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COUNTRY PAPERS

SMALL FARMER CREDIT IN WEST ASIA

AGENCY FOR INTERNATIONAL DEVELOPMENT
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Agricultural Credit in Afghanistan: A Review of Progress and Problems from 1954 until 1972

by Douglass G. Norvell
USAID/Afghanistan

Agricultural Credit for Small Farmers in the Middle East

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American University of Beirut

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1. "Small Farmer Credit in Turkey: The Supervised Credit Program of the Turkish Republican Agricultural Bank" by Thomas Stickley and Suha Satana.
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COUNTRY PROGRAM

SMALL FARMER CREDIT IN TURKEY

THE SUPERVISED CREDIT PROGRAM OF THE TURKISH REPUBLICAN AGRICULTURAL BANK

---

by:
Thomas Stickley and Suha Satana
Faculty of Agricultural Sciences
American University of Beirut

in cooperation with
The Turkish Republican
Agricultural Bank

Beirut
November, 1972
revised

PREFACE

Working under contract with the United States Agency for International Development in Turkey and with the cooperation of the Turkish Republican Agricultural Bank, the American University of Beirut prepared this report.

The 3 months allotted for preparing this report were insufficient to conduct surveys or to collect primary data. Therefore, secondary sources of data were used exclusively.

The authors are grateful to the many agencies and individuals who cooperated in offering information and reviewing the first draft of this report. Some of those who helped were the Turkish Republican Agricultural Bank (especially Ismet Alver, Ergin Tascioglu, Yalcin Poyraz, Yuksel Dikmen, Nekta Turkcan, and Nidir Orhan Toker), the United Nations Development Programme (especially Dr. Michael Hyland), the USAID/Ankara (especially Leonard Otto and Keith Byerge), and our colleagues at the American University of Beirut (especially Muzaffer Sarimeseli).

Special thanks are extended to James Sayre (Economic Research Service, U.S. Department of Agriculture), Leonard Otto (USAID/Ankara) and Yalcin Poyraz (Turkish Republican Agricultural Bank) for their conscientious editing of the final draft.

Though many persons have helped, the authors take full responsibility for the content.

All tables, charts, and maps referenced in the text of the report are found in the appendix. The numbers on these tables, charts and maps correspond to the sections in which they are discussed.

Turkish Liras were converted to U.S. dollars at the rate of 14 TL to $1 U.S. The Turkish Republican Agricultural Bank is referred to as the "Bank" and the Supervised Credit Program as the "SCP".

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SMALL FARMER CREDIT IN TURKEY

BY

Thomas Stickley[1] and Suha Satana[2]

SUMMARY

The Supervised Credit Program of the Turkish Republican Agricultural Bank started in 1964 as a pilot operation in two provinces. By 1972, the program had spread to 40 of the 67 provinces of Turkey. Within these 40 provinces were 277 Bank branches with 205 agronomists serving as supervisors. By July 31, 1972, 43 million dollars had been approved in loans to 22,000 farmers (about 0.4 percent of all Turkish farmers). These are mostly middle-income farmers. Low-income farmers are not attracted to this program because of (1) the long-term (5-year) farm plan to accompany the loans throughout the plan period (this involves a substantial obligation on the farmers part from which small farmers are discouraged by their traditional nature), (2) the larger size of the loans needed to carry out the plan (as compared to other sources of credit open to them where they can borrow smaller amounts), (3) the negative connotation of the Turkish name for the program (Kontrollu Zirai Kalkinma Kredileri) which means "The Controlled Agricultural Development Credit," (4) the priority designation of the Bank is not encouraging small farmers to participate in such programs (at the present stage of Turkey's agricultural development the limited resources are aimed toward influencing total agricultural production) and (5) inability of small farmers to furnish adequate tangible security.

In the last 2 or 3 years, the program has suffered from (1) a high delinquency rate (47 percent in 1970), (2) a decline in the number of new borrowers, and (3) less intensive supervision than that originally planned.

Although the Supervised Credit Program appears to be an innovative undertaking that combines credit with technical assistance, the necessary link could not be adequately provided between these two major components of an ideal program. Many frustrations evolved in getting the other technical organizations to coordinate with the Agricultural Bank. Such coordination still has not materialized and no satisfactory solution is in sight. The Bank, by itself, is far from furnishing the optimum level of technical assistance which characterizes an effective Supervised Credit Program.

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In the eyes of the borrowers, the Agricultural Bank represents a welfare organization with mostly outdated procedures of operating a credit mechanism. This situation was not encouraging to run the program effectively within the existing structure in Turkey. Therefore, a process of revitalization and dissemination of a new attitude toward agricultural credit was needed; such a process could not have come through the Agricultural Bank because of the obvious difficulties involved as well as the minor relative importance of the program among the Bank's other activities.

I. INTRODUCTION

A. DESCRIPTION OF TURKEY'S INSTITUTIONAL AGRICULTURAL CREDIT SYSTEM

Several institutional sources of agricultural credit exist in Turkey, but none matches the Turkish Republican Agricultural Bank (hereafter referred to as the "Bank") which occupies a dominant position with the widest coverage of the country and above 90 percent of all the institutional agricultural credit granted to farmers. The remaining share of agricultural credit is provided by four important public sector agencies -- the Sugar Company (monopoly), the State Farms, the State Supply Organization, and the Meat and Fish Company as well as four other private and semi-official banks -- the Aegean Bank, the Sugar Bank, the Grape Growers Bank and the Tobacco Producers Bank.

The institutional sources are generally characterized by 1) insufficient portfolio, 2) low rate of turnover, and 3) high rate of delinquency. In 1967, total supply of farm credit amounted to $432.35 million which satisfied only about 40 percent of the actual requirements. The Agricultural Credit Cooperatives account for a sizeable share of farm credit disbursed. (This establishment was under the Agricultural Bank, but has recently become autonomous). These cooperatives disbursed $28,347,902 to 970,621 farmers in 1970. The average loan was $116.21. However, about 75 percent of the outstanding loans of these cooperatives are not liquid, according to State Planning Organization estimates.[3]

B. SMALL FARMERS AND THE INSTITUTIONAL CREDIT SYSTEM

Small farmers are not adequately touched by the institutional credit system in Turkey. The Law of the Bank indicates that the distribution of agricultural credit should favor small farmers and necessary administrative facilities should be provided to them. Small farmers in Turkey are characterized by 1) small volume of production with usually little or no marketable surplus, 2) diversified and complex structure of operations, 3) difficulty in separating production and consumption expenditures, 4) seasonal nature of production and heavy dependence on nature, 5) surplus agricultural labor, 6) insufficient ability for presenting collateral, 7) inadequate social expenditure and lack of infrastructural facilities, 8) inseparable social fabric from economic activities, and 9) lack of agricultural technology. There is, then, an obvious difference between the credit needs of small farmers and those of large farmers and merchants. However, considerable injustices exist in the distribution of credit among different income groups, the least privileged of whom are the small farmers. For instance, the lower half of 1.3 million farmers receiving credit in any year from the Bank received an average of $23 in loans; about 74 percent received loans below $71.5. The amounts indicated are barely enough for maintenance of a farming family, let alone the possibility of covering the year-round costs of production.

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3. Hassan Umit, "Problems of Agricultural Credit with Special Emphasis on Usury, Review of the Faculty of Political Sciences, Ankara, Vol. XXV, No. 4, p. 93.

Especially, if the larger size of rural as opposed to urban families is considered, it is clearly seen that the underprivileged credit borrowers are being served an insufficient dole rather than credit. The authors conjecture that the minimum amount of farm credit should be around $200 per year after family maintenance has already been taken care of. In addition, there are 3.1 million farming families in Turkey. More than half of them have no access to institutional credit.[4]

C. MAGNITUDE AND RELATION OF THE SUPERVISED CREDIT PROGRAM TO SMALL FARMERS

The Supervised Credit Program (hereafter referred to as the "SCP") serves only a small minority of the total farmers, roughly 0.4 percent. The SCP had started with the objective of serving the medium-size farmers almost exclusively. However, it is now serving the small farmers too, but the number of these small farmers in the SCP is estimated to be as low as 10 percent.

Reaching small farmers is not important in the SCP. The policy makers have designated priority for medium and large-size farmers in order to influence agricultural production. Another reason for not choosing small farmers is to demonstrate the effect of the SCP by using large- and medium-size farmers. However, it is intended to make the SCP accessible to a larger group of both small and large farmers when the program becomes fully established.

A recent policy change, reaffirmed in October 1972, places emphasis on including more small farmers in order to attract a larger number of loan applicants under the SCP.

4. Hassan Umit, "Problems of Agricultural Credit with Special Emphasis on Usury, Review of the Faculty of Political Sciences, Ankara, Vol. XXV, No. 4, p. 93.

II. PROGRAM CHARACTERISTICS

A. BACKGROUND

1. Historical Summary

The Turkish Republican Agricultural Bank, over the years, conducted research to improve agricultural credit. A study made in 1961-63 in collaboration with the USAID showed that a Supervised Credit Program should be established. Such programs are being implemented in a number of both developing and advanced countries, a classic example of which is the Farmers Home Administration (FHA) in the USA. Turkey decided to adapt the FHA system by coordinating the ministries whose services are village oriented and by selecting pilot provinces with the intention of expanding the program throughout Turkey over time.

A project agreement (Number 277-14-061) was signed by the Ministries of Finance, Commerce, and Agriculture , the State Planning Organization, the USAID, and the Bank on March 24, 1963. For the first year's operation a fund of $3,571,428 was set up ($1,785,714 from the USAID and $1,785,714 from the Bank)

Under the same agreement, a decision-making mechanism, the Policy Committee, was formed at the highest level consisting of representatives of the above mentioned ministries and organizations. This Policy Committee decided upon the main principles that have guided the SCP. In conformity with these principles, the departments concerned in the Bank signed a Memorandum of undertaking and the program was put into action on March 20, 1964.

Presently, 40 of Turkey's 67 provinces (see Map II. A. 1) are being served by the program. The growth of the program since its inception in 1964 is shown in Table II.A.1.i. Though it was originally hoped that 60,000 new farmers would be added to the program each year, the actual numbers have been far short of this goal. Even in the best year, 1969, only 4,123 new beneficiaries were added.

Besides the Supervised Credit Program that started within the Bank in 1964, the TOPRAKSU (soil and water) Department of the Ministry of Rural Affairs has been involved in supervised credit since 1960. Though the Bank provides all of the credit, TOPRAKSU provides the technical assistance and the program is limited to loans for soil conservation and irrigation on a project basis.

TOPRAKSU loans are channeled through the Bank as stated in the preceding paragraph. The credit source is a combination of Bank funds, TOPRAKSU funds and AID funds. The projects are prepared by the field services of the TOPRAKSU. Only applications for loans larger than $2,857 are appraised and approved by higher level authorities in the Department. Loans smaller than this can be consummated at the local level. Credit worthiness of prospective TOPRAKSU borrowers is examined by the respective Bank branch office as has always been the case with all credit activities of the Bank. In case of loans larger than $2,857, secondary approval of headquarters office in Ankara is needed. Again, this procedure applies to all loans.

TOPRAKSU loans may be given to either individuals, cooperatives, or non-profit organizations. The growth of the TOPRAKSU program is presented in Table II.A.1.ii. Over the past 6 years the program has grown steadily in terms of new loans granted totaling about 13.5 million dollars. In 1971, over 1,700 loans totaling about 1.65 million dollars were granted.

The Supervised Credit Program is steadily changing. Major changes in the Program in addition to changes in funding and number of operations (farmers) are as follows. The list is not arranged chronologically.

1. In 1965, the floor limits on land size were reduced by 50 percent and priorities were said to be given to farmers closer to lower limits. Also, the upper land size limits were elevated periodically and now the ceiling limits are twice as high as they were before. The floor limit is currently 0.5 hectares while the ceiling is 240 hectares. These limits vary by type of soil and availability of irrigation water.

2. For the convenience of the applicant farmers the credit requests can be made to credit engineers orally (credit engineers are technical supervisors of the Bank). The request is then relayed to the branch office. This procedure was passed in 1967.

3. Farmers previously non-eligible due to minor non-agricultural activities are now eligible.

4. Lump sum credit advancement for investments has not generated effective results. The Bank recently decided that investment loans be spread throughout the farm plan period and be given individually for each year's activities.

5. In October 1972, the Bank started encouraging multi-purpose projects in the farm planning. Previously, a few simple changes were emphasized which the farmer could handle and which could be brought about with supervision in a few years.

6. The new Project Bureau was established within the Agricultural Bank. This Bureau employs mainly technical staff and its function is technical review of projects prepared by credit engineers.

7. The reader may question the causes of the sharp decline in the number of borrowers between the years 1969-1970 (Table II.A.1.i). The underlying reason is that until 1969 the Bank emphasized quantity of work done by credit engineers. But, in the wake of rising delinquency rates, it shifted emphasis to the quality. Fewer borrowers were served but the service was considered to be better.

2. Relation to National Credit System

In 1967, the Agricultural Bank accounted for more than 95 percent of all the outstanding agricultural loans from institutional sources in Turkey (see Table II.A.2.i). Officials of the Agricultural Bank acknowledged that the Bank's share never falls below 90 percent. As for non-instiutional lending, a CENTO study in 1962 showed that 60 percent of all money borrowed by farmers comes from non-institutional sources.

The operation of the SCP relative to the programs of the Bank has been increasing. In 1967, only 0.89 percent of the Bank's outstanding loan funds were supervised, but by 1970, the program's share approached 1.6 percent of the total amount of money outstaning in agricultural loans from the Bank (see Table II.A.2.ii.). The percentage of the number of supervised loans is also growing but not as rapidly as the percent of the amount of money loaned. This is in conformity with the fact that the average size of supervised loans ($857) is greater than the average size of the other agricultural loans ($178). These average figures are as of December 1970. The latest SCP Report of September 30, 1972 shows an average loan size of $1,400.

Within the institutional credit system serving agriculture, the Bank occupies a dominant position. The flow of credit to farmers through different channels and their relation to the Central Bank are shown on Chart II.A.2.

3. Other Program Activities

Article 4 of the Bank's law specifically requires the Bank to give special attention to the requirements of the small farmers whose definition is presented in Section II.D.1.A.

The Bank is responsible for giving credit for a diverse assortment of purposes (see Table II.A.3.). Those types of loans specifically designated to aid needy small farmers are indicated with an asterisk.

Relation to Pre-Existing Local Institutions

The Turkish Republican Agricultural Bank is a successor to the old Agricultural Bank established in 1863. In its present form, the Bank was established by Law No. 3202 enacted in 1937. This law was amended in 1953, 1960 and 1965. Under this law the Bank is an autonomous, state-owned institution.

The Bank is engaged in keen competition with other credit institutions and Banks. The competition is chiefly in the form of attracting more depositors since saving deposits constitute 60 percent of the Bank's total deposits which in turn constitute about one-third of the total Bank resources (see Table II.A.4).

5. Agricultural Patterns and Potential

Turkey is primarily an agricultural economy, but agriculture's contribution to national income has dropped steadily and by 1967 was only about 35 percent. However, 75 percent of the labor force is still in agriculture.

There are about 3 million separate agricultural holdings in Turkey of which two-thirds are less than 12 acres in size, accounting for only one-quarter of the total land in farms. A considerable number are subsistence farms. About 12 percent of the farmers farm more than half of the land, in moderate to large size units of 25 acres or more. There are some very large farms of over 1,200 acres--580 according to the 1963 agricultural census--of which 97 are state farms. These larger farms are located in the southern parts of the country, in the Mediterranean and Aegean regions, and are the most productive in the country. These farms usually grow cash crops such as tobacco, cotton, and citrus. Small farms usually consist of cropland only, with no grazing area. Livestock are grazed on common grazing grounds or on land where villages have grazing rights. Turkish agriculture suffers from considerable land fragmentation caused by the traditional splitting of land among the males of the family. Less than one-tenth of the farms are in one piece. The 1963 census indicates that many of the smaller farms are split into many pieces with poor field layout. Most Turkish farmers use age-old traditional methods of farming involving much hand labor. Nevertheless, recent development in Turkey has demonstrated that farmers in many instances are much more ready to change than previously assumed. When it was demonstrated in their own fields that a new, profitable technology would result in large differences in yields, production, and income, farmers were anxious to use the new technology and new inputs, if they were made available at reasonable prices at the proper times. The rapid acceptance of the new high-yielding wheat varieties in the coastal areas indicates that the farmers are receptive to profitable change. However, as yet no such development has been demonstrated on the semi-arid Central Anatolian Plateau.

Turkey's principal crops are cereals (mostly wheat and barley), sugar beet, cotton, and tobacco. Fruits and nuts are important, especially filberts, grapes (raisins), olives, figs, and citrus fruits. Vegetable growing, especially near the cities, makes an important contribution to the economy. Cereals are the major crops with wheat being the basic staple in the Turkish diet. Cereal production is concentrated on the Anatolian Plateau, along the Aegean coast near Izmir, and on the fertile Cukurova Plain. Animal husbandry is one of the most important componenets of Turkey's agriculture. Animals are used for motive power and provide significant quantities of animal products. Table II.A.5.i. shows the value of agricultural production from 1965 to 1968. Some crop yields are presented in Table II.A.5.ii.

Turkey's current agricultural potential lies in the domains of:

a. Increased wheat and barley production through introduction of new high-yielding varieties.

b. The completion of planned water development projects which should increase the irrigated area from 1.5 to approximately 4.0 million hectares.

c. A significant increase in water use efficiency.

d. An increase in fodder and livestock production by the introduction of legumes as a substitute for traditional fallow.

e. An increase in poultry production based on modern technology by supplementary imports of feed grains.

f. An increase of fruit and vegetable production for export and local demand, especially in the irrigated coastal areas.

The largest group of products exported from Turkey are the industrial crops (cotton and tobacco), with dried fruits (figs and raisins) next in order. With the increase in cotton production, its by-products, cotton-seed cake and meal, have also become relatively important exports. An important comparative advantage is in the production of hazelnuts -- Turkey is the leading exporter in the world. Livestock and animal products also constitute a share of Turkey's exports but their relative importance has been diminishing. Value of Turkey's agricultural exports is shown on Table II.A.5.iii. for the years 1966-1968.

B. OBJECTIVES

1. General Objectives

a. Announced.

The official objectives of the SCP as stated by the Bank are to: (1) increase the productivity of a unit of land, (2) promote the use of improved and appropriate production inputs and encourage on-farm investments; (3) have individual farmers operate economically; (4) create an effective farmers' demand for new technology; and, in order to achieve these, (5) provide the farmers with financial support (effective and adequate credit) if the purchase of durable capital and inputs lies beyond the capabilities of the farmers. As a consequence of the program, participating farmers are to have: (1) a reasonable level of living, (2) an ability to repay the loan, (3) financial strength in being self-supporting, and (4) sufficient income to enjoy profits over the costs of production.

Production increases are of primary importance since in Turkey it is no longer possible to augment agricultural production by extensive farming means. This fact became apparent in the early 1960's and the Turkish

Government has since then adopted the policy of shifting priorities to medium-and long-term agricultural investment credit. All this is done with the intention of bringing about as rapid a shift as possible towards intensive farming. Illustrating this phenomenon further, Table II.B.1.a. indicates the extensive development that came about in land use during the 1950's. The area of cultivated land (area sown plus fallow) increased by more than 9 million hectares in 10 years, at the expense of roughly the same amount of decrease in meadow and pasture land.

As stated earlier, the Bank by its law is required to give special attention to the requirements of the small farmers. The Bank defines the small farmers as those who "operate a size of land sufficient to keep the farmer and the whole family occupied full time so that they need neither to hire labor nor to work outside the farm to serve''next of kin''.

Yet, official objectives of the SCP require that loans be given to medium-sized farmers and the entire operation of the program be geared to the assistance of such farmers in order to create potent and economically independent farmers. The obvious controversy is explained by attributing the farmer-selection criteria of the Bank to the much emphasized production increases. Evidently, it takes less of an effort to deal with medium-sized farmers than with small farmers. Furthermore, the fact that there exists a gap in Turkey between the rate of growth of agricultural production and that of population well justifies such a deliberate discrimination against the small farmers in tackling national problems by their order of urgency.

All in all, the SCP is yet far from being significant and its relative unimportance definitely cannot be over emphasized. Table II.A.2.ii. shows how far the program has reached in financial terms. The total number of beneficiary farmers was about 19,000 as of September 30,1972. This number actually constitutes 0.4 percent of the total farmers in Turkey whose number is around 3.1 million.

b. Apparent

At this stage there seems to be little discrepancy between the announced objectives of the SCP and those that are apparent. The fact that the program has a brief history of only 8 years makes such an assessment difficult. Nevertheless some judgement could be passed concerning the Bank's experience with the SCP.

The growth of the program slowed between 1969 and 1971. This may be an indication of a declining genuine concern for the program-- not necessarily because of the immediate causes of the slow-down but because of the previous activities that led to such a course in the running of the program.

From the available evidence it is apparent that income distribution is not a major issue in this SCP. Pacification of discontented and potentially politically and economically powerful farmers is only an ancillary incident, not premeditated.

Although the SCP objectives were properly defined and appropriate selection criteria set, credit engineers continually grope to find potential borrowers. Moreover, funds allocated for the program were being fully used. This has forced the Bank to relax the land-size limits that were the main element determining eligibility. (The standing limits range from 0.5 to 240 hectares depending on the land use capacity). Consequently, some small farmers obtained the chance of entering the program. The small farmers cannot effectively use supervised credit, and the Bank is aware of this fact. It is argued that small farmers should not be the focus of the SCP during its initial stages of development.

However, due to the traditional nature of the small farmers in Turkey, they are generally not inclined to seek new possibilities of finance and farming. Therefore, it is not surprising that farmers who happen to have heard about and who have taken steps to obtain supervised credit loans are usually not the small farmers as defined earlier.

2. Terms of Loans

a. Purpose

Loans from the SCP are advanced for operational and investment purposes. Generally, loans are classified as short-term (seasonal operation loans), medium-term (loans for animal husbandry , agricultural tools and machinery) and long-term (loans for land development and improvement, irrigation development, and on-farm building construction).

There is a policy against making loans for consumption. There is no evidence of diversion of supervised credit to consumption owing to the strict Bank controls.

A fine distinction is made between short-term and long-term loans. For instance, loans for barnyard manure purchases are classified as long-term whereas loans for chemical fertilizers are short-term. The difference is due to the residual effect of barnyard manure remaining in the soil for longer periods than chemical fertilizers.

Each beneficiary must observe the specifications indicated in his farm production and investment plan which is made before the loans are extended. Specifications are made on the basis of the capabilities of the farmer concerned as well as the agricultural potential in the area.

b. Period

Generally, each participant in the SCP is working within a 5-year farm plan which includes both seasonal production and investment loans. Upon completion of a 5-year plan a second 5-year farm plan can be authorized on individual cases. However, only one 5-year extension is permitted.

The period of time for which loans are given varies according to purpose (see Section II.B.2.a. Purpose, above) and corresponds to approximately the following duration: short-term (less than 1 year), medium-term (1 to 5 years), and long-term (more than 5 years).

In the SCP the bulk of the money is given for medium-term purposes, less than one fourth goes for long-term purposes, and less than one fourth for short-term purposes (see Table II.B.2.b.).

C. ORGANIZATION

1. General Structure

The Bank is under the administrative jurisdiction of the Ministry of Commerce. The Bank has a very complex internal organization.

The SCP operates under the Policy Committee whose functions were described in Section II.A.1.

Chart II.C.1.ii. portrays the organization of the SCP. As depicted by broken lines in the chart, no formal relationship exists between the Bank and the extension services of the Ministry of Agriculture. The Selection Committee consists of seven members[5] three of whom are from the Bank staff. This committee is supposed to evaluate loan applications in an impartial and democratic manner by either approving or rejecting applications under discussion according to established criteria. The Selection Committee meets at the county center with a minimum of three members upon the request of the credit engineer in the area.

The first step in an effort to decentralize the Bank's administrative functions came through the implementation of the SCP as follows: Denizli (see Map II.A.1. in the mid-western Turkey) was the pioneering province. The Bank established an area office in Denizli for the administration of the project in all eleven branches of the Bank in the province. Hitherto, all branches of the Bank reported directly to, and received administrative direction from, the headquarters office in Ankara for loans of all sizes. Afterwards, other provinces included in the program followed suit.

Presently the degree of authority with respect to loan advancement is as follows: Loans up to $3,570 are approved by second class branches, between $3,570 and $5,360 by first class branches in the counties, between $5,360 and $7,140 by provincial branches, and above $7,140 are forwarded to the Ankara headquarters for approval.

2. Local Structure

The staffing pattern of a local agency office depends upon the volume of work of the individual branch and varies from province to province. Generally, the following are expected to be found in a typical branch office: manager, deputy-manager, cashier, other necessary personnel, and the credit engineer.

Division of labor is not specified to follow a certain pattern. In some branches, where the supervised credit scheme involves considerable work, division of labor in this regard may be carried out as the branch manager sees fit. Ordinarily, it is left to the initiative of the respective branch

5. The members are: 1) the local Bank manager, 2) agricultural credit cooperative managers, 3) local agricultural extension agents, 4) village mayor, 5) agricultural chamber representatives, 6) county veterinarians, and 7) credit engineer (who has no vote).

managers to handle issues such as division of labor number of personnel, and use of local intermediaries to facilitate branch operations.

D. BENEFICIARIES

1. Selection Criteria

To be eligible for a loan from the SCP The Bank requires the applicant farmers to meet conditions that pertain to both his person and his agricultural practices. Regarding the applicant's person, he must be a true farmer and may be involved only in minor non-agricultural activity to supplement family income. The applicant cannot be a member or employee in the Bank. There should be no doubt that the prospective loans are to be used for agricultural purposes. The farmer must be of good conduct, capable of adopting new practices without much difficulty, and cooperative in action. The applicant must be experienced in agricultural practices, well established in agriculture, and meet basic collateral requirements (discussed in section II.E.3.).

With benevolent motives, non-eligible farmers may be included in the program. Where the security offered falls short of basic requirements, intangible worthiness may play a role. Poor performers, on the other hand, are cut from the program in case of failure to observe the farm plan specifications or the technical advice given by the credit engineer. Such farmers are given a 1-month notice and, if no improvement occurs, the beneficiary is terminated from the program and required to repay within a short time.

Minimum farm size requirements are an insignificant determinant due the wide range of farm sizes currently in operation in the SCP (from 0.5 to 240 hectares). The unimportance of these limits becomes more pronounced when distribution of land by size is considered -- in 1963 about 87 percent of the holdings in Turkey was below 10 hectares which represent 2.7 million farmers out of a total of 3.1 million[6].

The selection of the two pilot provinces, Denizli in western Turkey and Erzincan in the eastern part of the country, was made intentionally to demonstrate the effectiveness of the Program under both mild and adverse climatic conditions which characterize the two provinces, respectively. The Program is no longer a pilot operation.

2. Graduation Policy

All loan recipients are excluded from the program when the plan-period terminates. The Bank, however, does not sever its relations with the graduate farmers who can continue borrowing from other Bank programs. A recently issued procedure informed branch offices that additional funds may be requested to loan to graduate farmers in order not to jeopardize the image of the SCP. Poor performers who were terminated from the program may also be given loans from other programs within the Bank so that they will be in a position to repay their overdue supervised credit loans while operating outside the SCP.

6. Agricultural Census, State Institute of Statistics, Ankara, 1963.

The Bank procedures do not, however, formally distinguish between successful and less successful borrowers with regard to the graduation policy to be pursued in each case. Perhaps it is implicitly assumed that all borrowers who can remain within the program during the plan-period are those who are to be successfully graduated from it.

3. Number and Types

The distribution of the supervised and other types of loans by farm size classes and crops is not available in the current agricultural credit statistics of the Bank. This omission in itself is a sign of the lack of concern in the Bank for an equitable distribution of its loans. However, the number of borrowers is available and has been shown in Table II.A.1.i.

4. Other Sources of Credit

Information is not available on the beneficiaries' supplemental borrowing. However, some general information may shed light on the degree to which small farmers have access to other credit sources.

The total Turkish official agricultural credit portfolio expanded by 275 percent between 1963 and 1969. This growth was barely sufficient to meet farmer credit requirements. In effect, only 35 percent of the actual need was met by this increase[7]. Since a portion of the institutional, as well as non-institutional, credit is invariably diverted to consumption, the credit deficit in Turkey assumes even more acute proportions than is actually portrayed by official percentages.

The unorganized money market, namely the private money lenders, account for 50-70 percent of agricultural financing[8]. There is evidence that these non-institutional sources are being partially fed by some institutional sources among which the Bank is a major supplier[9]. Private money lenders reportedly charge exorbitant interest rates from 50-60 percent per annum[10].

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7. Hassan Umit, "Problems of Agricultural Credit with Special Emphasis on Usury," Review of the Faculty of Political Sciences, University of Ankara, Turkey, Volume XXV, December 1970, No. 4.

8. CENTO, Traveling Seminar on Agricultural Credit and Cooperatives, Regional Tour, 1962, Ankara.

9. Boratar, Korkut, Income Distribution, Gercek Yayineri, Istanbul, 1969.

10. Blalock, James E., Capital and Finances in the Turkish Agriculture, Economic Planning Division, USAID, Ankara, 1969, p. 43.

There is an eccentric manner of credit use in Turkey whereby a borrower resorts to another source to repay his due loans in order to be eligible for another loan from the original source to repay the second source. This vicious cycle has no end and is peculiar to a good share of the Turkish farmers. This phenomenon is called "abonman"[11]. Prior indebtedness of the first 14,000 beneficiaries is shown in Table II.D.4. to be $ 3 million (an average of $215.61).

5. Profile of Farm Community

The authors of this paper are not familiar with any study that relates the beneficiaries to their farm community. But, it is known that small farms are generally interspersed with large farms, which either may or may not be progressive and which have relatively easier access to institutional credit.

Following are a few pertinent findings from research[12] conducted in the Denizli province which analysed the socio-economic standing of the farmers in the area on a randomly selected sample. This study was made in 1967, 3 years after the SCP started as a pilot operation in Denizli. From this study it was found that small-sized farms were characterized by higher rates of productivity and that the value of gross production per unit of land area decreased with increasing farm size. The same study indicated that there was a multiplicity of farm sizes in the area. The mode of grouping by farm size of the sample selected came out to be 2 to 4 hectares which corresponded to 325 farms out of a total 1,566. Thus, farms with an area of 2 to 4 hectares constituted 21 percent of the agricultural land on the basis of the sample. Landless farmers accounted for 3 percent of the farmers interviewed while, at the other extreme, 14 percent of the farmers interviewed owned farm land above 10 hectares.

The Denizli province cannot be considered to be representative of the entire program area. But it was deliberately chosen because of its dual importance. First, it is the pioneering province and second, it has the highest number of supervised credit beneficiaries, about 2,200 farmers, both graduated and current.

Only a small fraction of the small farmers is being served. A very crude estimate offered by some Bank officials is that one out of every thousand small farmers (both qualified and unqualified) is being reached by the program.

E. LENDING POLICIES AND PROCEDURES

1. Portfolio

The only index of the distribution of supervised loans between small and large farmers is available in the distribution of lending by loan-size classes. This distribution is shown in Table II.E.1.i. which makes use of the most recent data available.

11. French origin, meaning subscription

12. A Socio-Economic Study of Farming In Denizli Province, Republic of Turkey Ministry of Agriculture, Planning and Economic Research Organization, Publication No. 19, January 1967.

Table II.E.1.i. shows that the number of accounts in 1970 was 7757 and the number of loan cases sanctioned in the year was 3235 (Table II.A.1.i.), meaning that, on the average, each farmer received two loans from different accounts. These accounts include loans given for different purposes. Currently the following are designated as distinct accounts: 1) operational loans, 2) equipment and machinery loans, 3) productivity and amelioration loans, and 4) on-farm construction loans. For example, a farmer who receives two operational loans will appear as a single account; if he borrows for both productivity and machinery he will be assigned two accounts.

It seems that the likelihood that any given farmers will receive one small and one very large loan is almost nil. The division lines in the Table II.E.1.i. are drawn with this assumption. On the basis of this discussion it could be argued that the proportion of the accounts in Table II.E.1.i. reflects the proportion of the borrowers, especially so for the three portions depicted by the division lines. The Bank asserts that there exists no beneficiary who receives a total amount of annual credit below $357. This has been taken into account in fixing the division line for the lower loan size group.

Upon examination of the figures (Table II.E.1.i.), one observes that, at the lower loan-size level, nearly 52 percent of the supervised credit borrowers, who receive loans up to $357, get only 17 percent of the total amount loaned, and at the upper loan-size level, 7 percent of the borrowers who receive loans from $1,428 to over $7,142 get 28 percent of the total.

The above extrapolation shows that the distribution of lending in the SCP is highly skewed in favor of the borrowers of large loans. This distribution also corresponds closely to the distribution of land holdings in Turkey. Small farms with an area up to 2.5 hectares contain only 15 percent of the total area; whereas the upper 2 percent of the holdings (with more than 20 hectares each) have 22 percent of the total area (see Table II.E.1.ii)

Beneficiary farmers are entitled only to supervised loans and they are denied loans from other programs of the Bank. It is argued that a loose policy of extending both supervised and regular credit undermines the debt paying ability of the borrowers.

The number of loans that may be made to a single borrower is not specified, but the total of all loans within the 5-year plan period cannot exceed $14,286.

2. Interest Rates

The Bank used to charge a yearly interest rate of 9 percent for seasonal operational loans and 7 percent for medium- and long-term loans. The current rate charged on all agricultural loans, including the supervised loans, is now uniform at 10.5 percent per annum. Also, an additional 0.5 percent is charged to cover the cost of supervision and expertise (this remained unchanged). This rate change effected in 1970 applies only to new borrowers and to those who have misused the credit.

Inflation is a problem in Turkey. Wholesale price indices doubled from 1963 to 1972. It should be noted that this inflation was very much influenced by the 67 percent devaluation of the Turkish Lira on the international exchange market in 1970. To protect itself, the Bank should add about 7 percent to the interest rate it charges just to cover inflation.

3. Collateral

The following forms of collateral can be accepted for all agricultural loans:

a. promissory notes of the cooperative;
b. joint guarantees of the borrowing farmers;
c. mortgage of land;
d. pledge of cattle, equipment and livestock;
e. pledge of crops; and
f. guarantees of state and local authorities.

The value of agricultural land to serve as collateral is determined by a scale of land assessment (subject to periodic revision) and the value thus obtained is reduced by 25-30 percent.

If no tangible collateral exists which the farmer himself can offer a maximum of $2,850 can be advanced for the entire planned period by presenting signatures for joint liability of not less than three farmers. This procedure also applies to farmers who want to bridge their tangible deficit by presenting acceptable tangible securities owned by other people. Additionally, the signatures for joint liability of three or more farmers are acceptable as tangible security and will provide eligibility up to a loan value of $2,857.

4. Other Subsidy

A Selective Fund established by the Central Bank reimburses an equivalent of 1.5 percent of the loan to the borrowers through the Bank. Thus the effective rate of interest for farmers becomes 9 percent (10.5-1.5), but there is a 0.5 percent expertise and supervision levy which brings the charge up to 9.5 percent.

The Selective Fund also subsidizes the Bank by an equivalent of 1.3 percent on supervised operational loans and 2.5 percent on supervised investment loans. However, the Bank's own subsidies were not being paid though it is stated otherwise. Therefore, until they are paid, the actual interest income of the Bank is only 9.5 percent for supervised credit, although the nominal rate is 11 percent.

5. Appraisal Techniques

Ordinarily, not more than two visits are made to the farm to collect vital data about the applicant. Prior indebtedness and net worth consititute the bulk of the information collected. This information is then complemented by a local investigation regarding the ethics of the applicant.

If the collateral (tangible security) offered is adequate then the applicant's case is forwarded to the Selection Committee (see Section II.C.1. for details of the Selection Committee). The Committee's evaluations hinge mainly upon the intangible worthiness of the applicant. Data collected at the farm level constitutes the basis of the Committee's decisions.

F. COLLECTION

1. Repayment Record

Until December 1970, repayment delinquency was found to be a steadily worsening problem no matter how it was defined (see Table II.F.1.). Defined as the amount of loans overdue as a percent of the amount of loans outstanding as of December 31, 1970, the rate of delinquency was 29 percent-- worse than all previous years. Defined as the amount of loans not collected as a percent of the amount of loans that should have been collected during 1970, the rate of delinquency was 47 percent-- worse than all previous years except 1969 which was 51 percent. Defined as the number of delinquent borrowers as a percent of the total number of borrowers as of December 31, 1970, it was 24 percent-- worse than all previous years.

Yet, latest evidence indicates that delinquency rates have been reducing. The amount of loans not collected as a percent of the amount of loans that should have been collected decreased from 47 percent, 1970, to 24 percent in 1971. Similarly, there was an improvement in the number of delinquent borrowers. Their percentage dropped from 24 percent to 20 percent in 1971. The above improvement resulted from the Bank's recent policy in emphasizing quality in farm planning rather than number of borrowers.

Due to lack of empirical data, delinquency cannot be statistically related to any variables. However, it is felt by some Bank officials that the rate of delinquency is higher for big farmers than for small ones because big farmers may exert their influence to withstand and pressure that may be extended to force repayment.

2. Methods

Collection is carried out after the harvesting season for annual operational loans. The investment loans are expected to be collected before the due date. Collection in kind is not allowed except in cases of foreclosure if there was a pledge over the crops and animals.

Loanees are expected to report to the respective branch office to make their repayments. They are reminded by the credit engineers when necessary.

It is very difficult to instill a habit of punctuality to the beneficiaries since they have been conditioned to be lax in observing the loan due dates. This stems from the widely held impression that the Bank makes welfare loans without being strict enough to enforce repayment.

3. Special Enforcement Procedures

By law, the Bank is given special concessionary privileges to prompt and facilitate repayment. However, even the most effective measures are crippled before a farmer who resists repayment.

Delinquents are first given an oral or written notification, then pressure is exerted on the joint guarantees. Should everything fail, then foreclosure is used. Social solidarity is a formidable barrier in the sale of foreclosed property. Furthermore, transportation and handling of movable property foreclosed are costly and impractical. Therefore, foreclosure is not a practical measure to pursue in most delinquent cases.

Farmers usually are not motivated to maintain favorable relations with the Agricultural Bank. It is assumed that such an attitude can be well afforded since the Bank is a government institution with an obligation to render service irrespective of the farmers' past records.

4. Rescheduling

Beneficiary debts may be rescheduled if justification offered for failure to repay is approved by the credit engineer. Among good reasons may be natural disasters or any other reason out of the farmer's control. However, the report of the credit engineer's investigation of the borrower's situation must also be endorsed by the Bank. In such cases, debts may be repaid in installments or all at once in the following cropping season.

G. COSTS AND FINANCE

1. Portfolio Profits and Losses

There is an insignificant amount of supervised loans under litigation. An account for this purpose will be opened in 1973. Effects of erosion due to stagnant loans are thus not serious as is the case with other Bank programs.

No figure is available concerning the year-end balance of the SCP. Therefore, loans outstanding as a percent of the year-end balance could not be computed. These figures are available for the Agricultural Bank as a whole but not for that segment of the Bank's activity devoted to the SCP.

