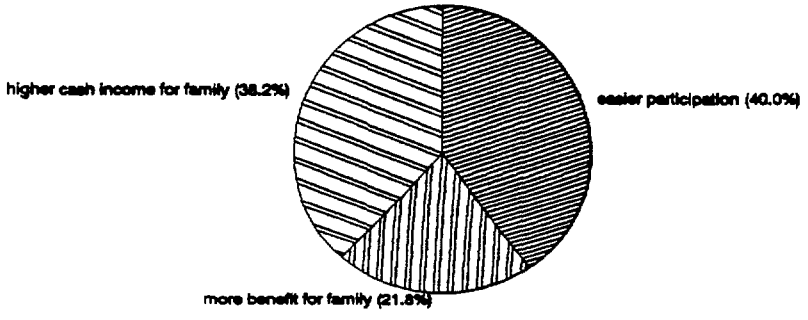
Table 5. Beneficiaries wishes to change activities - %

New/Existing	1	2	3	4	5	6
1. Agriculture input	44					
2. Meat and egg production	13	72				
3. Milk production and farm work	31	22	100	63		
4. Agriculture machines	7	6		30		
5. Land improvement, building	6			7	100	
6. Off farm activities						100

When asked for the reason for the desired change, 21.8% of them indicated that it could bring more benefit to the family, 38.2% said that it could bring a higher income to the family, while 40% answered that it would make it easier for them to participate in the project operation (graph BF8).

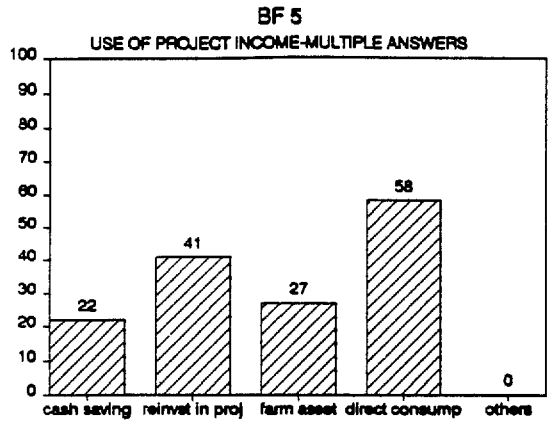
BF 8

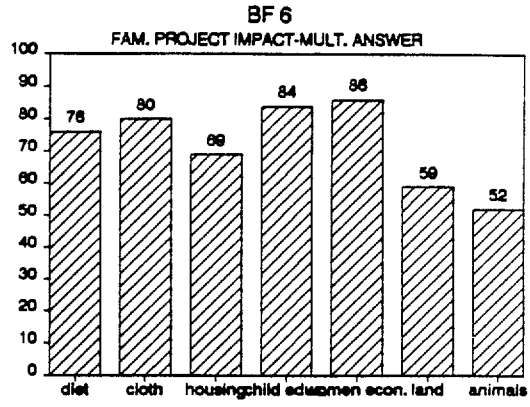
CHANGE CURRENT ACTIVITY - SINGLE ANSWER



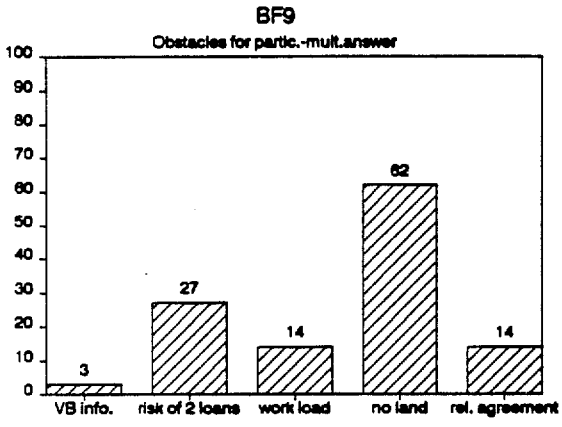
1.2.2.4. Project impact For a majority of the interviewed beneficiaries, 67%, the income from the APCP loan funded project is an additional income to the family, while 33 % view it as the main income (graph BF5).

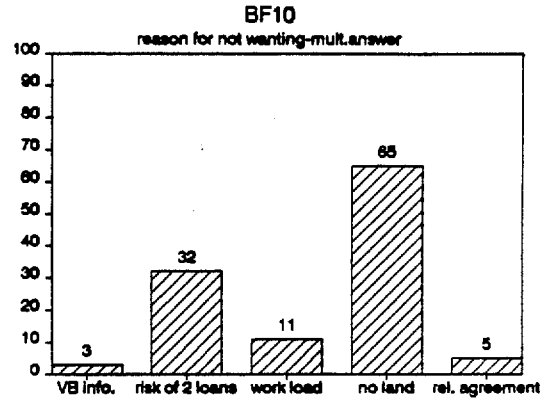
When asked how the proceeds from the project are used, direct consumption for the family was mentioned in 58% of the cases, while reinvestment into the project was mentioned in



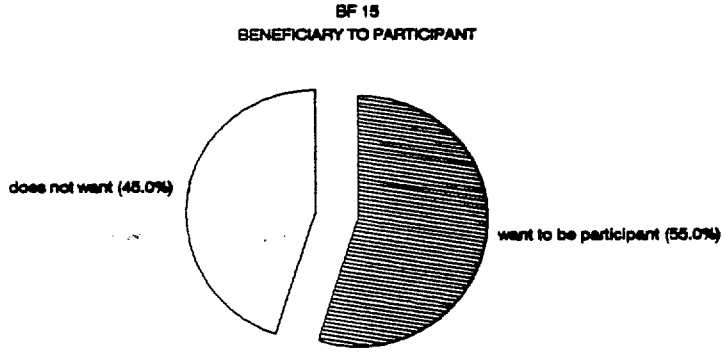


41% (graph BF6). Cash savings and increase of the farm asset score respectively 22% and 27%. This pattern leads to the conclusion that the group reached by the project to a large extent overlaps with the lowest income group, whose priority is the satisfaction of basic consumption needs. This is also confirmed by the pattern of answers to the question on impact of the project (graph BF6). It is noteworthy to mention that 86% of the respondents indicated that the project has improved their economic purchasing power, basically it has improved their capacity to buy food and clothes for the family and support additional education for the children.





1.2.2.5. Moving from beneficiary to participant status A small majority of women, 55%, indicated that they would like to become participants, as shown in graph BF 15. Among those, 62% said that the lack of land has prevented them from taking a loan, while 27% were afraid of taking the risk of two loans for the family (graph BF 9). The increased work load and lack of approval from a relative were mentioned by 14% as obstacles to apply for a loan. The pattern of reasons given by those beneficiaries who do not want to take a loan is similar to that of the previous group (graph BF10). The fear of taking the risk of a double loan is higher, but the main reason for women to not even think of applying for a loan is again the lack of land.