As can be seen from Table II.E.1.i., when the effects of inflation are accounted for, the rise in new loans is not satisfactory. Deflated oustanding and overdue loans, however, should be used with caution since outstanding loans tied up to current capital presents a different situation since value of capital keeps abreast with rises in prices after allowance for depreciation is effected. But for overdue loans, from the Bank's standpoint, inflation is a problem and will be aggravated as the percentage of overdue loans grows bigger (see Section II.F.1).

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Turnover ratios for the SCP are shown in Table II.G.1.ii. which indicates that the ratios rise as the average period of loans becomes shorter

2. Administrative Costs

The costs of operation to the Bank for the SCP were $112,940 in 1968 and $238,347 in 1970. In 1968, 20 percent of the operational costs was devoted to administering technology (supervision and expertise costs); the corresponding figure for 1970 was 15 percent (see Table II.G.2.).

Figures are not available on average costs per loan per se among the Bank's statistics. Computed average costs per loan from the available data are $30 and $73 for 1968 and 1970, respectively. Average costs of administering technology per loan are found to be $6 for 1968 and $11 for 1970.

There is no policy concerning possible cost-reducing measures. In fact, a greater number of technical staff and credit engineers are needed which will lead to a rise in the costs of supervision and expertise. Administrative procedures, on the other hand, are being simplified not with the intention of reducing costs but providing for better adjustment of the Program which initially was patterned after FHA. Another unintentional cost reducing activity is due to the scarcity of technical staff in the Bank. A standard type of farm building construction plans is being used. Such plans are available from the Ministry of Agriculture and also are made by the Bank's non-technical staff.

3. Beneficiary Savings

In the execution program of Turkey's Second Five Year Development Plan, it is declared that farmers who apply for loans will be required to provide 25 percent of the cost of seeds and chemical fertilizers from their own resources. Accordingly, the Bank has made the necessary changes by amending its supervised credit procedures. Consistent with these changes, farmer participation in the purchase of inputs differs from region to region. For instance, in the eastern and the relatively less developed parts of Turkey, little or no participation is required, but in regions where polyculture farming is practiced, maximum possible participation is carried out as determined by the size of the loan. Obviously, such measures force the beneficiary farmers to accumulate savings for internal refinance.

Apart from the above mentioned measures, the Bank has been following the policy of requiring beneficiaries to at least partially finance their operation and reduce their credit requirements. The degree of internal refinance is determined by the presence of sizable savings at the end of each annual plan period after allowance is made for family maintenance.

An example of how the Bank obliges the beneficiaries to save is worth mentioning. During the second and the succeeding years of the farm plan, if it is planned that the farmer should fatten cattle, the loans extended for this purpose will be 20 percent lower than that of the previous year and the farmer will be required to maintain or possibly increase the size of herd he handled the year before.

Though the SCP does not oblige participants to deposit savings (as is often the case in cooperative societies), there is the opportunity to make savings deposits with the Agricultural Bank. In fact, the Agricultural Bank relies on savings deposits as a major component of its sources. In 1970, for example, about one third of the agricultural Bank's funds came from all deposits combined (see Table II.G.4.).

4. External Finance

The SCP was initiated with a total loanable fund of $3.75 million, half of which was provided by the USAID, the only foreign donor involved in the program. The program has been financed from the available resources of the Bank except that the TOPRAKSU loans, which are extended via the SCP are partially covered by TOPRAKSU and USAID funds.

No portion of the funds obtained from the Central Bank under discount privileges are devoted to the SCP. However, the Central Bank also makes direct advances to the Agricultural Bank. But, the distribution of these advances among the various program activities of the Bank is not available. For illustration, overall discount privileges provided to the Bank are shown in Table II.G.4.i. The value of total discounts is subject to a ceiling of $46.4 million. Total net resources of the Bank that may be used for lending amount to $964 million. Table II.G.4.ii. shows the distribution of this $964 million with respect to source.

Also among the resources of the Bank are: 1) 1 percent of the total annual receipts in the Government Budget; 2) 6 percent of the annual proceeds of the land tax; and 3) special budget allocations made by the Government from time to time.

5. Institutional Solvency

The Bank's accounts show that there was a net profit of $1,000,842 as of December 1970. All expenses and returns of the year are shown in Table II.G.5. Besides these data, the following information is pertinent in the context of a solvency analysis. The ratio of total expenses to net returns of the Bank was 99 percent ($90,314,688 over $91,315,531). The ratio of net profit to paid-up capital was 1.24 percent ($1,000,842 over $80,475,050). Finally, the ratio of net profit to paid-up capital plus contingency reserves was 0.98 percent ($1,000,842 over $102,993,496). The economic feasibility of operations for the rate of return on aggregate capital of the Bank was only 0.12 percent of the 1970 year-end balance.[13]

6. Foreign Exchange Balance

The program's impact on foreign exchange reserves is negligible at the present time. Furthermore, no study has yet been conducted to assess this impact simply because of the program's minor relative importance.

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13. All figures obtained from General Directorate Report of the Agricultural Bank, 1970.

However, it is expected that any increase in the production of export and industrial crops will lead to a rise in foreign exchange reserves in which the program's beneficiaries may have a share. In recent years food and agricultural products have accounted for between 85 and 90 percent of the total annual export trade in Turkey.[14] The influence of the SCP on the exports will become apparent only after it covers the entire country with a sizeable and sufficient portfolio and a large case load of farmers.

H. COMPLEMENTARY FACTORS

1. Technology

a. Directing, Tying, and Packaging

The SCP requires that all payments for inputs be made directly to the dealers. Thus, in a round-about fashion, the credit is provided in kind and tied to a set of new technology inputs as designated by the credit engineers. However, in rare cases where conditions do not permit payment directly to dealers, payment in cash may be made to the borrower.

All purchases of inputs and investment goods are specified by the farm plans made prior to all loan advancements. The main features of the farm plan are structured upon the following information:

(1) available financial resources,
(2) objectives to be achieved for the individual farmer, and
(3) available agricultural technology to the farmers.

Based on the information collected, the following are determined:

(1) needs and methods,
(2) crop rotation (if any),
(3) agricultural system and techniques,
(4) necessary purchases, and
(5) the nature of on-farm development.

To be more specific, the long-term (up to 5 years) farm plan specifies the on-farm investments and the technology that should accompany these investments. Consistent with the long-term plans, annual plans are worked each year which specify the seasonal inputs which also are tied up to new technology. The Bank provides the credit in installments if there are steps involved in the implementation of the technology. This is done in order to insure proper use of the credit.

b. Program Extension and Supervision

Technical supervisory services cover a wide array of activities among which are the precise crop rotation schemes, techniques of crop protection, purchasing of animals, purchasing and maintenance of agricultural tools and machinery, techniques of efficient irrigation, and installment of the irrigation network.

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14. Agricultural Development in Turkey, The Ford Foundation, Beirut, Lebanon, 1971.

Number of on-farm visits varies with the number, service, volume, and facilities of the credit engineers available. Number of visits may be as low as two per year or as high as two per month (figures obtained from a credit engineer interviewed).

The credit engineers are asked to visit as many farms as possible which lie on the same route. Such a measure, as the Bank acknowledges, may bring about adverse psychological effects on the farmers if visits are not planned and made for necessary reasons.

County branches which do not have any credit engineers may make use of staff employed in the neighboring countries. However, credit engineers limit their visits to neighboring countries only to days when the local market is held. In this case, engineers may examine farmers' plans and meet them in groups.

An indirect way of multiplying the credit engineer's scarce time is reported by a USAID agriculture credit adviser.[15] The efforts belong to an individual credit engineer who taught key borrowers the advantages of improved poultry management. Now other villagers go to these farmers for help on their own poultry problems.

The SCP does not have built-in training programs. Such training programs are held by the extension services of the Ministry of Agriculture from which supervised credit borrowers can benefit along with other farmers.

c. Other Arrangements for Technical Transfer

In spite of the fact that the Bank employs credit engineers and other technical staff, the program's performance is growing more and more dependent upon other technical agency extension services. Following is a general discussion of agricultural field services in Turkey and their relationship to the SCP.

The Agricultural services in Turkey are based on a provincial administrative structure, which like local administration throughout much of the Middle East, is controlled from the national capital. All major social and economic functions are exercised at the provincial level by officials of the central ministries. The provincial governor has a key position in the administration. He can give instructions to any government officer within his province, including the agricultural field services. As a result, the extension staff spends more than 50 percent of its time on non-agricultural duties. There is a large number of government agencies whose responsibilities extend to the village level, with little or no coordination and with low effectiveness.

The Ministry of Agriculture, which is the main supplier of agricultural services, has at present six arms in direct contact with the villages and, thereby, the farmers.

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15. Studarus, Glenn W., End of Tour Report, USAID, Nov. 1969, Ankara.

(1) Technical Agricultural Organization: This agency is under the Central Directorate of Agriculture. This is the largest service and represents essentially an agricultural extension service. It has a technical agricultural director in each province and has a graduate staff in each district.

(2) General Directorate of Veterinary Services: This organization has a regional and provincial organization with veterinary officers and animal health assistants at the district level. The personnel are primarily concerned with disease control and to a lesser degree with extension work among farmers in livestock improvement, feeding, and health. Improved breeds are also made available to farmers from the Directorate's stud farms.

(3) General Directorate of Plant Protection and Quarantine: This agency also has a regional and provincial organization. Its functions at the district level are carried out by the technical agricultural staff.

(4) General Directorate of State Farms: There are at present 22 state farms. Their main function is the multiplication and distribution to farmers of improved cereal seeds and livestock. Also, they serve as a production demonstration arm of the Ministry.

(5) Agricultural Schools: Some of these run short courses for farmers, and a few of them have an extension agent attached on an experimental basis who carries out extension work in surrounding villages.

(6) Research Stations: Some of these have demonstrations, field days, and short courses for farmers, and undertake certain extension activities for specialized cash crops and in seed production.

From the summary above, the varied nature of technical services in contact with the villages is obvious. All the different services are highly centralized, with little cooperation or coordination at the provincial and local level.

The Technical Agricultural Organization under the Ministry of Agriculture carrys primary responsibility for agricultural extension. However, it has not been given personnel and material resources to carry out the extension function, in addition to the many regulatory and administration activities required. A proper operational and organizational framework for cooperation with agricultural research is also lacking. The number of staff is insufficient, with each extension worker often assigned to more than twice the desirable maximum number of farm families. Lack of transport is a major handicap and office facilities and clerical staff are scarce.

A major part of staff time is devoted to statutory and regulatory functions. Extension work in the traditional sense is given very little time. Therefore, it is questionable whether a true agricultural extension service, exists in Turkey.[16]

The expansion of the SCP unaccompanied by new and adequate recruiting of technical staff rendered the program very vulnerable and highly contingent upon the precarious extension services of the Ministry of Agriculture. Moreover this expansion required moving some credit engineers to new localities where they encountered considerable difficulty in adapting to and learning new local conditions.

Moreover, relationships between the Bank's technical staff and other technical agency personnel are far from favorable. The nature of these relationships is attributable to two factors. First, the fact that the Bank hires technical staff reflects the obvious insufficiency or perhaps incompetence of other technical agency personnel whose main duty is to provide similar services to all farmers. Second, there exists a credibility gap between the two parties which essentially boils down to personal conflicts. These relationships do not generate good cooperative action in creating mutual understanding and coordination. In addition, there is no formal coordination between the Bank and other technical agencies.

d. Nature of Technology

The extension agents of the Ministry of Agriculture operate under severe limitations imposed upon them by lack of adequate and effective training programs and lack of incentives that further undermines the quality of service extended. They cannot, therefore, adequately transmit new technologies to the farmers.

Information is not available that specifically bears upon the present and prospective levels of technology in the program area. The following is quoted directly from the Second Five Year Development Plan to provide a general assessment of the available and planned agricultural technologies for Turkey.

"The agricultural sector, with its social and economic aspects, has a dominant place in the life of Turkey. However, the inefficient use of resources and the low level of present technology have impeded the rapid and sustained growth of this sector. The limiting factor in the technological development of the sector has been due to the fact that a high percentage of the population is engaged in this sector, not only as a field of employment but also as a way of life, with a consequent dominance of the traditional values and difficulty in extending services to this great number of people dispersed over a large area.

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16. Agriculture Development in Turkey, Ford Foundation, Beirut, 1971.

"Along with the low level of technology, the principle problems are: an agricultural structure unsuitable for year-round management, the inadequate marketing system, the fact that the majority of holdings are too small even for family needs, population pressures, and the fact that 78 per cent of the agricultural land is subject to erosion. Price fluctuations inherent to agricultural production and the development of the industries processing agricultural raw materials are additional factors influencing the development of this sector.

"On the other hand, aside from land to be reclaimed, new arable land to be opened for agriculture by means of present day technology is virtually non-existent. However, with the possibility of irrigation of 7 million hectares of land and with the possible changes in land use, in a sense, the availability of land may be improved. In addition, the improvement of technology constitutes the most important opportunity for development of the sector.

"In the first four years of the First Plan period the average rate of growth was 3.1 per cent. The high rate of 7.6 percent in 1963 was followed by a slowdown in 1964, a decline to 3.3 percent in 1965 and an increase to 8.6 percent in 1966. Changes in grain and fruit production resulting from fluctuation in weather conditions resulted in fluctuations in the overall rate of growth. In regard to this, the most important consideration is the use of inputs which will secure technological development in this sector still so heavily dependent upon weather conditions. During the First Plan period a definite development in this area was started by the use of chemical fertilizers and selected seeds.

"Furthermore, in the use of agricultural credit, there is a definite trend to supply farmers with inputs rather than cash. This development is rather important in supporting technological development."[17]

2. Supplies and Sales

a. Program Supplies

The supervised loans, as mentioned earlier, are disbursed according to the project (farm-plan), usually in payments made directly to contractors and suppliers.

The Bank does not offer subsidies to supervised credit beneficiaries in the form of low-cost transport and other facilities. However, government provides low-cost transportation for agricultural inputs through the Supplies Agency of Turkey (Zirai Donatim Kurumu) and other related agencies. For example, the Supplies Agency accounted for 44.8 percent of the total fertilizers distributed in 1968. Currently, three government agencies and one quasi-government agency are importing fertilizers. These government agencies, which accounted for $ 42.5 million of fertilizer imports, equal to 72.8 percent of total fertilizer imports, are the Supplies Agency, The Sugar Company, state farms and the Union of Credit Cooperatives.

17. Second Five Year Development Plan (1968-1972), Republic of Turkey. Prime Ministry, State Planning Organization, Ankara.

b. Program Infrastructure

The SCP includes construction of irrigation works which are mainly carried out by the TOPRAKSU. The TOPRAKSU loans have financed the construction of 3,139,162 meters of irrigation canals. The total area terraced by the same department under the SCP is 10.3 million square meters.

Substantial infrastructural change cannot be brought about because of the ceiling limit on the amount of loans each farmer is entitled to receive. For this very same reason, the SCP cannot afford to finance heavy and capital intensive infrastructural investments. Nevertheless, within the operating limitations, the SCP is constructing some infrastructural facilities.

c. General Access and Availability.

The impact of these on production is limited more by scarcity of services than by a shortage of supplies. The SCP has undoubtedly affected and improved the levels of production for those farmers under the SCP (in some cases yields were tripled), but the fact still remains that a full scale utilization of land and human resources was not achieved despite the apparent increases in production.

d. Guaranteed Sales and Price Supports.

There is no price support system built into the SCP. Price support systems are available to all farmers, from the government services. These systems, however do not cover all crops. Wheat, for which a price support exists, is a classic example worth noting in this context.

Marketing activities are, as things stand now, the exclusive responsibility of the participating farmers. The SCP has provisions to promote marketing only by extending credit to private individual farmers except, in some few cases, where loans are made to groups of borrowers for improving market facilities. However, some beneficiaries may also happen to be members of local private marketing cooperatives, in which case they enjoy further marketing facilities.

e. Insurance

The Bank provides insurance for all mortgaged property and personal guarantees for its own purposes. Insurance programs, though not obligatory, are available to the beneficiaries. These insurance programs have recently emerged as a result of the Bank's pressures upon the insurance organizations which were reluctant to provide insurance for agricultural activities. Even now, these programs exclude a number of agricultural undertakings which are designated as too risky to insure. For instance, in poultry production, though there is no insurance for the flock the poultry house is always insured against fire if the building is mortgaged as part of the collateral.

Many a beneficiary is scared off from insurance programs because of high costs. Nevertheless, such programs, at the present time, include items such as fire, hail-storm, and death of livestock from which some borrowers are being protected.

f. Other Program Marketing Arrangements

According to the procedure manual, supervised credit beneficiaries are to be given advice on marketing. Services on marketing go beyond this if the beneficiaries are Agricultural Credit Cooperative members. This establishment was under the Bank. Services provided are comprised of construction of storage warehouses and other related marketing activities. The Bank's objective is to expand all-purpose cooperative action along with the provision of marketing facilities.

g. General Marketing Conditions.

The general marketing conditions in Turkey are described best in the following quotation from the Ford Foundation report.[18]

In Turkey marketing activities or functions are not carried on at a level of excellence that will result in the highest and most economic rate of agricultural development. In general, the marketing system seems to operate best in Turkey for those products that are storable or relatively non-perishable, and where considerable processing or product transformation is needed. For the highly perishable products the marketing system is less efficient.

"The size of the country and the general dispersion of agricultural production from small farms around many smaller villages result in inefficiencies in the assembly process. Often marketing agents handle the products several times before they reach the larger villages or urban centers. Even though each agent's compensation is relatively small, there is a large number of the agents in the marketing chain resulting in large marketing margins and a high degree of deterioration and spoilage of products.

"The organization of transportation of perishables is particularly deficient. Transportation facilities are improving, but refrigirated transportation is insufficient. Much of Turkey's livestock moves some distance to market on the hoof, causing a loss of weight and deterioration of quality.

"Because of the lack of good market information, pricing efficiency is low. The many steps in the marketing system and the many agents, each handling small quantities, tend to reduce the speed and accuracy with which consumer demands are relayed to producers."

h. Profits and Losses

No concrete evidence is available concerning the profitability of the technology beneficiaries have been instructed to adopt. Therefore, no analysis in this connection can be offered. However, it is estimated that a sufficient, but not necessarily attractive, margin of profits is allowed to the beneficiary. Additionally, such an analysis is not feasible because quantified assessments of risk involved in agriculture are not available.

18. Agricultural Development in Turkey, Ford Foundation, Beirut, Lebanon, 1971.

III. EVALUATION

A. PERFORMANCE

1. Apparent Uses of Credit

In the SCP there has obviously been less of a diversion to consumptive uses than is the case with other Bank programs. This can be associated with the credit-use specifications and fairly effective supervision.

The rising delinquency rates (see Section II.F.1.) do not accurately reflect the Bank's ability to supervise and guarantee proper use of its loans. Beneficiaries may have enjoyed considerable profits by using the loans as specified, but they may fail to repay for a variety of reasons among which are the following. Some farmers may choose not to observe the due dates in order to take advantage of the price fluctuations that characterize a good share of the agricultural crops. Therefore, a motivation to earn more money on non-perishables sometimes becomes the underlying purpose in non-payment. Lax attitudes in repayment, often with the expectation of foregiveness of loans, is another contributing factor to delinquency. Finally, though rare, disputes among the heirs of a deceased beneficiary may result in non-payment until the conflict is arbitrated.

2. Effects

a. Production

Statistical activities accompanying the SCP do not measure the impact of supervised credit on farm sales and production. Raw data, however, are available. The Bank agrees that a thorough academic study about the SCP is urgently needed to assess the improvement and actual performance in order to make sound policies.

However, crudely speaking, the level of production for beneficiaries has risen by 2 to 3 fold as compared to the times prior to the SCP's implementation. This rough estimate was offered by some Bank officials.

b. Farm Income

Bank statistics about the first 681 graduated farmers (no date indicated) show that their net worth increased by 29 percent. The average rate of realization of planned investments for these farmers is 85 percent -- a condition which substantially influenced their net worth which rose by a margin of $ 1633. Among the farmers surveyed the highest increase of net worth was $ 22,000 for a farmer in the Denizli province.

The distributive losses of farm income could hardly be reduced by the SCP. Marketing of farm produce, especially perishables, still continues to be a problem (see Section II.4.2.g.)

c. Technology

The SCP has undoubtedly affected the farmers' choice of technology. Bank reports show that within the SCP a tremendous number of activities were undertaken, each of which involved some technological innovation. How close these effects have come to grips with actual needs in technological development of the beneficiary farmers is obscure. Various studies show that, for example, fertilizer use in the country has increased in unprecented amount, but still far less than the amounts required to enrich the soils that have been considerably depleted by centuries of overuse and misuse.

d. Savings and Other Sources of Finance

Although no qualitative evidence exists it is expected that the Banks' saving discipline has had some positive impact, not necessarily in the direction of promoting farmer savings habits, but in reducing the farmers' credit requirements since credit is a scarce resource.

The interest rate charged on supervised loans is not low enough to discourage the flow of savings into farm finance. The standing rate, being 9.5 percent, is not low in a country experiencing a transition to intensive farming which involves a good deal of risk because of the accompanying technological changes.

The SCP is too small to have induced other sources of credit to expand operations. There exist other supervised credit activities which are organized for selected enterprises through the private sector (which may or may not be financed by external sources). However, no cause and effect relationship can be made between these private supervised credit sources and the SCP.

e. Employment

The SCP by itself does not have the ability to affect the wage-employment structure in the agricultural sector since, compared to other credit programs and institutions, it occupies a minor position. Despite the lack of available evidence, it could be stated that the effect, thus far, has been toward full employment of the beneficiary's available family labor. This, in some respects, may affect the wage rates in areas where labor mobility is restricted and agricultural practices are labor-intensive, because withdrawing unemployed family labor from the labor market by reaching full employment at the family farm causes labor shortages especially during the peak seasons of agricultural activities.

f. Political and Social Structure

Within the SCP, beneficiaries are granted loans also for land consolidation purposes. Land consolidation loans are considered investment loans with a period up to 20 years. Since, only about 30 percent of the farmers have deeds for their landed property, the trend along these lines has been in reinforcing the already strong farmers rather than favoring the

small and needy in increasing their economic and political strength simply because registering land and acquiring deeds are costly and involve intricate formalities which are obvious drawbacks for the small farmers.

The effects on the political influence of certain rural groups are not discernible as such, but could be deduced from the available information. There is evidence that some medium income farmer beneficiaries have built up a substantial net worth which may be an indication of their increased leverage against other political groups in the rural areas.

3. Progress Toward Other Objectives

The SCP is one of the significant steps toward more intensive farming in Turkey. But, relaxing land size limits overburdened limited technical supervisory personnel.

The other side of the question is the distribution of the beneficiaries' net worth. Although the average increase in net worth is $ 1,633 for the initial 680 graduate farmers, about three-fourths of these farmers are below this average. This means that the beneficiaries did not benefit equitably from the program in being self-supporting. The recent policy of granting loans to graduate farmers from other credit programs indicates that the graduation policy of the program was not sufficiently sound as far as creating economically independent farmers. Obviously, a SCP defies its purpose as long as its graduates are rendered dependent upon the original agency for their farm finance.

Though the Bank is successful in creating some potent and economically independent farmers, its degree of success is limited as only one-fourth of the borrowers built a net worth above the $ 1,633 level.

4. Image

a. Farmer Attitudes

The SCP has a generally favorable image. It is viewed as an innovative scheme by the majority of participating farmers. But, the relation of the program to the small farmers is far from being impressive for three reasons. First, many small farmers hesitate to enter the program because of the long-term farm plan which involves considerable obligation on their part. Second, the size of loans given through the program is much larger than customary, thus many small farmers prefer to abstain in an effort to avoid heavy indebtedness. Third, the Turkish name for the SCP (Kontrollu Zirai Kredi) carries and uninviting dictatorial connotation and does not describe its true nature.

Bank credit engineers are constantly trying to break through this mental block which even applies to some medium and large farmers. However, what is more important in this context is that there still exists a sizable number of farmers who have not heard of the SCP.

There are a few frets from the participating farmers which may be common to many. One of these is that inflation is not always accounted for in determining the size of loans to be disbursed throughout the plan period. Thus, a plan that initially specified a certain amount of credit for the entire farm plan period may prove quite inadequate in meeting the needs during the following years. However, in some cases, the size of loan can be adjusted upward if collateral can be adjusted accordingly.

b. General Image of Program

The SCP started with greater dedication and genuine concern than is presently exhibited. Perhaps the progress could have been faster and more discernible if it had started under an autonomous agency dealing exclusively with supervised credit. The vast number of activities that the Agricultural Bank is engaged in may have diverted the attention from the SCP, especially during the critical and initial stages of its development.

Within the Bank, the SCP has encountered some resistance from the other agricultural credit divisions on the grounds that their services were already quite adequate and a supervised credit scheme would be an unnecessary luxury. It may be speculated that the program implied a potential threat to the other credit divisions lest it would move too fast toward the technical side of agriculture which would leave little justification for a large number of administrative staff at the headquarters.

At the present time, a rigorous evaluation of the program with regard to its degree of success cannot be offered because of its very brief history.

B. EVALUATION PROCEDURES AND FEEDBACK

1. Program Evaluation Procedures

The evaluation procedures built into the program consist of monthly activity reports to the headquarters and year-end analyses of how beneficiaries have fared during the year.

Monthly activity reports include information about the case load, credit advanced, number of applicants, and other related items that are more of an administrative nature.

Year-end analyses are carried out for each farmer. Farm record books provide the basis for this evaluative process. The principal purposes of these analyses, as the Bank reports, are to investigate the causes of failure in realizing the expected results as programmed in the farm plans, to find out to what extent the Agency is being helpful, to have an insight as to possible means of improvement, and to determine where the farmer actually stands in comparison to his past records. In these analyses the farmer's status is determined from:

-total gross returns,
-total costs of family maintenance,
-total costs of operation,
-total cost of investments,
-kind of crops grown and quantities,
-whether or not the targets have been reached (if these have not been met, then the degree of realization),
-total sales and products domestically consumed,
-debts and repayments, and
-successful enterprises of the farming operation.

To assess the status of the graduate farmers, the following evaluative information is collected:

-planned investments and costs anticipated,
-investments realized and cost incurred,
-percent of realization of investments,
-net worth before inclusion in the SCP,
-net worth after graduation,
-increment of increase in net worth, and
-percent increase in net worth.

In the calculation of the net worth, a distinction is made between agricultural and non-agricultural belongings and they are shown separately.

There has been no major research on the SCP's performance. The Bank, however, apparently feels the need for such research.

2. Feedback and Changes in Program

From 1969 to 1971, the SCP underwent a slump in its growth. The reason for this was a sudden change of policy which dictated that quality should be given emphasis rather than a mere number of loan cases sanctioned. This resulted in cutting the number of new beneficiaries in order to maintain high standards of service.

During the first few years of the SCP's development it was realized that the borrowers were not able to carry out the farm plan specifications. Thus, the number of activities was reduced to a few. However, in October 1972, the Bank shifted emphasis away from just a few simple activities and it is now actively encouraging multi-purpose projects in the farm planning.

The procedures concerning the SCP proved too intricate to be meaningful to Bank personnel and credit engineers and were, therefore, simplified. Still more improvement is called for in making concise and coherent procedures that would not cause confusion among the branch officers and credit engineers.

C. PROBLEMS

1. Governmental Level

Presently the most serious problem is the lack of coordination of activities between the Bank and the extension services of the Ministry of Agriculture.

Past attempts to create formal relations between the Bank and extension services were not satisfactory. Two provinces, Amasya and Edirne, were chosen where formalized relations for the SCP were to start on a trial basis. The Ministry of Agriculture lagged behind in formulating policy concerning the details of the undertaking. Therefore, the planned formalization was not realized.

Another problem at the Government level is that the purchase of vehicles must be approved by the cabinet which then delegates the responsibility of actual supply to the State Supplies offices. The latter is not able to sufficiently meet the needs. Furthermore, funds set up by the Bank for purchasing vehicles are to be approved by the State Planning Organization which makes sizable cuts in these funds. Therefore, provision of vehicles is a double challenge for the Bank and needs an immediate solution if the program objectives are to be achieved.

The SCP is available in 40 provinces of the country. In these 40 provinces there are 384 Bank branches. SCP, however, is available from only 277 of the above branches. Of the 277 branches only 134 have been assigned vehicles.

2. Agency Level

The Bank has been standing the cost of the program with no government assistance. The authors know of no supervised agricultural credit program anywhere in the world that has been able to carry its own overhead costs and that government assistance has not been needed. The Bank adds a one-half percent service charge to the interest charged in an effort to solve the problem. The Bank officials estimate that the program will carry itself after the case load gets to about 240,000 borrowers.

Another problem which has been improving but is not yet solved is the relationship between the bankers and the agricultural credit engineers employed by the Bank. The credit engineers are technicians under the bankers. This sometimes results in friction where there is doubt whether a question is technical or financial.

When the SCP expands there is likely to be a problem of administering as many as 67 provincial programs from the headquarters office in Ankara. It appears that a regional set-up yet to be determined may be necessary even though the Bank has not used such a system in the past. Such a policy of decentralization will remove pressure from the central office.

One of the critical problems within the Bank, it seems, is the inefficiency which results from low productivity of Bank employees. This problem may be associated with low salaries but evidently other factors play a role as well.

3. Farm Level

As is well known, a supervised credit system cannot operate without credit engineers visiting farms and farmers. The Bank is doing its best as limited by the Government's provision of supplies. Lack of vehicles is probably the greatest limiting factor to the further expansion of the SCP at this time. No satisfactory solution is in sight.

Also, the SCP has not moved as rapidly as expected in the direction of being based on an analysis of the farmer's ability to repay. The reason is that some of the bankers and credit engineers have difficulty in getting the real spirit of the program because of its novelty.

The Bank officials admit that beneficiary farmers have a tendency to be inexact in their record keeping, either through forgetfulness, fear of taxes, or with the intent of obtaining credit as near to the ceiling as possible. The Bank has failed to explain to the farmers that such an attitude is against their own interests.

The credit engineers are striving to make the program well-known to all farmers. There still exists a large number of farmers who have not yet become acquainted with the concept of supervised loans. The Bank officials are also aware of this and they hope it will not take long before all farmers are informed of the SCP.

D. CONCLUSIONS ABOUT SMALL FARMER CREDIT

1. Major Problems of Small Farmers

Some of the major problems of small farmers are:

Infrastructure; roads, irrigation, drinking water, schools, and other public facilities are urgently needed. The forest villages and the rural areas in the east have especially been neglected. There has been a tendency to associate the overall development of the small farmers with the provision of infrastructure. But, nowadays this tendency is losing its strength since infrastructural change by itself is only part of the problem.

Population and labor pose problems for the small farmers. Disguised unemployment, the seasonal nature of agricultural activities, and the population pressures are contributing to rural-to-urban migration, a serious problem for Turkey. Small farmers who were at least able to provide for their own subsistance become urban liabilities to the government.

Semi-feudal land tenure is another problem. Uncertainty involved in share cropping, lack of legislation to govern leases, and exploitation of tenants all belong to this category. Land reform always remains pending in the Parliment. Promises along this line constitute the bait in election campaigns.

Cadastral surveys are inadequate. Most small farmers have no needs for their property which makes them ineligible for institutional credit because of a lack of tangible collateral. Judiciary procedures governing land ownership rights are in complete chaos. Obtaining deeds is costly and takes considerable time. Especially excessive land fragmentation becomes a great impediment in this context.

Marketing of agricultural products is utterly against the interest of the small farmers. Marketing agents hinder cooperative development. Often, the existing cooperatives become non-functional because both small and large farmers are included as members.

Social security is one of the bottle-necks inhibiting the development of the small farmers. Evidence suggests that often non-institutional sources provide the missing element of social security. Abolition of the unorganized money market will do little good unless an effective credit system replaces it together with all the invisible services that existed before.

Credit is one of the important limiting factors. Institutional sources are inadequate. The recent policy of providing credit in kind has worsened the problem. Resale of credit in kind is common and it boosts the interest rates to the small farmers since resale prices usually fall below 50 percent of the actual value. Interest rates charged by non-institutional sources usually are unjustified. Credit indebtedness has caused 20 percent of the small farmers to lose their land during the past 20 years.[19]

2. Role of Credit in Meeting These Problems

Presently, the Ministry of Rural Affairs has some credit schemes to develop the rural areas through cooperatives which give both grants and long-term loans. The Bank has a number of programs reaching the small farmers. Nevertheless, planned credit programs have, so far, made little contribution to the solution to the problems discussed in the preceding section. Some of these problems cannot be associated with the provision of adequate credit. Apparently, affecting the land tenure system, building of infrastructure and the problem of social security seem to lay outside the realm of credit.

The second Five year Development Plan has provisions to prevent the utilization of banking system credit in feeding the unorganized credit market. However, no policy measure is mentioned to fill the credit gap that will result.

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19. Kiray, Mubeccel Belik, "Approaches of the Development Plans to Rural Problems", in METU. Studies in Development, Fall 1970.

Some factors that impeded a constructive agricultural credit program and thus the solution of the small farmers' problems through credit can be listed as follows:

- The small size of land holdings. A large percent of farmers have less than economic size units.
- Land fragmentation. Farms have been divided through inheritence into small and non-contiguous holdings. Most farms are made up of three to ten parcels.
- Cadastral survey and title records have not been completed in many areas. Since land is the primary security for loans, this has prevented many farmers from securing needed credit.
- Laws dealing with chattel property do not give credit institutions adequate protection to use this property as a source of security.
- Lending is based on political pressures.
- Inability of government agencies to carry out effective, well coordinated agricultural programs.
- Farmers usually do not understand the value of credit or the responsibilities of a credit contract.

3. Credit and New Technology

a. Triggering Small Farmer Development

Tinnermeir argues "It is really just a question of establishing priorities. If a program attempts to work with the very small farmers it gives up the opportunity of significantly influencing total agricultural production. It is not suggested that the one to two hectare farmer be overlooked. Rather, the focus of the supervised credit should be on the farmers with, say, 2 to 10 hectares who can serve as a demonstration to the smaller farmers. The smaller farmers could easily be included in all group extension meetings and activities. Group loans could also be extended to these very small farmers but the administrative and supervisory controls should be reduced to an absolute minimum. These same marginal farmers could be included in Food for Peace programs and other humanitarian projects. But the supervised credit program should not be expected to solve the plight of this group of farmers, since the solution to their problems is related to a host of variables, the least important of which is credit".[20]

What Tinnermeier has observed in Peru (paragraph above) is relevant to Turkey. Definitely, the solution to small farmer's problems and pushing these small farmers to an improved level of technology cannot be associated with an extraordinary infusion of institutional credit especially if the vast array of other problems is considered that presently are peculiar to almost all of the small farmers in Turkey (see next Section III.D.3.b. and the section on Major Problems of Small Farmers, III.D.1.).

20. Tinnermeir, Ronald L., Supervised Credit and the Small Farmer from Seminar on Small Farmer Development Strategies, Ohio State University, 1971.

Mellor's argument on the issue of small farmer's technological development also relates to the conditions in Turkey. He states that "first emphasis in modernization should be on getting a high return from scarce inputs and on further testing under farm conditions through emphasis on the medium-size to large farms, with less emphasis on credit. As innovation spreads more widely, it may then be more appropriate to introduce a supervised credit program emphasizing the problems of smaller farmers".[21]

b. Sustaining Small Farmer Development

The existing small farmer credit programs in Turkey provide generally short-run assistance to these small farmers. As such, a sustained development policy is being pursued with little emphasis on a large-scale, long-run development scheme.

Government assistance programs should be handled in a way so that recipient farmers will be encouraged to assume the responsibility of operating under the SCP. The relevance of such a preparation period for the SCP is apparent. These assistance programs should also be geared to disseminate agricultural technology, one of the prerequisites upon which supervised credit can be effectively surmounted.

The SCP runs the risk of being one of the above mentioned short-run assistance programs if its emphasis moves closer to small and marginal farmers who are, generally speaking, devoid of the concept of modern agricultural techniques. Also, at this point it should be noted that the medium to large farmers of Turkey do not correspond to the conventional definitions of these classes by the Western countries where supervised credit is exclusively credit for the small farmers (i.e., a medium sized farmer in Turkey would correspond to small farmers in Western countries).

In view of the many facets of Turkey's traditional agriculture (such as lack of farmers' education, belief in fatalism, and a general distrust toward novelty) little can be done by the SCP alone to alter the conditions of farmers in the low-income sector.

Finally, it is the opinion of the authors that the following quotation from Nisbet applies to the Turkish situation. He says that "if supervised credit programs are not coupled with a general program of economic development, i.e., public works, education, and technical assistance, supervised credit programs will not provide the base for a take-off out of traditional agriculture. The result will be that farmers will remain dependent upon a continuous supervised credit program and the supervised credit program wil take on a welfare-type agency existence".[22]

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21. Mellor, John W., The Economics of Agricultural Development, Cornell University Press, 1963.

22. Nisbet, Charles T., "Supervised Credit Programs for Small Farmers in Chile", in Inter-American Economic Affairs, Vol. 21, No. 2, pp. 54.

4. Conditions for Success or Failure

The SCP has been unfavorably affected by the farmer's view of the Bank. As has already been mentioned, the Bank's dilemma is to extend credit to as many farmers as possible and to build a reputation of being strict in enforcing repayment. Past experiences have taught the farmers that many loans have gone uncollected for political reasons. Also, since the Bank operates under political pressure, it cannot free itself from financing potential delinquents. Thus, in many instances, it becomes possible to project far in advance the delinquency rates with reasonable accuracy.

This, along with other anachronistic structural and organic deficiencies has given rise to an unfavorable Bank image. It is no longer possible to evaluate the success of branch managers on their ability to collect loans. With few exceptions, all branches have an extraordinarily high number of delinquent borrowers. All these, obviously, are detrimental to sound operation of a credit institution.

The SCP operating under the Bank undoubtedly has suffered from this image of the Bank. Therefore, the possibility of having the SCP operate as an autonomous agency should be considered. Furthermore, Turkey, like most other developing countries, is faced with a scarcity of trained personnel for administering a supervised type credit program. A more efficient utilization of monetary resources, also extremely scarce for such programs, and human resources could be achieved if all supervised credit activities were integrated under one organization. There would seem to be some obvious internal economics of scale present in a single organization, e.g., one bookkeeping and clerical system.[23]

The present circumstances under which the Bank carries out its functions are not conductive to the formation of a full-fledged SCP within it. As it appears a new organization having the following characteristics would be highly beneficial:

- Progressive
- Service-oriented (credit, extension, and marketing)
- Strict in collection
- Up-to-date in procedures
- Less rigid regimentation among different administrative and technical staff positions.

However, the obvious advantages of operating under an already established and wide-spread (though inefficient)organization cannot be overlooked. Thus the question becomes a major policy issue to assess the economic and social feasibility of an autonomous Supervised Credit Agency.

5 How Could The Program be Improved

It is the authors' conviction that to separate borrower selection and supervision from loan collection is not advisable since the time and effort required for sufficient coordination under these circumstances is overwhelming. Therefore the Bank should increase the number of its qualified supervisory personnel while still trying to secure the coordination of other technical agencies to fill up possible deficiencies.