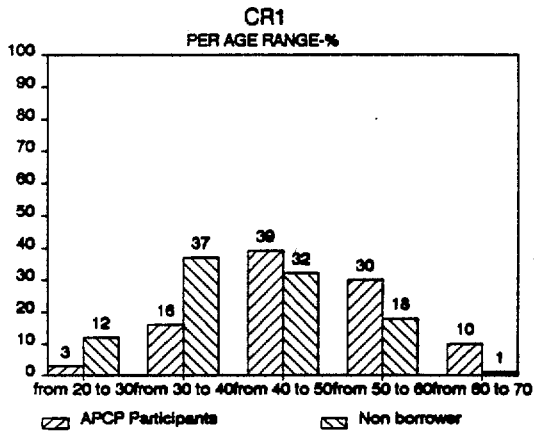


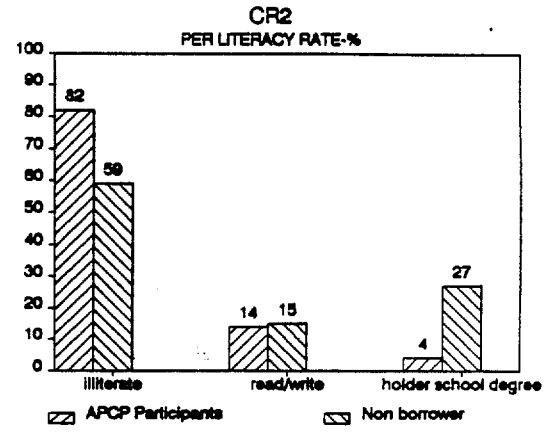
1.2.3. CREDIT NEEDS AND CONSTRAINTS

1.2.3.1. Description of sample A sample of 160 women composed of 40 women from each village, 20 APCP participants and 20 women who have never taken any loan, were interviewed.

The sample of APCP participants was drawn at random from the borrowers profile database. The resulting age distribution, graph CR1, shows some deviation from that of the borrowers profile, BR10, however the concentration in the range of 40 to 60 years is not very different: 69% of the interviewed APCP participants is in that age range, while in the overall borrower profile 76% of the women borrowers are in that range. The percentage of women in the range below 40 is higher than the one shown in BR10.

The non-borrowers were selected on an age criteria so as to reach a homogenous age distribution and cover the age range below 40 where the percentage of women borrowers is small in the borrowers profile (BR10).





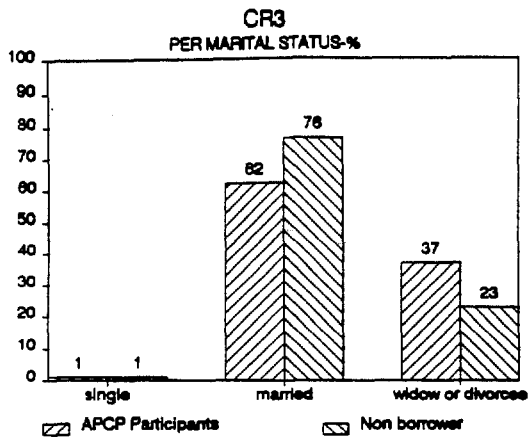
A larger majority of the APCP participants, 82%, are illiterate, as compared with 59% of the non-borrowers (graph CR2). Also 4% of the APCP participants hold a school degree against 27% of the non borrowers. This finding is most probably due to the different age distribution in the two sub- samples: 49% of the non-borrowers are of an age below 40 (19% of APCP participants) and had more schooling opportunities than the older generation.

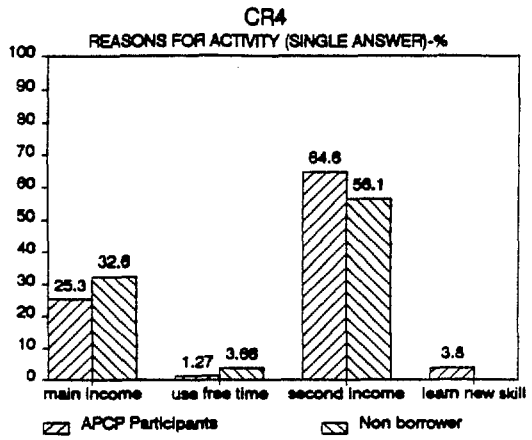
Distribution of the sample by profession confirms this trend with a considerably higher percentage of civil servants among the non-borrowers (table 6).

Table 6. Credit need - sample distribution by profession

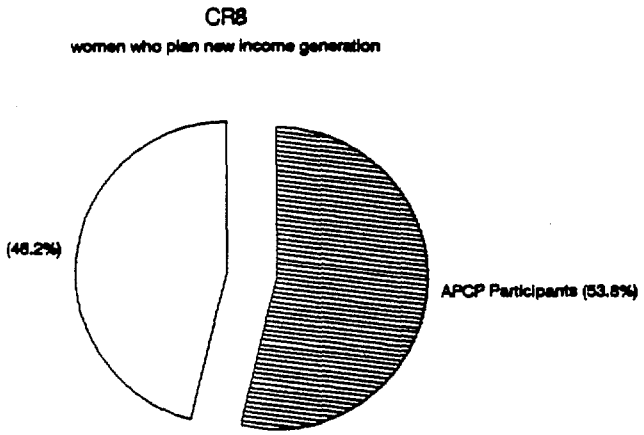
Description	APCP participant	Non borrower	Total
Housewife	52	26	38
Civil servant	4	18	11
Trader	4	5	5
Farmer	41	51	46

It has to be pointed out that the difference between the housewife and the farmer is in some cases not very clear as several women, wives of farmers, would classify themselves as housewife rather than farmer. The percentage of women as head of household, i.e. widows and divorcees is higher in the group of APCP participant than among the non borrowers (graph CR3). One cannot draw a final conclusion from the results of this sample, however, a more in-depth study of women borrowers would probably show that among female borrowers the proportion of women who head a household is higher than in the village as a whole, thereby indicating that these women are more likely to take a loan than other women.



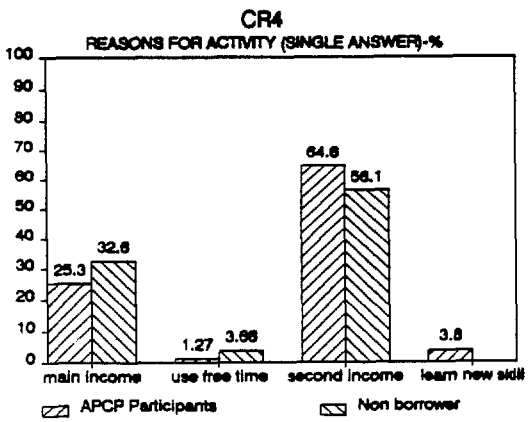


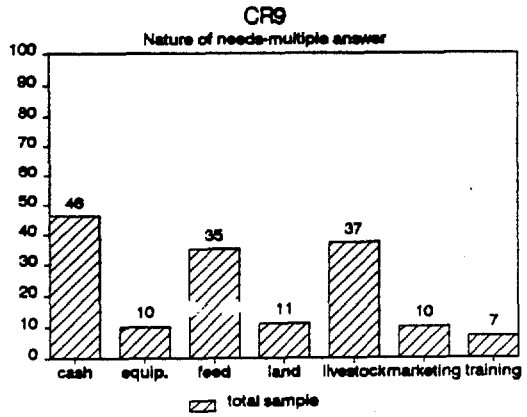
1.2.3.2. Need for credit A substantial majority of the interviewed women, 85.6%, have a plan to increase their income (graph CR8). The percentage is higher among the APCP participants than among the non- borrowers, which could indicate that their participation in the project has built some more initiative and confidence in planning to improve their economic conditions.



A difference can be noted in the perception of the needs of APCP participants and non-borrowers (graph CR4). More non- borrowers say they need a project to provide their main income, while the APCP participants more often view the project as a source of additional income. This may reflect a real need, but it could also indicate that the APCP participants are a little more realistic of how much they could expect from their income generation activity. Also a distinct difference in attitude is shown in the marginal group where 3.7% of the non-borrowers would undertake a new income generation activity to use the free time whereas 3.8% of the APCP participants would do it to learn a new skill.

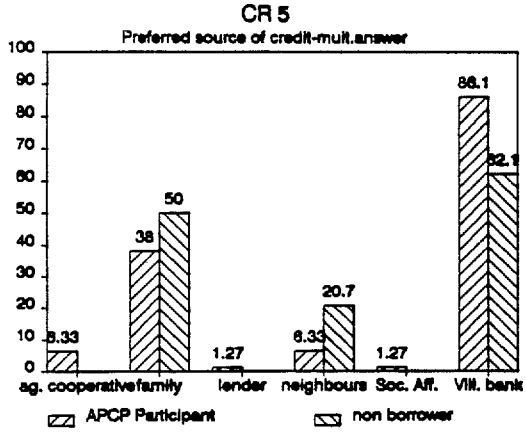
The answers from both groups regarding the nature of their needs for a new project were

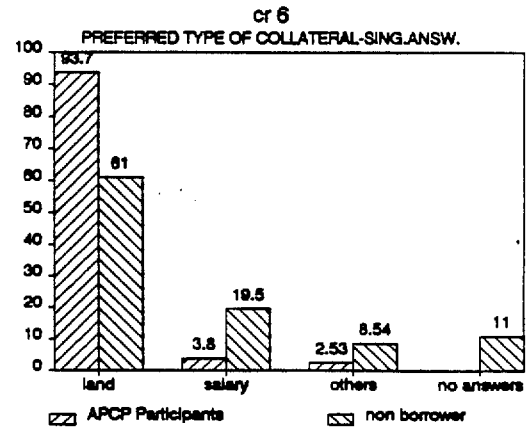




very close and therefore graph CR9 only gives the total percentages. Animal feed is required by 35% of all respondents and cattle for 37% of them, both showing clearly the type of projects they have in mind. Another 46 % of them need cash for unspecified projects.

1.2.3.3. Conditions for credit The village bank as source of credit comes first in the preference of both groups with 86% for the APCP participants and 62% for the non borrowers (graph CR5). It is followed by the informal channel, the family, with 38% for APCP participants and 50% for non-borrowers. Only 1.27% of the sample preferred a preference to the Social Affairs office which usually supports small programs for income generation in the villages.



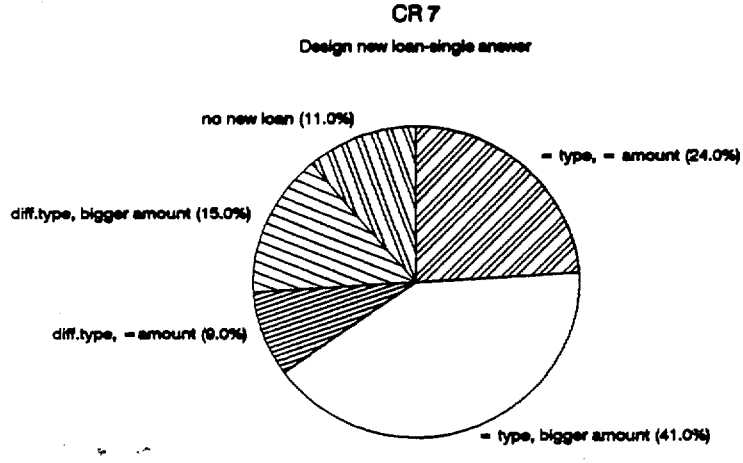


The percentage of non-borrowers who would prefer the neighbors is comparatively high. It stresses the attitude of non- borrowers who would prefer to deal with informal lending mechanisms. However, among the non borrowers who gave a preference to the bank, 86% said that it easier to deal with the bank as a credit institution than to negotiate with relatives or neighbors while at the same time keeping a good relation with them in the future.

Among the non-borrowers , 61% would still prefer the land as collateral (graph CR6), 19.5% the salary (probably the group of civil servants) and 8.5% would prefer another type of collateral. Preference for the type of collateral among the APCP participants is 93.7% for the land which could indicate that they are successfully fulfilling the conditions for collateral from the bank, i.e. the land.

1.2.4. WOMEN APCP PARTICIPANTS

1.2.4.1. New loans Questions about applying for a new loan were only addressed to the APCP participants. It appears, as shown in graph CR7, that 89% of the participants would



like to take a new loan. A majority of them, 65%, would like to maintain the same activity, but 41% would like to have a bigger loan. This obtains especially to the cases of loans for cattle,

since the market price is increasing at a much faster pace than the related amount of the loan allowed by the village bank.

1.2.4.2. Loan Impact The following table 7 indicates the impact of the project as perceived by the women APCP participants.

Table 7. Women APCP Participants

Description	% positive answers
Increased farm assets	4
Increased cash income	95
Increased skills	0

That 95% of the participants say that the project has increased their cash income means also that most of the income is directed to the basic consumption needs of the family. Benefit of the project to the women APCP participants is in a way similar to the APCP women beneficiaries since it serves their main purpose of addressing to the immediate consumption needs of their families.

1.2.5. WOMEN AS DEPOSITORS

The following table and graph shows the number of savings and deposits in the bridge and SFPP village banks. The women to men depositor ratio (25%) is higher than the borrower ratio (19.8%). Also the absolute number of women depositors is higher than the number of APCP women borrowers. In the bridge village, which had the lowest borrower ratio (12.7%) with only 89 female borrowers, the depositor ratio is the highest with 40%, representing 782 female depositors. A more in-depth study should be carried out to evaluate the overlap between the depositors and APCP borrowers and to assess the possibility of increasing at a first stage the number of women APCP participants from the existing group of village bank customers.

Table 8. Distribution of depositors per village bank and per gender

	Bridge		SFPP 1		SFPP 2		Total	
	Number	%	Number	%	Number	%	Number	%
Men	1169	60	1830	81	2073	82	5072	75
Women	782	40	416	19	447	18	1645	25
Total	1951	100	2246	100	2520	100	6717	100

Table 9. Percentage distribution by type of saving and gender

	Type of deposit				
	1	2	3	4	
Men	82	14	3	1	100
Women	90	6	2	2	100
Total sample	84	12	3	1	100

Type: 1 normal saving
2 saving with limited withdrawal
3 fixed accounts
4 current account

A majority of the depositors (84%) have a normal saving deposit. The rather conservative attitude of the village bank customers shows in the low proportion who have other types of deposit accounts such as fixed deposits that require more financial planning.

1.2.6. Women as staff of village bank The following table shows the proportion of women in the staff of the village banks in this sample.