23. Ibid.

Probably the Bank has adequate technical personnel. But, a majority are reluctant to work in the field. The only way of providing incentives to mobilize these personnel is by boosting their salaries. This is difficult to do, but there exists no reasonable alternative.

Before assuming the heavy responsibility of being field supervisors all technical personnel should be retrained in such areas as farm business management, accounting, agricultural economics, technical agriculture, and public relations.

The promotive cadres should be such that no technical supervisor will be promoted to a position where his field experiences become irrelevant.

Also, specialization should be encouraged among the supervisors since acquiring all the pertinent knowledge in their special fields of interest would enable them to serve with more efficiency and dedication.

Supervisors (credit engineers) should be entirely free of bureaucratic procedures and paper work in order to get more done in the field. The current practice of involving credit engineers in filing his clients' dossiers should be abandoned with adequate provisions of clerical staff to carry out the non-technical chores.

Every credit engineer (supervisor) should drive out in his own assigned vehicle (without a driver) to visit farms and farmers. For the purchase of vehicles, special arrangements must be provided other than the existing cumbersome mechanism which causes contrived scarcities. Possibly some funds may be allocated from the program's budget to buy all the needed vehicles without seeking approval of any other government agency. This policy, in fact, should have been made an integral part of the program at the very outset. Admittedly, a free lance policy in this regard would confront legal barriers. However, that a problem of such mundane characteristics should curtail the running of the SCP is still unjustifiable.

Loan approval techniques should be decentralized coupled with incentive programs which could be in the form of bonuses based on number of farmers reached, amount of money collected, or other measures of good performance.

A public relations campaign should be launched to arouse awareness of the SCP. This may be another way of encouraging more demand deposits. Here, a necessary precondition must be fulfilled, that is the Bank should establish a reputation of being strict in collections in order not to fall into competitive disadvantage with the commercial banks. Mass media could be used to arouse this awareness on a larger scale.

An intimate association between the credit and marketing activities should be provided. The beneficiaries should be encouraged or may be enforced to be members in the local marketing cooperatives. If no such local marketing cooperatives exist, the Bank should provide the necessary basis for their establishment. Successful market activities should be considered among other criteria currently used in evaluating the borrowers and their needs.

In order to reach small farmers, joint farm plans should be made for adjoining small farms. This will develop a sound basis for advising groups of farmers in order to reduce the costs of dealing with individuals. Loan security will be strengthened in such cases, if joint farm plans involve joint liability for loans.

Raising the rate of interest for high-risk small farmer borrowers is economically sound, but it may give rise to discontent among the small farmers. Therefore, it may be more reasonable to charge higher interest rates for all borrowers with the expectation that low-risk borrowers will subsidize those that are high-risk. This is an effective way of providing for a self-supporting program. Raising interest rates is important in view of the Government's negligence in making the prescribed subsidies to the Bank (see Interest Rates, Section II.E.2.). When the current rate of inflation is considered, negligible or no revenue is left over for the SCP.

Finally, it is necessary that the Policy Committee at the national level play a more dynamic role in guiding the program. Among its members should be some progressive farmers and specialists in agricultural economics. Such a measure could make the actions of the Committee more relevant to the real situation which farmers are facing.

IV. ROLE OF TECHNICAL ASSISTANCE

A. AID Inputs

This section draws on information supplied by AID/W, History of AID Programs: Agricultural Credit in Turkey (Draft). With some few deletions the following quotation is verbatim.

"Joint studies by the Government of Turkey and A.I.D. in 1960 indicated that agricultural production would have to double by 1980 to maintain the 1960 standard of living and that, in order to do this, agricultural credit would have to be made more readily available. It was found that progress in use of agricultural technology was being inhibited because of lack of capital resources.

"The Turkish Government and A.I.D. set up a project on Agriculture Credit and Marketing (-342) in late 1960. An agricultural credit advisor (Darrel A. Dunn) was assigned to the project for the year beginning June 1961, with a marketing and processing advisor (George T. McCloskey) added later that year.

"In 1962 the project was split to form an Agricultural Marketing Project (-343) and a project on Agricultural Credit (-342). The objectives of the latter project were to assist Turkish Government agencies, especially the Agricultural Bank:

a. develop a credit system responsive to farmers' needs;
b. improve the administration of the Bank;
c. develop greater capital resources for the Bank;
d. improve in-house training programs; and
e. improve the operation of the credit cooperatives.

"Three resident agricultural credit advisors were commissioned to assist in the new project (Darrel A. Dunn, June 1962 to October 1965, Ward W. Taylor, June 1963 to June 1966, and Glenn W. Studarus, August 1964 to June 1966, following a three month short-term assignment in 1963).

"By 1963 it was decided that the long-range objectives could be best achieved by establishing a new credit system in a pilot area as a model for the Bank to follow. Accordingly a review was made of ongoing A.I.D.-financed loans to the Bank and a SCP for Denizli Province was initiated with the establishment of a special TL 50 million ($ 1.79 million) loan fund in the Bank; half of this fund was provided from the Agriculture Bank's own resources and the balance was in the form of a PL 480 loan from A.I.D.

"Through this project the Government of Turkey came to know and accept principles of supervised credit programs. The Mission considers that through participation in this project the Agriculture Bank and the pertinent Ministries gained a better understanding of the agricultural credit situation and the farm credit needs of Turkey. The Mission reports that the Agriculture Bank has adopted a policy of change to keep pace with the needs of Turkish farmers.

"The Bank continued to make institutional changes and to extend the supervised credit program after A.I.D. terminated the project in 1966. By that time the program had been extended to four additional provinces outside Denizli Province."

B. OTHER DONOR INPUTS

The international organizations involved in financial and technical assistance programs in Turkey are mainly the U.N. organizations (such as UNDP and FAO), IBRD, and now the Rockefeller Foundation. IBRD loans to Turkey have reached a total of $ 70 million. IBRD projects on development of fresh fruit and vegetable production and marketing and the forest industries are under examination. The UNDP contributions, for various projects in agriculture, education, communications, business and industry, totaled closed to $ 20 million in 1968. Total World Food Program assistance over a number of years, primarily for economic and social development projects, reached $ 14.5 million by the end of 1967. The European Economic Community has provided credit for $ 175 million over the last 5-year period.

Smaller technical assistance programs are being supported by OECD, CENTO, NATO, and the Regional Corporation for Development (RCD, a cooperative program between Iran, Pakistan, and Turkey).

Unilateral technical assistance is also provided by the U.S.A. (in addition to huge grants and loans), Britain, France, West Germany, and recently USSR. USAID (in addition to its support directly to the Bank) is supporting programs concerned with the introduction of new wheat production technology, public administration, economic planning and research (in the Ministry of Agriculture), the organization of fruit and vegetable exports, and the improvements of water management at the farm level.[24]

C. EFFECTS

As is known, the SCP of the Bank was initially patterned after the Farmers Home Administration of the U.S.A. It was a misfit to Turkey's conditions due to a variety of different domestic conditions which Dunn and Studarus identified as follows:[25]

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24. Agricultural Development in Turkey, Ford Foundation, Beirut, Lebanon, 1971.

25. Darrel A. Dunn (1965) and G.W. Studarus (1968) were credit advisors at the USAID, Ankara.

1. Almost all of the institutional credit is supplied to farmers in Turkey by the Agricultural Bank while it is supplied by many sources in the United States. The FHA provides only 5 percent of the institutional agricultural credit in the U.S.A.

2. The Agricultural Bank has only a few agriculturists as employees who are not in policy making positions.

3. Agriculture graduates of universities, generally, come from urban centers and do not have practical agricultural background.

4. There is little cooperation or coordination of programs of the Bank and the agencies of the Ministry of Agriculture.

5. In most of the cases, the Bank is security-oriented rather than loan productivity-oriented.

6. A large percent of the borrowers are illiterate.

7. Transportation available to Bank personnel for the purpose of contacting farmers is deficient.

Thus, there was a definite need to tailor the original plan to make it applicable in Turkey. It took some time to learn that the FHA pattern was too sophisticated and costly for Turkey. Since then, the most significant actions in the program have been in the area of changing it in parts from a copy of an alien structure to one that better fits conditions in Turkey. Forms, record books, and some procedures have been greatly simplified. Instead of trying to reorganize the whole farming operation for optimum efficiency (which many farmers could not accomplish in a short term) loans are now advanced to concentrate on one or a few changes which the farmer can handle with supervision.

The progress of the SCP can be attributed to the technical assistance which was the missing link in the credit activities of the Agricultural Bank. Since the technical supervisory extension services of the Ministry of Agriculture are utterly insufficient, it was a rational policy on the Bank's part to hire technical staff of its own. However, the Bank's success in this respect cannot be appraised as excellent since there had been negligible previous injections of technical assistance to the farmers served. Thus, little dosages of this catalytic injection have had some discernible effects. It still remains to be seen whether the succeeding packages of technical assistance will adequately meet the rising need for such services since the ignition spark (which came at a high cost) has already been provided to start the process.

D. RECOMMENDATIONS

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Whether operating a farm or a bank, a cost-benefit analysis should be behind every decision. Based on this, a precedent of sound loans (at the micro level) and viable banking (at the macro level) would emerge. The authors recommend that any domestic or international support being

considered in the future for the SCP should be based on complete and accurate cost-benefit analyses at both the micro and macro levels. Specifically, future support for the SCP should be given with the following conditions:

1. The program should reach low (but not necessarily the lowest--see discussion in Section III.D.3.a.) income farmers and should include those complementary factors needed (such as technical assistance, marketing services, etc.) to guarantee loan productivity.

2. Any outside agency should exert its influence to increase the effectiveness of complementary agencies in:

   a. Meeting the host of needs of the lowest (below the level which can be effectively served by a SCP) income farmers.

   b. Coordinating their programs with the needs of the SCP.

3. Banking [illegible] to improve efficiency of operations should be implemented to move the SCP toward a more viable position.

4. Loans should be given in the way that the likelihood of repayment will increase thereby reducing the currently high rate of delinquency.

5. On-the-job training programs should be going on continuously for the SCP supervisors and technicians who link the farmers to the Bank.

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APPENDIX

TABLES, CHARTS AND MAPS

APPENDIX

TABLES, CHARTS AND MAPS

TABLE II. A.1.i.- GROWTH OF THE SUPERVISED CREDIT PROGRAM IN TERMS OF NUMBER OF PROVINCES AND NUMBER OF BORROWERS.

Year	New Provinces	New Borrowers
1964	2	92
1965	3	233
1966	0	1044
1967	5	2903
1968	5	3708
1969	5	4123
1970	8	3235
1971	0	3710
1972	12	2469[1]
Total	40	21517

1 As of July 31, 1972

Source: Turkish Republican Agricultural Bank, Monthly Reports.

1

MAP II. A.L. DISTRIBUTION OF THE SUPERVISED CREDIT PROGRAM IN TURKEY

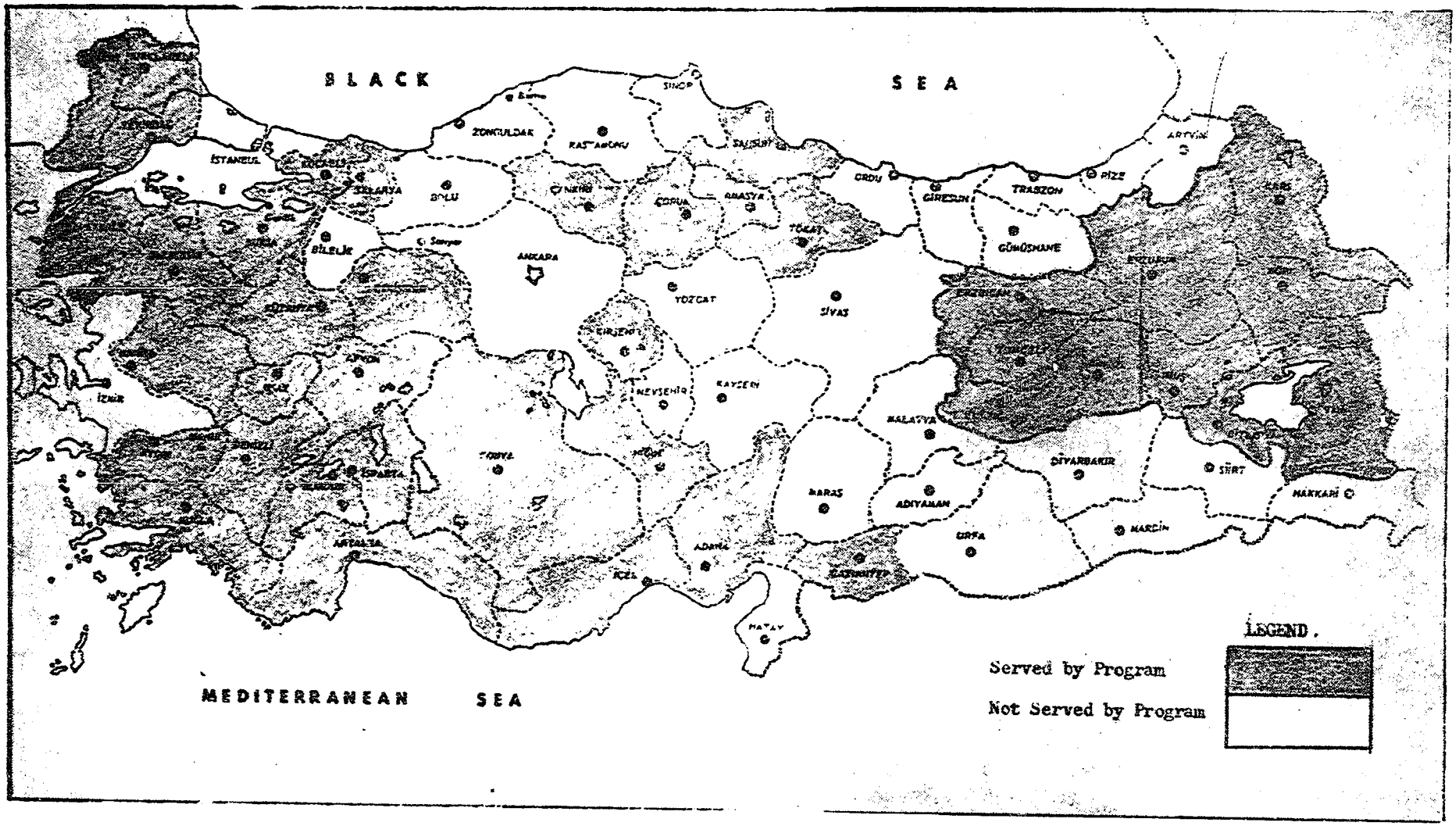


TABLE II. A. 1. ii.- GROWTH OF THE TOPRAKSU (SOIL AND WATER CONSERVATION) LOANS.

Year	New borrowers	Loans outstanding (Millions of dollars)
1960	-	-
1964	2,287	2.445
1965	594	2.992
1966	1,058	3.788
1967	1,105	4.879
1968	1,316	6.058
1969	1,719	7.564
1970	1,790	9.060
1971	1,722	8.435
1972[1)]	882	8.495
Total	12474	8.495

1) As of July 31, 1972.

Source: Turkish Republican Agricultural Bank, Monthly Reports.

TABLE II. A. 2. i.- DISTRIBUTION OF AGRICULTURAL INSTITUTIONAL LOANS BY SOURCE. (As of Dec. 1970).

Name of institutional source of agricultural credit (refer also to Chart II. A. 2.)	Amount of Loans outstanding as of December 31, 1967 (Millions of dollars)	
Sugar Monopoly, Field Crops Office and Directorate of Government Monopolies	16.40	
Commercial banks	1.39	
Regional banks	0.42	
Private agricultural cooperatives	0.11	
Sub-Total	18.07	
Agricultural Bank	414.28	(95.82 percent)
Grand Total	432.35	

Source: Aruoba, Celik, "Turkiyede Tarim Kredileri ve Tarimsal Yatirim Iliskileri" in A.U. Siyasal Bilgiler Fakultesi Dergisi, volume: XXIV, Sept. 1969, No. 3.

TABLE II. A. 2. ii.- SHARE OF SUPERVISED LOANS IN THE TOTAL AGRICULTURAL OUTSTANDING LOANS OF THE TURKISH REPUBLICAN AGRICULTURAL BANK

Years	Total agricultural credit (Millions of dollars)	Total supervised credit (Millions of dollars)	Amount of loans as a percent of total amount	Number of loans as a percent of the total number of loans
1967	418	3.72	0.89	0.26
1968	565	7.68	1.35	0.51
1969	693	11.79	1.70	0.76
1970	787	13.00	1.60	0.93

Source: Turkish Republican Agricultural Bank.

CHART II. A. 2 — FLOW OF AGRICULTURAL CREDIT IN TURKEY

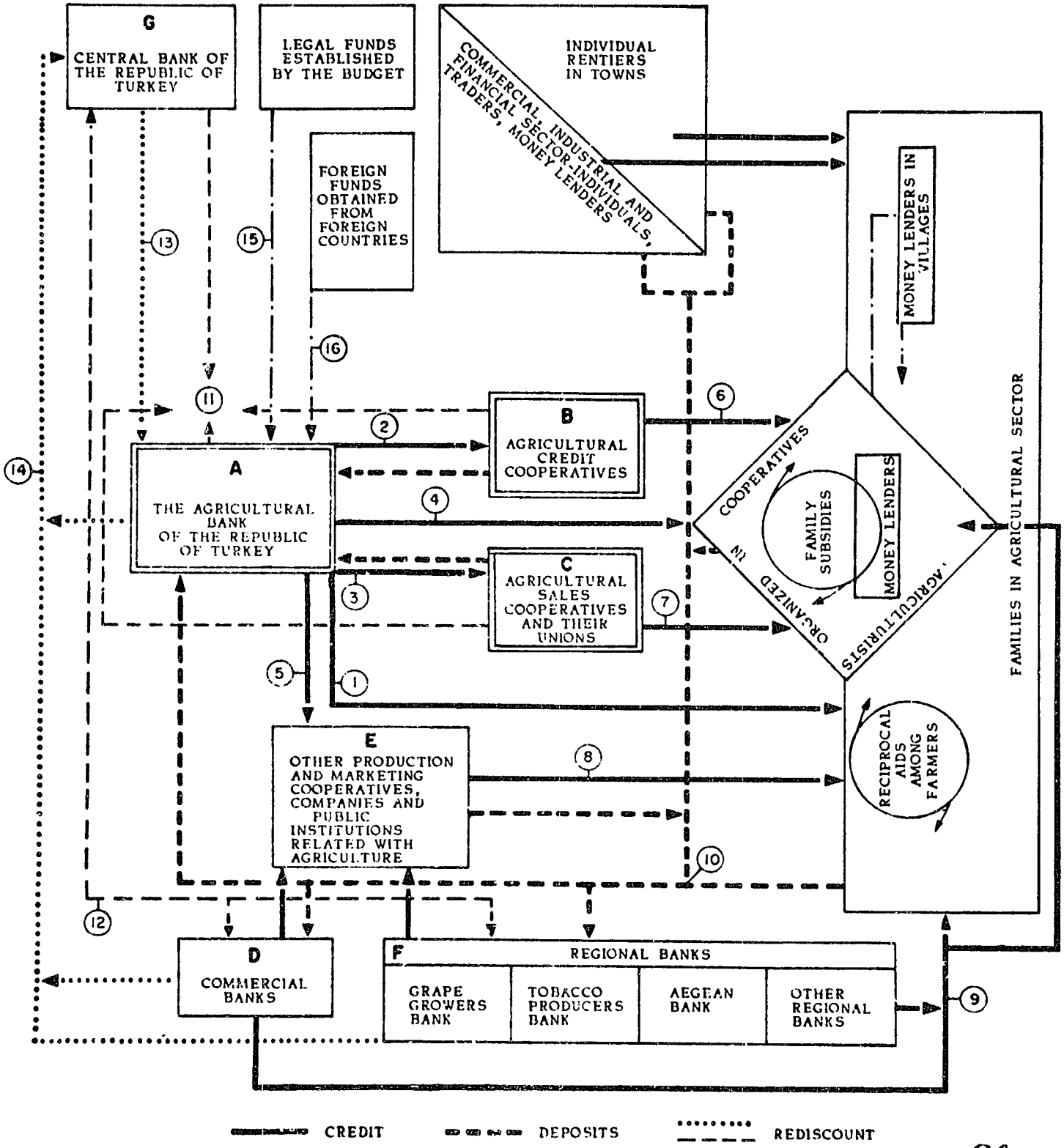


TABLE II.A.3.- OTHER PROGRAM ACTIVITIES OF THE AGRICULTURAL BANK.

	Loans	Total outstanding (as of Dec. 31, 1970) (Millions of dollars)
1.	Annual production loans	198.000
2.	Marketing loans	3.315
3.	Agricultural supply loans	56.656
4.	Productivity and land improvement loans	1.722
5.	Land ownership and establishment loans	21.147
6.	Agricultural industry loans	1.719
7.	Loans from AID funds	3.819
8.	Loans for the purchase of equipment and draft animals to needy farmers to make virgin lands arable and cultivable	0.247*
9.	Land ownership loans to needy small farmers	1.616*
10.	Loans to rural agricultural development cooperatives	0.062*
11.	Agricultural and industrial development and export promotion loans	9.470
12.	Loans for export oriented agricultural industries (from a special fund at the Central Bank)	3.317
13.	Housing loans to farmers	0.065*
14.	Loans to Agricultural Sales Cooperatives and their Unions	15.933
15.	Loans to Agricultural Sales Cooperatives for Price Support Purchases	208.696*
16.	Loans to agricultural supply agencies	34.193*
17.	Seed loans to needy small farmers	14.193*
	Total	547.178

* Asterisk indicates programs reaching small farmers.

Source: Poyraz, Yalcin, Agricultural Loans in 1970, Turkisk Republican Agricultural Bank, Ankara.

TABLE II. A. 4.- COMPOSITION OF DEPOSITS IN THE AGRICULTURAL BANK

Years	Total (millions of dollars)	Percent of Total			
		Official	Commercial	Bank	Saving
1967	477.3	24.5	12.8	3.0	59.7
1968	564.7	22.5	15.8	2.9	58.8
1969	624.0	23.2	15.6	2.0	59.2
1970	728.5	25.5	11.8	2.3	60.4

Source: Agricultural Bank

TABLE II. A. 5. i.- VALUE OF AGRICULTURAL PRODUCTION, 1965-1968 (IN MILLIONS OF DOLLARS, IN 1961 PRICES)

Year	Total cereals	wheat cereals	Other cereals	Industrial & crops[1]	Livestock products	Other crops	Total
1965	614	393	214	336	537	378	2471
1966	686	443	243	379	543	414	2707
1967	707	464	243	443	536	407	2800
1968	664	443	223	407	557	514	2814

1. Field crops other than cereals and pulses.

Source: State Institute of Statistics.

TABLE II. A. 5. ii.- YIELD OF SELECTED CROPS (TONS PER HECTARE)

	1967	1968	1969
Wheat	1.15	1.15	1.23
Barley	1.39	1.30	1.41
Maize	1.56	1.53	1.52
Sugar beets	33.48	37.27	32.70
Tobacco	.64	.60	.34
Cotton (lint)	.55	.61	.63
Dry beans	1.31	1.26	1.26
Chick peas	1.14	1.13	1.24
Sesame seed	.67	.62	.61
Sunflower seed	1.07	.96	1.09
Cotton seed	.88	.98	1.00

Source: Summary of Agricultural Statistics, State Institute of Statistics, Turkey.

TABLE II. A. 5. iii.- VALUE OF AGRICULTURAL EXPORTS

	1966	1967	1968
		Millions of dollars	
Cotton	126.7	128.5	136.1
Tobacco	107.6	118.0	94.8
Hazelnuts	54.8	82.7	76.0
Figs, sultanas	28.7	29.9	29.8
Raisins	22.1	22.7	22.8
Cereals	2.5	1.6	1.1
Dried legumes	6.2	4.1	4.8
Citrus fruits	5.4	6.6	8.6
Sugar	0.7	0.6	0.1
Tea	0.7	1.9	2.0
Cereal by-products	1.1	1.8	0.5
Cottonseed cake & meat	13.2	14.8	13.6
Sunflower seed cake & meat	6.1	8.3	6.0
Olive oil	2.2	6.8	0.8
Other	23.6	23.3	15.3
Wool and mohair	8.4	8.5	8.7
Cattle (live)	4.7	3.2	1.9
Sheep, lamb & goats (live)	5.2	5.8	8.7
Hides and skins	7.7	5.4	5.6
Other	23.6	23.3	15.3
Total	427.6	474.5	437.7

Source: OECD Economic Surveys, August 1969 and F.A.O. Trade Yearbook.

TABLE II.B.1.a.- CHANGES IN PATTERNS OF LAND USE IN TURKEY

Manner of use	In thousand hectares	
	1950	1969
Area sown	9,868	15,305
Fallow	4,6[illegible]	7,959
Pastures and meadows	37,806	28.658
Vinyards and orchards	1,466	2,060
Forests	10,418	10,584
Unproductive land	13,466	13,132
Total	77.698	77.698

Source: Kayran, D. "The Plan and the Agricultural Sector" in Planning In Turkey, METU, Faculty of Administrative Sciences, Publication No. 9, June 1967.

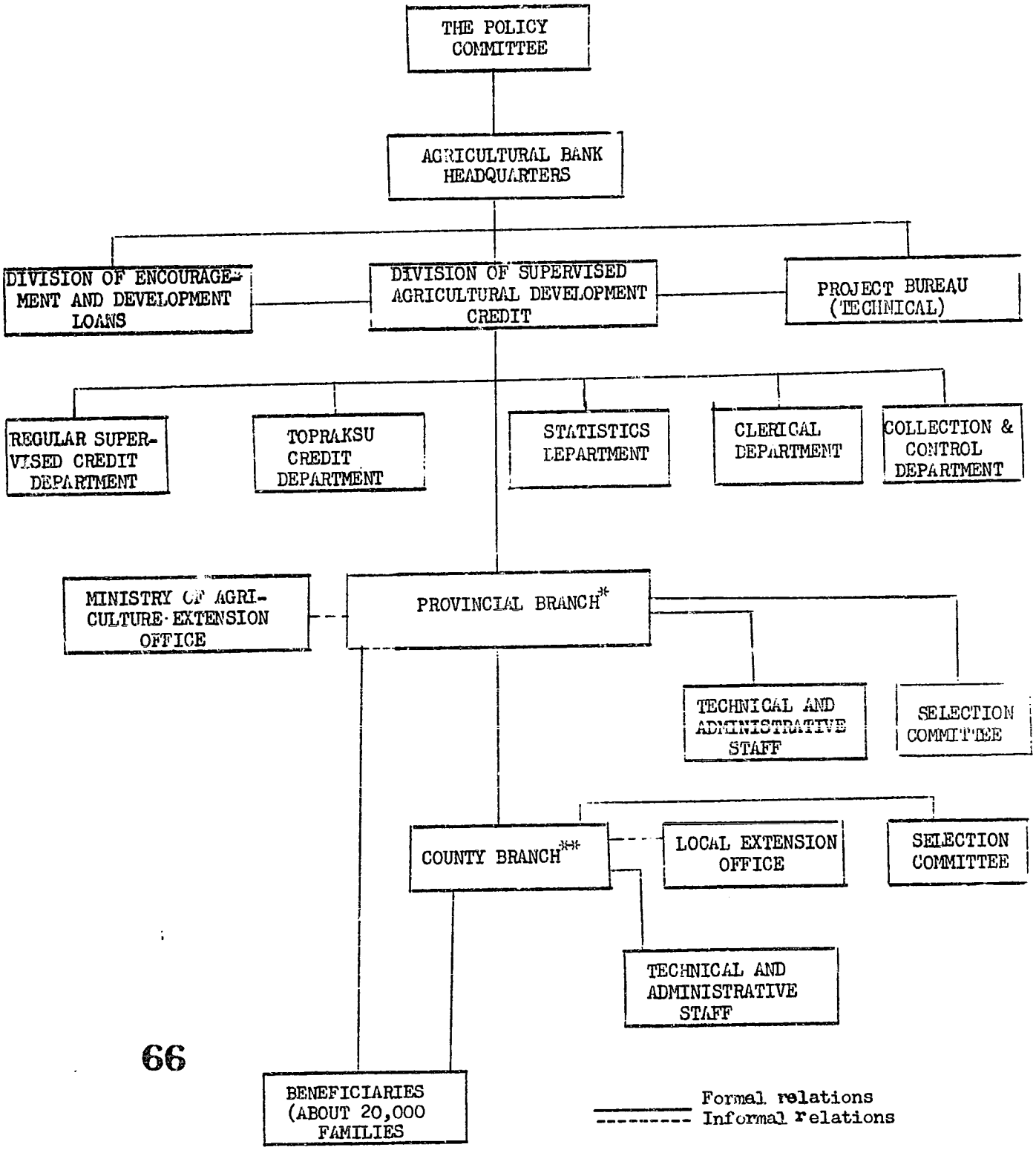
TABLE II. B. 2. b.- DISTRIBUTION OF LOANS GIVEN BY THE SUPERVISED CREDIT PROGRAM FOR DIFFERENT TERMS IN 1968 AND 1972.

Term	As of August 31, 1968		As of March 31, 1972	
	Amount*	Percent	Amount*	Percent
Short-term	2.64	21	8.5	23
Medium-term	7.85	64	19.3	53
Long-term	1.85	15	8.8	24
Total	12.35	100	36.6	100

* Millions of dollars

Source: Turkish Republican Agricultural Bank.

CHART II. C.1.ii. - ORGANIZATION OF THE SUPERVISED CREDIT PROGRAM



* All provincial branches are first class branches.
** Some county branches are first and some are second class branches.

TABLE II. D.4. TOTAL ASSETS AND LIABILITIES OF THE FIRST 14,000 SUPERVISED CREDIT BENEFICIARIES AT THE TIME OF APPLICATION FOR LOANS

Assets (U.S. dollars)			Liabilities (U.S. Dollars)		
Kind	Value	%	Kind	Value	%
Total Land Cultivated	$ 63,657,785	65	To Agricultural Bank Cooperatives	$ 2,291,071	75
Buildings	13,603,285	14	Others	725,500	25
Animals	6,244,357	6			
Agricultural Tools and Machinery	5,234,142	5			
Other Property	2,370,500				
Total	$ 98,119,071	100		$ 3,018,571	100

Source: Agricultural Bank Reports.

TABLE II. E.1.i. DISTRIBUTION OF NEW LOANS BY SIZE, DECEMBER, 1970.

Loan-size group (millions of dollars)	Amount loaned	Proportion of amount (percent)	Cumulative percent of amount	Average loan per account	Number of accounts	Proportion of accounts (percent)	Cumulative percent of accounts
- 35.71 or less	4,894	0.10	0.10	26.42	185	2.38	2.38
35.78 - 71.42	25,764	0.57	0.67	60.14	428	5.51	7.89
71.49 - 142.85	139,085	3.09	3.76	107.64	1292	16.65	24.54
142.92 - 357.14	606,071	13.48	17.24	280.00	2164	27.89	52.43
357.21 - 714.28	1,004,297	22.34	39.58	575.14	1746	22.50	74.93
714.35 -1428.57	1,435,307	31.93	71.51	1,033.28	1389	17.90	92.83
1428.63 -3571.42	1,086,949	24.18	95.69	2,090.28	520	6.70	99.53
3571.49 -7142.85	131,218	2.91	98.60	4,859.92	27	0.34	99.87
Over 7142.85	60,259	1.33	99.93	7,471.78	6	0.07	100.00
TOTAL	4,493,848	100	100	579.28	7757	100	100

Source: Agricultural Bank

TABLE II.E.1.ii. SIZE DISTRIBUTION OF HOLDINGS IN TURKEY

Size class (hectares)	percent of holdings	percent of area
0 - 1.0	30.5	4.3
1.1 - 2.5	25.9	11.0
2.6 - 5.0	21.4	18.9
5.7 - 7.5	8.7	12.7
7.6 - 10.0	5.1	10.8
10.1 - 20.0	6.0	20.1
Above 20.0		
	100.0	100.0
Total no. of holdings	2,857,511	
Total area (hectares)	12,107,888	

Source: Data collected from various sources, 1962-70

TABLE II.F.1. DELINQUENCY IN THE REPAYMENT OF LOANS IN THE SUPERVISED CREDIT PROGRAM

Year	Amount of loans overdue as a percent of the amount outstanding (as of Dec. 31) (Percent)	Amount of loans not collected as a percent of the amount of loans that should have been collected (during the calendar year) (Percent)	Number of delinquent borrowers as a percent of the total number of borrowers (as of Dec. 31) (Percent)
1966	4	-	-
1967	2	11	2
1968	13	38	10
1969	27	51	20
1970	29	47	24
1971	-	24	20

Source: Agricultural Bank

TABLE II.G.1.i.- EFFECT OF INFLATION ON THE SUPERVISED CREDIT PROGRAM

Year	Price indices[1] 1963 = 100	Loans outstanding and overdue[2] (Millions of dollars)		New loans[3] (Millions of dollars)	
		Current prices	Deflated (in 1963 prices)	Current prices	Deflated (in 1965 prices)
1965	109.4	0.43	0.39	-	-
1966	114.7	1.35	1.17	-	-
1967	123.4	3.72	3.01	2.82	2.28
1968	127.3	7.68	6.03	5.06	3.97
1969	136.5	11.79	8.63	6.26	4.58
1970	145.7	12.99	8.91	4.49	3.03

Source: 1) State Institute of Statistics

2) Agricultural Bank, General Directorage Financial Reports (1967, 1968, 1969, 1970); Celik Aruoba, Political Sciences Periodical (SBF), Volume XXLV, No. 3.

3) Agricultural Bank, General Directorate Financial Reports (1967, 1968, 1969, 1970).

TABLE II.G.1.ii. TURNOVER RATIOS FOR THE SUPERVISED CREDIT PROGRAM

Year	Ratio	Average period of loans (in days)
1967	0.25	1460
1968	0.26	1404
1969	0.29	1259
1970	0.35	1042

Source: Agricultural Bank.

TABLE II.G.2. OPERATING COST OF THE SUPERVISED CREDIT PROGRAM

Year	Expertise and supervision cost (Dollars)			Overall costs (Dollars)			(a/b x 100) Proportion of expertise and supervision costs to overall costs (percent)
	Operational loans	Investment loans	(a) Total	Direct	Indirect	(b) Total	
1968	1,955	20,369	22,324	4,683	108,257	112,940	19.7
1970	3,824	32,633	36,457	5,459	232,887	238,347	15.2

Source: Agricultural Bank reports.

TABLE II.G.4.i. CENTRAL BANK REDISCOUNT PRIVILEGES FOR THE AGRICULTURAL BANK

Discounts from Central Bank to the Bank	1964		1965		1966		1967		1968		1969		1970	
	Mil. $	%	Mil. $	%	Mil. $	%	Mil. $	%	Mil. $	%	Mil. $	%	Mil. $	%
Agricultural	48	78	46.3	87	109.2	92	142.6	87	224	93	289.2	93	308	93
Commercial	10.5	22	6.6	13	8.4	8	20.7	13	17	7	20.7	7	23	7
	58.5	100	52.9	100	117.7	100	163.4	100	241	100	310.0	100	331	100

Source: State Planning Organization, Publication No. DPT;776-1PD: 270, Agricultural Bank Reports.

TABLE II.G.4.ii. OVERALL NET RESOURCES OF THE BANK THAT ARE LOANABLE AS OF DECEMBER 31, 1970

		Millions of dollars
1)	The Bank's own resources	63.65
2)	Bonds in circulation	3.60
3)	Sundry funds	52.67
4)	Time deposits	169.44
5)	Demand deposits	200.64
6)	Creditor's current accounts	81.69
7)	Rediscount privileges	386.24
8)	Other resources	5.53
	Total	963.43

Source: Agricultural Bank

TABLE II.G.5. INCOME SUMMARY OF THE TURKISH REPUBLICAN AGRICULTURAL BANK, FOR THE YEAR ENDING, DECEMBER 31, 1970

Expenses (U.S. dollars)		Returns (U.S. dollars)	
Personnel expenses	$ 28,599,000.15	Interest and Commissions	$ 77,538,514.31
Taxes and duties	4,207,488.10	Returns on bonds and stocks	1,985,906.47
Interest and commissions paid	47,167,033.25	Interest and commissions earned on bank's services	8,247,515.92
Exchange losses	198,710.04	Exchange earnings	890,030.43
Saving and encouragement bonuses	1,256,241.66	Affiliates profits	559,114.71
Amortization and depreciation	1,256,072.29	Miscellaneous profits	2,094,407.08
Agency and affiliates losses	-		
Other expenditure and losses	7,630,142.74		
Profit	1,000,842.72		
Total	91,315,530.98	Total	91,315,530.98

Source: Agricultural Bank Reports.

COUNTRY PROGRAM

SMALL FARMER CREDIT IN JORDAN

THE AGRICULTURAL CREDIT CORPORATION OF JORDAN

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by:
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in cooperation with
The Agricultural Credit Corporation

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revised

PREFACE

Working under contract with the United States Agency for International Development in Jordan and with the cooperation of the Agricultural Credit Corporation of Jordan the American University of Beirut has prepared this report.

The four months alloted for writing the report were insufficient to conduct surveys or to collect primary data. Therefore, secondary sources of data were used exclusively. This required the full cooperation of those holding the information needed. The authors are grateful to the many agencies and individuals who cooperated in offering information and reviewing the first draft of this report. Some of those who helped were: The Agricultural Credit Corporation (especially Mohammed Koran, Burhan Sharabi and Yusuf Hazimeh), the National Planning Council (especially Wail Kannan), the Royal Scientific Society (especially Michael Marto), the Ministry of Agriculture (especially Ahmed Abu Shaikha, and Burhan Abu-Howayej), and the U.S. AID (especially Robert Mills and Fuad Qushair).

Though many persons have offered their help, the authors themselves take full responsibility for any mistakes found in the content of this paper.

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SMALL FARMER CREDIT IN JORDAN

By
Thomas Stickley[1] and Marwan Hayek[2]

SUMMARY

The Agricultural Credit Corporation (ACC) of Jordan is a semi-autonomous agricultural lending institution giving loans to farmers for seasonal, medium and long-term productive purposes.

In 1959 Law No. 50 was enacted which established the ACC as the single agencyconsolidating all previously existing official agricultural lending agencies. In August 1960, the ACC began its operations. By 1968 the Jordan Cooperative Organization (JCO) discontinued its relations with the ACC and began operations as an independent semi-autonomous government agency giving short-term loans and services to cooperatives.

By the end of 1971, ACC had built up its loanable funds to more than 21 million dollars. This was done with help from AID (more than 3 million dollars in loans and grants) and the IDA of the World Bank Group (6 million dollars in loans).

As of the end of 1971 a total of 28995 borrowers (not all different people) had received loans totaling about 26 million dollars. During 1971, 1955 farmers received loans from ACC.

Jordan's land-owning people number about 90,000. This number is not more than half of all the farm operators of Jordan. Therefore, an insignificant proportion of farm operators are receiving loans from ACC. In fact none of the very smallest

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farmers received loans from ACC. Besides all the landless farmers, about 45 percent of the land-owners (all those with farms less than two hectares) also are not served by ACC. In spite of ACC's avoidance of this high-risk group of borrowers it still was able to collect only 19 percent of the money that should have been collected in 1971. This 81 percent delinquency rate is attributed to many factors such as the large number of bad debts inherited at the time of ACC's consolidated establishment in 1960, the June 1967 war, the 1968 drought, the 1970 internal crisis and the closing of the Syrian borders since 1970. Farmers attitudes that loans are gifts has also been difficult to overcome in ACC's renewed interest to improve its repayment record. In spite of these problems, the energetic and innovative staff of ACC is working to improve the ACC. Toward this end it has made some significant changes very recently. It is giving loans in installments. Payments for certain loan purposes are going directly to the supplier. A check on the farm is made before each succeeding installment is made. Supervision to control loan expenditures is now practiced on all ACC loans. A payroll deduction plan in some cases is another recent innovation in which farmers may have their loan repaid by having regular monthly deduction from government paychecks (from wages of family members who are government employees) made directly to the ACC. Interest charge waivers on some very old debts inherited from earlier agencies is an incentive to encourage repayment of at least the principal.

The ACC can be a sound institution with a bright future that would deserve the support of any individual or institution, domestic or foreign, if its most serious problems are solved.

I. INTRODUCTION

The institutional agricultural credit system in Jordan is constituted of two main semi-autonomous agencies, namely, the Agricultural Credit Corporation and the Jordan Cooperative Organization.

The Agricultural Credit Corporation issued, during the last twelve years (since the date it began operation in 1960), a total sum of $ 26 million as loans for the purposes of land improvement, livestock development, purchase of machines and equipment and farm constructions. Average annual loans issued during last five years was $ 1,755,000 and total outstanding loans at the end of 1971 amounted to about $ 16.5 million.

The Jordan Cooperative Organization's outstanding loans by the end of 1971 amounted to $ 2,156,000. These are issued to cooperative societies who in turn issue short-term or seasonal loans to members. The agricultural cooperative movement in Jordan started early in the fifties. There are about 150 agricultural cooperative societies in East Jordan with a total number of members of about 5,838 members. Originally cooperative work proceeded in extending seasonal loans to members of the cooperative societies, production inputs and limited marketing services. However, the cooperative movement has not, so far, accomplished its objectives in agricultural development represented in group actions to procure production inputs, marketing crops, land consolidation to reduce costs of production and increase farmer's returns. There are only a few cooperative societies which are characterized by a large number of members and activities and full-time management. These newly established cooperatives do not cover all agricultural areas and there is still a need for an increase in the number of similar cooperatives.

On the other hand, since farmers (especially small farmers) savings are so small, and farmers depend upon credit to invest in agriculture, and since loans issued by both the Agricultural Credit Corporation and the Jordan Cooperative Organization did not cover farmers needs for capital to invest in agriculture farmers had to borrow from non-institutional sources at a high rate of interest.

These non-institutional sources of credit are constituted mainly of private money lenders, commission agents, land lords, village grocers agricultural input suppliers, and exporters in the vegetable and fruit markets. In addition, farmers buy agricultural machinery on credit from dealers who borrow from commercial banks. Commercial banks credit to farmers is mostly in this indirect form. It is believed that the non-institutional

sources of agricultural credit form the largest share of the aggregate agricultural rural indebtedness, though there are no statistics to measure its volume as this sort of lending is made against the signature of promissory notes, or may be recorded as an entry in the lender's book. Therefore only an approximative picture of the sources and quantities available for agricultural loans exists. Non-institutional credit is mostly short-term or seasonal and it is certain that the interest rates charged (whether explicitly or implicitly) by these lenders are high and exploitive.

In nature, the small farmers in Jordan are first of all too small to enjoy any advantages from economics of scale. The fact that 36 percent of the total number of holdings in Jordan in 1965 was below one hectare in area is enough to assert this point. However, this problem is made more cronic by adding to it the fact that there is a lack of a sufficient quality and quantity of inputs (including management) to these small farmers, which deteriorates the productivity of the small farms they have. Insufficient capital for investment, or capital provided on exploitive terms by non-institutional lenders is another main problem. In addition, the improper selection of enterprise and the unfavourable cost-return balance further keeps their income low and this low level of income in turn makes them unable to move to a better level of technology, invest in their land or free them of the need for continuous credit even to produce the minimum they can produce. This unfavourable process goes on in a vicious circle.

Only a small part of the small farmers are touched by institutional credit. The Agricultural Credit Corporation is not reaching those farmers who own less than 2 hectares in land area (who constituted about 45 percent of the total number of holdings in 1965) in addition to not reaching non-owner operators (share-croppers and renters). Besides this, even if we consider that all the members of the cooperative societies in East Jordan are small farmers, the 5,838 members represent a small share of small farmers too. However, the Agricultural Credit Corporation was established to give credit to all farmers in Jordan, big and small. But the fact that the major part of the small farmers (the lower income category) is not reached by the Agricultural Credit Corporation might be due to three main factors: (1) tangible security requirement, (2) economic justifications and (3) loan procedures. However, it is felt that these farmers need something more than credit in order to develop and make productive use of the credit given to them. Consolidation schemes, land-tenurial reform, improved marketing and technical assistance are also needed to complement the injection of credit.

II - PROGRAM CHARACTERISTICS

A. BACKGROUND

1. Historical Summary

The Agricultural Credit Corporation (ACC) was established by Law No. 50 of 1959, to be the official lending institution for agricultural purpose with an authorized capital of seven million Jordanian Dinars (19.6 million U.S. Dollars). ACC was established to take over agricultural credit from the multiplicity of institutions (See Section II, A. 4. below) engaged in agricultural credit before 1959. Such centralization was expected to organize the use of financial resources and make credit terms uniform, as well as subject lending to proper scrutiny and supervision (FAO, 1967 p 101).

The ACC started operations on 1 August, 1960 after taking over the assets and liabilities of the other lending agencies. The paid up capital of ACC at its establishment amounted to J.D. 3,662,087 ($ 10,253,843) which became at the end of the first year 1960/61 J.D. 3,795,729, ($ 10,628,041) consisting of what was transferred to ACC from the assets of the pre-existing institution and USAID grant.

Through September 30, 1965, USAID had advanced a total of $ 2,743,727.66 in the form of direct grant money to ACC through Project No. 278-15-140-091 "Agricultural Loan Fund". This money became part of ACC's total capital of $ 12,542,242 at that time. With the backing of this capital, ACC secured a loan from the International Development Association (IDA) in the amount of $ 3,000,000 in 1963. Another $ 3,000,000 loan from IDA was secured in 1967. Each of these loans was to be repaid in a period of forty years from their date of issue (the first 10 years being a grace period, during which only the interest is paid on a half year basis) with an interest of 0.75 percent for each. The full amount of these two loans was disbursed as loans to farmers. The ACC raised the rate of interest it charges as a requirement by the IDA (See Section II.E.2) as a result of taking those two loans.

In light of its first three years' experience, ACC reorganized its general structure in order to improve its activities in both its Main Office and its branches; systematic procedures were developed for the sake of the farmer-borrowers and for the improvement of efficiency in meeting the objectives for which it was established.

Thus ACC replaced its Law No. 50 of 1959 by Law No. 12 of 1963 after reconsidering its previous law and policies and developing them in a way that complies with the objectives for which ACC was established and it put into effect the new rules and procedures to be followed in giving a loan, supervision, execution and collection.

At the time when ACC was established it had only six branches (Amman, Jerusalem, Nablus, Kerak, Irbid and Jerash). These branches were not sufficient to serve all the farmers all over the country and farmers were incurring high expenses before getting a loan because of their distance from the above branches. Thus ACC developed a plan to establish new branches in all the productive centers of the country so as to limit centralization and to enable the farmers to get the loans in the least time and cost. Now ACC has 16 branches (Amman -- headquarters also -- Salt, Irbid, Jerash, Wadi Yabis, Ramtha, Mefraq, Ajloun, Kerak, Taffila, Ma'an, Jerusalem, Nablus, Jenin and Hebron. The last four branches which are located in the West Bank of Jordan have been temporarily closed since June 1967 because of the Israel occupation.). There is a policy of opening more branches when the need arises and when necessary funds are available. ACC is servicing all areas in the country within its available resources and limitations.

In the beginning, ACC decided to channel all short-term credit to members of cooperative societies through the Jordan Central Cooperatives Union (JCCU) (later the name was changed to Jordan Cooperative Organization, JCO). But later ACC found that JCO is not reaching all farmers as not all farmers are members of cooperative societies.

So in 1969, after the reorganization of JCO, it was agreed that ACC settle its relation with JCO by renouncing the sum of $ 999,168 from ACC's capital and considering it part of JCO's capital so that ACC's responsibility of financing the cooperative societies with seasonal loans ends. Thus ACC stopped issuing loans to JCO. This required the modification of ACC Law No. 12 of 1963 by Law No. 3 of 1970 according to which ACC started, once again, to extend seasonal loans to farmers directly (in addition to extending medium and long-term loans).

2. Relation to National Credit System

From the Laws of the Jordan Central Bank (JCB) (Temporary Laws of the JCB Nos. 93, 94, 95, & 96 of 1966, pp. 16-18), articles 38, 39, 40, 41, 45 (Appendix A) define the organizational links and relationships of the specialized credit institutions (which include ACC & JCO) with the Jordan Central Bank (JCB). The main idea of these articles of the law is that the JCB serves as a clearing house for the specialized credit institutions and for the certified banks,

accepts their deposits, and extends credit and rediscount privilages to them. Also the JCB acts as a supervisory unit over the specialized credit institutions and the certified banks, performs other formal activities and makes decisions on the general conditions and instructions concerning credit facilities for the certified banks and the specialized credit institutions. It is important to note that ACC does not keep any amount of cash in its vaults. It deposits its cash and revenues at certain commercial banks in the country. ACC also represents the largest share of the aggregate official agricultural portfolio (79 percent), then comes the commercial banks (11 percent) and then JCO (10 percent) (Table 1).

Table 1. Share of ACC, Commercial Banks and JCO in the Official Agricultural Portfolio

Institution	Loans outstanding at end of December 1971	
	$	%
ACC	16,553,600*	79.0
JCO	2,156,000	10.3
Commercial Banks (Bank Facilities)**	2,237,000	10.7

Source: Central Bank of Jordan, Statistical Bulletin, Jan. 1972

* Part of the ACC outstanding loans include Staff housing loans which are non-agricultural loans.

** Bank facilities means loans, bills and bonds.

3. Other Program Activities

Before 1966 ACC had a program for rural development where it financed the construction of village schools, health centers, roads, developed water springs, etc. This program was terminated in 1966 as the funds for this project were supplied by the U.S. Point Four Program and these funds were exhausted. The program was converted to the Ministry of Interior for Municipal and Village Affairs. The program's name was the Village Development Loan Fund and had a separate executive body, though from the administrative point of view it had the same administration.

Currently, ACC plays a role in rural development through the rural housing project by extending loans for the purpose of building farm houses. This project served a large category of farmers, mostly small farmers, because as a first requirement for giving the loan in all cases, the house should be built on the farm so that the farmer lives on his farm and takes better care of it. ACC has loaned out for this purpose about $ 1,078,000 of which $ 378,000 was spent from the NPC (Project 150) loan and $ 700,00 from ACC's own funds. The maximum size of a loan is $ 3,780, which the average size is about $ 2,240. The duration of each loan is 10 years and their repayment record has been quite good (collection rate more than 95% of due loans) since the principal is generally deducted from the salary of one of the borrower's relatives (generally his son, if the son is a government employee). The average size of the farm owned by the borrowers of these loans is about 7 hectares.

Also ACC is cooperating with other government agencies like the Ministry of Agriculture and the Natural Resources Authority in some development projects by extending credit to farmers included in those projects like the Bedouin Settlement Program in El-Jafre and other areas The Soil Conservation and Terracing Project, these two undertaken by the Ministry of Agriculture, and the East Ghor Canal Project, Wadi Dhuleil Project and the Irrigation Projects of the Southern areas of Jordan being under the responsibility of the National Resources Authority.

The beneficiaries of those projects are mostly small farmers. In all of the mentioned projects, (except for the Soil Conservation and Terracing Project) the newly developed and irrigated area is distributed in units ranging between 2.5 to 5 hectares on selected efficient and deserving farmers after a trial period.

4. Relation to Pre-existing Local Institutions

ACC is a consolidation of several institutions (discussed below) dealing with agricultural credit prior to 1959. Between 1950 and 1960 several agricultural credit institutions operated in Jordan, but because village communities were usually scattered and transport fascilities were inadequate, the villagers were usually forced to apply for credit to the village shop keeper, the landlord, the merchant or the money lender. Their dependence upon these persons often entailed serious social and economic consequences (USAID, Project No. 091, Agr. Loan Fund, p.1). These non-institutional lenders are still an important source of seasonal loans to the small farmers. But these lenders charge high interest rates. The unanswered question is whether or not the high risk of their clients justifies the high interest they charge.

Prior to 1959, the following official institutions, which were amalgamated into ACC, were in operation in Jordan:

- The Agricultural Bank, which had been the main source of credit for farmers in Trans Jordan from the time of the Ottoman regime. It had its headquarters in Amman with five branches in Jerusalem, Nablus, Irbid, Kerak and Jerash and was under the control of the Minister of Finance. Upon the takeover by ACC the Bank's capital was $ 2,212,000 and reserves $ 93,520. However its working funds were larger than its capital and reserves as credit was extended to it by the Treasury. Outstanding loans due to it amounted to $ 3,007,200 upon its takeover by the ACC.

- The Bureau for Agricultural Credit (est. in 1952) of the Development Board had branches in Amman and Jerusalem. It was established mainly to provide "village development loans" to the frontier villages in the West Bank but its services were extended to the rest of the country in 1953. Loans were extended at 4 percent per annum for various agricultural purposes. Loans outstanding upon the takeover by ACC were $ 5,395,600.

- The Cooperative Agricultural Societies, which were supervised by the Ministry of Labor and Social Affairs, through the Department of Cooperative Development. Loans extended by these societies stood at $ 1,030,400 as of August 1960 when ACC started operations. This, of course, broke off from ACC later in 1969, with the break off between ACC and JCO.

Later, on June 1, 1961, the Village Development Loan Scheme, which was attached to the Development Board, was transferred to ACC. This scheme used to extend group loans for the village boards and representatives for the purpose of the construction of schools, health centers and the development of water springs for the villagers. But later, on July 1, 1966, this program was transferred to the Ministry of Interior for Municipal and Village Affairs.

Then on May 3, 1967, the assets and liabilities of the Jordan Development Bank were transferred to ACC by an agreement signed between the ACC and UNRWA. It became the responsibility of ACC to collect overdue loans from the bank borrowers.

When ACC was formed in 1960, 115 employees of the then-existing credit institutions amalgamated into the ACC were appointed as employees of the ACC at the same grades and salaries as they had formerly received. Thus many less qualified persons were hired by ACC (AID, Project No. 091, Agricultural Loan Fund). But since then ACC tried hard to raise the standard qualifications of its employees by on-the-job in-service training, by sending employees abroad, especially to the U.S.A., to acquire more experience and qualifications in certain fields and by recruiting new qualified university graduates. USAID has helped much in these programs by sending several advisors in various fields to ACC. These advisors' services were very beneficial to ACC in many ways. Also USAID contributed in the beginning $ 30,000 for in-service training of 41 trainees. ACC continued this program for all new recruits (USAID, Project 09', p. 4).

In summary, ACC does not compete with other institutions except with JCO in seasonal loans and to a small extent with commercial banks. Also ACC was built upon pre-existing institutional structure and its principal officers were drawn from groups associated with local agencies and ministries.

5. Agricultural Patterns and Potential:

a. Role of the Agricultural Sector in the economy of Jordan

Agriculture in Jordan, including livestock production, is the largest productive sector in the economy of Jordan. Around 40 percent of the total labour force works in this sector which contributes an average of 18-23 percent of the GDP annually. Agricultural exports represent a ratio of 50-64 percent of the value of total exports yearly. The value of agricultural exports ranged between $ 11.2 - 16.8 millions annually during the period 1964-1970. In spite of the increase in the agricultural produce during the past few years, Jordan's food-stuff imports still represent a ratio of 20-30% of the value of total imports. During the period 1967-1971 agricultural imports averaged $54.6 millions while exports averaged $ 14.56 millions thus creating a deficit of $ 30.04 millions. Thus the GOJ is giving the agricultural sector special attention in its Three Year Economic Development Plan (1973-75) (Appendix B) for the following reasons:

i) Its contribution in meeting the local market needs and in reducing the balance of payments' deficit by increasing the production of exportable goods and/or import competing goods.

ii) Its contribution in raising employment opportunities, as this sector is more capable than any other sector in absorbing the labour force especially in irrigated farming.

iii) Agricultural land and water are the country's most important known natural resources. Fertile land is abundant while the scarcity and uncertainty of rainfall limits the area of rainfed farming. The full utilization of these resources is a very important economical and social objective.

iv) The development and growth of this sector sustains and accelerates the growth of other sectors in the economy especially the services and industrial sectors.

Thus the GOJ is making plans and progressive steps to improve the agricultural sector from all sides with the help of a number of foreign countries and agencies such as the UNDP, the USAID, the IDA, and the KFAED (The Kuwait Fund for Arab Economic Development). The direct aim of these plans and projects is to increase the cultivable area in the country, especially irrigated areas, by irrigation projects and systems and raising the intensities of cropping in the existing areas by the replacement of old antiquated earthern distribution systems, introduction of land leveling and grading and by the introduction of suitable agricultural and marketing facilities.

b. Present situation

The present average productivity per hectare is low for most of the crops because of misuse of the land and water and the weakness in the care taken of the crops.

However, Jordanian agriculture is highly unstable because a large proportion of total agricultural output is derived from dry farming in areas subject to frequent droughts. In consideration thereof and in view of the impact this has on the level of economic activity, primary emphasis has been given in these years to irrigation schemes, soil and water conservation programs, and the promotion of drought-resistant crops in areas where irrigation possibilities do not exist.

As a result of these and other measures, this sector evidenced steady improvement and growth. The value of agricultural production rose from an average of $ 32.2 million in the two years 1954 and 1955 to an average of $ 99.96 million in the two years 1965 and 1966 and to an average of $ 106.4 million for the years 1967-1970 in spite of the effects of the 1967 June war (The Hashemite Kingdom of Jordan, Ministry of Culture and Information, Economic Development, p.12)

Jordan covers an area of 97,740 square kilometers of which about 5,874 square kilometers lie on the West Bank of the Jordan River. Out of a total of 350,000 hectares of cultivable land at present about 25,000 hectares (7.1 percent) is irrigated in East Jordan. About 76 percent of this irrigated land lies in the Jordan Valley (Appendix C).

About 93 percent of the total cultivable land, mostly spread over the highlands, is dependent on limited and irregular rainfall to produce crops. Limited possibilities exist of expanding cultivated land under rainfed conditions. The only expansion possible is by increasing irrigation on some of the existing cultivable land and by irrigating limited areas in the desert. The limited water supply has enforced a cropping pattern oriented towards annual crops, mostly irrigated vegetables which are the main products of Jordan's agriculture (Appendix D). Vegetables make up about 80 percent of the crops planted under irrigation in the Jordan Valley. Tomatoes are the most important vegetables grown and exported. They are produced mostly as an out-of-season winter crop and made up about 55 percent of the total vegetable exports during the period 1967-1970. But there is a definite downward trend both in the total value and in the percentage that tomatoes contribute to total domestic exports due partly to increased production in other neighbouring Arab countries such as Saudi Arabia. Citrus fruits and bananas together make a major contribution to Jordan's total fruit production. (Appendix E). The growing of both these crops is almost entirely restricted to the Jordan Valley and both these crops will play a more important role in Jordan's agriculture.

Rainfed farming on an estimated 300,000 hectares of land takes place in the highlands of Jordan. Average annual rainfall varies between 250 milimeters to 600 milimeters. Suitable soil exists in these areas for cereal production, mainly wheat and barley (Appendix F). Wheat accounted for 80 percent of the cereal acreage in the period 1967-1970. Jordan has 7.5 million hectares classified as range land and desert of which only 1.1 million hectares can be considered as true range lands with variation that have some development potential. The Jordanian livestock population consists of 664,000 sheep, 350,000 goats, 40,000 head of cattle and 9,000 camels.[3] The sheep and goat flocks which are by far the most important part of the livestock sub-sector, follow the same management patterns that have existed for centuries. It moves uncontrolled over the range lands of the country relying on the natural growth on the range lands for its food during the spring, on fodder crops and cereal by-products during summer and a combination of all three during winter and autumn.

c. Development Potential

Development possibilities exist in all the three main agricultural fields: irrigated farming, rainfed farming and livestock. Irrigated farming in the frost-free lowlands of the Jordan Valley holds considerable promise. The key to this development is a modest, and not unlimited increase in irrigation water which will be made available through the new dam on the Zerqa River. To maximize economic returns from the increased irrigation water, a re-orientation of irrigated agriculture towards citrus and other high market value fruits should take place. On the other hand, development in the rainfed areas should aim at increased cereal production as a means of import substitution. Land consolidation, the storage of rainfall by soil conservation and application of modern cultivation methods are vital to improving cereal fields. Very little increased production can come from expanding acreage.

The development of the livestock industry will directly depend on efforts to increase the productivity of the national sheep and goat flock. Attempts to expand submarginal cereal cultivation into the best range lands reduce their carrying capacity. Lack of grazing control further erodes existing range lands. Tackling these two problems must be a high priority of development policies within the livestock sub-sector. In addition, to improve

3. IBRD/IDA, August 1972. Current Economic Position and Prospects of Jordan, World Bank, Washington, D.C.

the productivity of the stock through range development increased output can also be achieved by organizing marketing of weaned lambs, whereby they will be channelled for further feeding on irrigated fodder and ceral crop by-products. Despite the small number of cattle in Jordan at present there is scope for the development for a dairy industry, particularly near the larger centers of population, if feed can be made available.[4]

In the Three Year Plan (1973-1975), it is projected that income from the agricultural sector should increase during the plan period by 20.2 percent when compared with 1972, or 28.5 percent when compared with 1971, at an average annual growth rate of 6.4 percent (Table 2). Such a growth rate will come about by expanding land utilization and irrigation in the Jordan Valley, the Ghor and the plateau areas, by applying suitable techniques for the production of crops, by improving marketing methods and up grading livestock.

Table 2. Value of Agricultural Produce (U.S. Dollars, millions)

1967	1968	1969	1970	1971	1972	1973	1974	1975
108.360	77.0	101.640	90.160	102.200	109.200	115.080	122.640	131.320

Source: Three Year (1973 - 1975) Economic Development Plan

After this brief discussion of the agricultural pattern and potential of the Jordanian agricultural sector, we shall return to our discussion of the ACC, starting with its objectives as in the following section.

B. OBJECTIVES

1. General Objectives

a. Announced

The agricultural sector in Jordan can be distinguished, like in other developing countries by the following characteristics:

i) There is a surplus in the labour force in the agricultural sector.

ii) There is a lack of available capital directed towards agricultural development and scarcity of financial resources.

Ibid

iii) The other two factors of production in agriculture -- land and management have a varying degree of availability depending on the farmer abilities and the various producing regions. (Lecture given by ACC's representative, November 4, 1963). Thus in view of the role played by capital in increasing income per capita , productivity and standard of living, ACC was established with the following ultimate economic and social objectives. (USAID, Project 091, p.3):

- Provide all credit-worthy farmers, but preference would be given to small farmer-operators, with a source of credit to keep him in business
- Increase his farm production.
- Raise his standard of living.
- Get him out of the clutches of the merchant and money lender.

For the realization of the above mentioned ultimate objectives, the following intermediate targets are set-up:

- Win the confidence of the farmer so that he would be susceptible to the advice and recommendations of the credit supervisor.
- Supervise all loans to see that the loan funds were used for their intended purpose and to encourage improvement of farm practices.
- Develop farm and home plans with each borrower.
- Base all loans on the individual's ability to repay.
- Finance the farmer for increased production.
- Make adjustment loan that would result in more net profit to the farmer.

A higher standard of living for the farmers, and the full utilization of the land, water and human resources were the principal long term objectives.

b. Apparent

Though ACC till now has not yet achieved or fully realized all its ultimate objectives and has not yet succeeded in all its intermediate targets, we can safely say that its apparent objectives seem to coincide with its pronounced ones.

2. Terms of Loan

a. Purpose

ACC Loans are given only for agricultural productive purposes and nothing is given for consumption or for settlement of farmers outside debts. The Agricultural productive purposes for which loans are given are:

i) Irrigation projects and its accessories like wells, reservoirs, pumps, irrigation and drainage canals.

ii) Reclamation and development of cultivable land threatened by erosion through terracing and fruit tree plantations especially olives and grapes.

iii) Construction of fruits and vegetables farms in irrigated areas with all that is needed for fencing, plants, fertilizers, seeds and services.

iv) Buying of agricultural machinery like tractors, harvesters, sprayers etc.

v) Construction of poultry (both layers and broilers) farms.

vi) Construction of farm houses, store houses for the agricultural machinery and stables.

vii) Construction of agricultural industries like olive presses.

viii) Seasonal loans for buying fertilizers, seeds, paying wages, insecticides, etc.

b. Period

The period of the loan depends on the project to be undertaken by the loan. ACC gives (i) Long term loans for a period not exceeding 20 years, (ii) medium term loans for a period not exceeding 10 years, and (iii) Seasonal loans for a period not exceeding one year.

In all cases, ACC takes into account, when determining the period of a loan, the possibility of repayment from the projects income whenever that is possible. In some cases ACC extends the period of the loan if it is convinced that this will help the borrower to settle his accounts without overburdening him especially in cases when the project meets any problems or natural difficulties. Funds are not divided among the different periods according to any ratio. This entirely depends on loan applications.

C. ORGANIZATION

1. General Structure

The ACC is formed of:

a A Board of Directors.
b A Director-General.
c A Deputy Director-General.
d An Executive Staff.

a. The Board of Directors consists of 4 Governmental members and 5 non-government members as follows:

i) Government members:

- The Director General of ACC ----- Chairman
- Under-Secretary of Ministry of Agriculture ----- Member
- Director of Land Department (Ministry of Finance) ----- Member
- Secretary General of National Planning Coucil ----- Member

ii) Non-Government Members:

Non-government members consist of five representatives of farmers. These members should be known for their ability and experience in agriculture or banking. They are appointed on a rotating basis for a three year period. No person who is a member of parliament or a director or board member of a firm or a company which may benefit directly or indirectly from the lending activities of the corporation shall be a member of the Board. District representation is taken into consideration as far as possible in the appointment of non-government members.

The Board of Directors is entrusted with wide powers and functions, the most important of which are: establishing the basic policies and procedures of the corporation, the approval of the organizational and administrative structure of the corporation, the opening or closing of branches and offices, the borrowing of money from the government or any other corporation or institution, the issuance of bonds and other borrowing instruments with the approval of the Council of Ministers, to sanction any settlement which may involve a loss to the corporation, to recommend and make any amendments to the Acts and Regulations of the Corporation, to consider and approve the Annual Budget, to approve the Audited Annual Balance Sheet, the Profit and Loss Statement, and the allocation of net profits (or losses) to the Operating Surplus, to determine the rate of interest payable on loans, to designate movable and immovable property which may be accepted as security for loans, to prescribe procedures and rules which should be followed by the corporation in the issue and collection of loans and to prescribe conditions which will ensure that loans which are issued by the corporation are spent for productive agricultural purposes and further to ensure that such loans are invested in sound agricultural operations under strict supervision of officers of the corporation.

b. The Director-General is the chief executive of the corporation and presides over meetings of the Board and is responsible for the implementation and execution of the policies prescribed by the Board and for administering the Corporation in such a manner that will ensure the realization of its objectives. He may delegate any of his powers to the Deputy Director-General or to any other officer of the Corporation.

c. The Deputy Director-General assists the Director-General in the administration of the operations of the corporation. He exercises the necessary powers to ensure the proper functioning of the Head Office and branches under the general supervision of the Director-General. The Deputy Director-General is also the Secretary of the Board but he is not entitled to vote except in the absence of the Director-General when presiding over meetings and in case of a division in vote he has a casting vote.

d. The Execution Staff:

i. Loans Department: This department is presided over by the Assistant Deputy Director-General/Loans whose responsibility is to supervise the credit and research division, the supervision and execution division, the collection and follow-up division and the engineering division.

ii. Administration Department: Presided over by the Assistant Deputy Director-General/Administration whose responsibility is to supervise the administration division, the personnel division, the stores division and the dispatches division.

iii. Financial Affairs Department: Presided over by the Assistnant Deputy Director-General/Financial Affairs, whose responsibility is to supervise the internal auditing division and the accounting division the latter of which has several sub-divisions which include the credit accounting, salaries, cash, expenditures, the ex-Jordan Development Bank accounts, the ledger and the statistics sub-divisions.

iv. Loan Committees:

- The Central Loan Committee:

This Committee is located in the Head Office of the Corporation which consists of:

The Director General or his Deputy - Chairman
Assistant Deputy Director - General/Loans
Chief of Credit and Reasearch Division.
Representative of the farmers.

All the above four are member in addition to the Assistant Deputy Director-General/Financial Affairs and the Assistant Deputy Director-General/Administration in the Corporation as auditors.

Descisions of this committee are taken by a majority of votes. In case of a tie-vote, the vote of the Director-General or his Deputy shall prevail. This committee is entitled to make determinations on loans up to J.D. 2500.($ 7000)

- Branch Loan Committees:

In each branch there is established a branch loan committee which consist of:

The Branch Manager
The senior officer of the Ministry of Agriculture in the District or sub-District.
Representative of farmers in the District or sub-District.
The branch credit supervisor (if available).

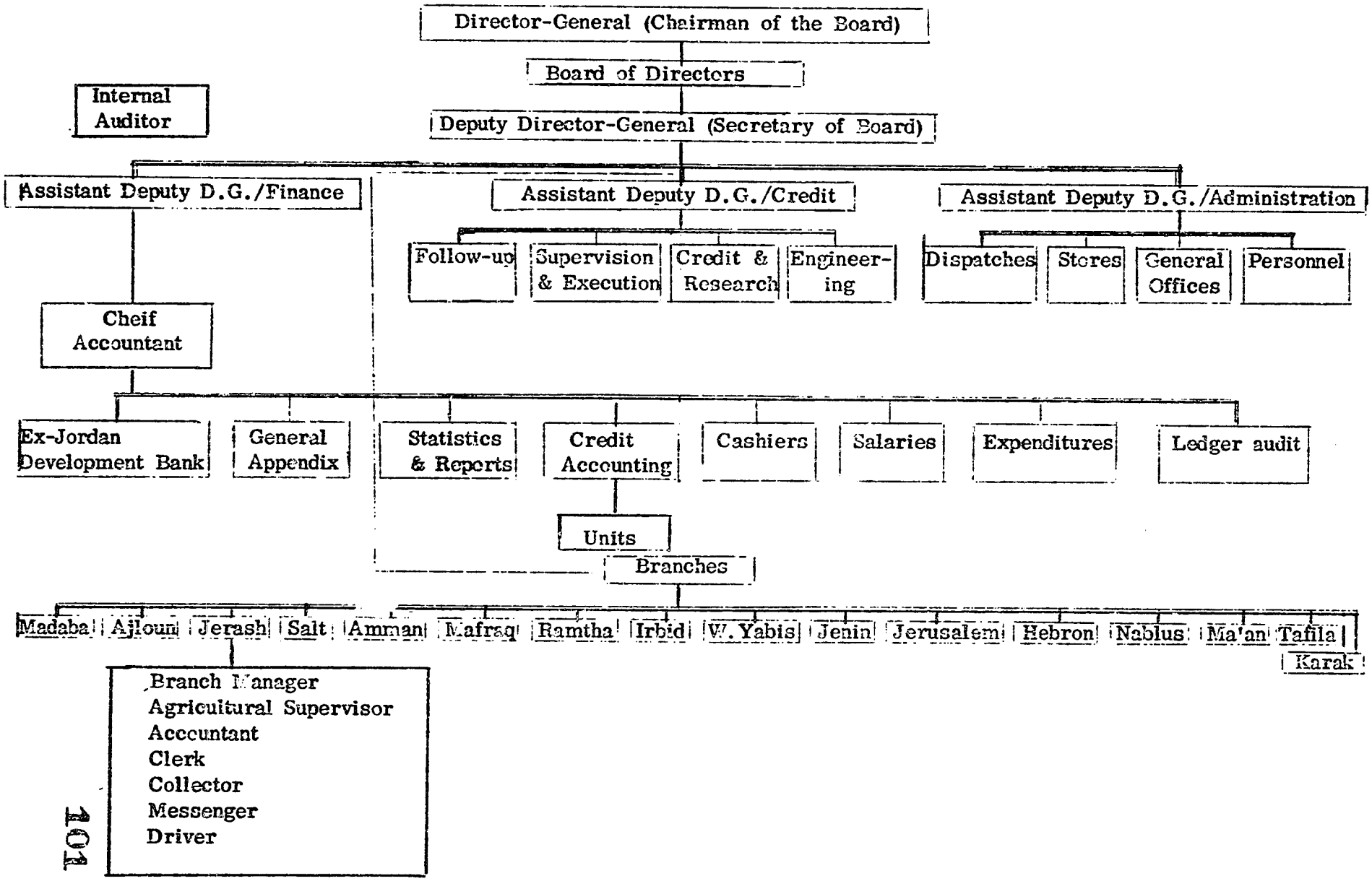
Decisions of these Committees are taken by a majority vote. All applications for loans are submitted to the branch manager concerned. After the completion of the prescribed requirements, they are then placed before the branch loan committee concerned for determination if the loan is seasonal and is less than $ 280 (J.D. 100) in value. These committees study seasonal loans of more than $ 280 and all other loans, medium and long-term, and then submitte. the applications to the Central Loan Committee for further study and for determination if the loan is within the vested powers of the Central Loan Committee, i.e., up to $ 7000. Loans exceeding $ 7000 after receiving the recommendation of the Central Loan Committee are determined by the Board of Directors. Decisions of the Central Loan Committee are recorded and submitted to the Director-General and all resolutions of the General Loan Committee are subject to the approval of the Director-General.

Following is an organizational chart which shows the structure and organization of the corporation at the Head Office and at a typical local branch. (Chart No. 1).

2. Local Structure

The organization at the local level (also shown in Chart No. 1) is one which typically includes a branch manager, and/or agricultural supervisor, an accountant, a clerk, at least one collector, a messenger and a driver. Also there is the local branch loan committee. (See Section II C 1).

Chart No. 1 : Organizational Structure of ACC Head Office and Typical Branch and Branches Classification



D. BENEFICIARIES

1. Selection Criteria

Any farmer who is Jordanian, over 18 years old and owns land or is a tenant who has security and has a valid lease can borrow from ACC. Applications for loans may be submitted by any corporate body or company or partnership or group of persons or contractors doing custom work in agriculture.

In deciding whether or not a loan should be given to an applicant, his credibility, his previous record with the corporation, the extent of his indebtedness to the corporation or to any other institutions shall be taken into consideration. Also the circumstances under which he obtained his previous loans shall be taken into account. It is in the rules of ACC that no borrower or surety shall be given a loan until and unless he pays to the corporation any installment or interest due from him, except in cases where deferment of payment, or a settlement was sanctioned by the Director-General. Thus, the presumptions about the credit worthiness of any borrower depend on his previous record with ACC.

Concerning the relation of the terms of lending to the borrowers characteristics, consideration is given to the financial standing of the applicant with a view to avoiding over-burdening him. From the inspection committee's report form (Appendix G), it is noted that the age of the applicant, his previous education and experience, his present work, number of family members working with the applicant in agriculture, number of family members contributing to the family's income (from work other than agriculture) and the average annual income of the family from agriculture and other sources are all recorded. Also, the family's average annual expenditures and average annual net income are recorded and taken into consideration when deciding on the terms of the loan. But it is worth noting that the nature and characteristics of the project to be undertaken by the loan are more important in deciding on the terms of the loan. For example, from the lending rules and procedures of ACC, it is noted that loans are repayable in yearly installments to be determined on the basis of the life and productivity of the project. However this provision has not been strictly followed due to limited loanable funds. It was found that many loans are not self-liquidating such as the orchard loans.

ACC extends credit to all farmers, big and small, all over the country who meet the requirements of ACC and who apply for loans. But ACC is no longer a pilot program anymore and it does not carry any pilot programs by itself. This is the function of the Natural Resources Authority (NRA), the Ministry of Agriculture and other agencies. These agencies select program areas and ACC contribute to these programs by extending credit to the farmers included in those programs. Some of these programs have been mentioned earlier like the Bedouins Settlement Project in El-Jafre and similar projects in other areas, the East Ghor Canal Project and the Land Terracing and Conservation Project.

The major criteria for cutting poor performance from the program are:

i. Misuse of the loan

Loans are paid out to the borrowers in installments. Usually, each installment equals one third of the value of the loan. If the borrower does not carry out the requirements to be made from any installment, he is given a one-month notice to do so. If he still does not respond, then he is asked to repay the parts of the loan he received together with interest due plus a fine of one percent.

ii. Persistant ask for renewal

If the borrower asks for renewal for several times with no valid or convincing reasons, and if the ACC personnel know that he can repay and he does not, they ask him to repay the whole amount due on him or else they take the necessary actions against him.

2. Graduation Policy

Graduation policy does not exist in ACC and it is not applied in Jordan as for example in the U.S. Farmers Home Administration. But ACC borrowers may remain in touch with the Corporation.

Borrowing from ACC introduces the small farmers to the banking system and banking activities in Jordan because ACC gives its installments of loans by a cheque drawn on one of the commercial banks. But, the possibility for the small farmers to get absorbed into and remain with the general banking system is limited since commercial banks do not exist in small villages and since small farmers' savings are marginal. Also, small farmers do not use the banking services very often for their activities. However, the credit and thrift cooperatives which are spreading in rural areas might be a good step towards this end, at least by teaching the small farmers to save a small part of their income.

3. Number and Types

Following is a table showing number of beneficiaries and value of loans by purpose and by year (Table 3). In that table, the breakdown of the value of loans is done only according to purpose. Though the ACC gives loans to farmers of different sizes, it was impossible to give a breakdown according to farm size or income. The only possible breakdown is value of loans by purpose, by year.

Table 3. Number of Beneficiaries, Value and Distribution of Loans by Purpose.

Year	No. of new Borrowers	Value of Loans $	Cost of Agricultural Projects in $						
			Improvement Of unirrigated Lands	Improvement Of irrigated Lands	Livestock & Poultry	Agricultural machinery	Agricultural buildings	Short and seasonal	Other Acti-vities
1960	14,481	1,281,504	173,065	141,089	62,924	64,190	48,930	650 078	141,226
1961	2,618	1,396,548	632,676	206,102	125,879	63,392	3,156	177,100	108,264
1962	3,433	2,901,656	626,964	227,936	271,524	158,970	24,634	138,261	1,454,373
1963	2 485	2 507,859	585,365	603,204	634,219	74,166	100,010		530,894
1964	2 223	2,333,718	301,994	408,844	862,148	340,396	105,280		315,056
1965	2 658	3 379,572	317,004	645,825	1,220,569	555,578	195,638		344,954
1966	2,588	3 623,018	894,770	568,363	625,242	528,507	427,841		578,432
1967	1,733	1,891,232	306,093	443,783	234,494	395,483	410 956		100,422
1968	1,607	2,092,882	249,508	177,626	115,612	797,918	639,223		112,994
1969	1,100	1,586,356	112,207	331,007	182,988	571,130	327,163	16,318	45,542
1970	1,114	1,225,574	113,702	304,348	105,277	147,747	394,584	109 681	50,232
1971	1,955	1,988,053	283,130	301,235	227,080	429,730	410,547	201,818	134,512
Total	38,995	26,147,976	4,596,482	4,358,365	4,767,960	4,127,270	3,087,744	1,293,258	3,916,903

Source: ACC, Amman.