Table 10. Percentage distribution of village bank staff per gender

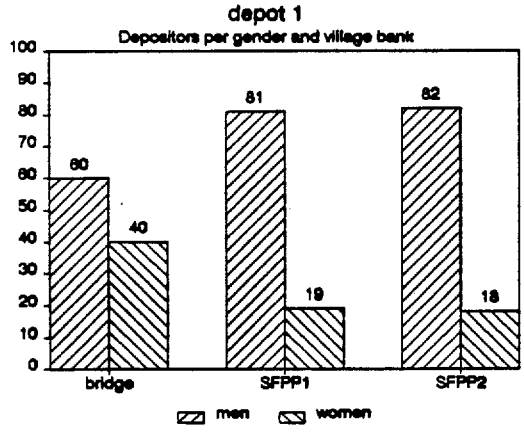
	Bridge	SFPP 1	SFPP 2	Non project	Total
Men	93	69	87	87	83
Women	7	31	13	13	17
Total	100	100	100	100	100

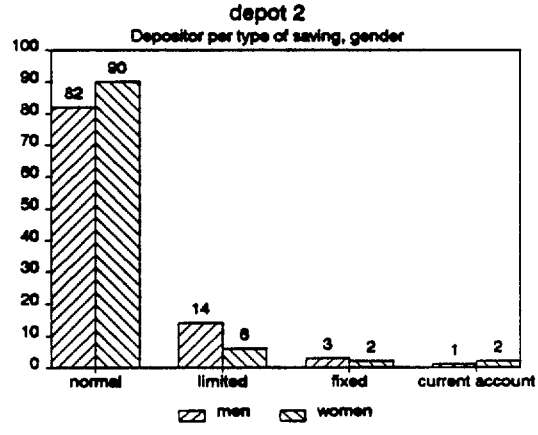
source: Village Bank Managers Survey

The participation of women in the village bank staff is not only marginal in a numerical sense, but also in terms of the positions they hold. The vast majority of them are clerks. None of them is a member of the village bank committee, which has all the project information and makes the decisions.

Information about APCP facilities is generally circulated by the employees of the village bank through informal social gatherings. It is obvious that the female staff cannot play an active role in diffusing project information among the village women when they themselves are not fully informed due to the nature of their positions.

Any attempt at increasing the number of women as APCP participants and as depositors should start by establishing an appropriate system to disseminate information. In view of the actual way information is spread, this implies that the degree of participation of female staff in the project activities should be increased. Furthermore, to ensure satisfactory participation of women in the long term, an overall increase in the number of female staff in the village bank should be an essential part of the APCP strategy for development of the bank personnel.





2. SMALL SCALE ENTERPRISE

2.1. METHODOLOGY

The initial scope of work of the WID specialist included the establishment of a profile of the small scale enterprises through the farm business survey in cooperation with the livestock specialist. The farm business survey was cancelled from the livestock specialist's scope of work. Subsequently, in agreement with the Baseline Study team leader, the survey of the small scale enterprises by the WID specialist was restricted to those in the sector of agricultural products processing, a line of enterprise which could offer better opportunities for women entrepreneurs.

Two main sources of information for the small scale enterprises were then identified by the consultant:

1. Sanitation control department of the Mudaria of Health which supervises the enterprises related to food production of the governorate;

2. Municipal registration department which issues the licenses for operation of any kind of enterprise in the governorate.

Administrative clearance to collect information was received by the fourth week of April, exactly when the official Ramadan holidays were to start. However, information from 6 districts out of seven were successfully collected within the timeframe of the baseline study.

During the same period, an extensive questionnaire was developed to evaluate the operation and financial performance of a sample of enterprises to be drawn from the data supplied by the registration department. However, because of the above-mentioned administrative delays, the interviews started before receiving the data and were held among enterprises which were reported to the consultant by unofficial informants. A total of seven enterprises have been visited, results of which are summarized in section 2.2.

2.2. PROFILE AND STATUS

Historical data about date of establishment, registration renewals, name of owner, type of business and number of workers can be found in the registration department. Due to time constraints, only data about type of activity and number of workers have been collected. More time is required to analyse ownership and staff by gender and to establish a codification system to retrieve information from each district municipality. This survey, based on the data of the municipal registration office, could be developed at a later stage by the project to be replicated in other governorates participating in APCP.

2.2.1. MUNICIPAL REGISTRATION OFFICE DATA

The following data include the agricultural products or food processing businesses registered in the governorate with a number of workers of less than 15. It is not yet clear how many of the small scale enterprises with one or two family member workers also get registered and therefore to which extent the following data are representative of the informal sector. Details about the enterprises by district, type and average number of workers are attached in appendix 1.

Table 11. Agricultural products and food processing enterprises - distribution of activities - %

Activity sector	Number	% of total
animal feed	1	1.04
bakery	1	1.04
biscuits	1	1.04
chicken slaughtering and freezing	1	1.04
confectionery	16	16.67
cotton cleaning	2	2.08
dairy products	19	19.79
edible oils	1	1.04
fish products	3	3.13
food preservation	7	7.29
grain and packing	1	1.04
grain mill	2	2.08
ice cream	1	1.04
ice maker	3	3.13
maize flour	1	1.04
meat processing	1	1.04
mill for agricultural products	1	1.04
oil press	3	3.13
packing of imported dairy products	1	1.04
packing of oils	1	1.04
packing of various foodstuffs	1	1.04
pasta	8	8.33
pasta, wheat flour	1	1.04
pastry and juice	1	1.04
pickles	3	3.13
preservation of imported food	2	2.08
sesame sweets and paste	8	8.33
sweet juice	1	1.04
vegetable freezing	1	1.04
wholesaler of vegetables and fruits	1	1.04
wholesaler of herbs/vegetables	1	1.04
wholesaler of vegetables	1	1.04
TOTAL	96	99.97

2.2.2. REMARKS

Majority of enterprises involved in food preservation , oil press which represent 14% of the total are in fact enterprises involved in packing of imported food. A small number of them are involved in the freezing and/or packing of the governorate vegetable production. Enterprises such as pasta factory, confectionery, sesame paste which represent 33% of the total are mainly processing imported food either from the governorate or from outside Egypt and do face difficulties in supply of subsidized material such as wheat, sugar.

Among the enterprises which process local agricultural products, dairy products, pickles and meat(pasturma, salted and spiced beef meat) processing business represents 24% of the total. They have been selected for in depth interviews for number of reasons of which:

- dairy products makes up 19% of the total, i.e. the largest group from the governorate food processing enterprises.
- they only process agriculture products from the governorate;
- they were quickly located from the time of beginning of the field visits to Qalubiya governorate.

2.3. ENTERPRISE SURVEY

2.3.1. INTRODUCTION

In-depth interviews were held with the owners of typical small and medium scale enterprises for processing of agricultural products. The geographical distribution, type of activities and size of the enterprises are summarized in Table 12.

Table 12. Profile of interviewed enterprises

District	Activity	Total number of workers	Yearly processed quantity - tons
1. Benha	vegetable pickling	5	400
2. Benha	vegetable pickling	3	180
3. Benha	dairy products	12	450
4. Toukh	dairy products	6	360
5. Toukh	dairy products	6	450
6. Toukh	dairy products	2	36
7. Toukh	meat processing	2	24

Vegetable pickling: unit processes vegetables such as carrots, turnip, cabbage, lemon, onion and olives.

Dairy products: products include white feta cheese, fermented cheese (roumi), cream, pasteurized milk, yogurt and butter.

Meat processing: unit produces salted and spiced beef meat.

2.3.2. GENERAL DESCRIPTION

2.3.2.1. Assets and working capital Fixed assets consist mainly of equipment and basic infrastructural improvements made in the working area. Only 15% of the respondents actually owns the processing unit premises while 85% rents it.