Since its establishment and until the end of 1971, the ACC had extended loans to 38,995 borrowers for a total value of $ 26,147,976. Short-term and seasonal loans have the lowest share of this total ($ 1,293,258) as ACC did not extend these loans for about six years (1962-1968) during which time ACC was extending these loans by loaning to the JCC.

Livestock and poultry loans constitute the largest share ($ 4,767,960) of the value of total loans extended. The share of the other loan purposes: improvement of unirrigated lands, improvement of irrigated lands, agricultural machinery, agricultural buildings and other activities are more or less equal, ranging between $ 4,596,482 and $ 3,037,744.

4. Other Sources of Credit

Correct information on ACC beneficiaries' supplemental borrowing activities is not available. Although there is a section in each loan application inquiring about the prior indebtedness of the applicants, it was found that the information in this section is not correct as the farmers do not show all their prior indebtedness in order to appear in a good financial position. Also, this information is not extracted in any form and it was impossible to go over all the loan applications to extract it while writing this report. However, other sources of credit are accessible to ACC beneficiaries such as the private money lenders, commercial banks and the JCC. It is safe to say that the private money lenders constitute the major accessible source especially to small farmers

5. Profile of Farm Community

According to the information of the 1965 agricultural census though not completely reliable, the pattern of land ownership is predominantly one of small holdings. Almost half of the number of holdings in the country are less than two hectares in size and 95 percent less than 20 hectares. There are about 280 holdings of over 100 hectares and only 18 of 500 hectares or more (Appendix H).

We have taken the 1965 census as a source of information and not another later census so as to include the whole of the country of Jordan and not only the East Bank because since 1967 the West Bank has been occupied by Israel. Also, since ACC serves farmers all over Jordan and does not restrict its services to specific area, and beneficiaries are found in every district of Jordan, a general view of the farm community as a whole would be applicable.

Not only small holdings are predominant, but also fragmentation of holdings into smaller dispersed parcels is widespread and it is believed to have led to inefficiency of cultivation and production. This fragmentation of holdings is due to the antiquated legal forms of land rights, the pressure of rural population on cultivable land, the division of ownership among members of large families by inheritance and the process of land settlement itself which tends to parcel out the communal (Musha'a) land.

The predominant form of the relations of the land operator to the land is that of owner-operator. Probably less than 12 percent of the area of holdings in 1965 were operated by sharecroppers. Another 20 percent of the area was partly operated by tenants while 65 percent was operated by owners (FAO 1967, p. 190). Until the writing of this report there were no laws or regulations which govern or organize the relationship of the tenant with the owner of the land, such relationship being still governed by custom and tradition. But, as we heard from government officials, such laws are under preparation and study, and are going to be put into effect soon.

However, the GOJ has already taken a bold step in the direction of land reform in the newly completed East Ghor Canal Project area which covers 12,000 hectares. The East Ghor area is part of the Jordan Valley which covers about 20,057.8 hectares This area includes the largest irrigated area in the country (Dept. of Statistics, Agr. Sample) and size of farm ownership is smaller than in other areas and thus more populated with small farmers. In the East Gho area, land has been acquired by the government and redistributed to farmers under the NRA Laws 31 of 1962 and 37 of 1966. A reasonable compensation has been paid to the old land owners. The area thus taken is redistributed with a minimum of 3 hectares and a maximum of 20 hectares. Area previously held was alloted according to the scale shown in Table 4.

Table 4. Scale of Redistribution of Land Ownership in the East Ghor Canal Project Area.

Area Previously Held (hectares)	Area Alloted to Holders
3 - 5	To be alloted in full
5.1 - 10	5 hectares to be alloted in full plus 25% of area in excess of 5 hectares
10.1 - 50	6.2 hectares plus 17 percent of area in excess of 10 hectares
50.1 - 100	13 hectares plus 12 percent of area in excess of 50 hectares.
100.1 - and over	20 hectares to be alloted.

Source: FAO, 1967. Jordan Country Report, p. 95.

In cases where ownership previously held was in plots smaller than 3 hectares, additional land was sold or leased to the owner to bring his total holding up to 3 hectares (if land was of class I or II) and to 5 hectares if land was of class III. The most obvious aspects of the East Ghor Canal laws have been land redistribution, the promotion of family farms, and the setting of a minimum size of holding. The distribution of land ownership by size in the East Ghor Canal Project area before redistribution in July 1960, and after redistribution is presented in Appendixes I and V

Selection of farmers was made under Law 31 of 1962 of the Natural Resources Authority (NRA) according to a system of priorities. Priority was given to holders who exploit their lands themselves and then to professional farmers residing in the project area. Professional farmers from among district inhabitants and from other districts were given lower priorities and last priority was given to tenants in the project area. The priority scale thus gives preference for professional farmers over holders who are non-operators themselves.

A radical break with tradition and legal principle regarding inheritance has been incorporated into the law. This relates to the provision that farm units may not be fragmented to a size smaller than the minimum area of 3 hectares. This provision created no resistance. However, according to the FAO 1967 Jordan Country Report, this provision has not been applied rigorously.

This much attention has been given to the East Ghor Canal area in this part of the report because this area is one of the most productive areas in Jordan, fully irrigated, representative of small farming, and the range between the minimum and maximum ownership in it is reasonable. More important is that these reforms are going to be applied to any other areas that in the future may benefit from major irrigation projects. Though restricted regionally, these land reform measures are far reaching in effect and were implemented without creating social problems due to the flexibility of the Laws governing the reform, their moderation, their realism and their fairness (FAO, 1967, p.94).

From the previous discussion, and from Appendix H that shows the distribution of holdings by size group in Jordan we can judge that the farm community in which beneficiaries live is relatively homogeneous with respect to farm size though there are a number of large farms (holdings exceeding 100 hectares) which were 276 holdings in 1965 all over Jordan, interspersed with small farms. However, as Mosher[5] accurately indicated, the size of a farm in hectares is only one of several factors that determine the size of the farm business it supports[6], and though we could not find data to measure the size of farm business in Jordan, we can safely say that the size of the farm business of the small farms in Jordan is also small (except perhaps in the Jordan Valley, especially in the East Ghor Canal area, where there is more intensive farming and where the farms are generally cropped twice a year).

E. LENDING POLICIES AND PROCEDURES

1. Portfolio

Table 3, showed the number of borrowers, value of loans and distribution of value of loans by purpose for the years 1960-1971. The number of loans move directly with the number of borrowers, though the number of loans is lower than the number of borrowers because some loans are given to more than one borrower. Concerning the type of loans, it suffices to say that the majority of the initial loans given are medium-term loans and the remaining part is either long-term or seasonal.

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5. Mosher, A.T., 1966. Getting Agriculture Moving, F.A. Praeger.

6. A large farm may support a relatively small farm business if it is devoted only to extensive crops and pasture, or if some of it is not used at all. Likewise, a relatively large farm business can be developed on a small farm by combining several intensive crops and livestock enterprises on it.

It is worth noting that some farmers have more than one loan at the same time and many beneficiaries are repeaters from previous years. There are no restrictions on the number of loans or the value of loans that can be made to one farmer as long as he fulfills the requirements, submits the necessary security required and has good justifications for needing the loan.

2. Interest Rate

The rate of interest charged on ACC loans has changed quite a bit since ACC started. The institutions which were consolidated into ACC charged different rates of interest before their amalgamation. Some used to charge a rate of 3 percent per annum, others 4 percent or 9 percent. When ACC was established it unified the interest rate at 4 percent per annum for all individual borrowers. Loans to the JCCU were charged a rate of 1 percent per annum only. Then in 1963 and under the request of the IDA, the ACC raised its rate of interest to 5.25 percent per annum, so as to be able to cover its expenses and to bring market rates and ACC rates closer to each other. The rate on loans to JCCU was raised to 2 percent per annum. Then in 1967 the rate was raised on all loans to 6 percent per annum, again at the request of the IDA which felt that ACC's interest rate was low. Following that year in 1968 ACC also stopped issuing loans to the JCCU, which became the JCO after its reorganization. Since that year ACC started extending seasonal loans to individuals directly at a rate of 0.7 percent per month. Till the writing of this report ACC still charges a rate of six percent per annum on long-term and medium-term loans and a rate of 0.7 percent per month on seasonal loans to all borrowers.

3. Collateral

As prescribed by the ACC's lending rules and regulations, ACC accepts as security in respect of loans given to farmers any of the following:

i. Immovable property: Agricultural land, vineyards, orchards or building sites. Sixty percent of the assessed value of these securities is the maximum given for long and medium-term loans and the maximum is raised to 75 percent when seasonal loans are required.

ii. Financial security: For farmers the title of whose lands has not been settled or is not registered in the Land Registry or who are not able to offer immovable property as security, the property is mortgaged and cannot be accepted as such. They may be given in each case a medium-term loan not exceeding J.D. 500 ($ 1400), secured by two guaranters of good financial standing acceptable to the branch manager. In special cases which may require a loan exceeding J.D. 500 ($ 1400), the Director General may exceed this limit if he is of the opinion that there is sufficient justification to do so.

iii. Shares and stocks: Shares and stocks may, at the discretion of the Director-General, be accepted as security for loans up to the extent of 80 percent of their market or nominal value, which ever is lesser. Shares and stocks are currently used very rarely.

iv. Bank guaranties: These are also acceptable if the farmer can secure such guarantees.

4. Other Subsidy

Subsidized interest rates have been used by ACC in some urgent circumstances. For example, after the June 1967 war, the interest rate was reduced on loans given to farmers in the Ghor Area because the farmers in that area were unable to cultivate their lands for a long period of time. The interest rate was reduced to one percent in certain situations and three percent in others Also, the payments of the principal were postponed The ACC gives consideration to individual cases also, e.g. if a farmer had his tractor out of order or his project faced difficulty in which case postponement of principal payment is possible.

The Ministry of Agriculture, through its Soil Conservation and Fruit Tree Plantation Project is absorbing a large part of the costs that the farmers are undertaking in cleaning their land from stones, terracing their lands and building stone walls around their lands. The World Food Program (WFP) through the Ministry is supplying the farmers with foodstuffs as compensation for the costs incurred by them and as a compensation for the temporal decrease in their income as a result of shifting their lands to fruit trees plantation instead of cereals. Foodstuffs are also supplied to the laborers employed by farmers in building the terraces and retaining walls. The Ministry is also supplying the farmers with the technical assistance needed in planting the improved lands in addition to supplying them with free olive trees and grapes plants. It is also selling other fruit trees plants (almond and apples) at reduced prices to encourage the farmers to grow them as these have a better economical justification than the cereals.

5. Appraisal Techniques

When issuing a medium or long-term loan, the ACC constructs an agricultural plan (included in the Pre-Loan Inspection Report, Appendix G) for the loan, which includes the financial position of the applicant, specifies the purposes he wishes to achieve by his project and summarizes the expected improvement in the land, classifies the invested and working capital and estimates the expected income during the period of the loan. This plan is filled under the knowledge of the credit supervisor in the applicant's presence. The purposes and total costs of each item are determined according to the physical inspection carried by the specialized committees according to the project's nature. These committees submit the relevant recommendations for issuing the loan after considering the economical feasibility of the project.

All loans issued by the ACC are totally supervised loans (though practically small loans are not supervised). But the loans are invariably paid out in installments, the first upon final approval of the loan and subsequent installments only after the commitment covered by previous installments is fulfilled to the satisfaction of ACC inspectors.

In this way every application is technically studied and appraised. Physical inspection is carried out by visiting the farm (more than one visit is made if needed) to estimate the improvement and development to be done on the applicant's farm with the cost of every item. Then, subsequent visits by the credit supervisor are made to the farm after the exhaustion of every installment to make sure that the previous installments have been fully committed to the project and to check on the progress of the project. Surprise visits are sometimes made when necessary. Reporting on these visits is made on a special form which is submitted to the branch manager after being filled by the credit supervisor. Similar studies and other needed information is conducted for seasonal and poultry loans on special forms.

F. COLLECTION

1. Repayment Record

The repayment record of ACC loans has not been satisfactory over the past years. The rate of collection of installments due has been low and the rate of delinquency has been high Although there seems to be a likely improvement in the rate of collection in normal years, this rate has fluctuated during the years 1966-1977, rising in one year and dropping sharply in another, (see Tables 5 & 6) due to abnormal conditions prevailing in the country during those years.

Several factors have affected the general rate of collection and delinquency, the most important of which are:-

- The debts inherited by ACC from the institutions merged into it at its establishment. These loans have a very low rate of collection because most of these were given in emergency cases and were considered as welfare loans. Their effect on the general rate of collection can be seen by comparing Tables 5 and 6.

Table 5. Rate of Repayment of ACC Loans[1] 1966-1971 (Including Inherited Loans) (U.S. Dollars)

Principal	1966	1967	1968	1969	1970	1971
Due & over-due till end of year	6,356,778	5 287,537	6,941,676	8 049,132	7,761 224	6 422,698
Collection of due installments during year	1,459 743	1,403,687	1 117 816	1 865,110	934,088	1,249,077
Percentage of collection of due installment to due	23%	26%	16%	23%	12%	19%
Precollections during year	–	-	14,000	70,000	312,015	540,820
Total Collections	1,459,743	1,403,687	1,131,816	1,935,110	1 246 106	1 789,897

Source: ACC, 1966-1971, Annual Reports.

1. Data exclude interest.

Table 6. Rate of Repayment of ACC Loans[1] 1966-1971 (Excluding Inherited) (U.S. Dollars)

Principal	1966	1967	1968	1969	1970	1971
Due & overdue till end of year	2,929.045	2,694 983	4 470,824	5 471.024	5,419,127	4,454 691
Collection of due instalments during year	1,078,353	1 019.754	811 728	1 564,296	801,203	1,099,680
Percentage of collection of due installments to due	36.7%	37.83%	18.15%	28.6%	14.8%	24.68%
Precollections	–	–	14 000	70,000	312,015	540,820
Total Collections	1,078,353	1.019,754	825,728	1,634 296	1,103,410	1 622,012

Source: ACC 1966-1971. Annual Reports.

1 Data exclude interest.

- The June 1967 war and its aftermath. The collection of due and overdue loans of the West Bank of Jordan was very negligible after that war and collections of due loans in the Ghor areas of East Jordan was difficult and postponed for a certain period of time. Also it affected collection in all other areas of the Kingdom.

- Drought years, such as 1968, which result in low productivity and reduce the farmers income thus making it impossible for him to meet his obligations towards ACC.

- The internal disturbances in 1970 which stopped economic activity and production in different areas of the country for several months, and the subsequent closure of the Syrian boarders.

The variation in the rates of collection and delinquency among the years 1966-1971 is due mainly to the above mentioned factors. These low rates of collection are in part, but not wholly, due to those factors. The general rate of collection remains low and this problem of delinquency must be attributed to other factors.

These rates of collection and the present situation of credit in Jordan reflect the fact that a large number of the borrowers who received loans from the ACC, failed partially or completely to repay their loans on the due dates. This condition is neither good to the lenders nor to the farmers, and is unfavourable for the development of the agricultural sector of the economy of Jordan.

In a study that was conducted by Abu-Howayej[7] to identify the causes of delinquency in Jordan the results of the study showed that out of the factors hypothesized to be causing delinquency some were significant at the 95 percent level of confidence. It will be noted from the following chosen list of significant factors from that study that they are not mutually exclusive (in some cases they are overlapping and interrelated). The factors are identified in terms which describe delinquent (as opposed to non-delinquent) borrowers. They are not arranged in order of importance but rather according to relationship to borrowers, lenders, and general environment.

a. Factors Related Mainly to the Farmer

- Lack of water for irrigation
- Lack of storage for products and supplies.
- Lack of encouragement in farming by farmers' dependents.
- Misuse of the loan (used for purpose other than that for which applied). This is a problem that has been largely solved in ACC due to the current

7. Abu Howayej, Burhan, 1970. Agricultural Credit Delinquency in Jordan. A study conducted in fulfillment of his M.Sc. requirements in the Faculty of Agricultural Sciences A.U.B.

practice of giving loans in installments and checking the use of the previous installments before giving the next installment.
- Failure to use optimal combinations of chemical pesticides and fertilizers.
- Long-term farming plans not used.
- Dependence on friends and firms as main sources of information rather than institutional sources.
- Borrowing from many non-institutional lenders in addition to the loan taken from ACC.
- Living off the farm. (This has been partly solved through giving loans for farm houses located on the farm).
- Lack of feeling of dishonor from being delinquent.
- Habit of non-repayment.
- Expectation of no action from the lenders to force repayment and expectation of easy renewal of the loan in good years as well as in bad years.
- Low priority given for repayment of institutional loans.
- Poor knowledge about the conditions of the loan (such as interest rate, due date, security, etc...)
- Lack of a credit concept by the farmers, i.e., loans are viewed as gifts.

b. Factors Related Mainly to the Lenders

- Adoption of a weak collection policy
- Shortage of capital which results in an inadequate arrangement of loan duration. As a result, ACC loans are not self-liquidating such as citrus and olive tree loans. The principal of these loans is to be repaid starting with the fourth year of the loan while those trees start producing on the fifth year. The loan itself is also given for only 10 years. Thus the farmer will not be able to repay the loan from the income that is generated from it and thus he will likely be delinquent especially if he does not have other sources of income. At the same time ACC cannot bind its funds for a period long enough for the loan to be self-liquidating because then it would not be able to give as many loans as possible.

c. Factors Related Mainly to the General Environment

- Low average annual rainfall.
- Drought seasons.
- Consequences of the 1967 June War

Since delinquency rates could be calculated in several different ways, the magnitude of delinquency then depends on the way in which it is approached. Three of these different ways which we could calculate are represented in Table 7 . These approaches are: the amount of loans not collected as a percentage of what should have been collected during a year; the amount of

Table 7. 119 Delinquency Position at the Agricultural Credit Corporation.

	1966 Percent	1967 Percent	1968 Percent	1969 Percent	1970 Percent	1971 Percent
Amount of loans not collected as a percentage to what should have been collected[1]	77	73.5	83.9	76.9	88	81
Amount of overdue loans and interest as a percentage of outstanding loans.[2]	16.40	33.45	42.82	40.71	45.87	36.04
Amount of overdue loans and interest as a percentage of total assets[2](end-of-year balance)	15.45	31.23	39.99	35.43	38.38	29.42

Source: ACC 1966-1971 Annual Reports

1. What should have been collected is equal to what was collected plus what was overdue at end of year (Table 5).

2. Overdue loans and interests are those not extended renewed or rescheduled (See Table 8).

overdue loans and interest as a percentage of outstanding loans at the end of the year; and the amount of overdue loans and interests as a percentage of total assets at the end of the year. The first approach, the amount of due loans not collected as a percentage of what should have been collected, obviously gives the highest rate of delinquency ranging, over the period 1966-1971, between 73.5 percent and 88 percent.

2. Methods

Repayment of ACC loans is all in cash. Repayment has to be done on or before the due dates which are scheduled before issuing the loans. Consideration is given to the cultivation time of the borrower's crops when scheduling dates for repayment of the principal.

Collection is carried out in a systematic procedure. Notices are sent to the borrowers within a period not exceeding two months before the date on which payment is due. These notices are sent either by post or through collectors, though it is considered in the regulations of ACC that failure to serve such notices is not to be taken as an excuse for failure to pay on the due date and does not affect the collection of any portion of the amount due to the ACC or weaken it in legal proceedings for collection. The ACC may collect the sum due through its authorized officers or collectors who should give the debtor an official receipt of the amount of principal or interest paid. Payment may be made also to any department of the government or bank on behalf of ACC.

3. Special Enforcement Procedures

In the event of the failure of any debtor to pay any installment or interest due to the ACC and if no suitable settlement is reached, with the approval of the Director-General, or any official authorized by him, and the debtor is not given a period of grace or extension, all unpaid installments become due and the ACC proceeds with their collection from the property of the debtor or his surety. Foreclosure of mortgage is under-taken when it is known that the debtor can repay and he does not. But this foreclosure action has been very rarely undertaken by ACC. They try to give the farmer every opportunity to repay the loan without the need to take away his land or any other mortgaged property. Renewal or extension of the loan is possible if "good reasons" are given for that, especially in drought seasons or under circumstances beyond control. Thus ACC enforcement procedures are actually lenient and have not been applied rigorously.

4. Rescheduling

Rescheduling of the installments' due dates is also possible and has often been undertaken. This rescheduling depends on many factors affecting the project undertaken by the loan. As an example, sometimes the scheduling of the due dates of installments is not proper and does not coincide with cultivation dates. In this case the previous scheduling is reconsidered and the due dates of installments are rescheduled. Also in circumstances which are beyond the borrower's control, such as when the borrower's project faces serious difficulties, rescheduling is arranged depending on further studies of the project. Rescheduling therefore, is an accepted procedure by ACC and has often been applied.

G. COSTS AND FINANCE

1. Portfolio Profits and Losses

The size of ACC's portfolio has been gradually increasing over the years 1966-1971 (Table 8) except for the year 1969 where the size of the portfolio decreased as indicated by the size of total assets for that year.

There has been no erosion from the portfolio due to nonpayment of installments of principal or due to inflation. The price level has been relatively stable, rising very smoothly and gradually over the past decade in the country. The overdue loans or due installments of loans which are not paid on due dates remain with outstanding loans and are never considered as bad debts or removed from ACC portfolio. Erosion due to non-payment of loans is, therefore, out of consideration according to ACC officials. But some losses have taken place due to exemptions or deductions of the interest due on loans as shown in Table 8 . This has been used as a bargaining tool encouraging very old debts to be settled. These exemptions or deductions are subtracted from ACC's profits or added to its losses.

Table 8. Financial Position of the Agricultural Credit Corporation of Jordan. 1966-1971. (U.S. Dollars)

Title	1966	1967	1968	1969	1970	1971
1) Total Loanable Funds	18 091. 824	13 830. 162	19 979 862	21 042. 518	20,4 4,286	21 433, 420
2) Total Assets (year-end balance)	17,980,959	17 952 566	19, 185. 561	19 143, 810	19,832, 812	20, 278, 600
3) Capital	12,134, 934	12,362, 859	12, 567, 620	11,838, 677	11, 998, 294	12, 103, 086
4) Outstanding Loans	16,935. 912	16,731, 868	17,920, 540	16,661. 702	16. 582 412	16, 554, 112
Current plus inherited (except for old seed loans)	16. 022 518	15 906 887	17, 215, 531	16, 066, 697	16, 025 584	16, 038, 932
(Old Seed Loans)[1]	913, 394	824, 981	705, 009	595, 005	556, 828	515, 180
5) Overdue (loans & Interests)	2, 778. 647	5, 598 421	7, 674, 064	6. 783, 339	7 606, 827	5, 967 122
Principal	2, 185 417	4 462, 556	6, 236, 670	5, 519 052	6, 270, 309	4, 658, 388
Interest	593, 230	1, 135, 865	1, 437, 394	1. 264 287	1, 336, 518	1, 308, 734
6) Net Profit (Loss)	78, 733	14, 456	12. 339	173, 275	(58, 466)	(33, 160)
Sub Net Profit (Loss) During year[2]	78 733	14, 456	12 339	194, 415	(40, 418)	3, 108
Exemption & Deductions	—	—	—	(21. 140)	(18, 048)	(36, 268)

Source: ACC 1966-1971, Annual Reports.

1. The old seed loans were originally extended to farmers by the Ministry of Finance. Then their outstanding balance was transferred to ACC (at its establishment). Amounts collected from these loans are added to ACC's capital.
2. Sub net profits are grand profits during the year (collected loans interests, interest on deposits in banks, interest on treasury bills and government bonds and other incomes) minus all expenditures (wages and salaries, rents routine expenditures and interests due on ACC's Loans) except the exemptions and deductions on collected interests of old debts.

Table 9. Loans Outstanding as Percentages of Total Assets and Total Loanable Funds[1]

	1966	1967	1968	1969	1970	1971
Amount of Outstanding Loans as a Percentage of Total Assets (Year end balance)	94.18	93.20	93.40	87.03	83.61	81.63
Amount of Outstanding Loans as a Percentage of Total Loanable Funds	93.61	88.85	89.69	79.18	81.03	77.23

Source: ACC. 1966-1971. Annual Reports.

1. (See Table 8 for figures in dollars).

Though there is no erosion, at least theoretically, in the portfolio due to non-payment of loans, the high rate of delinquency, as discussed in section II.F.1, places a heavy burden on ACC and creates a problem for it and is thought to result in a shortcoming of its activities. Moreover, overdue loans and interests constituted around 16 percent of total outstanding loans in 1966. This rate continued to increase approaching 46 percent in 1970 then dropped to about 36 percent in 1971 (Table 7, section II.F.1). The same thing applies to the percentage of overdue loans and interests to total assets (year-end balance) but with lower percentages over the given years (Table 7). Loans outstanding as a percentage of total assets (year-end balance) are given in Table 9 which shows that the loans outstanding constitute the major component of ACC's total assets (more than 85 percent on the average). Also that table shows that the loans outstanding constitute the major share of total loanable funds.

It is difficult to judge how fast and how many times the ACC is able to turn over an initial capital subscription. However, since most ACC loans are medium-term loans (which actually become long-term loans because of many extensions and reschedulings), and because of the high percentage of overdue loans and interest to outstanding loans and because of the high rate of delinquency and low rates of collection as mentioned before, we are justified in concluding that ACC over the past few years has accomplished only a low turn-over rate except for a few types of loans which have had a relatively high rate of collection such as the agricultural machinery loans (Project 150) whose rate of collection in 1971 was 100 percent, the staff housing scheme loans (100 percent in 1971 and previous years), and the loans given from the IDA (Second Loan) Funds (about 50 percent on the average.).

2. Administrative Costs

The administrative costs of ACC have been increasing with variations over the years 1966-1971. These costs are shown in the following table (Table10).

Table 10. Administrative Costs and other Expenditures of ACC, (U.S. Dollars).

1966	1967	1968	1969	1970	1971
322 479	514,777	487,298	500,898	608,762	592,382

Source: ACC, 1966 - 1971. Annual Reports

In the above figures, expenditures on capital goods such as the buying of new cars, calculating or typing machines, furniture, etc... have been excluded from the operational costs, since these expenditures are then transferred to the capital accounts.

The major aggregate components of the administrative costs of ACC, with the expenditures on each component in the year 1971, are listed below in Table 11, to show the relative importance of each component. For sub-components and details of expenditures see Appendix K.

Table 11. Major Components of ACC Expenditures in 1971.

Component	Expenditures During 1971 (U.S. Dollars)
Total Capital Expenditures	13,014
Total Salaries & Remunerations	324,290
Total Routine Expenditures	79,372
Total Interests Due on ACC	188,720
Minus Capital Expenditures	13,014
Total Operational Expenditures	592,382

Source: ACC, 1971. Annual Report.

The average cost per loan varies indirectly (inversely) with the number of new loans disbursed during a year. This is very clearly shown in Table 12, for the period 1966-1971. In 1966, when the number of new loans issued was highest (2147) compared to subsequent years, the average cost of administering a loan was lowest ($ 150.20). Also the average cost per loan varies directly (positively) with the administrative costs in a certain year (assuming a constant number of loans). This is shown by comparing the two years 1969 and 1970 in Table 12. In 1969, the number of new loans disbursed was less than in 1970, but still the average cost per loan in 1969 was less than that in 1970 ($ 602.04 compared to $ 687.09 in 1970) because administrative costs were higher in 1970 ($ 608,762) than in 1969 ($ 500,898). Thus the average

Table 12. ACC Average Costs Per Loan and Per Dollar Loaned, 1966 - 1971, (U.S. Dollars)

	1966	1967	1968	1969	1970	1971
Value of new loans disbursed	3,623.018	1,891 232	2,092 882	1 586,357	1,225 574	1,988,058
No. of loans disbursed	2147	1331	1350	832	886	1616
Administrative costs and other Expenditures	322,479	514,777	487,298	500,898	608,762	592,382
Average cost of Administering a Loan	150,20	386,75	360 90	602,04	687 09	366,57
Average cost of Administering a one-dollar loaned	0.089	0.272	0.232	0.315	0.496	0.297

Source: ACC, 1966-1971. Annual Reports.

cost per loan depends on two factors, the number of loans issued in a year (inverse relationship), and the administrative costs during a year (positive relationship). For ACC, it is clear that they can have lower average costs per loan by issuing more loans in a year and it is clear that they have not been utilizing maximum efficiency or operating at the profit-maximization level. By issuing more loans, they can reduce average cost per loan and at the same time accrue more profits from the interests to be collected from those loans, with the assumption of stable administrative costs. Or alternatively, they could reduce the average cost per loan by reducing administrative costs. Part of the high average cost per loan on ACC loans over the years 1967-1971 is due to circumstances beyond the control of ACC. The aftermath of the June 1967 war and the internal disturbances and instability enter the picture here again.

The average cost of administration per dollar loaned follows the same analysis. Thus average cost per dollar varies inversely with the value of loans disbursed and positively with total administrative costs in a year as is shown clearly in Table [illegible]. In Table [illegible], the average cost of administration per dollar loaned was lowest in 1966 ($ 0.089) where the total value of loans disbursed during that year was highest. In 1970, the reverse was true.

However, it was disappointing to the authors to be unable to obtain data bearing directly on the problem of administrative costs of lending as it relates to the question of credit for small farmers. The data available shows the average cost of administration per dollar loaned but it did not show what the authors believe to be true, namely, that the administrative cost per dollar loaned is higher for small loans than for large loans because of certain fixed costs associated with any loan regardless of size. This may create tendency for bank employees to favor larger loans.

3. <u>Beneficiary Savings</u>

Although there is an article in ACC Law that permits it to accept farmers savings as deposits, ACC has not practiced or applied this privilege since its establishment and did not encourage farmers to deposit their accumulated savings in its vaults until the writing of this report. Neither have equity investments of any kind been applied or practiced.

4. External Finance

ACC's sources of finance are formed of the paid-up capital, the accumulated profits, the Development Board (DB) Loans, the IDA Loans and the collection of ACC loans and interest. Table 13 shows the sources of finance of ACC during the years 1966-1967 and from that table the following points are noted:-

a. Paid-up capital and grants from A.I.D.

The paid-up capital constitutes the largest part of the sources of finance. The ratio of this source of finance to total sources of finance was continuously decreasing over the years 1966-1971. It fell from 67 percent in 1966 to 56.5 percent in 1971 mainly due to the exploitation of new sources and the rising ratios of other sources of finance. On the other hand, the paid up capital decreased in 1969 to $ 11,838,677 and to a ratio of 56.2 percent compared to other sources from an amount of $ 12,567,620 and a ratio of 62.9 percent in 1968 as a result of the remuneration of the sum of $ 999,168 from ACC's capital in 1969 to the JCO.

It is worth noting that this paid-up capital is formed of what was transferred to ACC from the amalgamated institutions in 1960, government subscriptions every year, collections from the old seed loans (which were given to farmers by the Ministry of Finance) and USAID grants. Through 1969, USAID grants amounted to ($ 2,850,085) and constituted 24 percent of ACC's paid-up capital at that year or 13.5 percent of the total sources of finance. What is called government subscription is not really a subscription from the government's funds. It is formed in this manner: IDA gave two loans of $ 3,000,000 each in 1963 and 1967 through the GOJ at an annual interest rate of 0.75 percent. The GOJ, in turn, charged ACC an annual interest rate of 3.25 percent. Then the GOJ used to be and still does transfer the difference of those rates of interest to ACC. This is recorded in ACC accounts as a government annual contribution to ACC's paid-up capital. These are called capital subscriptions and their ratio to the paid-up capital and to total sources of finance for the years 1966-1971 are recorded in Table 14. In that table is recorded also the annual collections from the old seed loans that are transferred to the paid-up capital with their ratios to paid-up capital and total sources of finance for the same period of time.

b. Loans from the IDA

Loans from the IDA form the second source of finance for ACC, (ACC has secured two loans from the IDA of $ 3,000,000 each). The outstanding balance of the IDA loans at ACC has been increasing over the period 1966-1971 with the ratio of these loans to the total sources of finance rising from 16.6 percent in 1966 to 25.5 percent in 1971. In 1971 the outstanding balance of the IDA Loans amounted to $ 5,470,021.

. 13. Sources of Finance for the Agricultural Credit Corporation

e	1966 $	%	1967 $	%	1968 $	%	1969 $	%	1970 $	%	1971 $	
.id-up Capital	12,134,934	67.0	12,362,859	65.6	12,567 620	62.9	11,838,677	56.2	11,998,294	58.6	12,103,086	56.6
:serves (Accumulated ·ofits)	1,031,595	5.7	1,037,002	5.5	1,047,832	5.2	1,213,402	5.7	706,916	3.4	673,752	3.2
;cal Loans:	56,000	0.3	215,454	1.1	540,150	2.7	750,150	3.5	988,150	4.8	948,245	4.4
i) DB (Project 150)	...		...		...		210,000		448,000		410,664	
·i) DB (Tobacco)	...		...		336,000		336,000		336,000		336,000	
i) Treasury Advance	56,000		215,454		204 150		204,150		204,150		201,524	
:ternal Loans	2,999,760	16.6	3,264,850	17.3	4,179,224	20.9	4,658,259	22.1	5,057,304	24.7	5,470 021	25.5
;) IDA (1st Loan)	2,999,760		2,999,760		2,999,760		2,999,760		2,999,760		2,999,760	
i) IDA (2nd Loan)	...		265,090		1,116,004		1,658,499		2,057,544		2,414,261	
ollections	1,863,934	10.3	1,949,995	10.3	1,645,033	8.2	2,582,028	12.1	1,713,571	8.4	2,238,314	10.4
;) From Loans	1,459,743		1,403,687		1,131,816		1,935,110		1,246,106		1,789,897	
.) From Interest	404,191		546,308		513,217		646,918		467,465		448,417	
; Sources of Finance ·l Loanable Funds)	18,091,824	100	18 830,162	100	19,979,862	100	21,042,518	100	20,464,236	100	21,433,420	100

Source: ACC, 1966-1971. Annual Reports.

Table 14. Government Subscription and Collections from Old Seed Loans (Amount in U.S. Dollars)

	1966	1967	1968	1969	1970	1971
Government Contribution	34913	86178	82418	109043	230482	63145
Ratio to Paid-up Capital	0.2%	0.6%	0.6%	0.9%	1.9%	0.5%
Ratio to Total Sources of Finance	0.1%	0.4%	0.4%	0.5%	1.1%	0.2%
Collections from Old Seed Loans	45565	85923	119089	110003	38178	41647
Ratio to Paid-up Capital	0.3%	0.6%	0.9%	0.9%	0.3%	0.3%
Ratio to Total Sources of Finance	0.2%	0.4%	0.5%	0.5%	0.1%	0.1%

Source: ACC, 1966 - 1971. Annual Reports.

c. Collections

Collections from ACC loans and interests form a third source of finance. These collections were $ 1,862,934 in 1966 with a ratio to total sources of finance around 10 percent, rising to a peak of $ 2,582,028 and a ratio of 12 percent to total sources of finance in 1969, then falling to an amount of $ 2,238,314 and a ratio of 10 percent to total sources of finance in 1971.

d. Accumulated profits

Accumulated profits formed an average of 5 percent of the total sources of finance during the period 1966-1971. The accumulated profits rose from an amount of $ 1,031,595 in 1966 and a ratio of 5.7 percent to a maximum of $ 1,213,402 and a ratio of 5.7 percent to total sources of finance in 1969 and then decreased to $ 673,752 and a ratio of 3 percent to total sources of finance in 1971. There has been a depletion on the accumulated profits in 1970 and 1971.

e. Loans from government agencies

The ACC depended to a very small extent on loaning from the Development Board (which later became the National Planning Council, NPC) and from the Treasury to finance part of its activities. Its balance of loans from the DB and the Treasury amounted $ 56,000 in 1966 with a ratio of only 0.3 percent and rose to an amount of $ 948,245 and a ratio of 4.4 percent to total sources of finance in 1971.

The authorized capital of ACC was set-up at J.D. 7 million ($ 19.6 million) at its establishment. In 1971, the paid-up capital amounted to $ 12,103,086. This paid-up capital in 1971 constituted only 61.7 percent of the authorized capital. The GOJ is supposed to contribute to ACC paid-up capital in order to help ACC fulfill its authorized capital. But till the writing of this report, the GOJ has been contributing to ACC capital in the form discussed earlier.

ACC also has the privilage of rediscount facilities at the Jordan Central Bank, but ACC has not made use of this privilage till the writing of this report. At the same time the government at certain levels of the lending, loaning and rediscounting chain guarantees ACC and its funds. The two IDA loans for ACC have been guaranteed by the GOJ. Also loans given by ACC to certain agencies are guaranteed by the government. Lately ACC gave a loan to the Jordan Organization for Marketing Agricultural Produce (JOMAP) guaranteed by the government.

5. Institutional Solvency

ACC has been able to refinance its costs and losses from its own earings. In table15the accumulated net profits show'net accumulated profits from previous years over and above costs and losses if there was any. Cash at banks plus loans advances to branches have been continuously increasing over the period 1966-1971 rising from $ 744,464 in 1966 to $ 3,239,591 in 1971. On the other hand, total loanable funds have increased from $ 18,091,824 in 1966 to $ 21,433,420 in 1971.

6. Foreign Exchange Balance

The receiving of an external loan or grant would increase the foreign exchange reserves of the economy under consideration and would have a positive impact on the currency of that economy. ACC, in acquiring two loans from the IDA of $ 6,000,000 and grants from the USAID, have imposed a positive impact on the economy of Jordan in that direction. ACC itself did not receive the loans and grants in dollars, but the dollars were received by the Jordan Central Bank which converted the equivalent amounts in Jordan Dinars to ACC's accounts. However, foreign loans have to be repaid in foreign exchange, but in installments and over a long period of time.

Also ACC is believed to have increased the foreign exchange reserves to a small extent indirectly through the productive results of its loaning activities. To the extent that its loans to farmers help in increasing agricultural production, especially export crops or import substitution crops, and to the extent that the increased production increases agricultural exports and reduces food-imports, ACC is helping not only in increasing farm income, productivity, and level of living, but also in increasing foreign exchange reserves and in this it is backing and strengthening the economy of the country.

H. COMPLEMENTARY FACTORS

1. Technology

a. Directing, tying and packaging

ACC gives advice to its borrowers when needed, concerning the best way in which they can use their loans, what crops best suit their farm's environment and give higher yields etc... Tying and packaging exist on a small scale in a form in which credit is given for certain purposes which are specified in the loan application. Also, each loan is supervised by ACC's supervisors (all of whom have at least a bachelor of science degree in agriculture) in order to make sure that the monev is spent for the

Table 15. Liquidity Position of the Agricultural Credit Corporation 1966-1971
U.S. $

Title	1966	1967	1968	1969	1970	1971
Administrative & Other costs (Dec. 31)	322479	514777	487298	500878	608762	592382
Net Profit or (Loss) During Year	78,733	14,456	12,339	173,275	(58466)	(33160)
Accumulated Net Profits[1] at end of year	1,031,595	1,037,002	1,047,832	1,213,382	706916[2]	673,752
Cash at Banks & Loans Advances to Branches	744,464	808,973	815,866	2,030,973	2,789,973	3,239,591
Total Loanable Funds (Sources of Finance Table 13)	18,091,824	18,830,162	19,979,862	21,042,518	20,464,236	21,433,420

Source: ACC, 1966-1971. Annual Reports.

1. Accumulate net profits at beginning of year + annual gross profits during year - Administrative costs and other expenditures and deductions during year = Accumulated net profits at end of year.

2. $ 448,000 in 1970 were transferred from the accumulated profits account to the staff housing scheme credit account.

purposes for which it was applied, ACC gives its loans all in cash (except for the machinery and pump loans, payment is made directly to the selling agency) and no enforcement is made on the borrower to buy certain brands of inputs or from certain places or to use a certain technology. They advise him on the best and most suitable techniques but he does not have to take their advice.

b. Program extension and supervision

Extension services are not built into ACC. ACC supervises its credit to control the use that is made of the loan and to be sure that it is spent only on the purposes for which it was applied. It is not involved in technical diffusion or transfer. In the meantime, there are no special farmer training programs undertaken by ACC itself. But prior to 1967, ACC used to arrange trips to farmers of certain areas to visit other prosperous areas in order to make them benefit from each other's experience. On-farm visits by ACC credit supervisors are carried out to check on the progress of the projects undertaken by ACC loans and to recommend on the payment of subsequent installments of the loan depending on whether or not the commitment covered by previous installments is fulfilled to the satisfaction of ACC credit supervisors or inspectors. The minimum number of on-farm visits is three to four, one before the approval of the loan and two or three after approval. Visits are sometimes made to individual beneficiaries and others to groups of them depending on the situation. The credit supervisor in the branch office prepares a schedule of the visits he has to make, and if more than one farm has to be visited in a certain area in a certain period of time, he arranges to make the visits in one day so as to save time and effort.

c. Other arrangements for technical transfer

Agricultural research and extension in Jordan are under the responsibility of the Ministry of Agriculture. The Agriculture Research and Extension Directorate has become the biggest unit in the Ministry of Agriculture. Formerly the agricultural research and extension staff were separate, each in a different directorate. The Agricultural Research Directorate was formalized in 1950 with the founding of Deir Alla station in the Jordan Valley as an agricultural experimental station, and the Extension and Services Directorate was set-up in 1952. Later (in 1970) these two directorates were unified into one and the extension staff was merged with the research staff in order to increase coordination between research and extension, and to facilitate extension of research findings to farmers.

The Ministry's research program was only slightly affected by the 1967 war and the subsequent internal disturbances. Some of the staff of Deir Alla, the main research station in the Jordan Valley, left their work for a while. Wadi Dhuliel, the main research station in the highlands has been interrupted to a lesser extent in its research work. As a result, it has been difficult for research to keep up with the new agricultural developments and their applicability to Jordanian conditions.

The extension services, which include (as defined in Ordinance 29 of 1966) the education and guidance of the Jordanian farmer to enable him to pursue modern agricultural methods conducive to raising his efficiency and ability to better exploit his land, are set out through the diffusion of modern agricultural knowledge, the conduct of demonstrations and the provision of agricultural services such as the supply of improved seeds, sapplings, etc....

The extension services operate at different levels, with the main outline of the system being as follows:[8]

i. First, there are specialists in each extension field located in the agricultural directorate of each Governorate.

ii. Second, there are the general field extension agents that are located in each locality. The total number of these agents does not exceed 72 in both banks of Jordan.

iii. Third, there is the extension staff that is concerned with the control of disease in the irrigated crops of the Jordan Valley. Its main responsibility is to carry out compulsory spraying which may be introduced in the event of a serious outbreak of plant disease.

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8. These points have been taken from IBRD/IDA, 1972. Current Economic Position and Prospects of Jordan, Washington D.C., with added communications from the Ministry of Agriculture, Amman, 1972.

iv. Fourth, there is the Range Management Division which is a newly established extension service. It has the responsibility of enforcing any future grazing laws in the range lands.

v. Fifth, there is the extension staff of the Veterinary Division whose primary function is disease control especially of contagious diseases. These personnel are not devoting enough attention to animal husbandry.

There are a number of qualified extension staff members involved in extension services and advisory work on agricultural production in Jordan. However, the Extension Division is still undermanned and there is room for expanding its staff for better results to be achieved. Better guidance and direction must be given to these personnel so that they would be able to make a greater contribution to increasing agricultural output. More and better training and incentives to increase their "missionary zeal" is required in addition to supplying them with better extension equipment and transportation vehicles to increase their efficiency. Also coordination between the divisions responsible for different parts of the extension work within the Ministry of Agriculture has to be greatly improved.

In the mean time, there is limited coordination between the credit extension services at headquarters, (there is participation of a member from the Ministry of Agriculture, the under-secretary, on the Board of Directors of ACC) and at regional levels (there is a representative of the Ministry of Agriculture in each district or subdistrict usually an extension agent, but not always -- in the branch loan committees at the branches of ACC). These members participate in the decisions of the Board of Directors of ACC and the branch loan committees. But as we heard from the head of the Research and Extension Department, there are ideas about having stronger and more functional coordination in the future between the Research and Extension Department and the ACC. The main point of this coordination is that technical assistance and advice and other extension services should be provided with each loan and in certain cases the loan should be tied to a certain new technology and a set of inputs and technically supervised by the extension agents. For the Research and Extension Department to be able to carry out this responsibility, more and better qualified extension agents should be employed. In the Three Year Economic Development Plan 1973-1975, the development of the agricultural extension has been taken into consideration and two main projects are to be carried-out (see Appendix B, Agricultural Extension). One of the projects called the Project of Agricultural Rehabilitating and Training Center, aims at improving the efficiency of extension agents in introducing desirable changes in agriculture. This project includes the establishment of a center for training the research workers, the extension agents, and the farmers at the different research

stations. The other project, called the Project for Training Farmers on Irrigated Cultivation aims specifically at training Bedouin youth on practicing irrigated farming. Also it is worth noting (Appendix B, Agricultural Research) the development and establishment of research stations to be undertaken by the Three Year Plan.

d. Nature of technology

Although the unsettled conditions which existed in Jordan since 1967 have had a major effect on the performance of the agricultural sector, the available statistics for the past four years show a tendency for average yields from irrigated lands to increase and that from rain fed lands to decrease. The increased yields from irrigated farms are being achieved through increased efforts in adapting a more suitable plant population and controlling weeds and disease both by hand labor and spraying. Fertilizer use is increasing gradually, while no rapid increase in mechanization in the Jordan Valley and other irrigated areas has taken place.

Technical change in rain-fed farming has mostly been in the form of increased tractors. But this increase was not accompanied by much improvement in the cultivation methods - only with an extension of the land plowed into areas of very low rainfall unsuited for rain-fed cereal production. In 1970, 2758 tractors were recorded as being owned in East Jordan (part of which might be out of operation) which could provide sufficient power to cultivate all the cultivable land in the East Bank. Lately improved wheat seed has been used in a project for doubling wheat production. Although fertilizer use has increased from a little less than 3000 tons in 1967 to about 3,500 tons in 1970, this is still less than 3 percent of the economically optimal level.[9] In addition, there has been a marked increase in the use of herbicides and fungicides.

Improvement in disease control is the only change which is continuously taking place in the livestock sector. Husbandry methods are the same as have been performed for centuries with very little improvement in feeding and breeding aimed at increasing output having been adopted. However, the Three Year Plan (1973-1975) includes an Animal Production Project which aims at laying down the foundations of developing livestock production in Jordan by means of research, training of local staff and farmers on animal production aspects including range management, fodder production in rain-fed and irrigated areas, improving feed and fodder processing, increasing the productivity of farm animals through up-grading of local sheep and the introduction of foreign dairy cattle and layers, improving animal husbandry, control of disease and the improvement of marketing and

9. Ibid

packaging techniques of livestock products. The total cost of the project is expected to be around $ 2,161,600 spread over five years (See Appendix B, Animal Production Project).

2. Supplies and Sales

a. Program supplies

As mentioned earlier ACC issues the loans and pays in cash to the borrower except in cases of agricultural machinary where ACC pays the dealer (who is chosen by the farmer). In seasonal credit, if the loan is for animal feed and fodder, ACC also pays the dealer, as if giving the loan in kind. ACC credit agents do not handle supplies. Even in the above mentioned cases supplies are handled by the concerned dealers and ACC just transfers a cheque in payment of what the borrower has bought.

The general field staff (extention agents) of the Research and Extension Department of the Ministry of Agriculture, as mentioned earlier, handles the distribution of some improved seeds and fertilizers and other new technology inputs at cost prices to the farmers so as to diffuse and make known the use of these improved inputs and then leave it to the private sector to continue handling and supplying these inputs to the farmers. The prices of these inputs to the ACC beneficiaries are the same as those prevailing in the market. Also the government does not subsidize prices of inputs provided by the private sector.

However, there are no administrative restrictions on imports of agricultural inputs and customs on these imports are relatively low in order to encourage their use. It is worth noting that Jordan is an exporter of crude phosphate used in fertilizer.

b. Program infrastructure

ACC activities do not include the construction of infrastructural facilities as they are broadly defined. These activities are the responsibility of other government agencies and departments such as the Natural Resources Authority, Jordan River and Tributaries Regional Corporation, the Ministry of Agriculture and the Ministry of Public Works. However, if infrastructure is considered in the narrower sense and taken on a smaller basis then we can say that ACC is involved in some infrastructural activities, such as the financing of the construction of terracing and supporting walls, reservoirs, artisian wells, cement and earth canals, etc., on a farm basis as can be seen from (Appendix L, Activities of ACC, during the period 1967 through June 1972).

c. General access and availability

In continuation of what was mentioned in part II.H.2.a (Program Supplies), the private sector is the major source of supplies and services to farmers in Jordan. In additon to supplying agricultural inputs, either on cash payment or on credit, the private sector supplies other services such as marketing of agricultural produce and giving technical assitance and advice to the farmers especially on how to use the agricultural machines and optimum use of fertilizer and pesticides. A scientific study may reveal that those services are being provided more satisfactorily by the private sector than by the public sector (especially, the agricultural extension service),

d. Guaranteed sales and price support

The ACC does not guarantee a market for its beneficiaries' produce and does not have any arrangements to collect, transport or sell their produce. Also there is no price support system built into ACC. All these functions are outside the scope of ACC activities.

However, part of these activities will be provided by the new marketing organization, the Jordan Organization for Marketing Agricultural Produce (JOMAP), which was established by GOJ in 1972. This organization now has the responsibility of raising the marketing efficiency for Jordan's agricultural produce. This organization will supply the farmers, owners or tenants, with improved varieties of seeds on credit to produce high quality tomatoes, eggplants, beans, sweet pepper and other vegetables and fruits mainly for export purposes to European markets. This will be done on a contract basis between the producers and the organization whereby the organization provides the farmers with the improved varieties of seeds and the needed fertilizer and pesticides on credit and guarantees to buy all their produce at predetermined guaranteed prices.

Article 6 of the JOMAP Law No. 36 of 1972 gives the JOMAP the right to deal in the agricultural produce in domestic and foreign markets, to process that produce to the extent needed for its marketing, provide marketing services for producers and exporters, to construct (or rent) and manage facilities needed for delivering, grading, storing and refrigerating agricultural produce and selling this produce on wholesale and retail basis.. The JOMAP can also establish (or share in establishing and managing) agricultural industries and it can import, buy or rent the machines, equipment, tools and transporting facilities that are needed.

On the other hand, concerning price subsidies, the Extension Department of the Ministry of Agriculture has been providing improved varieties of wheat seed to wheat growers in dry farming areas of more than 300 mm of annual rainfall, and subsidizing wheat prices up to 15 percent of the market price.

e. Insurance

Insurance against crop damage and loss is not available in Jordan at all, neither through ACC nor any other agency.

f. Other program marketing arrangements

ACC has been found also not to be offering its beneficiaries any special services such as low-cost, off-farm storage facilities, collective transport rates, or wholesale marketing privileges. As of the time of this writing, these services are provided to a very limited extent by JCO through its marketing and multipurpose cooperatives. However, the previously mentioned new marketing organization, the JOMAP, might be able in the future to provide to the farmers part or all of these services depending on the extent of its success and capabilities.

g. General marketing conditions

Marketing is basically moving products in terms of time, space, and form. Any programs to provide transportation, storage and processing will have the effect of reducing price difference over distance and time by bringing supply and demand into equilibrium. On the demand side, consumers will benefit from having agricultural products at the time, in the place and in the form that they want at stable prices. On the supply side, producers will not suffer seasonal price fluctuations. The consequences of this on income, loan productivity and repayment will be positive. In this context, the marketing structure and conditions prevailing in Jordan are inadequate and insufficient.

At the writing of this report, the marketing of the agricultural products in Jordan is mostly handled by the private sector through which the agricultural produce is disposed of in two major ways: sale through a commission agent in a hisbi[10] (or a municipal market) and sale to a wholesale merchant who is generally an exporter. Direct sale to retail merchants, to consumer cooperatives or to export markets and disposal through marketing cooperative societies is still of small significance.[11] Prices of agricultural products, especially vegetables during the seasonal cultivation

10. A hisbi is the common name for a fruit and vegetable market run by the municipality.
11. FAO, 1967, Jordan Country Report. Rome.

periods would be generally and usually low due to the lack of storing, grading, refrigerating and processing facilities. These conditions prevent the farmer from reaching programmed income targets. This problem in the author's opinions could not be attributed only to marketing. The whole production pattern should be reorganized to fit the demand of the domestic and export markets in addition to greatly improving the whole structure of the marketing chain so that the farmers would not be forced to dispose of their produce at low prices during the cultivation period as in the case now prevailing.

It is interesting to note the procedure through which the produce is disposed of as described by the FAO, 1967 report (page 106): the produce is transported to the market in two ways. The first involves the collection of the produce and its transportation to the hisbi in a nearby city or town by the growers themselves. In the Jordan Valley, transportation is often made by tractor-trailers belonging to the farmers (or rented from other farmers) or else by ordinary trucks and sometimes by bus. In these instances, the farmers bear the costs of picking, packing and porterage at the farm and, in addition, they pay a fee of 5 percent of the value of the produce to the commission agent (who auction the produce on the farmer's behalf) at the hisbi and 2 percent to the municipality. The second method consists of the wholesale merchant-exporter or his agent visiting the farm area to collect the produce. In this instance, the merchant provides the containers and undertakes the packing after a very crude sorting operation and bears all expenses involved. No fee or tax is involved and settlement for the value of produce is made on the spot, after deduction of any advances or loans, in cash or in kind. This method applies specifically to bananas which are never handled through a commission agent but are sold directly to merchants and exporters, and also applies to citrus fruits and tomatoes exported to foreign markets. Exports are almost wholly carried by trucks to neighbouring Arab markets.

h. Profits and risks

Unfortunately, the authors were unable to find or generate any information or data that could help to determine the profitability of the technology that the beneficiaries are instructed or assumed to adopt.

However, from a survey that is currently underway in Jordan[12] on "Lending Procedures followed by the ACC and other Money lenders in the Balqa District of Jordan", preliminary results show that 50 percent of the ACC borrowers in the sample answered that the result of investing the loan will be enough to realize a profit after repaying the interest and principal. However, of the other 50 percent, who answered that they did not realize any profits as a result of the loans given to them, only 14 percent (i.e. 7 percent of the sample) said that this was so due to technical reasons.

12. This survey was in progress at the time of this writing. It was conducted by Adnan Dabbas in fulfillment of his M.Sc. requirements in the Faculty of Agricultural Sciences, A.U.B.

The rest of the respondents did not realize profits, during the period of the loan, due to the fact that some took loans for constructing buildings, buying oxen (for plowing), terracing their land (and other longer term purposes), or due to misuse of the loan.

The results of the above survey could be confirmed by a previous survey[13] in which farmers were asked whether or not they could repay the loan from income derived from it. 48 percent of the respondents said that they could not. 17 percent said that they could while 35 percent said that it was too early to decide.

Concerning profit enough to cover risk, data which bears directly on this point was not found. However, it is certain that the risk of crop failure is high especially in non-irrigated areas. For example in a farm survey[14] in the dry Bani-Hasan area (200-400 mm average annual rainfall) water for irrigation is not available. Farmers rely entirely on natural rainfall. The survey showed that farmers know that they should expect a complete wheat crop failure in 4 out of 10 years. In 4 out of 10 years they may expect to harvest an amount equal to the amount of seed planted and they may expect a bountiful crop in only 2 out of 10 years.

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13. Kana'an, Wail, 1970. Credit Services in Jordan. A survey conducted in fulfillment of his M.Sc. requirements in the Faculty Agricultural Sciences, A.U.B.

14. Abu - Shaikha, Ahmad, 1971. Land Tenure in Jordan - A Case Study of the Bani-Hasan Area. A study conducted in fulfillment of his M.Sc. requirements in the Faculty of Agricultural Sciences, A. U. B.

III EVALUATION

A. PERFORMANCE

1. Apparent Uses of Credit

ACC issues loans to farmers only for productive purposes and nothing for consumption. Since credit is supervised, and since loans are paid out in installments, credit is used for the intended purposes. Leakages are not impossible to take place and some farmers appear to be using a small part of the credit they get for purposes other than those for which they were intended. Though we cannot specify what percentage of the credit has been used in this way, we can say with relative accuracy that it is a very small percentage and possibly not exceeding 1 percent of the value of loans given. However, a study could be conducted to test the possibility of a trickle-down of ACC loans to tenants through landowners. On the other hand, as discussed in Section II.E.1. the used of credit are specified and known. The exact purposes for which the credit was used appears in Table 3.

2. Effects

Each loan project to be undertaken by ACC is economically and technically studied before the approval of the loan. However, a survey should be conducted to show the validity of such studies. On the pre-loan Inspection Committee Report (See Appendix G), the situation of the applicant's farm before getting the loan is recorded in terms of crop pattern, productivity, farm income and available investment and technology. Then what needs to be undertaken by the loan on the farm, such as land improvement, irrigation development and machinery is recorded. Then an economic justification analysis of the project is undertaken by estimating the net income to be anticipated from the project. In this procedure and by more estimates (done before the loan is approved) the financial rate of return of the project is calculated. No evaluation of this kind based on actual facts (except for certain recent bench-mark surveys) is made after using the full amount of the loan in the project or after the loan repayment. Therefore empirical data showing the effects of the loan is unavailable.

Faced with this situation of lacking empirical evidence, it was necessary to revert to a subjective judgement, through interviewing several knowledgeable people, and other indications, namely, the activities of ACC (i.e. activities undertaken by ACC loans to the farmers) and concluding from these general evaluations without concrete data.

a. Production

All the interviewed people (List in Appendix M) asserted that ACC credit had an impact on production but were unable to assert the extent of this impact. All based their judgement, that ACC helped in increasing production, on the fact that ACC loans have been used in improving agricultural land, digging wells and extending canals and other irrigation works, buying agricultural machinery and other inputs, all of which help in increasing agricultural production. The activities of ACC during the period 1967-1972 (Appendix L), assert these judgements and views.

b. Farm income

Most of the interviewed persons also indicated that the income and net worth of the beneficiaries of ACC has increased but without being able to measure the extent of this increase. Preliminary results of the previously mentioned Dabbas survey indicate that 50 percent of the ACC sample of borrowers asserted that the loan increased their income, 35 percent said that the loan resulted in no change in their income while 14 percent said that the loan decreased their income. The main reason for this result as reported by those borrowers was misuse of the loans in addition to the fact that some loans do not show immediate results on income.

c. Technology

The interviewed people were of the opinion that ACC improved or had an impact on technology. Loans given for agricultural machines such as tractors, harvestors and sprayers are an example of embodied technology. These loans are increasing the mechanization of agriculture. Irrigation loans are mostly given to farms which used to depend only on rainfall. This could be considered as new technology in those areas - - the digging of wells and extension of earth or conrete pipes or canals and the use of water pumps. Some loans are given for the buying of highly productive Holstein - Fresian cows. Also seasonal loans given for the buying of fertilizer, seed, and pesticides encourage the farmers to increase the use of these inputs and to use a better quality of these inputs. Preparing a farm plan for the farmer and teaching him how to keep a kind of record of his accounts is a new technique to most farmers. The use of a daily record form on poultry farms in which the quantity of seed used and the rate of mortality of the chickens is recorded in addition to expenditures, sales and profit or loss is also a new technique which has been recently applied by ACC (See Appendix N). Four hundred and seventy one tractors during 1967-1971 were purchased by ACC loans (Appendix L). These

form about 68 percent of the total number of tractors (688 tractors)[15] sold in East Jordan during 1967-1971. Also of a total of 53 combines sold in East Jordan during 1967-1971 50 of them or 94 percent were financed by ACC loans.

d. Saving and other sources of finance

Until the writing of this report, ACC has not imposed any saving discipline upon its borrowers. As mentioned earlier, ACC has the right of accepting deposits and farmers' savings but it had not practiced this function or formulated any strategy for farmers' savings. So it follows that it had no discernible impact on farmer savings habits.

The unfilled credit needs of the smallest farmers has induced other sources of credit, namely the non-institutional moneylenders, to expand operations. These people are showing increased interest and attention to the farmers, by visiting them on their farms, asking about their needs of inputs, delivering these needed inputs without delay and on credit to the farmer at his farm and at the same time they are binding these farmers to themselves. This information was acquired through personal visits to a few farmers in the Der Alla region in the East Ghor Canal Area and from the preliminary results of the Debbas survey in the Balqa District.

e. Employment

Some of the borrowers of ACC are absentee-owners, and the loans they get affect employment by increasing the number of agricultural workers or tenants they employ. Although part of ACC loans might have a slight negative effect on employment -- such as loans given for labour-saving agricultural machinery -- other loans such as loans given for terracing and building of soil maintaining walls, forestation or fruit tree loans, poultry farm loans and irrgation development loans (which increase the irrigated areas and which lead to intensive farming) lead to increase employment. However, no figures could be found to measure the extent to which ACC loans have helped in increasing employment.

f. Political and social structure

No noticeable effects on the political influence of certain rural groups could be noticed which were specifically due to ACC loans. ACC has not been reaching the lowest income group of farmers although this is one of the objectives for which it was created as will be seen in the following section. Changes in unit farm size have occurred in such places as the East Ghor Canal area due to the legal laws arising after the construction of the Canal (Appendixes I & J), but these changes were not the result of credit given by ACC.

15. Department of Statistics, 1971. Agriculture Statistical Year Book

3. Progress Towards other Objectives

Progress towards all the objectives mentioned in section II.E.1 was dealt with in the above discussion except for two of the intermediate targets which are considered as part of the means for achieving the ultimate objectives. These are:-

a. Win the confidence of the farmer so that he would be susceptible to the advice and recommendations of the credit supervisors. One of the problems of agricultural development in Jordan is that many of the farmers are illiterate, traditional (they put more value on their own experience and knowledge than on new ideas), and unsusceptible to advice and recommendations especially if that advice is coming from a younger man, which is usually the case of the credit supervisors. Through repeated times of trial and error ACC has been able to achieve progress to a certain extent in the direction of overcoming this problem with farmers with whom it has been dealing for a long time. However, no collective measures have been undertaken by ACC to enlighten the farmers and win their confidence on a wide scale basis.

b.

- Base all loans on the individual's ability to repay:
The borrower's ability to repay is estimated before the approval of the loan by studying his financial position and estimating his future income from his farm if the loan is approved. But until now, no loans have been given by ACC on that basis only. Mortgage of land or other security have to be submitted by the applicant even if it is proved that he can repay the loan from his farm income. This has been a major limitation to the accessability of lower income farmers the value of whose land would not be enough to cover the security needed for the loan and thus this is a major limitation to the progress of ACC towards one of its ultimate objectives which is to finance small farmers and provide them with credit to keep them in business.

However, here, a major qualification about small farmers must be made. Generally, small farmers in Jordan are:

i. Those who own small farms, possibly with a maximum not exceeding 5 hectares in irrigated areas and even a much higher maximum in dry farming areas.

ii. Those who do not own land, i.e., non-owner farmer-operators, which include all kinds of share-croppers and renters.

Part of the small farmers who own farms small in size are being served by ACC, namely those who own land above 2 or 3 hectares in irrigated areas. The value of the land of these farmers would be generally enough to cover the security needed by ACC, and their farm business is above the subsistence level. However, in dry farming areas, even those farmers who own about 10 hectares of land would be considered as small farmers, since the value of their farm business is low and fluctuating and the value of their land is low.

On the other hand, non-owner operators are ineligible to recieve loans from ACC unless they can provide guarantors who own land to secure them.

From the above discussion, it seems that ACC is reaching some small farmers in Jordan but it is not reaching the lower income farmers, those who own very small farms (below 2 or 3 hectares in irrigated farming areas and even more than that in dry farming areas), plus the non-owner operators. All these constitute a significant proportion of the farm population, as only the number of farm holdings that are below 2 hectares in area constituted (in 1965) about 45 percent of the total number of farm holdings all over Jordan (Appendix H), let alone the small farmers in dry farming areas and the share-croppers and other sorts of tenants. It might not be worthwhile (economically) to extend loans to those lower-income farmers. However, something should be done to help them such as consolidating them in corporations or collectives where they share in the production and income of that system, each according to his contribution of land and labour and according to a certain scale. A survey should be conducted on a scientific basis to study the profitability of farms of different sizes in different, irrigated and rainfed, areas of the country. This study could be used by policy-makers in Jordan to determine the optimum farm size in different areas and the possibility of consolidating small unprofitable farms in corporations, collectives or other forms of large-scale operation which lead to profitable farming, and thus lead to an increase in productivity, income and the level of living of this significant portion of the farm population.

4. Image

Reproduced from best available copy.

a. Farmer attitudes

In a study[16] which was conducted in 1971, by Kana'an, to evaluate the services of ACC from the farmers' point of view, twelve services which were provided by ACC were evaluated by a sample of borrowers selected randomly from the population of the study.

16. Kana'an Wail, 1971, Agricultural Credit Services in Jordan. A study conducted in fulfillment of his M.Sc. degree in the Faculty of Agricultural Sciences, A.U.B.

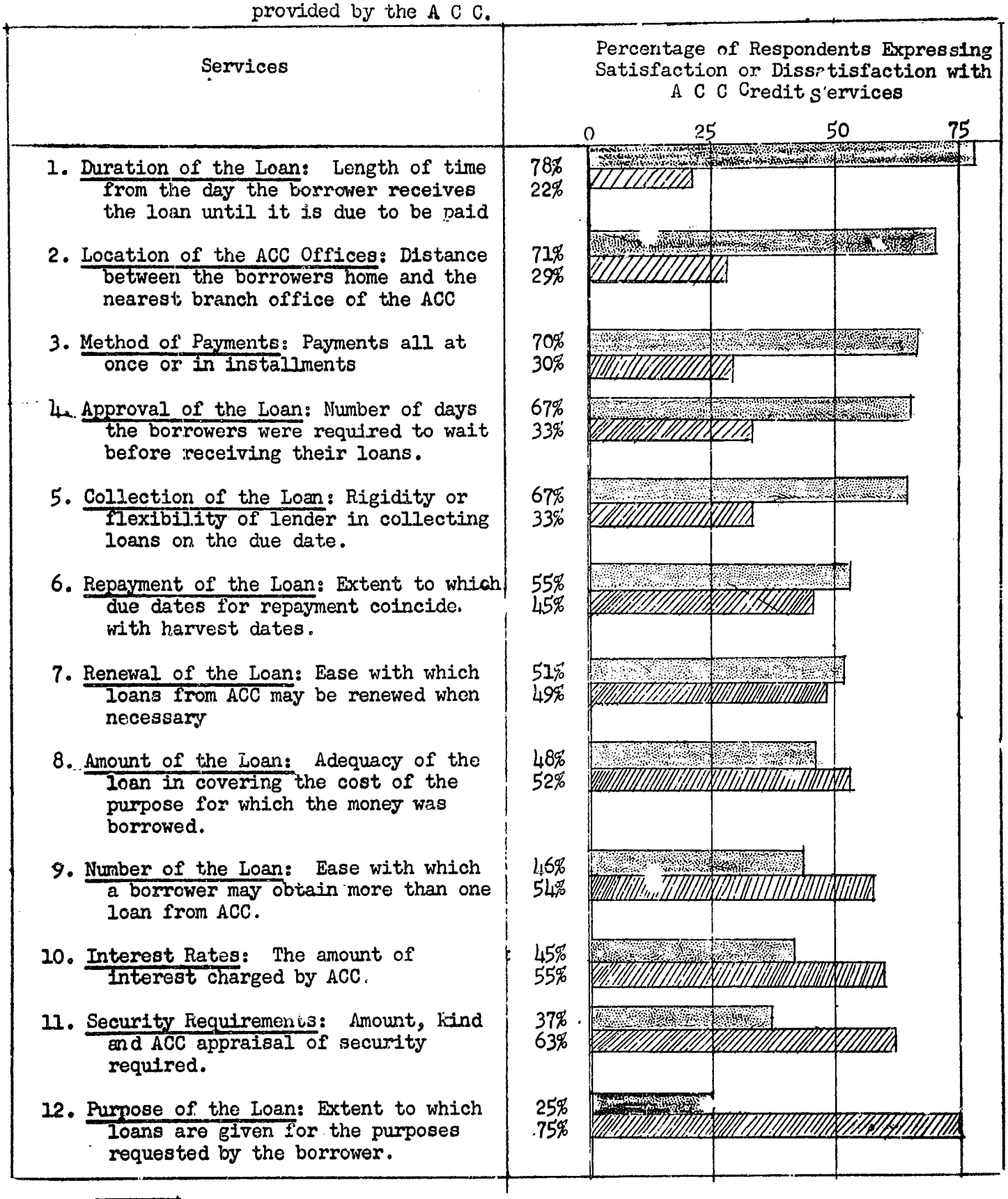
The results of the evaluation of those 12 credit services provided by the ACC showed that 7 out of the 12 were satisfactory to more than 50 percent of the respondents (Services number 1-7, Figure 1) and 1 service was satisfactory to more than 75 percent of the respondents (Service number1, Figure 1). Five services out of the 12 were unsatisfactory to more than 50 percent of the respondents (Services number 8-12, Figure 1) and 1 service was unsatisfactory to about 75 percent (Service number 12, Figure 1). These findings can be used as a tool for policy makers who are in positions to decide the percent of farmers they should satisfy. If the policy is to satisfy at least 50 percent of the borrowers, only five services which were unsatisfactory to more than 50 percent of the respondents should be improved (Services 8-12, Figure 1). If the policy is to satisfy at least 75 percent of the borrowers, all the credit services provided by the ACC should be improved except the duration of the loan which was the only service satisfying more than 75 percent of the farmers.

The study showed that farmer-borrowers' dissatisfaction with the services provided by the ACC was due mainly to the following: (1) loan size was not adjusted to farmers' needs, (2) loans were not given for all purposes needed by the farmers, (3) loans were based primarily on tangible securities and secondarily on intangible qualities, (4) estimation of the value of the security by the ACC was low, (5) interest rates charged (in the opinion of the farmers) were high, (6) the size of the loan was limited to 60% of the value of the security offered by the farmers, (7) repayment schedules did not coincide with the repayment ability of the borrowers, (8) loans were given after a long waiting period. In general, the above sources of dissatisfaction with the services provided by the ACC reflect the thinking, beliefs and feelings of the respondents and are not necessarily the actual prevailing conditions of the ACC credit services.

The respondents gave some suggestions for the improvement of the ACC credit services. Most of them suggested that efficiency of the ACC would increase if it would provide more seasonal loans, provide adequate amounts, give loans for all purposes needed, and postpone repayment of loans in dry years. Among other suggestions were the following: (1) eliminating the requirement of tangible security, (2) stabilizing prices, (3) studying the requirement of the village when providing loans for machinery, and (4) reducing the formalities in providing loans.

In general, the findings of this study confirmed the assumption that by increasing the number and quality of the services provided, farmers' satisfaction would be increased and this in turn, would be expected to increase the demand for ACC loans. The expenses of providing such

Figure 1. Farmer-borrowers' evaluation provided by the A C C.



Satisfactory

Unsatisfactory

Source: Kanaan, Wail Rushdi, Evaluation of Credit Services Provided by the Agricultural Credit Corporation in Jordan, M.S. Thesis, Faculty of Agricultural Sciences, American University of Beirut. Beirut. Lebanon.

services would cause the supply cost of credit to increase but this increase in the supply cost may be offset by the expected increase in the demand. In addition farmers' profits and social benefits would be expected to increase by a larger proportion than the increase in supply cost.

b. General image of program

The collective impression that the majority of observers have had about the ACC is that its establishment has been a good step towards the further development of agriculture, although they had some reservations about it. These reservations pertain mainly to recommendations for the development of its activities and services so that it can achieve its objectives. To these observers, ACC had made a good achievement in comparison with the situation prevailing before its establishment. First with the establishment of ACC, all institutional sources of credit for agriculture have been consolidated into one source. This made the credit structure easier for the farmer who previously did not know which is the most appropriate place to go for credit and at the same time there was no coordination in lending procedures and policies. Secondly, foreign financing agencies and donors did not know with whom to deal. Thus when ACC was established, it started to represent and talk in the name of agricultural credit in Jordan. Moreover, in the past when a farmer got a loan, he had the feeling, more than that at present, that this loan was just a government grant. ACC also started the supervised credit system which was not in existence before. The major reservation against ACC was that it has not been progressing in reaching the lowest income farmers. AID's image is summarized in the following quotation: "We consider the ACC program one of the best managed activities in the GOJ. It has designed its program to reach as many farmers as possible with low interest rate loans, and to centralize a source of credit to farmers. It has capable leadership and we are confident that ACC will continue to improve its operations to provide credit services to farmers." (AID, Proj 278-15-140-091, p. 11 - Director's Comments). The FAO Country Report authors' image about ACC is that "Judging by the volume of transactions year by year, and by an examination of operations in the field, it is legitimate to say that the ACC operates efficiently and is not overburdened by red-tape" (FAO, 1967, p. 103). The only documented impression from the GOJ is that loans issued by both the ACC and JCO did not cover farmers need for capital to invest in agriculture and farmers had to borrow from banks and middlemen at a high rate of interest, (Three-Year Plan (1973-1975), Agriculture Sector). The above impressions about ACC reflect the thinking and beliefs of the concerned parties and do not necessarily reflect the actual prevailing conditions of ACC.

B. EVALUATION PROCEDURES AND FEEDBACK

1. Program Evaluation Procedures

There are no evaluative procedures built into the ACC program or applied by it. Only two bench-mark surveys were being conducted on irrigation and poultry projects at the time of this writing. No ample surveys of income changes have been undertaken, no set of indicators designed to show progress toward announced objectives has been formulated and no major research on ACC performance has been made until the writing of this report. Only the annual revision of cost-return data serves as a basis for determining optimal loan size. The only formal periodic reporting requirement is that which has been applied lately on poultry farms. Any person who gets a loan for poultry projects is given two copies of a special form (Appendix N) which he has to fill on a day-to-day basis concerning the amount of feed he gives to the chickens and their rate of mortality. Then at the end of each month he fills his expenditures and sales value and submits one copy of the form to the branch manager who (from that copy) evaluates the performance of that borrower and gives him any necessary recommendations for the improvement of his project.

2. Feedback and Changes in Program

ACC has continuously modified its rules and procedures from the experience it acquired over the past years. Its Law No. 50 of 1959 was repealed and replaced by Law No. 12 of 1963. Several other modifications have taken place in its policies such as the termination of livestock loans especially those given for buying sheep as it was found that those loans are being used for other purposes because of difficulty of supervision over them.

Recently ACC started to write farm plans for its beneficiaries. It also has been providing farmers with seasonal loans since 1969. We have the impression that some of ACC's officers are dynami and susceptible to change and development and have creative ideas for the improvement of the program, but they are restricted to a certain extent by bureaucratic and routine work and by the lack of incentives.

C. PROBLEMS

1. Government Level

The Agricultural Credit Corporation was established with the overall objective of supporting agricultural development in Jordan through extending credit to farmers. This agricultural credit is only one link in a complete chain of factors and activities that can help the agricultural sector in Jordan

to develop. This chain is integrated, complementary, and comprehensive in nature, involving the economic and social development of the agricultural sector. The success of each link in achieving its anticipated role depends on the behavior of other links which involve the support of both the public sector (government) and the private sector.

Governmental support for agriculture is channel :d through a multiplicity of agencies and bodies. This multiplicity of agencies and bodies has rendered government policies less effective than they otherwise could have been and thus make ACC less effective in playing its anticipated role in agriculture. This is a short-coming which is likely to continue so long as no streamlining and consolidation of existing bodies and agencies is undertaken. On the other hand, coordination between credit, extension and marketing is still needed and the existence of a general agricultural farm plan containing the crop pattern for each area is still missing.

2. Program Level

The major problems facing ACC at the program level are:

- Shortage of funds
- Scheduling of repayments in short periods as a result of the shortage of funds.
- Delinquency in repayment of loans.

The ACC capital when it was established consisted mainly of the amalgamated institutions outstanding debts. Thus since its beginning in 1960, ACC has had to deal with the collection of bad debts most of which were delinquent loans given in emergency cases and under different policies and procedures. This caused a serious drain on its loanable funds. ACC was able to solve the problem of shortage of funds temporarily by getting two loans from the IDA which totaled $ 6,000,000. ACC is trying to collect and settle its inherited loans by giving incentives for repayment through partial or complete discharge of due interests on those loans. As discussed earlier, this shortage of funds is forcing ACC to give loans for shorter terms than the optimal to be self-liquidating which is one reason for delinquency.

As mentioned earlier, the delinquency rate of ACC loans is high. This high rate of delinquency in section II.F.1 was attributed to several factors part of which are beyond the control of ACC. Some of those factors which could be controlled by ACC have been improved upon though not completely solved such as taking into consideration the time of harvest while arranging the repayment schedule, examining the borrowers financially before approval of the loans and supervising all loans to ensure that none of them is misused.

Problems still to be solved are the adoption of a strict collection policy and the limiting of the cases of loan renewal to only those absolutely justified.

At its establishment, the personnel of the amalgamated institutions were transfered to ACC. Most of those were underqualified. ACC was able to improve their qualifications and standards to a certain extent through in-service training programs. Yet, complete remo l of the still underqualified personnel should be undertaken to increase the bank's efficiency of operation and reduce its administrative costs.

3. Farm Level

Problems associated with the ACC and related to the farm level are extracted mainly from the Kana'an's survey on ACC services. The main points which pertain to problems associated with the ACC on the farm level are:

- Loan size: is not adjusted to farmers' needs. ACC is trying to make the size of the loan adequate enough to cover the costs of the purpose for which the money is borrowed.