Average fixed capital is LE 6,900.-, with a minimum of LE 200.- for the meat processing unit and a maximum of LE 11,350.- for dairy products unit number 3.

Most of the entrepreneurs, 86%, used their own savings to buy the equipment. While the bank and other sources were also used by 29% of the respondents, non of the entrepreneurs borrowed money from a relative to purchase the equipment.

2.3.2.2. Financial performance The total yearly expenses of the enterprises has been averaged by type of activity in the following table.

Table 13. Average yearly expenses by item and by type of enterprise

Activity	Total yearly expenses	% raw material	% wages	% packing	% admin. O/M
Dairy	141,222.-	75	9	1	15
Pickles	61,600.-	72	14	4	10
Meat	161,600.-	96	2	0	2
Average	121,298.-	77	10	2	11

An average of 20% profit margin has been calculated from the figures provided by each of the enterprises about their yearly sale. The minimum profit margin was found in the meat processing business (10.6%) and maximum in dairy product (30%) unit 6, which processes only white feta cheese. However, this number should only be considered as indicative since a few discrepancies were found in the answers concerning the financial performance of the enterprises.

2.3.3. OPERATION AND PRODUCTION

2.3.3.1. Equipment When asked what sort of problems they faced in the technical operation of their businesses, 58% of the respondents mentioned that the production capacity of their equipment was limited. For 43% irregular power supply created problems, and 29% said they were using an old technique. Non of the respondents experienced frequent breakdowns nor had difficulties obtaining spare parts.

2.3.3.2. Transportation of raw material All interviewed entrepreneurs said they used carts to collect their raw material. In addition, 29% used a donkey and 15% used taxis.

2.3.3.3. Supply of raw material As for the supply of raw material, the entrepreneurs encounter a variety of problems. Most often mentioned are the problems of price fluctuation and transportation,identified respectively as a problem by 100% and 85% of the respondents. Lack of cash is experienced by 85% as an obstacle. Storage facilities, irregularity in the supply and lack of quantity were each mentioned by 43%.

2.3.3.4. Quality control of raw material Most of the respondents checked the quality of the raw materials themselves (85%), while 14% had it done by a governmental office.

2.3.3.5. Quality control of products As for the checking of the quality of the finished products, again this was done in most cases by the respondents themselves (85%) and in 15% by a governmental office.

Neither in the case of the checking of the quality of the raw material nor in the case of the end product were services hired from outside to do the examining.

2.3.4. MARKETING

72% of the respondents sell their products at the production unit itself or bring them to the customers. 43% use a distribution center as a way of marketing.

2.3.5. PRODUCTION DEVELOPMENT

2.3.5.1. Expansion and innovation A majority of the respondents plans to increase production (71%) while 57% has plans to introduce a new product. To be able to start these new activities or expand the current one, most respondents replied that they would need cash (71%), equipment (71%) and additional space (57%). Other things, like improved supply or new technology were mentioned by fewer people.

2.3.5.2. Source of financial assistance Responding to the question which source of assistance they would prefer, 58% of the respondents said assistance from the village bank (BDAC branch). The option family scored 15% while 28% of them did not provide an answer. Asked for the reason for selecting this particular source of assistance 72% answered that it is compatible with their type of business and that it had a better repayment procedure than the other sources.

2.4. FEEDMILLS

2.4.1. BACKGROUND

In the earlier scope of work of the WID specialist, a contribution to the design of credit package for production of animal feed at local level was included. Preliminary data collection and interviews were carried out in the governorate of Qalubiya. Also under a suggestion of Mr Mahmud Nour, a visit was paid to a pilot farm in Dumiat governorate to:

- evaluate their experiment in processing non-traditional feed at farm level;
- visit the mobile feedmill units distributed by the Authority for Popular Development to the farmers of the region.

During the course of baseline study, the scope of work of the livestock specialist was modified in order to allow him to concentrate on the problem of animal feed production. Therefore, design of a credit package for feedmill was not required anymore from the WID specialist. However results from an earlier data collection and field visits are presented herein, at least for the sake of the files...

2.4.2. DUMIAT PILOT FARM

2.4.2.1. Equipment and investment The large unit has a capacity of 750 kg an hour. It is installed under a shade and covers an area of 10x8 m2. It is composed of:

- a German made chopper for rice straw and various roughage;
- a locally made vertical shaft to lead the chopped material to a mixing unit;
- a locally made steel tank to store the molasses;
- a small suction pump to lead the mix of molasses and vitamin additive to the main mixer;
- an electrical switch board;
- a locally made conveyor belt to carry the final product from the mixer to the tractor.

The unit is electrically operated and has a power consumption of 75 KVA.

Total cost of the installation was LE 105,000.-, with equipment accounting for LE 75,000.-, infrastructure and electrical installation for LE 30,000.-. At present, one is studying ways of producing the unit locally. This should decrease the cost of the equipment by at least 50 %.

2.4.2.2. Raw material and production costs Composition of the feed is as follows:

Table 14. Dumiat pilot farm - non traditional feed composition

Materials	Percentage, in weight
Molasses	10-15%
Phosphoric acid	2.5%
Vitamin	2.5%
Mineral	3.5%
Urea	2.0%
Rice straw, farm by-products	75%

The main roughage is rice straw, bought from the local farmers at LE 30.- per ton. Molasses is either supplied by the government at LE 65.- per ton or obtained from the free market at LE 300.- per ton. The prices quoted at the Dumiat pilot farm are different from those obtained from the Mudaria of Agriculture in Qalubiya Governorate, see table 11.

Table 15. Prices of animal feed components in Qalubiya Governorate, 1988-1989

Component	Government feed price pr. ton 07/88	09/88	02/89	03/89	Free market price
Cotton cake	125	125	125	125	
Maize	300	360	360	395	500
Bran	30	30	30	30	275
Rice hull	50	50	71.5	71.5	
Rice cake Waste				75	125
Salt	36	45	45	75	
Molassess	20	20	100	100	500
Bean		540	540	625	800
Mixed flour		200	225	250	275
Maize corn		288	400		500
Flax cake		430			
Calcium	20	20	20		400
Soya Bean			1000		1100

Source: Mudaria of Agriculture Qalubiya

Production cost of the feed calculated by the farm administration is 7.1 piaster per kg if molasses is bought at government price or 30 piaster per kg if molasses comes from the free market. These prices include operation costs and depreciation of the station.

2.4.2.3. Operation The machine is operated daily. During the winter, production is about one ton per day, in summer this goes up to 3 tons per day..

The feedmill unit is operated by only one laborer and is supervised by the farms mechanical engineer. Within the five years of operation, no major technical problems have been encountered.

2.4.2.4. Nutritional value The non-traditional feed produced by the feedmill is used to supplement the fodder and government supplied quota of concentrated mix. Production records showed that the concentrated mix produces better milk yields than the non- traditional feed, but that their performance in meat production is equally good.

2.4.3. CONCLUSIONS

With respect to the large animal feed processing unit it can be concluded that duplication at small farm level is limited by its investment costs. However, duplication could be considered in the form of a plant operated at village level by a cooperative or as a private enterprise. The conditions for viable duplication are:

- equipment is manufactured locally to reduce the cost;
- technical support for unit operation and recommended local feed composition is provided at the inception stage;
- a training about animal feeding practices for farmers is provided by the village extension service.