- Loan urpose: Loans are not given for all purposes. Farmers complain that ACC does not give them loans for their consumption needs and so they have to borrow from other sources (or maybe misuse the ACC loan).

- Collateral: Loans are based only on tangible security and the loan size is limited to only 60 percent of the assessed value of the applicants land. The estimation of the value of the security by the ACC is considered low by the farmers.

- Though it is possible, theoretically, for a non-owner to borrow from ACC, preliminary results of the Debbas study indicate that it is very rare for such a person to be found among CC borrowers. As mentioned earlier (Section II.D.5.) the proportion of these non-land-owning farmers in Jordan is significant.

- Repayment schedules did not coincide with the repayment ability of the farmer, i.e., with harvest time. This problem is being solved by ACC.

- Loan procedures and time needed for loan approval is a problem. In the Kana'an survey, 20 percent of the farmer-borrower sample interviewed received their loans in 15 days or less, 43 percent in 16 to 35 days, and 37 percent received their loans after 35 days.

- Farmers complain that the interest rate charged by ACC is high. This rate was unsatisfactory to 55 percent of the farmer borrowers in the Kana'an survey sample. The author's expect the final analysis of the Debbas study to show that it is not the nominal interest but rather the real cost of borrowing that farmers object to.

D. CONCLUSIONS ABOUT SMALL FARMER CREDIT

1. Major Problems of Small Farmers

The major problems of small farmers in Jordan are cited in the following points.

- Low level of income which is due mainly to low productivity levels which in turn is due to the inefficient use of the limited resources, namely land and water.

- Fragmented small farm units

- Lack of water and dependence on infrequent and insufficient natural rainfall in large unirrigated areas.

- Lack of availability of inputs, seed, fertilizer and pesticides.

- Lack of the proper combination of the whole package of services that are needed in the proper time and place

- Lack of knowledge of how best to combine and use limited resources.

- Lack of well-developed markets, storage, refrigeration and transportation.

- Lack of incentives because of low and fluctuating prices.

- Low level of general education

- Frequent loss of crops as a result of the June 1967 war and its aftermath which resulted in the inability of farmers either to cultivate their land or harvest their crops several times since 1967. Also the closure of the Syrian borders since 1970 resulted in the loss of markets, a drop in prices, and further losses to the farmers.

- Indebtedness of small farmers to non-institutional money-lenters at exorbitant rates of interest.

2. Role of Credit in Meeting These Problems

Credit can enter into the picture at both the macro and micro levels to solve most of the above problems. At the macro-level, the bank itself could develop infrastructure, transportation, and marketing including storage processing, and refrigeration. A lender may help in marketing by directly buying the farmers produce or advise the farmers on where and when to market. On the other hand, a borrower could invest in storage, refrigeration, processing and transportation facilities and thus have the effect of stabilizing prices.

At the micro-level, credit could be given in a way that is of mutual benefit to both the lender and the borrower. Credit given with proper education, supervision, technical assistance and with a complete and tied package of inputs will not only improve production and productivity but will also improve the managerial spirit of the farmers.

However, to solve the problems of the lower-income farmers, credit alone is not enough. As mentioned earlier, the owner-operators of these farmers need to be consolidated in corporation or collectives and then credit can be properly given to them. Concerning the non-owner operators, institutional credit to them, we think, will depend on the new laws which will organize the relationship between the tenants and the land owners.

On the other hand, institutional credit is highly needed to solve the problem of small farmers cronic indebte dness to non-institutional money lenders at exorbitant rates of interest.

3. Credit and New Technology

a. Triggering small farmer development

Small farmers' incomes are very low and their savings are meager if not totally non-existant. They need credit badly to stay in the business of farming either their own lands or the land of other owners. Therefore it is evident that if they are to move to an improved level of technology, an extra-ordinary infusion of institutional credit is needed for both the use of modern agricultural techniques and for the use of good qualities and adequate quantities of purchased inputs, especially seed, fertilizer and pesticides. In our opinion, in order that the small farmers move to an improved level of technology, credit should not be given only to cover the cost of the use of purchased inputs, but also to cover all operational costs including the farmer's subsistence consumption needs. The needs of his subsistence living should be considered as other operational costs. A tractor needs fuel to move and a farmer needs food to work.

b. Sustaining small farmer development

Proper long-term development planning that succeeds in increasing the small farmers income and in raising their level of living would make it also possible for the small farmer to continue to purchase new technology inputs by himself without the need for credit. The limiting factor on the small farmer's ability or propensity to continue to purchase new technology is not only credit, but credit that is properly given together with agricultural education and complete technical assistance. However, more important than credit is the availability and maximum utilization of water resources and the assurance that when credit is given, the whole package of inputs will accompany it.

4. Conditions for Success or Failure

The Agricultural Credit Coorporation (ACC) is a simple institution in operation and action and it is not too huge or complicated to be manageable. It has definite rules and regulations and is specialized in one field of services, that is, it does not handle too many things at the same time. This might be a reason why it has done better than the Jordan Cooperative Organization (JCO).

The main explanations for its not being fully successful in its operations are crop failures, the uncertainty of markets (such as the result after the closure of the Syrian borders in 1970), and the political situation that has risen since the June 1967 war. These circumstances lead to the explanation of its weak collection policy. Though the ACC is moving now in the right direction of giving incentives for the setting of old loans, foreclosure should be applied in the near future to make the farmers aware of the consequences of not repaying their debts. Supervision applied by ACC is incomplete in the sense that it is supervision for the control of he loan rather than supervision for technical assistance and development.

5. How Could the Program be Improved

Based on the discussion throughout this report, several recommendations, some more important than others, can be made with the view of improving the performance of the ACC. These recommendations are classified in different categories which pertain to (a) Loan approval procedures and requirements, (b) Collection procedures and policies, (c) Technical assistance and other recommendations.

a. Loan approval procedures and requirements

i) Decentralize loan approval techniques and reduce loan approval procedures. This will reduce the time needed for loan approval and will lower the cost of lending.

ii) Intangible security (such as the repayme capacity of the borrower, his character and reputation in the community, his ability as farmer and manager) must be taken into consideration for each borrower and, with time, may replace tangible security.

iii) The size of the loan should not be limited to 60 percent of the value of the tangible security in all cases.

iv) Loans should not be issued long in advance of the time when money is actually needed, neither, on the other hand, should the issue be delayed until the time for use has passed.

v) The amount of the loan should be sufficient to insure the achievement of the purpose of the loan. It may even include something for subsistence (labor maintenance) consumption.

b. Collection procedures and policies

i) A better method for making the borrower understand and remember the conditions of the loan should be adopted. Personal contact with the borrowers at different suitable intervals can be followed to refresh the memory of the borrower with the due dates and other conditions of the loans as well as reminding him of a moral obligation to repay his loans.

ii) Give incentives to raise the efficiency of the bank employees:

- Give bank employees a percentage of money collected, or
- Increase salaries based on such criteria as:

  x. amount of money loaned,
  x. percent of money collected, or
  x. number of borrowers served.

iii) Establish a reputation of being strict and tough in collection.

iv) Establish an annual routine of classifying loans which reach a certain number of years (possibly 15 years) in their delinquency status as "lost" and consider the value of these loans (with their interest) as a percent of money loaned during the year. This would be a percentage that should be added to the interest rate to cover risk. This implies also the elimination of an interest rate ceiling.

v) Postponement of repayment and renewal should be tied only to severe circumstances and causes beyond the farmer's control such as crop failure or other natural disasters. The need for loans renewal may be reduced if repayment due dates coincide more closely with dates on which harvests come.

vi) Develop a technique of crop insurance through local insurance companies. This would reduce the risk both to the farmer and to the ACC. If this system is developed, the ACC should accept the insurance policy as a guarantee. It may even adopt a policy of adding to the loan an amount sufficient to pay for each farmer's annual insurance premium.

c. Technical assistance and other recommendation

i) Adequate technical assistance and guidance concerning the proper use of the loan and the technology of inputs to be used should be provided by the ACC with the help of the agricultural extension agents to insure the productive use of the loans.

ii) Make sure that the proper package of inputs is available so that lower levels of technologically essential inputs will not be used instead.

iii) The research and credit department at ACC should develop a scientifically designed methodology for collecting data and setup built-in evaluation procedures and systems to be used in evaluating the loans given out and the ACC progres towards its objectives so that the results will be guideliness for changes in policy and procedures. Emperical data on the effect of the loans on farm productivity, income and technology should be collected on a sample of loans after they are spent. This procedure should be followed at various intervals of time on a different sample of loans.

iv) Coordination between the ACC, the Research and Extension Department and the JOMAP should be highly increased, so that the farmer-borrower would have the advantage of the services of the three institutions, taking credit from the ACC, and receiving technical assistance and guidance from the extension agents and marketing facilities from the JOMAP. These three institutions could form together one integrated and comprehensive chain.

v) There should be a shift to a more thorough and positive type of supervision, (emphasizing techniques of farming and sound financial management). Admittedly this would be more costly. Perhaps a graduation policy which allowed deserving borrowers to move to a non-supervised program within the ACC would free the limited supervisory staff to exert this intensive supervision on those left in the supervised program, thereby making it possible to continue with no additional staff.

vi) To complement the increase in livestock production specified in the 1973-75 Three Year Plan (Appendix B) it is recommended that ACC resume lending for livestock purposes and that payments be made directly to the seller of the livestock rather than to the borrower to avoid misuse of the loan.

vii) The authors wish to endorse the recommendation made by ACC in 1966 which is repeated in the FAO[17] Dar El-Handasa Reports (1967 and 1969, respectively): "Particularly intractable is the problem of debtors who have borrowed from money lenders and traders at exorbitant rates of interest, with or without the mortgage of land. Postponement of repayment, the practice that has been legalized for some 20 years now, is no solution. It is here recommended that a Royal Commission be appointed to examine the problem in its entirety, consolidate the farmers' indebtedness to private sources, and suggest scaling of debt and lump-sum settlement to the creditors. The settlement, to be effective and decisive, must be supplemented by the availability of funds to pay the debts finally. In other words, the Government should only undertake this course if it has access to funds that will be adequate to erase rural indebtedness to private lenders and to shift the obligation to an official agency. This agency would then be reimbursed by the debtors installments at very low rates of interest."

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17. FAO, 1967. Jordan Country Report. Rome.

IV. ROLE OF TECHNICAL ASSISTANCE

A. A.I.D. INPUTS

As described above (See Sections II.A.1 and II.G.4 AID has contributed to ACC in the form of a grant of $ 2,743,727, a loan of $ 448,000, and $ 30,000 worth of technical assistance in the form of on-th-job training to ACC staff.

B. OTHER DONOR INPUTS

IDA has assisted the ACC with two loans of $ 3,000,000 each. Besides this, both the IDA and the American Friends Service Committee have provided technical assistance to the ACC.

C. EFFECTS

Without the help of AID and IDA financial and technical assistance the supervisory aspect of the ACC credit program would have begun much later, if over. But domestic conditons were not sufficiently considered by both AID and IDA to:

- reduce delinquency in loan repayment, and
- reach large numbers of the lowest income farmers.

D. RECOMMENDATIONS

Basically the ACC is a sound lending institution staffed with dedicated people who are anxious and willing to make the changes necessary to improve their program of agricultural credit. As such it is well deserving support from either domestic or international sources.

If AID wants to use its influence to persuade ACC management to accept policy changes, perhaps the least presumptuous way to do so would be to continue sponsoring scholarships by which ACC management can learn for itself how to correct its own problems. There are serious doubts about the integrity of making changes through the control and leverage devices which developed nations use to exert pressure on less developed nations. A more dignified and humane way by which nations of the world deal with each other must be fostered at all levels and at all points of contact. AID's relationship to ACC should be no exception. If, however, AID should choose to provide a loan to the ACC for credit for small

farmers then the following conditions should be imposed with the loan:

- Provisions need to be made to guarantee that the money goes only to lower income farmers.

- Provisions should be made to reduce delinquency in repayment of loans (see specific recommendations related to this section III. D. 5).

- A part of any donor assistance program should include a budget for a continuous on-the-job training program given to the ACC credit supervisors and Ministry of Agriculture agricultural extension agents jointly to strengthen the working relationship between the two and to equip them with both the inspiration and the supervisory skills needed to give effective technical assistance and complete supervision to low income, weak, small farmers so that these farmers may make permanent advances and productive use of loans.

- Attention should be given to the recommendations made earlier in this paper (See Section III. D. 5).

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A P P E N D I X E S

Appendix A

Articles of the Laws of the Jordan Central Bank (JCB) that pertain to its relationship with the SCI's.

Article 38 - The Central Bank opens accounts to the specialized credit institutions (SCI), accepts their deposits and serves as a clearing house between them and between member banks and serves as a bank for these institutions.

Article 39 - The JCB buys from the certified banks and SCI's on conditions it decides, bonds, bills and any other securities and it sells, discounts and rediscounts these documents if their due date does not exceed 90 days after the JCB buys or rediscounts these securities.

Article 40 - The JCB extends credit to the certified banks and SCI's for a period not exceeding 9 months on the condition that a mortgage be given as security for this credit in the form of the following:

a) The security bills mentioned in article 39.

b) Government bonds and bills marketable in the market on the condition that their due date does not exceed 10 years when submitted to the JCB.

c) Public Institution's bonds guaranteed by the government and marketable in the market on condition that their due date does not exceed 10 years when submitted to the JCB.

Article 41 -

a) The JCB make decisions on the general conditions and on all the instructions concerning credit facilities for the certified banks and SCI's. The JCB publishes irregularly the discount rate it charges for rediscounting and giving credit.

Article 45 -

a) The certified banks and the SCI's have to supply the JCB with the information it asks for in the times and procedures it decides.

b) The JCB asks for any additional or clearing information from the certified banks and the SCI's who have to supply this information on the specified date.

c) The JCB has the right to publish all or part of the accumulated information if the information published does not reveal any special financial conditions of a certified bank or an SCI unless the written agreement of the concerned institution is secured before hand to publish such information.

Appendix B

The Three-Year (1973-1975) Economic

Development Plan of Jordan

THE AGRICULTURAL SECTOR

AGRICULTURE

The agricultural sector occupies an important place in the Jordan economy; 20% of GDP comes from agriculture and about 40% of the tota labour force is engaged in it. Exports of agricultural commodities represent 50% of the total value of exports. However, this sector is still unable to satisfy the country's needs of various food and agricultural products. Imports of these products during the period 1967-1971 amounted to JD 19.5 million, while exports during the same period did not exceed JD 5.2 million, which shows a deficit in the trade balance of agricultural commodities of around JD 14.3 million.

1. General

Total agricultural output in the East Bank of Jordan comes from utilizing 6.7% of the land in this part of the kingdom. This output is affected not only by the area utilized but also by a number of interrelated factors that necessitate the review of the general agricultural situation in the country in light of the following:

a) Natural Agricultural Areas

The agricultural areas in the East Bank of Jordan can be divided into three natural regions, namely the Ghor region, the Highland region and the Badia (desert) region.

1. The Ghor Region

This area is part of the Dead Sea basin that falls between the Yarmouk River in the north and Khneizers Vally in the south, and between the Jordan River and the Dead Sea in the west and the Eastern highlands in the east. The whole area falls below sea level, and water for irrigation is available in this region. This region is characterized by its ability to produce more than one crop each year, and by its early production capability relative to other regions and neighbouring countries.

The Ghor region can be divided into two main divisions the North Ghor and the South Ghor, with the Dead Sea in between.

Total cultivable area in the North Ghor is around 325.000 dunums, while in the South Ghor it is around 60,000 dunums. The main available water resources in the North Ghor are the Yarmouk River and side wadis which are all tributaries of the Jordan River. Annual discharge of these

resources is around 660 million cubic meters. Water resources in the south Ghor are Mujeb, Waditheh and Hasa valleys, in addition to a number of springs. Annual discharge of these resources is around 30 million cubic meters. Some construction for irrigation purposes has been made as part of the phases of utilizing water resources for irrigation in the Ghor Area (see irrigation).

These projects helped place more land under irrigation and enhanced agricultural output of the Ghor regions.

2. The Highland Region

This region falls between the Yarmouk River and the Syrian borders in the north, Wadi Mousa in the south, Wadi Araba and the Ghor in the west and the Badia region that surrounds it from the east and the south. This region includes a hilly area of three parts. The first falls in the Irbid Governorate in the north, the second in the Amman and Balqa Governorates in the middle, extending from the Yarmouk River to Wadi Walla, while the third part falls in Karak and Ma'an Governorates, extending from Wadi Mujeb in the north to Wadi Musa in the south.

Average rainfall is 200-600 mm. in the north and the middle parts and 200-300 mm. in the southern part of this region. Average volume of annual rainfall in this region represents 44% of the total annual volume of rainfall in the East Bank of Jordan. Rainfall in this region is characterized by variation in volume, density and time from one year to another. It is the main source of water for irrigation. Other water resources are: several scattered springs and a small amount of ground water in the Sama Sdood, Zarka, Ghuweir, and Shobak areas. Areas in this region that are partially irrgated from spring water are around 60,000 dunums, while areas under irrigation from ground water are around 9,500 dunums.

This region is subject to severe erosive factors as a result of the eradication of most of the trees by human action. Land holdings are generally fragmented and small in size. The main crops are wheat, barley, legumes, tobacco, vegetables and fruits. Terracing and planting fruit trees such as olives, grapes and stone fruits started only recently in this area, in addition to afforestration of some wide areas to control soil erosion.

3. The Badia (Desert) Region

This region falls south and east of the Hiland region and occupies around 87% of the total area of the East Bank of Jordan. Its land is used for grazing purposes since livestock depends on the grass that grows in its

valleys and rainfed areas. This region lost much of tis economic importance as a result of overgrazing and the lack of organized grazing. Investigations and hydrological research have shown that its ground water in the north can irrigate 30,000 dunums, but only 17,000 dunums are presently utilized. Ground water in the south can irrigate 88,000 dunums of which only a few thousand are presently utilized.

Four agricultural stations have been established in this region, two in the north, one in the middle and one in the south. These stations work on delineating suitable crop rotations and plants for each area.

b) Agricultural Labour Force

In most of the rainfed areas, farmers are characterized by a traditional agricultural attitude, represented by poor planning in terms of the selection of varieties and quantities to be used or dates of planting or cost accounting. Modern methods, such as the use of improved seeds chemicals and fertilizers and investment credits are not widely practised. Agricultural workers in these areas differ in their attitude towards agriculture from farmers in the irrigated areas. The latter produce mainly for commercial purposes and consume little of the what they produce.

The labour force in the agricultural sector can be classified into three classes: landlords, tenants (rent or sharecropping basis) and hired hands. No legislation has been enacted to organize relations between landlords and tenants and to specify the rights of the agricultural labour force, as is the case in other sectors.

c) Organizational and Supporting Factors

1. Agricultural Holdings

The agricultural census of 1965 showed tha the total number of agricultural holdings in Jordan was 93,000, 36% of which were less than 10 dunums and 70% less than 50 dunums. Most of these holdings were not economically feasible, as they were fragmented into several small pieces. This increased production costs, reduced investment inventives and led to a poor level of land utilization. It is worth noting, however, that the East Ghor Canal Law has now solved the problem of land fragmentation in the Jordan Valley and has ensured that the problem would not arise in the future. The South Ghor and Highland areas, however, still suffer from land fragmentation.

2. Agricultural Cooperatives

The agricultural cooperative movement started early in the fifties. There are 150 agricultural cooperatives in the East Bank, with a total number of 5,217 members. The cooperative system has played its traditional role of procuring seasonal loans, supplying production needs and aiding the marketing process, but on a small scale. The movement has not, however, played an active part in developing agriculture in Jordan to a satisfactory level in terms of broad group action, import of production materials, extensive marketing, land consolidation or profit increases. Presently, a number of small cooperatives in Arda, Irbid and Madaba have been consolidated into several multi-purpose groups. These new societies are characterized by large membership, efficient work and full-time administration; but they do not cover all areas, and the need still exists for more service-oriented agricultural cooperative societies.

3. Agricultural Credit

Farmers' savings in Jordan are meagre; hence credit is an essential factor. However, there are only two official credit societies: The Agricultural Credit Corporation (ACC) and the Jordan Cooperative Organization (JCO). In the last twelve years, the ACC issued a total of JD 9.3 million in loans for the purpose of land improvement, livestock development, purchase of machines and equipment, and farm construction. At the end of 1972, total outstanding loans amounted to JD 5.3 million; and annual loans during the last five years averaged JD 627,000. At the end of 1971, the JCO outstanding loans amounted to JD 770,000. Loans issued by both the ACC and JCO do not satisfy the capital-investment needs of the agricultural sector. Consequently, farmers have to borrow from banks and middlemen at a high rate of interest.

4. Other Agricultural Services

The Ministry of Agriculture started its agricultural research and extension activities and services in the early fifties. A research station was established in Deir Alla and an extension staff was employed to offer services to farmers in most agricultural areas. The development that took place since then, especially in the irrigated areas, required further technical support to achieve continuity and improvement. This can be achieved through improving the quality and quantity of extension services and upgrading the efficiency of extension agents by providing them with adequate training, locally and abroad. In 1970, the extension staff was merged with the research staff to facilitate the dissemination of research findings.

In addition to the above services, the Ministry of Agriculture offers veterinary services, gives out seedlings of fruit trees, exercises and disease control and helps farmers in terracing and soil conservation practices. The Ministry also offers marketing services such as grading and packing of fruits and vegetables in the North Shounch and Wadi Yabes stations, providing market news including prices and quantities of local and foreign markets, and marketing of agricultural product through the Jordan Agricultural Marketing Organization.

The Agricultural Marketing Directorate was merged early in 1972 with the Agricultural Economics Directorate in order to organize marketing at the national level.

2. Characteristics and Problems

a) Fragmentation and small size of agricultural holdings. This contributes to an increase in costs of production, limited investment and low agricultural output.

b) Prevalence of traditional cropping patterns that do not lead to maximum output and contribute to soil exploitation and a decrease in fertility.

c) Deterioration of land productivity as a result of erosion and the lack of sound soil and water conservation practices; also, cereal planting in the marginal areas and steppes and disorganized grazing. This has contributed to aridity and mass cattle destruction in dry seasons. In addition, areas planted with forest and fruit trees are very small.

d) Lack of effective coordination between the agencies involved in agriculture, namely the Ministry of Agriculture, Ministry of National Economy, Ministry of Education, Jordan River and Tributaries Regional Corporation, Land and Survey Department, Agricultural Credit Corporation and Jordan Cooperative Organization. This lack of coordination causes waste, and poor guidance and leads to conflict in objectives and means of communication between these agencies and the farmers.

e) Lack of organized bodies that represent farmers and strengthen relations among them; also, weakness of the cooperative societies, reflected in their small numbers, limited memberships, and poor services.

f) Weakness of agricultural marketing, reflected in the lack of efficient marketing services and facilities. This has resulted in a proliferation of middlemen and hence to higher consumer prices and lower farmer revenues.

g) Utilization of a large percentage of the cultivable land on a rent or share cropping basis, which causes a decrease in national agricultural output as a result of inequality in cost and return sharing between the landlords and the tenants and lack of security and investment incentives for the tenant.

h) Prevalence of seasonal, disguised, and chronic unemployment of farmers.

i) Insufficient capital available for agricultural investment and complicated lending procedures.

j) Inefficient utilization of water resources for agricultural purposes, which limits the use of land for intensive and diversified plantations of high and stable productivity. This type of land does not exceed 3.9% of total cultivated land.

k) Low farmer income ingeneral as a result of the above mentioned factors and of the high costs of production and low prices of crops, in addition to lack of crop diversification.

3. Goals

a) Increasing agricultural income from JD 36.5 million in 1971 to JD 46.9 million in 1975, a 28% increase.

b Increasing the output of agricultural commodities and animal products in the East Bank, according to the following schedule:-

Crop	Average Production 1967-1971 (1000 tons)	Estimated Production In 1975 (1000 tons)	% of Increase in Production 1975 over 1967/1971
1. Field Crops			
Wheat	134.4	160	19
Lentils	18.8	22	17
Fodders	93.4	170.2	82
Others	4.9	7.5	55
Total	251.5	359.8	43

Crop	Average Production 1967-1971 (1000 tons)	Estimated Production in 1975 (1000 tons)	% of Increase in Production 1975 over 1967/1971
2. Vegetalbes			
Tomato	155.6	190	22
Eggplants	37.7	47	25
Pepper	8.2	11	34
Potato	2.2	8	264
Onion and Garlic	3.5	7.6	117
Others	84.5	115	36
Total	291.7	378.6	29
3. Fruit Trees			
Olives	15.5	24	54
Grapes	14.9	21	40
Citrus	23.8	40	68
Banana	14.6	17	16
Others	7.8	11	41
Total	76.6	113	47
4. Animal Products			
Meat	15.9	25.6	48
Dairy Products	69.6	84.8	21
Eggs (in million	48.1	140.0	191
Others	2.7	5.3	96
Total (Except eggs)	88.2	113.7	29

c) Increasing the value of exports of agricultural commodities from JD 4 million in 1971 to JD 8.5 million in 1975, and decreasing the value of imports of agricultural commodities.

d) Improving the efficiency of marketing agricultural products through establishment of marketing institutions and procurement of marketing services.

e) Reclaiming land and increasing the area under cultivation through land leveling practices and planting more forest and fruit trees.

f) Increasing the number of livestock varieties of high meat and milk productivity through introducing new strains and improving local varieties.

4. Organizational and Policy Measures

a) Formation of an Agricultural Development Council, chaired by the Minister of Agriculture and having the following members: Minister of National Economy, President of the National Planning Council, Director General of the Agricultural Credit Corporation, Director of Jordan River and Tributaries Regional Corporation, Vice President of the Natural Resources Authority, Director General of the Jordan Agricultural Marketing Organization, Dean of the Faculty of Agriculture at the University of Jordan, Director General of the Jordan Cooperative Organization and three members representing the private sector. The functions of the council will be as follows:

1. To determine agricultural policies and objectives within the framework of the Plan.

2. To formulate integrated plans for agricultural development, control and follow up of projects and works of the Plan, and to overcome difficulties that may face such activities.

3. To direct the potentials and activities of the private sector within the limits of agricultural policies and the objectives of the Plan.

4. To take measures and decisions to develop, protect and maintain agricultural production.

5. To coordinate activities and requirements of different departments, corporations and organizations involved in the agricultural sector.

6. To supervise the agricultural development councils on the Governorate level, and, through these councils, to oversee the agricultural development committees in the villages.

b) Formation of an agricultural development council in each governorate chaired by the Governor and composed of the directors of the ACC and the JCO and a number of representatives from the private sector in the governorate. The function of these councils is the implementation of agricultural development projects in each governorate, establishment and support of cooperative societies and encouragement of the private sector by all possible means to invest more in agriculture in order to increase agricultural productivity.

c) Formation of committees on the village level composed of farmers and the extension and cooperative agents in the village. The function of these committees is to participate effectively in agricultural development on both farmer and village level.

d) Enactment of laws to organize the relationship between landlords and tenants or sharecroppers, and to secure adequate incentives for tenants to invest more in agriculture.

e) Expansion and strengthening of the agricultural cooperative movement ot include the maximum possible number of farmers. This can be achieved by supporting the existing societies, forming new specialized and regional cooperatives and unions, and assisting these societies financially and technically, to enable them to organize agricultural production, implement agricultural policies and procure supplies for the production and marketing of agricultural products.

f) Organization and promotion of marketing of agricultural products in local and foreign markets, through the following procedures:

1. Application of a flexible cropping pattern that takes into consideration the requirements of local and foreign markets.

2. Encouragement and training of farmers to grade their products in their farms and in grading and packing stations.

3. Formulation of standards for all kinds of agricultural commodities and packages for local consumption or export, and prohibition of exporting of commodities which do not meet the standards, in order to gain and maintain a good reputation in foreign markets. Also, prohibition of marketing of products which do not meet the standards required for local markets in order to reduce the marketing margin, for the benefit of the farmers.

4. Promulgation of material and moral incentives to farmers who turn out good products or obtain yields higher than a certain level.

5. Organization of agricultural exhibitions with the objective of promoting desirable competition among farmers.

6. Organization of the marketing of products (especially tomatoes, eggplants, peppers, and beans) in foreign markets through contracts between the Jordan Agricultural Marketing Organization and the producers, with the purpose of producing desirable varieties at a maintained minimum far price.

g) Development and support of agricultural and extension stations by technical and material means and establishment of more stations to cover various agricultural areas so that applied research can be conducted, with the objective of increasing land production, diversification of products, introduction of varieties for export and processing and plant protection from diseases and pests.

h) Improvement and expansion of extension services to cover all agricultural areas, through the following measures:

1. Improvement of the technical level of the presently employed extension agents through training programmes in the research stations and abroad.

2. Expansion of the number of extension agents in order to provide services to the majority of farmers.

3. Dependence on extension agents to convey government agricultural policies to the farmers, and to convey problems and difficulties that face the farmers to various departments for solutions.

4. Procurement of material and technical facilities needed to conduct demonstrations in various agricultural fields.

i) Organization of production and distribution of forest and fruit trees seedlings through improvement of existing nurseries and increasing their number, in order to meet afforestation and tree-planting requirements.

5. <u>Projects</u>

a) <u>Agricultural-Economic Research and Studies</u>

Planning for agricultural development requires the collection of comprehensive data and statistics on various agricultural activities, as the coundness of planning depends on the availability of this information.

This project aims at conducting studies on the following subjects, with the purpose of supporting future planning for the agricultural sector:

a. Farm administration, including the utilization of agricultural resources, production costs and agricultural revenues.

b. The agricultural holdings situation, such as th distribution and fragmentation of holdings, land tenure conditions and their effect on investment and income distribution.

c. Agricultural marketing, including demand on agricultural commodities in different markets and marketing efficiency.

d. Animal husbandry from the economic point of view, including introduction of new strains, feeding, productivity of different varieties, cost and returns.

e. Feasibility study of processing agricultural products.

f. Agricultural credit, including financial resources, size and terms of loans.

g. Analysis of the ongoing and proposed agricultural projects to be executed during the Plan Period, and follow up of these projects.

An agreement has been concluded with the United States Agency for International Development (USAID) to recruit an expert to assist the Agricultural Economics Directorate in conducting studies and collecting information related to planning on national, regional and farm levels.

Estimated costs of this project are JD 25,000 to be financed from the general budget and foreign assistance, and distributed as follows:

(In JD 000's)

1973	1974	1975	Total
5	10	10	25

b) Regional Development of Dryland Farming

The aim of this project is to solve natural, human and organizational problems and restrictions facing farmers in dryland areas. The project deals specifically with problems of agricultural development as integrated efforts between public and private sectors which will be organized into suitable cooperatives. Farmers in dryland areas all suffer from these problems, which cannot be tackled on an individual basis, because of their integrated and multi-faceted nautre.

The achievement of the above-mentioned objectives requires the following:

1. A detailed survey of the presently practised cropping pattern.

2. Soil survey and classification.

3. Study of the problems related to agricultural land holdings, which should include determination of the minimum economic size of holdings, land consolidation and redistribution. In these studies, consideration should be given to topography and productive factors, voluntary exchange among land holders, consolidation and redistribution of land among the same holders (in a way similar to the one followed in the East Ghor Canal Project), and group incorporation where the cost of production as well as profits are shared among partners, in the same ratio.

4. Establishment and application of a new cropping pattern, considering the natural factors of production such as climate, soil and rainfall.

As the development of all dryland areas in the East Bank during the Plan period is impossible due to limited available facilities, the execution of this project is limited to an area of 170,000 dunums located in Karak Governorate in cooperation with the United Nations Development Programme and World Food Programme as a pilot project named "Al Hussein Green Project". In addition to the above-mentioned tasks the pilot project will plan and execute other activities related to water reservation and soil conservation within an area of 70,000 dunums.

The pilot project costs over the Plan period are estimated at JD 741,000 distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
UNDP Contribution	83	72	72	227
Government Budget	38	38	38	114
WFP Contribution	100	150	150	400
Total	221	260	260	741

This pilot project was started in 1963 in the Baqa'a area, but was transferred to the Karak area in 1971 as a result of the 1970 events.

Although the project is scheduled to terminate at the end of 1974 according to the present agreement with UNDP, further extension will be requested because of its importance.

In addition to the pilot project, the dryland development project includes the following actions:

1. Aerial survey of about 12,000 km^2 of land where annual rainfall is more 250 mm. Air-photographs will be prepared in a scale of 1:10,000.

2. Soil survey and classification using air-photographs, and preparation of soil maps for 12,000 km^2 in a scale of 1:10,000.

3. Detailed soil survey and classification of an area of 30,000 dunums.

4. Detailed survey of the present cropping pattern in the dryland areas by using aerial-photographs. Also, preparation of a new cropping pattern for various areas based on their relative advantages and characteristics.

Estimated costs of the above works during the Plan period are KD 260,000 to be financed from the general budget and foreign assistance and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Costs of aerial surveys	200	30	30	260

c) Wheat

Wheat is one of the main agricultural crops in Jordan as it is the staple food of the population and occupies the largest area of cultivated land. The average annual wheat-cultivated area for the period 1967-1971 was 2.1 million dunums, or more than one-third of the cultivated land in the East Bank of Jordan. Average annual production of wheat for the same period was 134,000 tons, while average consumption was 246,000 tons, which shows a deficit of 111,000 tons valued at JD 3.3 million or one-fifth of agricultural imports.

This deficit, which is increasing every year, is attributed to many factors, which include: increase in population, decrease in yield per dunum (average of only 63 kgs.), fluctuation of annyal production according to fluctuation and seasonal distribution of rainfall, practicing traditional methods in wheat production and continuous expansion in wheat growing, in the marginal and sloping areas that are characterized by a thin layer of surface soil.

The proper organization of wheat production requires the replacement of wheat with barley in marginal areas, planting the sloping areas with forest and fruit trees, and restriction of wheat growing to areas of more than 300 mm. rainfall and average yield of 85 kgs. or more per dunums. In addition, productivity in these areas can be increased by using improved seeds, chemicals, weedkillers, fertilizers, mechanization and modern methods of agriculture.

Experiments conducted by the Ministry of Agriculture in the research stations and demonstrations conducted in the farms have shown that it is possible to double the production of wheat per dunum.

The objective of this project is to increase total wheat production from 134,000 tons to 160,000 tons by the end of the plan period, which means increasing production by 26,000 tons or 19% of the present outputs, through the following measures:

1. Increase in improved wheat seed, through contracts between the Ministry of Agriculture and individual producers or cooperatives, whereby the Ministry of Agriculture would buy the seed at encouraging prices and distribute it gradually to the farmers.

2. Conducting field demonstrations and training farmers on the use of improved seeds, weedkillers, chemicals and machines in wheat production.

3. Expansion of the use of modern machines by importing them through the public sector and selling them to farmers at reduced prices.

Project costs during the plan period are estimated at JD 245,000, financed from the general budget and USAID and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
General Budget	50	47	43	140
USAID	35	35	35	105
Total	85	82	78	245

d) · Hybrid Maize in the Ghor Areas

As a result of adopting a suitable cropping pattern in the Ghor areas, there is a possibility of growing 13,000 dunums of hybrid maize in order to reduce present maize imports, which amount to 12,000 tons annually and are consumed as feed for livestock. Growing maize in the Ghor areas will be a new large industry which needs hybrid seeds, fertilizers and planting and harvesting machines. The project aims at helping farmers to produce around 5,000 tons of maize.

Estimated costs of the project are JD 5,000, to be financed from the general budget and USAID and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
USAID	18	-	-	18
General Budget	10	11	11	32
Total	28	11	11	50

e) Fruit Trees in the Drylands

The total area planted with fruit trees at the end of 1971 was 365,000 dunums. Olives occupy 277,000 dunums or about two-thirds of the fruit-trees area, followed by grapes (39,000 dunums), citrus (16,000 dunums) and banana (10,000 dunums).

Average income from the fruit industry for the period 1967-1971 was JD 3.4 million. Nevertheless, Jordan is still facing a deficit of JD 500,000 in the fruit trade balance.

This project aims at expansion in planting olives, grapes, and stone fruits in areas of suitable climatic conditions and soils that are subject to erosion. These areas are estimated at 623,000 dunums and planting costs are estimated at JD 24 per dunum.

The project plan includes the following:

1. Planting fruit trees according to the following schedule:

Variety	Area (000 dunums)
Olives	140
Stonefruit and others	30
Grapes	15
Total	185

2. Preparation of required seedlings at existing nurseries in addition to another two nurseries to be established for the same purpose in the Karak and Ma'an Governorates.

Implementation of this project includes the selection of suitable catchments in different regions, terracing, planting and other technical works.

These works will be implemented in group action in order to reduce costs and train farmers in team work. The Jordan Government will provide half of the cost and the private sector will provide the other half.

According to the agreement with WFP, with terminates in 1974, the third phase of this project started in January 1969. Contracts will be made for further extension of the agreement for five more years.

Total costs of this project during the Plan period are estimated at JD 4.35 million to be financed by the general budget, foreign assistance, WFP and the private sector and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
WFP	480	480	480	1440
General Budget and Foreign Assistance	270	270	260	800
Private Sector	700	700	720	2120
Total	1,450	1,450	1,460	4,360

f) Soil Conservation and Afforestration

About 1.2 million dunums of land need afforestration in the East Bank of Jordan (400,000 are already forest reserved). These lands suffer from erosion and water runoff, which will affect other resources, besides being unsuitable for economic agricultural practices.

Soil conservation in these lands include building stone wall terraces, gullies and small dams and the planting of 200,000 dunume of land with forest trees.

Because of the direct and indirect benefits of these projects, it is proposed that all citizens should participate in them, especially students and youth camp participants.

These projects include:

1. Soil Conservation in Wadi Zerqa

The Ministry of Agriculture has already prepared the plans for soil conservation in this steppe area with priorities to watershed areas and water dams sites. This project aims at soil conservation and afforestration in Jerash and Burma village in the northern section and Alouk and Rumman areas in the southern slopes. Areas included are about 100,000 dunums and the proposed work will include soil erosion control measures to check and minimize soil movement from slopes, the planting of carob and almond trees in suitable sites, and the improvement of naturally-growing wild olives.

Costs during the plan period are estimated at JD 740,000 to be financed from foreign assistance and the government budget and distributed as follows:

(In JD)

1973	1974	1975	Total
240,000	227,000	273,000	740,000

2. Soil Conservation in Wadi Shueib and Kufrein

This aims at controlling soil and water erosion from the watersheds. The area is about 340 km^2. This will be accomplished through soil control measures, gullies and dams, with the assistance of FAO experts over a five year period, with costs estimated at JD 5000,000. The project was started in 1970, during which JD 100,000 were expended.

It is proposed that JD 300,000 be contributed from the budget and foreign assistance and distributed as follows:

(In JD)

1973	1974	1975	Total
100,000	100,000	100,000	300,000

3. Annual Afforestration Project

This project aims at planting 25,000 dunums a year, or 75,000 dunums in three years. The work will be achieved through the Forest Department staff in addition to the previous projects.