The three prototypes of small mobile feedmill units, consisting of a tractor operated chopper/grinder, that were distributed to Local Government Units, have all been taken back to Cairo for readjustment after technical tests in the field.

Both types of units are not technically ready yet to be included into a "ready to operate" credit package. In the case of the mobile units, basic technical problems have to be overcome. For the large animal feed processing unit a pilot phase is still required to test out the equip-

ment at village level and to coordinate with the existing extension services on the supply of essential training about animal feed composition and practices to the farmers. The question is whether such a pilot phase should be directly implemented by PBDAC or through an APCP sponsored sub-project.

3. CREDIT PACKAGES

3.1. INTRODUCTION

The following credit packages have been designed, keeping in mind the objective to increase women's participation in small scale agribusiness. They can offer opportunities to women to participate either as the main owner of the business or as a family member. Selection of the types of business has been dictated by the following criteria:

- the raw material is largely available in the cultivated area falling under the concerned village bank;
- the processing unit can either be located in or nearby the farm;
- it can be operated and controlled by one family.

Feasibility studies of credit packages have been carried out for vegetable pickling and milk collection, both traditional women's activities in rural areas.

3.2. MILK COLLECTION

3.2.1. BACKGROUND

The present supply of milk to the governorate dairy processing units and to the urban consumers of the nearby suburb of Cairo is insufficient. However, a large source of fresh milk supply remains untapped. This source consists of the thousands of cows and buffalos that are scattered among the small farmers who own one or two heads (see table 1).

Table 16. Female cattle population above 1 year in selected APCP participant villages,1985

District	Village	1 - 5 years			more than 5 years		
		Buffalo	Local Cows	Mixed breed	Buffalo	Local cows	Mixed breed
Benha	Sandanhour	97	75	4	252	80	2
Benha	Sheblanga	87	33	0	938	377	0
Benha	Tahla	83	69	9	234	158	0
Kafr Shukr	Asneet	112	45	0	100	0	0
Kafr Shukr	Shukr	422	272	0	400	200	0
Tukh	Sanhur	217	54	12	125	16	39
Tukh	Tersa	262	90	0	128	23	0
Tukh	Aghur Kubra	3	0	0	138	71	0

Source: Mudaria of Agriculture, Qalubiya

Their milk production is usually processed for family consumption, but it is also common practice to sell the surplus to neighbours or at a local market. Findings from the survey carried out in Fayum governorate by NSCE [1] and conclusions of interviews with women suppliers to milk collection networks indicate that the value added during the processing of milk at the farm level is small in contrast with the time spent daily by the women in preparing the dairy products. Most of the women would prefer to sell their surplus as fresh milk rather than as processed products.

Support by APCP to establish family operated milk collection networks with adequate supply of credit should initiate the following developments:

- decrease of amount of time spent by women in processing dairy products;
- decrease of losses that result from processing and storage of dairy products at the farm;
- increase of family cash income from milk production;
- improvement of milk and dairy products supply to the urban consumers.

3.2.2. PROJECT OPERATION

The milk collection station is usually located at the ground floor of the business owner's house. The equipment is basic: a scale, tools to measure fat content and barrels of 200 liters for storage.

The milk is brought to the house of the milk collector by the individual producers. Collection is carried out early morning and evening to match the twice a day cattle milking pattern. Women often sell the produce of the morning milking and keep that of the evening for family consumption. Each of the subscribers, most of them women from the village, has a booklet to record the daily contribution she/he has taken to the collection station. Payments are cleared on a weekly basis. It is common practice to pay an advance of a week to the suppliers to secure a regular supply.

The milk collection business is undertaken by the whole family. Tasks related to the reception and testing of the milk are carried out by the woman/women of the house while the man is in charge of the financial administration and contacts with the collectors. The unit operates as an intermediate collection station for a larger network which takes care of the delivery to the urban centers.

A larger scale business could include a distribution service whereby the owners deliver the milk at the dairy units and/or the urban distributors of fresh milk. Credit packages for both alternatives are being proposed here.

A third alternative could also be envisaged: a combination of a milk collection and cheese processing unit at village level. This credit package could be studied and developed by APCP at a later stage.

3.2.3. INTERMEDIATE MILK COLLECTION NETWORK PACKAGE

A daily amount of 600 kgs will be collected for a period of 320 days. This amount will be supplied by 150-200 farms. It is assumed that the collected milk will consist of 2/3 buffalo milk and 1/3 cow milk. Prices paid to the farmers are LE 0.6 to 0.7 per kg for buffalo milk and LE 0.4 per kg of cow milk. Average fat content of the milk is maintained high enough to sell it at LE 0.7 per kg to the collector.

3.2.3.1. Required investment - LE

Title	Unit Price	Quantity	Total
Storage, testing, scale			300
Improvement reception area			200
Advance to milk suppliers			
Cow milk	0.40	200 x 7	560
Buffalo milk	0.65	400 x 7	1820
Miscellaneous			120

3.2.3.2. Loan design A medium-term loan with an amount of LE 3000.- at an interest rate of 15% should be provided with a repayment period of 3 years.

3.2.3.3. Financial analysis Repayment plan of the loan, cash flow and balance sheets calculated for the repayment period are attached in appendix 2. Graph pack 1 shows the net sale, income and total assets of the project during the repayment period. Analysis of these data show that the project would keep a profit margin of above 10% and a rate of return of 5. Liquidity of the project would be maintained at 2.

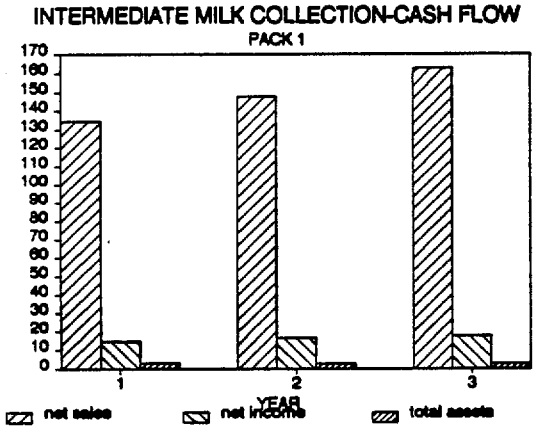
3.2.4. MILK COLLECTION AND DELIVERY PACKAGE

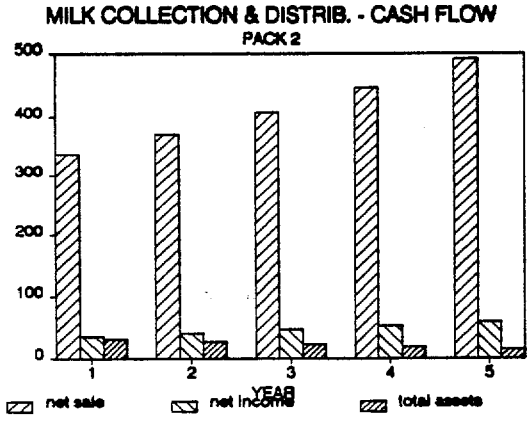
A daily amount of 1500 kgs will be collected for a period of 320 days. This amount will be supplied by 400-500 farms. It is assumed that the collected milk will consist of 2/3 buffalo milk and 1/3 cow milk. Prices paid to the farmers are LE 0.6 to 0.7 a kg for buffalo milk and LE 0.4 per kg of cow milk. Milk is sold to the dairy units at LE 0.8 and LE 1 to the fresh milk distributor in the urban centers. Average sale price of the milk will be LE 0.9, assuming that they sell half of the milk to each outlet.

The credit will cover purchase of a 1.5 ton pick up truck, milk churns and working capital.

3.2.4.1. Required investment - LE

	Unit price	Quantity	Total
Storage, testing tool			1000
Improvement reception area			1000
Car			25000
Advance to suppliers and operating cost			10000
			37000





3.2.4.2. Loan design A medium-term loan with an amount of LE 37,000.- at an interest rate of 15% should be provided with a repayment period of 5 years.

3.2.4.3. Financial analysis Repayment plan of the loan, cash flow and balance sheets calculated for the repayment period are attached in appendix 2, package 2. Graph pack2 shows the net sale, income and total assets of the project during the repayment period. Analysis of the calculations show that the project would keep a profit margin of around 11%. The rate of return is expected to increase from 1 to 3 during the repayment period, while liquidity of the project decreases in the same period from 3 to 1.

(Y-axis in graphs indicates LE 1000.-)

3.3. VEGETABLES PICKLING

3.3.1. Background Vegetable pickling is traditionally carried out at farm level for home consumption. Pickling businesses are found in the district and governorate centers to cater for the urban consumers. The majority of the units operate as a processing as well as sale station. They sell to individual customers, retailers and to wholesale dealers from outside the town or even outside the governorate.

Vegetables used for pickling are carrots, turnip, pepper, lemon, olives and onions. Most of them are produced in sufficient quantity in the governorate except olives which are imported from Sinai or the North Western Coast.

A processing unit is usually made up of one large tiled room, with water facilities and drains. Large amounts of vegetables are bought when the price is at its lowest and stored for a couple of months to keep the unit working all year round. It is usually operated by the family with a few additional laborers for the chopping and packing of the vegetables. The female members of the family participate in the work supervision and administration of the production, while the men are more involved in the purchase of raw material, marketing and financial administration.

A brief description of the processing chain is given to introduce and explain the loan design for the credit package. Vegetables are received and either processed immediately or stored for some time. When they are processed, they are washed, trimmed and stored in salt for one month by variety. At the end of the period, they are sorted out. Those in bad condition are thrown while the good ones are stored in plastic barrels for another period of 3 months. At the end of the pickling period, the vegetables are chopped into small pieces, mixed together and packed into small plastic bags for direct sale to consumers or into tin cans of 15 kgs for retailers and wholesalers.

Along with the growing need of food for the urban centers, demand for pickled vegetable has steadily increased. New processing units have been established in urban centers, but although they are closer to the marketing outlets they do have difficulties in the supply of raw material, both in terms of price and quantity. On the other hand, pickling units in villages could take advantage of a better and cheaper supply of vegetable but this will require the establishment of a marketing channel from the villages to the urban centers. This should not be that difficult if they have more competitive prices to offer.

3.3.2. VEGETABLE PICKLING PACKAGE

The units will process 120 tons a year of vegetables into 60 tons of pickled vegetables. The storage capacity for end- product is 20 tons and storage capacity for raw material is 10 tons.

3.3.2.1. Required Investment

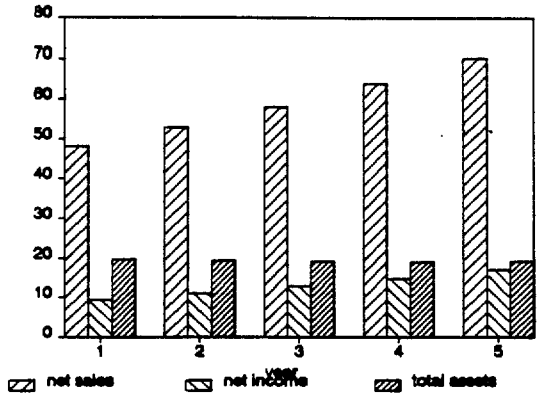
Table 19 Vegetable pickling - required investment, LE

Description	Quantity	Unit Price	Total
1. Infrastructure			3000
Plastic barrels	130	25	3250
Packing equipment, tools			1000
2. Working capital			
Storage, tons	20	180	5400
Storage raw materials, tons	12	180	360
Wages (months)	6	500	3000
Transport, admin (months)	6	300	1800

3.3.2.2. Loan design A medium term loan with an amount of LE 18,000.- at an interest rate of 15% should be provided with a repayment period of 5 years.

3.3.2.3. Financial analysis Repayment plan of the loan, cash flow and balance sheets calculated for the repayment period are attached in appendix 2, package 3. Graph pack3 shows the net sale, income and total assets of the project during the repayment period. Analysis of the data show that the project would keep a profit margin of around 11%. The rate of return is expected to increase from 1 to 3 during the repayment period, while liquidity of the project decreases over the same period from 3 to 1.

PACK 3. VEGTABLE PICKLING - CASH FLOW



Appendix A. FOOD PROCESSING ENTERPRISES - STATISTICAL DATA

Data about number of workers have not been systematically provided by the registration office.Therefore, the indicated average number of workers in the following table have been calculated form the available data.

BENHA	Type of product	total number	average nr. workers
	confectionery	6	3.5
	dairy products	10	1.8
	food preservation	1	
	ice maker	1	13.0
	oil press	3	6.0
	pasta	1	
	pickles	3	1.3
	sesame sweets and paste	4	5.3
SUBTOTAL		30	

KANATER			
	packing of imported dairy products	1	3.0
	preservation of imported food	2	7.5
	ice maker	1	15.0
SUBTOTAL		4	

KHANKA	type of product	total number	average nr. workers
	chicken slaughtering and freezing	1	
	confectionery	1	
	food preservation	1	
	ice maker	1	
	pastry and juice	1	
	sesame sweets and paste	1	
SUBTOTAL		6	

QALIUB	type of product	total number	average nr. workers
	biscuits	1	
	confectionery	4	
	cotton cleaning	2	
	dairy products	6	
	fish products	3	
	food preservation	3	
	grain mill	1	
	ice cream	1	
	packing of oils	1	
	packing of various foodstuffs	1	
	pasta	2	
	pasturma production	1	
	sweet juice	1	
SUBTOTAL		27	
SHOUBRA			
	bakery	1	
	confectionery	5	
	maize flour	1	
	mill for agricultural products	1	
	pasta	4	
	pasta, wheat flour	1	
	sesame sweets and paste	1	
SUBTOTAL		14	
TOUKH			
	animal feed	1	12.0
	dairy products	3	2.5
	grain and packing	1	1.0
	grain mill	1	1.0
	food preservation	2	-
	pasta	1	7.0
	sesame sweets and paste	2	-
	vegetable freezing	1	12.0
	wholesaler of herbs/vegetables	1	1.0
	wholesaler of vegetables and fruits	1	-
	wholesaler of vegetables	1	-
SUBTOTAL		15	

Appendix B. CREDIT PACKAGES- CASH FLOW AND BALANCE SHEET

1. MILK COLLECTION - INTERMEDIATE STATION

1.1 LOAN DESIGN - INTEREST RATE AND REPAYMENT, LE

period	due	paid	interest
year one	3000	1000	450
year two	2000	1000	300
year three	1000	1000	150
total		3000	900
yearly repayment			1300
monthly repayment			109

1.2 CASH FLOW[1]

YEAR	1	2	3
EXPENSES			
cow milk	25600	28160	30976
buffalo milk	83200	91520	100672
transportation	6400	7040	8096
wages	3200	3520	3872
loan repayment	1300	1300	1300
TOTAL EXPENSES	119700	131540	144916
SALES	134400	147840	162624
NET INCOME	14700	16300	17708

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1. an increase of 10% per year has been applied for the purchase and sale price of the milk and 15% for the transportation

1.3 BALANCE SHEET

YEAR	1	2	3
ASSETS			
1. current assets			
advance(suppliers)	2380	2380	2380
2. fixed assets			
equipment	300	300	300
building	700	700	700
depreciation	200	400	600
total fixed assets	800	600	400
TOTAL ASSETS	3180	2980	2780
LIABILITIES			
current liabilities			
long term debt	1300	1300	1300
total liability	1300	1300	1300

1.4 RATIO

YEAR	1	2	3
LIQUIDITY			
curent ratio	2	2	2
PROFITABILITY			
profit margin on sale %	10.9%	11.0%	10.9%
rate of return, % (to investment)	5	5	6

2. MILK COLLECTION AND DELIVERY

2.1 LOAN DESIGN - INTEREST RATE AND REPAYMENT, LE

period	due	paid	interest
year one	37000	7400	5550
year two	29600	7400	4440
year three	22200	7400	3330
year four	14800	7400	2220
year five	7400	7400	1110
total		37000	15540
yearly repayment			10508
monthly repayment			876

2.2 CASH FLOW

YEAR	1	2	3	4	5
EXPENSES					
cow milk	64000	70400	77440	85184	93702
buffalo milk	208000	228800	251680	276848	304533
o/m cost	3000	3300	3795	4364	5019
wages	9600	10560	11616	12778	14055
depreciation	5400	5400	5400	5400	5400
loan repayment	10508	10508	10508	10508	10508
TOTAL EXPENSES	300508	328968	360439	395082	433217
SALES	336000	369600	406560	447216	491938
NET INCOME	35492	40632	46121	52134	58720

2.3 BALANCE SHEET

YEAR	1	2	3	4	5
ASSETS					
1. current assets					
advance to suppliers	10000	11000	12100	13310	14641
2. fixed assets					
equipment	1000	1000	1000	1000	1000
building	1000	1000	1000	1000	1000
car	25000	25000	25000	25000	25000
depreciation	5400	10800	16200	21600	27000
total fixed assets	21600	16200	10800	5400	0
TOTAL ASSETS	31600	27200	22900	18710	14641
LIABILITIES					
current liabilities					
long term debt	10508	10508	10508	10508	10508
Total liability	10508	10508	10508	10508	10508

2.4 RATIO

YEAR	1	2	3	4	5
LIQUIDITY					
curent ratio	3	3	2	2	1
PROFITABILITY					
profit margin on sale %	10.6%	11.0%	11.3%	11.7%	11.9%
rate of return, % (to investment)	1	1	2	3	4

3. VEGETABLE PICKLING

3.1 LOAN DESIGN - INTEREST RATE AND REPAYMENT, LE

Period	Due	Paid	Interest	
year one	18000	3600	2700	
year two	14400	3600	2160	
year three	10800	3600	1620	
year four	7200	3600	1080	
year five	3600	3600	540	
total		18000	8100	
yearly repayment			5220	
monthly repayment				435

3.2 CASH FLOW

year	1	2	3	4	5
EXPENSES					
raw material	21600	23760	26136	28750	31625
equipment o/m	1300	1430	1573	1730	1903
packing	700	770	847	932	1025
wages	6600	7260	7986	8785	9663
admin. cost	1700	1870	2057	2263	2489
depreciation	1450	1450	1450	1450	1450
loan repayment	5220	5220	5220	5220	5220
TOTAL EXPENSES	38570	41760	45269	49129	53375
NET SALES[2]	48000	52800	58080	63888	70277
NET INCOME	9430	11040	12811	14759	16902

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2. two third of the year production

3.3 BALANCE SHEET

YEAR	1	2	3	4	5
ASSETS					
1. current assets					
20 ton processed products	12857	13920	15090	16376	17792
(at production cost)					
5 tons raw material	900	990	1089	1198	1318
total current assets	13757	14910	16179	17574	19109
2. fixed assets					
equipment	4250	4250	4250	4250	4250
building	3000	3000	3000	3000	3000
depreciation	1450	2900	4350	5800	7250
total fixed assets	5800	4350	2900	1450	0
TOTAL ASSETS	19557	19260	19079	19024	19109
LIABILITIES					
current liabilities					
long term debt	5220	5220	5220	5220	5220
total liability	5220	5220	5220	5220	5220

3.4 RATIO

YEAR	1	2	3	4	5
LIQUIDITY					
curent ratio	4	4	4	4	4
PROFITABILITY					
profit margin on sale %	20%	21%	22%	23%	24%
rate of return, %	48%	57%	67%	78%	88%
(to investment)					

Appendix C. SCOPE OF WORK

WID SPECIALIST IN LIVESTOCK MANAGEMENT, DAIRY PROCESSING AND SMALL ENTERPRISES.

GENERAL RESPONSIBILITIES

The WID Specialist will work with the Agribusiness Specialist to develop technology/credit packages in areas managed by women. Two areas previously identified as having the potential to increase the income of farm families and women are livestock and dairy processing. The specialist will also identify for future development other enterprises, i.e., food processing and packaging, with the potential to benefit women.

SPECIFIC RESPONSIBILITIES

1. The WID Specialist will work with the Agribusiness Specialist in obtaining and reviewing relevant literature on micro and small enterprises, particularly in livestock management and dairy processing.

2. The WID Specialist will collaborate with the Agribusiness Specialist in development of the Farm Business Survey. This survey should include:

a. Profile and status of small and medium size agribusiness in selected governorates, including:

   Type of activities.
   Type of ownership: private, cooperative; male, female.
   Size: number of men and women employed.
   Financial status.
   Current use and need for additional credit.

b. One or two detailed model agribusiness plans including market, technical, financial and cash flow and analyses suitable for consideration for immediate funding by PBDAC. The first enterprise area to be examined is dairy processing and livestock management.

c. Additional opportunities for new, modified or expanded agribusinesses that will increase women's income, including:

   Assessment of the availability and value added of additional technologies, and need for credit, and financial analysis of enterprises.
   A "package" of credit and technological assistance needed by these enterprises.

3. Institutional profile of WID within PBDAC:

   Establish a baseline on women clients of PBDAC by including information on loans given to women (e.g., number, types, repayment rates).
   Identify constraints to women receiving credit (e.g., tenure issues, lack of collateral).
   Develop strategies that potentially could increase credit to women (e.g., non-collateralized loans).

DELIVERABLES:

1. One or two detailed model agribusiness plans including market, technical, financial and cash flow analyses suitable for immediate use by PBDAC. These plans should clearly identify the amount of credit, a cash flow analysis and types of appropriate technology and extension/veterinarian services needed.

2. Identify other enterprises or household activities managed primarily by women that could provide increased family/female income with a credit/technology "package".

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