Total costs are estimated at JD 370,000 to be financed from the government budget and distributed as follows:

(In JD)

1973	1974	1975	Total
130,000	120,000	120,000	370,000

4. Improvement of Forest Nurseries

The implementation of the previous three projects requires 24 million seedlings in three years. Therefore, the nurseries have to be improved and expanded for raising the required stock. Costs are estimated at JD 115,000 to be financed from the government budget and distributed as follows:

(In JD)

1973	1974	1975	Total
30,000	40,000	45,000	115,000

Total costs are estimated at JD 1.525 million, to be financed from foreign sources and the government budget and distributed as follows:

(In JD)

1973	1974	1975	Total
500,000	487,000	538,000	1,525,000

g) Ghor Lands Improvement

There are lands in the East Ghor Canal area that still need to be levelled, in order to improve their productivity by using irrigation and new methods of agriculture. This project aims at the following:

1. Conducting surveys and studies to delineate the areas that need to be levelled.

2. Procurement of heavy-duty levelling machines.

3. Organization of land levelling and improvement as follows:

   a) Land levelling

   b) Digging earth canals and construction of lined canals that suit each farm.

   c) Enforcement of suitable regulations relating to irrigation, such as a straight furrow irrigating system.

Total costs of this project are estimated at JD 652,000, half of which will be provided by the private sector. They will be distributed as follows:

(In JD)

	1973	1974	1975	Total
Government Budget and Foreign Assistance	95,000	95,000	91,000	281,000
Private Sector	95,000	95,000	91,000	281,000
Total	190,000	190,000	182,000	562,000

h) Growing and Grading Tobacco

The total average area planted with tobacco during the period 1967-1971 in the East Bank was 36,000 dunums, and average production for the same period was 1,400 tons valued at JD 449,000. Total net annual income from tobacco leaves is around JD 987,000.

This project aims at Government involvement in developing the tobacco industry through improvement of methods of production and use of new curing and manufacturing techniques. This will help improve the quality of local production and raising the quantity that goes into the Jordan cigarette industry.

An agreement with FAO was concluded on Apr 1, 1970 for a three year period aimed at developing the tobacco industry in Jordan. The contribution of UNDP to this project is around JD 154,000 and the Government contribution is JD 129,000. This project was started in July 1970 but was stopped early in 1971. The project period needs to be extended until the middle of 1974.

Contacts have been made with the Government of West Germany to establish an experimental centre for tobacco classification, grading, and curing.

Estimated costs of the project are JD 244,000, including JD 120,000 for the establishment of the centre. They will be distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Government Budget	35	16	-	51
UNDP	48	25	-	73
Government of West Germany	-	120	-	120
Total	83	161	-	244

i) Animal Resources

Livestock projects aim at increasing animal products such as meat and dairy, wools, leather and others whose demand is increasing. There exists a large deficit in the production of these commodities amounting to about JD 7million annually. The increase in production will be realized through the improvement and increase of existing stock and the introduction and acclimatization of high yielding foreign breeds. There exist possibilities to increase fodder production by about 105,000 tones as a result of crop pattern application in the Ghor areas and areas irrigated from springs and groundwater.

Animal production projects include the following:

1. Production of Acclimatized Dairy Cows

The project aims principally at the production of dairy cows of foreign purebreeds under Jordanian conditions to satisfy farmer for acclimatized dairy cattle. This aim can be fulfilled by the establishment of a stud farm at the Sultani irrigation scheme where feed and fodder requirements can be grown successfully. This project should be a profitable commercial enterprise.

The capital cost of the project is estimated at JD 685,000 to be met from the government budget and foreign assistance. The cost of the project is distributed as follows:

(In JD 000's)

1973	1974	1975	Total
432	202	51	685

2. Animal Production

This project aims at laying down the foundations of developing livestock production in Jordan by means of research, training of local staff and farmers in animal production aspects, including range management, fodder production in rainfed and irrigation areas, improving feed and fodder processing, increasing the productivity of farm animals through upgrading of local sheep and the introduction of foreign dairy cattle and layers, improving animal husbandry and control of disease and improvement of marketing and packing techniques of livestock products.

The total cost of the project is JD 772,000 spread over a five-year period (1973-1975). However, the cost of the project over the Plan period is JD 426,000, of which the Jordan Government's contribution in kind will be JD 126,000 and the rest will be contributed by the UNDP. The cash contributions of the Government and UNDP are distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Government contribution	8	14	11	33
UNDP contribution	92	102	73	267
Total	100	116	84	300

3. Poultry

a) Egg Production Project

Available statistics show that egg consumption is increasing and local egg production does not meet the increasing demand. Total imports of eggs in 1971 was around 101 million eggs.

This project aims at satisfying the local market demands by establishing a company for egg production, to be financed from the government budget, the private sector and a foreign company. Estimated costs of this project are JD 1.205 million, distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Private sector & foreign company	500	455	-	955
Government budget	-	250	-	250
Total	500	705	-	1,205

b) Project for Improvement the Breeding of Farmers Layers

1. Development of Wala station to be a layer stock breeding station, where eggs and chickens for breeding can be produced and procured to farmers, to meet the increasing demand for these products.

2. Establishment of two layer farms, one in Dhuleil area and the other in the South with the following objectives:

   (i) As model layer farms.
   (ii) To train agricultural agents and farmers on poultry industry works.
   (iii) To run experiments on feed production and cheap concentrates.

Costs of this project are estimated at JD 68.000 and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Government Budget	23	23	22	68

4. Increasing Meat Production from Local Sheep

The objective of this project is to train sheep growers in fattening their sheep in cooperative centres, in order to increase their income by feeding the sheep to an economical slaughter weight.

To achieve this objective, three pilot fattening centres will be established in Amman, Irbid and Ma'an governorates, each of 10,000 lamb fattening capacity.

The number of these centres will be increased in order to handle all slaughtered animals. The increase will be effected through a number of cooperative organizations supported by the Government. Through its gradual participation in capital and managing boards, the private sector will eventually take over the whole operation.

In the meantime, farmers will bring their sheep to be fattened in the centres and will be charged for this service.

The investment cost of these three centres is estimated at JD 60,000 to be financed from the government budget. The working capital is estimated at JD 175,000, distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Government Budget	60	-	-	60
Foreign Assistance	60	60	55	175
Total	120	60	55	235

5. Development and Improvement of Veterinary Services and Animal Health

In 1968, an agreement was signed between the Government of Jordan and the UNDP, by which an animal health centre was established to train Jordanian veterinary staff on the diagnosis of animal diseases, methods of controlling disease outbreaks, preparation of vaccines and training stock owners in ways of protection of venereal diseases. This project terminates in June 1973, but the UNDP will be approached for extending the project for five more years, in order to complete the research work that has been initiated on vaccine preparation.

The total cost of the project over the Plan period is estimated at JD 346,000, of which JD 270,000 is financed from UNDP and JD 76,000 from the government budget and foreign assistance. The capital investment of the costs are distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
UNDP Contribution	110	89	71	270
Government Budget & Foreign Assistance	50	26	-	76
Total	160	115	71	346

SUMMARY OF ANIMAL WEALTH PROJECTS

(In JD 000's)

	1973	1974	1975	Total
1. Production of acclimatized dairy cows	432	202	51	685
2. Animal production	100	116	84	300
3. Egg projects				
a) Egg production	500	705	-	1205
b) Farmers layers improvement	23	23	22	68
4. Increasing meat from local sheep	120	60	55	235
5. Improvement of veterinary and animal health services	160	115	71	346
Total	1335	1221	283	1839

j) Research and Extension Projects

Research and extension projects aim at increasing productivity per unit of land, decreasing costs of production and improving the quality of products to meet marketing and processing requirements through studying the problems of agricultural production in different areas. This includes the following:

1. Research on varieties of high-yield disease resistant products, suitable for transportation and desirable for marketing and/or manufacturing.

2. Research on dates of planting and agricultural rotation in order to make the best use of land and meet local and foreign market demands.

3. Research on agricultural practices such as seedling production, method and intensity of planting, soil covering, and growing on trellis.

4. Studies on insect lifecycles to find out suitable programmes for pest control.

5. Experiments on chemical and biological pest control.

6. Experiments on soil fertility and water requirements.

7. Studies on avoiding or limiting soil salinity.

8. Experiments on growing under controlled conditions, to produce vegetables in off-seasons.

9. Study of mechanization in agriculture production under different growing conditions.

10. Production of stock and improved seeds.

11. Dissemination of research findings to farmers by use of different extension methods.

Research and extension programmes include the following projects:

1. Development and Establishment of Research Stations in Different Agricultural Regions

This includes development of the Deir Alla research station and establishment of three stations in Wadi Yabis, Middle Ghor and South Ghor, in addition to another two stations to be established in drylands

in Amman and Irbid. No stations are now available in these areas except for the Irbid station, which is going to bo sold because it is located within the Irbid Municipality boundaries. Costs of developing and establishing the above-mentioned stations are JD 1.1 million, distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Stations in the Ghor Areas				
Development of Deir Alla Station	150	30	40	220
Development of Wadi Yabis	150	54	53	257
Establishment of Middle Ghor Station	30	55	55	141
Establishment of Amman-Irbid Station	290	25	27	342
Total	650	220	230	1,100

2. Establishment of Laboratories for Plant Protection and Seeds

These are needed to support research and studies in irrigated areas, carried out by the research stations in different regions. Costs of establishing these laboratories are JD 118,000, distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Plant Protection Laboratory	14	7	6	27
Toxicity Laboratory	10	4	5	19
Seeds Laboratory	37	22	13	72
Total	61	33	24	118

3. Conducting Agricultural Research and Experiments

This deals with field and industrial crops, vegetables and fruit trees with the following objectives:

a) Research on Field and Industrial Crops Conducting research, experiments and demonistrations on agricultural practices such as irrigation, fertilizing and plant protection. These studies will be made on irrigated and dryland areas. Costs of these works are JD 150,000 to be financed from the government budget and foreign assistance, and distributed as follows:

(In JD 000's)

1973	1974	1975	Total
50	50	50	150

b) Vegetable Research These studies and research aim at introducing high yielding varieties of vegetables as well as new products for export, conducting breeding to introduce disease resistant varieties, and studying dates of planting, irrigation, fertilization and mechanization. Costs of these works are estimated at JD 150,000 to be financed from the government budget and distributed as follows·

(In JD 000's)

1973	1974	1975	Total
50	50	50	150

c) Fruit Trees Research This research aims at introducing suitable new varieties and agricultural practices such as irrigation, fertilization and plant protection of these new varieties. Costs are estimated at JD 20,000, to be financed from the government budget and distributed as follows:

(In JD 000's)

1973	1974	1975	Total
5	5	10	20

4. Agricultural Extension

a) Project of Agricultural Rehabilitation and Training Centre

Manpower is the main element in agricultural development. Farmers' social and cultural levels, in addition to organizational and technical facilities, largely affect the adoption of new scientific methods and the rate of growth of the agricultural sector.

The agricultural extension programme aims at improving farmers' agricultural attitudes, knowledge and skills through continuous training. Accordingly, this project aims at improving the efficiency of extension agents in introducing desirable changes such as new research findings and delineated cropping patterns.

The project includes the establishment of a centre for training research workers, extension agents and farmers at the different research stations. The cost of the project, during the plan period, is estimated at JD 222,000, to be financed by the Government and UNDP, the Government participates with 15% of this cost. The project also includes conducting demonstrations in different fields of agriculture. The cost of these demonstrations is estimated at JD 57,000, to be financed from the government budget. Costs of the project are distributed as follows:

(in JD 000's)

	1973	1974	1975	Total
(i) Training Centre				
1. UNDP	63	63	63	189
2. Government Budget	11	11	11	33
(ii) Demonstrations	19	19	19	57
Total	93	93	93	279

b) Project for Training Farmers on Irrigated Cultivation

This project specifically aims at training bedouin youth on practicing irrigated farming before giving them titles for farm units in the irrigated projects which are carried out in Kerak and Ma'an. Training will be conducted as follows:

1. A committee representing different ministries and government institutions will select nominees from the population of the areas of the projects to be given farming units.

2. Employment of the persons selected by the committee as daily labourers for the Ministry of Agriculture, with the purpose of training them for two years in the farming units which will be distributed among them in the future.

3. Renting out the farming units to the nominated trainees to do farming independently for three years. During these three years they will be supplied with water for irrigation at prices not exeeding costs of maintaining and operating the artesian wells and irrigating canals.

4. At the end of this period, the farmers who show interest and efficiency in farming their units will be given titles to them. At the same time, they start re-paying the costs of construction and operation and maintenance of wells on a water consumption basis. Costs of the project during the Plan period are estimated at JD 336,000 to be financed from the recurring expenditures of the budget.

SUMMARY OF RESEARCH AND EXTENSION PROJECTS

(In JD 000's)

	1973	1974	1975	Total
Research Stations	650	220	230	1,100
Agricultural Laboratories	61	33	24	118
Research on Industrial & Field Crops	50	50	50	150
Vegetable Research	50	50	50	150
Fruit Trees Research	5	5	10	20
Re-inhabilitation and Training Centre	93	93	93	279
Total	909	451	457	1,817

k) Agricultural Marketing

1. Establishment of four new centres for assembling, packing and storing agricultural products. Three of these centres will be located in the Jordan Valley at Ma'adi, North Shouneh and South Shouneh, while the fourth centrs will be located at Al Mazra'a in South Ghor. The agricultural Marketing Organization (AMO) will be responsible for the establishment and management of these centres wholesale marketing centres.

   Costs of this project are estimated at JD 182,000, to be financed from foreign assistance and the budget of AMD and distributed as follows:

(In JD 000's)

	1972	1974	1975	Total
AMD & Foreign aids	120	62	-	182

2. Processing of Agricultural Products. Processing of agricultural products is considered one of the main channels of agricultural marketing and a starting point towards the integration of agricultural and industrial activities of the national economy. It is also an important means of increasing exports or producing alternatives imported commodities, in addition to stabilizing agricultural production.

   This project includes the following:

   a) Establishment of a tomato paste plant and the processing of other vegetables and fruits. An agreement has been signed with the UNDP with the purpose of developing agricultural marketing. FAO, being the executive agency of UNDP, studies the feasibility of establishing a plant that can be used for the processing of tomato paste and other vegetables and fruits and, accordingly, action was taken to establish the plant. The plant capacity is 4,000 tons of tomato paste and 600 tons of other vegetables and fruits. The plant is expected to start production in 1973. Cost of this project is estimated at JD 160,000, of which JD 40,000 will be incurred by UNDP and the rest by AMO, and distributed as follows:

(IN JD 000's)

	1973	1974	1975	Total
AMO	120	-	-	120
UNDP	40	-	-	40
Total	160	-	-	160

b) Updating and conducting studies for the processing of agricultural products and for the production of agro-industrial crops for the production of sugar, edible oils and others. The studies which prove to be economically and technically feasible will be further implemented.

Costs of these studies are estimated at JD 10,000, to be financed from foreign assistance and distributed as follows:

(In JD 000's)

	1973	1974	1975	Total
Foreign Assistance	10	-	-	10

SUMMARY OF AGRICULTURAL MARKETING PROJECTS

(In JD 000's)

	1973	1974	1975	Total
Establishment of collection and packing centres	120	62	-	182
Tomato processing plant	160	-	-	160
Studies of agricultural processing	10	-	-	10
Total	290	62	-	352

SUMMARY OF AGRICULTURAL PROJECTS

(In JD 000's)

		1973	1974	1975	Total
1.	Agricultural Economic Studies	3	10	10	25
2.	Regional Dryland Farming Development	421	290	290	1,001
3.	Wheat Project	85	82	78	245
4.	Maize Project	28	11	11	50
5.	Fruit Trees in Drylands	1,450	1,450	1,460	4,360
6.	Forestration and Soil Conservation	500	487	538	1,525
7.	Ghor Land Improvement	190	190	182	562
8.	Tobacco Growing and Grading	83	161	-	244
9.	Livestock Projects	1,335	1,221	283	2,839
10.	Research and Extension Projects	909	451	457	1,817
11.	Agricultural Marketing Projects	290	62	-	352
	Total	5,296	4,415	3,309	13,020

Appendix C

Irrigated Lands of East Jordan (at the end of 1971)
(Area in hectares)

I. Below Mediterranean sea level (with frost free climate)		
1. Jordan Valley (East Bank only)		
a. Zor, close to the Jordan River 1/	Negligible	
b. Ghor, below East Ghor Canal 2/	11,700	
c. Ghor, from wadis, above Canal:	500	
d. Ghor, partly from groundwater 3/	2,700	
2. Lower valleys of tributaries	1,500	
3. Southern Ghors (2,760 to 3,775 ha) 4/	2,760	
Total	19,160	19,160
II. Above Sea level (intermediate and continental climate)		
1. Secondary valleys (surface & spring water)	5,000	
2. Highlands and plateau (mostly pumping)	900	
Total	5,900	5,900
Grand total:		25,060

Source: Ministry of Agriculture

Appendix D

Area, produce, productivity, imports, exports and consumption of vegetables, average for the years 1967-1970.

Crop	Tomatoes	Eggplant	Onion & garlic	Cauliflower & cabbage	Melons	Cucumbers	Broad green beans	Potatoes	Others
Area (000 hectares)	16.380	2.400	0.660	0.990	7.120	1.610	0.950	0.360	2.300
Produce (000 tons)	157.8	24.65	4.20	18.10	42.30	10.40	7.30	2.70	11.10
Productivity (tons/hectare)	9.633	10.270	6.363	18.282	5.941	6.459	7.684	7.500	4.826
Imports (000 tons)	0.12	-	6.80	0.17	2.23	-	-	14.90	2.28
Exports (000 tons)	56.69	12.23	1.89	3.87	10.26	-	1.46	2.05	5.43
Consumption (000 tons)	101.23	22.43	9.11	14.60	34.27	10.40	5.84	15.35	7.95

Source: Ministry of Agriculture, Amman.

Appendix E

Area, produce, productivity, imports, exports, & consumption of fruits, average years 1967-1970.

Crop	Olives	Grapes	Almonds	Citrus	Banana	Apples & pears	Figs	Pomegranate	Others
Area (000 ha)	20.01	5.61	1.130	1.598	1.089	0.944	0.91	0.21	0.31
Produce (000 tons)	14.70	14.00	1.30	18.70	13.85	1.60	2.30	1.20	1.30
Productivity (tons/hectare)	0.734	2.495	1.150	11.702	12.718	1.694	2.527	5.714	4.193
Imports (000 tons)	0.20	2.70	0.97	3.36	0.32	12.83	-	0.65	3.00
Exports (000 tons)	0.25	1.50	1.72	13.06	5.35	0.10	-	0.48	0.56
Consumption (000 tons)	14.65	15.20	0.55	8.99	8.77	14.33	2.30	1.37	3.74

Source: Ministry of Agriculture, Amman.

Appendix F

Area, produce, productivity, imports, exports, and consumption of field crops, average for years 1967-1970.

Crop	Wheat	Barley	Maize	Sesame	Lentils	Chickpeas	Persameh
Area (000 ha)	207.81	56.120	0.650	0.740	22.250	2.170	7.59
Produce (000 tons)	153.00	40.10	2.60	0.60	16.10	1.60	4.4
Productivity (tons/hectare)	0.736	0.714	4.000	0.810	0.723	0.737	0.579
Imports (000 tons)	87.22	10.10	5.70	2.70	0.25	1.65	-
Exports (000 tons)	3.39	6.60	0.26	0.22	11.18	0.13	-
Consumption (000 tons)	236.81	43.60	7.54	2.08	5.17	3.12	4.4

Source: Ministry of Agriculture, Amman.

Appendix G

HASHEMITE KINGDOM OF JORDAN

AGRICULTURAL CREDIT CORPORATION

BRANCH _____

PRE-LOAN INSPECTION REPORT

APPLICATION NUMBER _____ DATE _____

APPLICANT _____ AGE _____

FROM _____ GOVERNORATE _____

EDUCATION AND EXPERIENCE _____

PRESENT OCCUPATION _____

FAMILY MEMBERS WORKING IN AGRICULTURE _____

FAMILY MEMBERS WORKING OFF THE FARM _____

ANNUAL FAMILY INCOME:

a. From Agriculture _____ JD

b. From other jobs _____ JD

Total _____ JD

Annual Family Expense _____ JD

Net Family Income _____ JD

Amount of Loan requested _____ JD

Purpose of Loan	Cost in JD's
Total	

Financial Status as on (date) / 19

Assets					Liabilities	
Fixed assets	Village or Town	Area in dunum	Estimated value per dunum J.D.	Estimated Value in J.D.	Debts	Estimated Amount J.D.
1. Dry land					1. Previous debts	
2. Irrigated land					2. Bank debts	
Description					3. Debts for Merchants & Others	
3. Owned land					Taxes due	
4. Buildings					Other obligations	
Working Assets						
1. Machinery including Irrigation Equipment						
2. Livestock and plowing animals						
Other assets						
1. Agricultural & animal products						
2. Cash in Bank, Shares & stocks						
3. Receivables						
Miscellaneous						
				Total		Total

Net Worth (Assets - Liabilities) ---------- JDs

by Mr. _____

in the presence of _____ and we found the following:

Location Village	Parcel Name	Parcel No.	Plot No.	Area in Plot		Share owned by Appl	Area of his Land		Percentage of Tillable Area	Est. value per dun.	Total value	
				Dun.	m^2		Dun.	m^2	%		JD	fils
60% of Total value .....JD										Total		

Location	Parcel Name	Parcel No.	Plot No.	Type of Building	Type of Constructions	Area in m^2	Share owned by Appl.	Area owned by Appl. m^2	Value per m^2		Applicant buildings' value	
									JD	fils	JD	fils
60% of the value of buildings ..... JD									Total			
60% of Total Security value ..... JD Total Est. Security value.....JD												

Remarks about other securities

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Title	Land Registrar	Credit Supervisor	Branch Manager
Signature	.....	.....	.....

JD

THE PROJECT

1. PROJECT LAND AND ITS LOCATION

District or Governorate	Village or Town	Parcel Name	Parcel No.
_____	_____	_____	_____

Plot No.	Area Dunum	Area Sq. m	Applicant's Shares	Area of applicant's shares Dunum	Area of applicant's shares Sq. m.
_____	_____	_____	_____	_____	_____

Arable land _____% Area of arable land _____ dunum.

Distance of Project from:

a) Nearest road fit for cars _____Km.

b) Nearest asphalt road _____ Km.

2. Topography and kind of soil in project land:

_____

_____

_____

_____

3. Accomplished development work (all constructions, water sources and water utilization): _____

_____

_____

_____

_____

4. Present farm machinery, equipment and animals in the project:

_____

_____

_____

ESTIMATED PRODUCTIVE POWER OF PROJECT IN AN AVERAGE YEAR

(Pre - Development)

Kind	Area in dunum or number	Farmer's average net income from 1 du./1 head JD	Farmer's total income JD	Average Annual Rainfall mm.
TOTAL				

Recommended Improvements	A.C.C. JD	ESTIMATING SOURCES Ministry of Agriculture JD	Applicant JD
TOTAL			

Total expenses _____ JD

Amount of loan recommended _____ JD

PROJECT PLAN

N.B. All important features of the Project should be indicated (including pre-development and post development improvements). A brief explanation regarding these features should appear in the legend.

ECONOMIC FEASIBILITY OF PROJECT

(LOAN DURATION)

CAPITAL INVESTMENTS	1	2	3	4	5	6	7	8	9	10
1.										
2.										
3.										
4.										
5.										
6.										
Total										
OPERATING (SEASONAL) EXPENSES										
1.										
2.										
3.										
4.										
5										
6.										
Total										
C GROSS INCOME										
1.										
2.										
Total										
D. NET INCOME										
E. FINANCING:@										
Interest										
Princip										
Balance of loan										
Total payments										
Final net income										
Accumulative net income										

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Appendix H

Number and area of holdings by size group, 1965 Agricultural Census

Size group (hectare)	No. of holdings	Percent of total no.
Less than 1 ha.	33,986	36.4
1 and less than 2	10,194	10.9
2 and less than 3	9,364	10.0
3 and less than 4	7,621	8.2
4 and less than 5	5,394	5.8
Sub-total 1-5	32,573	34.9
5 and less than 10	14,221	15.2
10 and less than 20	8,003	8.6
20 and less than 30	3,745	4.0
50 and less than 100	688	0.7
100 and less than 200	198	0.2
200 and less than 500	60	0.1
500 and less than 1000	16	-
1000 and over	2	-
Total holdings of 1 ha and over	59,506	-
Total all holdings	93,492	100.0

Source: FAO, 1967, pp 91 - Report on Agricultural Census. 1965, Amman. 1967, Table on pp 86.

Appendix I

Distribution of land ownership by size in East Ghor Canal Project Area, July 1960 a/

Size of ownership (ha)	No. of landowners		Area owned		
	Number	Percent of the total	Area (ha)	Percent total area	Average area of ownership (ha)
0.1 - 0.9	1,309	35.7	550	3.5	0.4
1 - 1.9	708	19.3	993	6.3	1.4
2 - 2.9	378	10.3	907	5.7	2.4
3 - 7.5	866	23.6	3,909	24.7	4.6
7.6 - 10	113	3.1	987	6.2	8.7
10.1 - 50	252	6.9	4,781	30.2	19.0
50.1 - 100	32	0.9	2,178	13.8	68.1
Over 100	10	0.3	1,524	9.6	152.4
Total/average	3,668	100.0	15,830 a/	100.0	4.3

Source: Department of Statistics, The East Jordan Valley, A Social and Economic Survey, Amman 1961, Table 62, pp 155. Source indicated in Survey as being "Department of Lands and Surveys". Last column added. FAO, 1967.

a/ The total area does not include 4,618 ha of land owned by the State or any land in Al-Mashrou, but does include all other land lying between the East Ghor Canal and the Yarmouk and Jordan rivers; in the South the boundary is the most southerly limit of land to be irrigated from the main canal.

Appendix J

Distribution of land ownership a/in East Ghor Canal Project Area after the reallocation of land.

Size of ownership (ha)	No. of landowners		Area owned	
	Number	Percent of total	Area (ha)	Percent of total
3.0 - 5.0	1,046	74.9	3,486	54.8
5.1 - 6.2	128	9.1	748	11.8
6.3 - 13.0	195	14.0	1,623	25.5
13.1 - 20.0	19	1.4	307	4.8
Over 20 b/	8	0.6	197	3.1
Total	1,396	100.0	6,360	100.0

Source: Sweilem M. Haddad, "Principles and Procedures Used in Planning and Executing the East Ghor Irrigation Project", paper presented to the International Conference on Water for Peace, Washington, May 21-31, 1967. Schedule No. 2. FAO, 1967.

a/ This land ownership covers only 22 out of 24 'development areas', having a total area of 6,360 ha or 52% of 12,000 ha of the project area. The remaining area of the project is almost completely allotted to new farmers but the final ownership classification records were not ready at the time of preparing the Paper for the Conference.

b/ It is noteworthy that 2,158 holders had owned farm units smaller than the minimum holding allowed under the Law in the form of joint ownership through inheritance or additions. Due to the shortage of lands and to the great number of original holders involved, and in order to avoid displacement of these holders, the original Law was modified to reduce the maximum limit of ownership from 50 to 20 ha. The priority scale in the selection of farmers was likewise changed, so that professional farmers in the project area were given priority over absentee holders or those who utilize their land by lease or sharecropping. As such, a total area of 1,971.5 ha of the project area was allotted in the form of farm units shared by more than one holder.

Appendix K

Accounts of ACC Expenditures for the Year 1971 (U.S.Dollars)

Type of Exp. (Component)	Expenditures during 1971	Total
1) Wages, Salaries, & Raises		
Salaries of classified Employees	194,729	
Salaries of Unclassified Employees	20,345	
Salaries of contract Employees	4,222	
Employees on lump-sum wages	19,040	
Family, technical & additional raises	79,582	
Additional wages & Daily Employees	2,635	
ACC contribution to the saving account	3,732	324,288
2) Other Expenses		
Transportation Expenses	2,282	
Travel Increase	,823	
Filed Per Dien Increase	4,900	
Feed for animals used by collectors	504	
Emergency Aid	294	8,806
3) Rents	5,247	5,247
4) Post, Telephone, Telegraph	1,274	
Social Facilities	689	1,963
5) Various Experiments		
Employees Family's Medical Expenses	801	
Guests (Hospitality)	4,060	
Other	1,151	
Participation in Seminars	25	
Building Repairs	1,319	8,571
6) Operational Necessities		
Electricity & heat	1,954	
Stationary	4,178	
Employees Uniforms	3,548	
Fuel, Parts, Tires & Car repairs	9,794	
Car insurance	938	20,412
7) Rewards & Remunerations		
Members of Board	6,269	
Member of Loan Committees	7,137	
Collection Rewards	2,800	16,206
8) Forestation Incentive Rewards	4,802	4,802

9) Depreciation

Furniture	2,100	
Cars	5,698	
Materials & work shop	120	
Accounting & Electronic machines	5,432	13,350

10) Due Interests on Loans given To ACC

Interest on IDA Loan (1st)	98,000	
Interest on IDA Loan (2nd)	70,000	
Interest on Development Board Loan (Rural Housing)	20,720	188,720

11) Expenditures on Buying of Capital goods

Furniture & Other	3,716	
Work shop materials	109	
Buildings & Constructions	9,192	13,017

Total	605,399
Minus Capital Goods Purchases	13,017
Total Operational Costs	592,382

JORDAN
AGRICULTURAL CREDIT CORPORATION

Activities of the A.C.C. during the years 1967 through 1972 (June)

Year	Land reclamation and improvement of dry land				Farm buildings		Tree plantation
	Terracing and supporting walls	Barbed wire fence	Land preparation	Cisterns	Farm housing	Other buildings	Various trees
	m^2	Mts. long	Dunums	No.	No.	No.	No.
1967	178,300	70,163	2,676	227	75	411	272,490
1968	194,586	41,830	552	183	47	553	128,330
1969	115,820	25,875	1,223	96	65	237	49,870
1970	97,198	13,910	2,223	91	53	241	34,470
1971	214,108	63,692	1,989	227	80	267	80,750
1972(June)	137,396	42,930	4,224	104	94	271	367,700
Total	937,408	258,400	12,887	928	414	1,980	933,610

(Appendix L continued)

Year	Land Reclamation and Improvement within Irrigation Schemes						
	Engines	Pumps	Reservoirs	Artesian wells	Cement canals	Earth canals	Pipes
	No.	No.	No.	No.	Mts. long	Mts. long	Mts. long
1967	23	16	42	3	17,945	3,450	19,510
1968	10	9	14	6	5,035	-	5,055
1969	20	14	13	15	4,650	-	8,312
1970	15	12	17	8	17,665	2,600	10,397
1971	13	9	18	3	8,825	120	11,297
1972 (June)	18	14	14	6	10,202	8,450	7,885
Total	99	74	118	41	64,322	14,620	62,456

(Appendix L concluded)

Year	Livestock, farm animals, and poultry				Farm machinery				
	Milking cows	Sheep	Plowing animals and others	Poultry	Tractors	Ploughs	Trailers	Combines	Other machinery
	No.	No.	No.	No.	No.	No.	No.	No.	No.
1967	3	40	613	18,500	88	130	69	4	15
1968	284	-	350	13,200	128	185	100	16	17
1969	-	-	223	85,700	93	96	56	11	10
1970	110	-	97	89,800	34	21	1	2	1
1971	-	-	475	82,900	82	61	11	8	11
1972 (June)	-	-	73	123,600	46	13	11	9	9
Total	397	40	1,831	418,700	471	506	248	50	63

Appendix M

Persons Interviewed to Evaluate ACC on General Terms:

Ministry of Agriculture, Amman

Dr. Khalil Lubani, Deputy Minister
Mr. Said Gazawi, Head, Research and Extension Department
Mr. Ahmed Abu Shaikha, Deputy Director, Agricultural Economics Department
Mr. Burhan Abu Howayej, Head, Statistics Section, Agricultural Economics Department

National Planning Council, Amman

Dr. Hannah Odeh, Secretary General
Mr. Mohammed Henidi, Chief, Cooperative Section
Mr. Wail Kana'an, Chief, Agricultural Planning Section

Jordan River and Tributaries Regional Corporation

Mr. Omar Abdullah Dakhkan, Director General

Appendix N

H.A.J.
Agricultural Credit Corporation
Branch: _____

Statistical schedule For A Poultry Farm/Broiler

Name _____ Arrival Date _____ Source: _____ Kind _____ No. _____

	Quantity of Feed used/Kg.								Number of dead chicks								
Week	Sat.	Sun.	Mon.	Tue.	Wed.	Thur.	Fri	Total	Sat.	Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Total	Notes
First																	
Second																	
Third																	
Fourth																	
Fifth																	
Sixth																	
Seventh																	
Eighth																	
Ninth																	

Expenditures

Type	Date	Value
Feed		
Chicks		
Medication		
Labor		
Other		
Total		

Sales

Group	Date	No.	T. weight	Gross value J.D. Fils
First				
Second				
Third				
Fourth				
	Total			

Profits/Losses	Fils	J.D.
Sales		
Operfational Expenditures		
Profit or Loss		

Appendix O

LIST OF ABBREVIATIONS

ACC	Agricultural Credit Corporation
DB	Development Board
EGC	East Ghor Canal
GOJ	Government of Jordan
IDA	International Development Association
JCB	Jordan Central Bank
JCCU	Jordan Central Cooperative Union
JCO	Jordan Cooperative Organization
JD	Jordan Dinar
JOMAP	Jordan Organization for Marketing Agricultural Products
NPC	National Planning Council
NRA	Natural Resources Authority
SCI's	Specialized Credit Institutions
USAID	United States Agency for International Development
WFP	World Food Program

Conversion Factors

One J.D. = 2.8 U.S. Dollars

One Dunum = 0.1 Hectares

COUNTRY PROGRAM

SMALL FARMER CREDIT IN IRAN

THE SUPERVISED AGRICULTURAL CREDIT PROGRAM OF THE AGRICULTURAL COOPERATIVE BANK OF IRAN

by:
Thomas Stickley and Ebrahim Hosseini
Faculty of Agricultural Sciences
American University of Beirut

in cooperation with
The Agricultural Cooperative Bank
of Iran

Beirut
November, 1972

PREFACE

This country Program Paper on the Supervised Credit Program of the Agricultural Cooperative Bank of Iran (ACBI) was prepared under a 3-month contract between the United States Agency for International Development in Washington, D.C. (USAID/W) and the American University of Beirut (AUB).

The report adheres strictly to an outline prepared by the USAID/W. Because of the newness of the program (established in 1970), the authors were unable to present full information on many points asked for in the outline. In spite of this each point in the outline was discussed as well as possible at this early stage of the development of the Supervised Credit Program.

The report was prepared from secondary sources of data exclusively because time and resource limitations did not permit the collection of original data through a farm survey. This made it essential to solicit the collaboration of those government agencies holding the information relating to this report. The authors wish to acknowledge the contribution of the many agencies which cooperated and the Agricultural Cooperative Bank of Iran in particular (especially the Administrator of the Supervised Credit Program, Mr. Jarad Saphaei).

Though this report is the result of the cooperation of many persons and institutions, the authors bear full responsibility for any mistakes or omissions.

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SMALL FARMER CREDIT IN IRAN

by

Thomas Stickley[1] and Ebrahim Hosseini[2]

SUMMARY

The Supervised Credit Program started expanding in 1969-70 with the objective of helping the small farmers (Cooperative members and non-members) in areas of good development potential. That year the program covered a total of 8274 farmers residing in about 140 villages located in 27 different areas of the country. In 1970-71 it was expanded to cover about 20,500 farmers residing in about 540 villages, located in 40 different areas of the country.

The program has an efficient supervision system. That is, first a preliminary survey is made and the fields of potential agricultural activity determined. Then a farm plan is developed with the help of the prospective borrowers. The plan should specify the type of activity, the calender of undertaking the various activities, the inputs (kind and cash) required and the costs involved. It should also specify what is to be done collectively by all the farmer beneficiaries and what by individuals. Out of these plans the credit requirement is determined and the relevant accounts (collective or individual) are credited. Such accounts can only be debited at the time and of the amounts specified in the farm plan. If the farm plan in question indicates a need for raw materials, goods and services which should be collectively used, checks are drawn directly to the order of the suppliers of these to the extent possible. Throughout the whole process the program supervisor's approval is needed. Other people involved in the process of loan payment and repayment at the village level are: farmers' representatives, local leaders, extension agents or extension corpsmen, and other White Revolution Corpsmen.

The program has demonstrated good performance in terms of productivity of loans and repayment of loans. It suffers, however, from the poor performance by the other institutions n providing the supporting services such as marketing and extension.

It is recommended that the program be expanded and integrated more with the supplementary services needed.

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I. INTRODUCTION

A. AGRICULTURAL CREDIT SOURCES

At present the following sources provide credit to Agriculture in Iran:

Agricultural Cooperative Bank of Iran (ACBI)
Rural Cooperatives
Agricultural Development Fund
Bank-E-Omran
Commercial Banks
Government Agencies
Processers of Agricultural Products
Non-institutional sources

There has not so far been any countrywide study with respect to the share of institutional credit sources in the total credit extended to farmers. On the basis of the available piecemeal information however, it may be said that institutional and non-institutional credit sources share the market equally.

The institutional sources of credit are briefly described below.

1. Agricultural Cooperative Bank of Iran (ACBI)

This bank is by far the most important institutional credit source in Iran. It extends short, medium, and long-term credit to individual farmers and rural cooperatives. It also finances special government programs for improvement of agricultural production. During the agronomic year 1970-71, the ACBI advanced loans amounting to 119 million U.S. Dollars of which about 90 percent were short-term loans. About 75 percent of these loans were extended to cooperatives.

2. Rural Cooperatives

The number of cooperatives until the end of 1970-71 was 8,300 with a membership of 1.6 million or about half f all the small farmers. The total amount of credit extended by these cooperatives was 84 million U.S. Dollars in both cash and kind. Rural cooperatives extend mostly short term loans not exceeding 666 U.S. Dollars, each. The resources available to cooperatives are: government capital, credit from the Plan Organization, credit from ACBI and their own capital and reserves.

3. Agricultural Development Fund of Iran (ADFI)

This institution was established in 1968 with the purpose of long term financing of commercial agricultural projects. Until the end of 1970-71, i.e., after three years of operation, the credit contribution of ADFI was 187 million U.S. Dollars with the average loan size of 200 thousand U.S. Dollars. The recipients of these loans were commercial farmers or private firms engaged in agricultural activities.

4. Bank-E-Omran

This bank is concerned with the farmers who have gained ownership on Pahlavi's Land. It also extends loans to the Qashguaei Tribe. In 1970-71, for example, a total of about $ 1.2 million (93 million Iranian Rials) was extended to 5015 cooperative members in such areas. Credit cooperatives were established under the supervision of Bank-E-Omran.

5. Commercial Banks

The banking system in Iran is comprised of the Central Bank of Iran, seven specialized banks, and 20 commercial banks. The largest commercial bank is Bank Meli, Iran, which is owned by the Government.

The credit activity of the commercial banks for agriculture is a minor part of their total lending operation (in 1970-71 it was only about 10 percent). Bank Meli and Bank Saderat are the only ones which have a significant share in agricultural credit. But loans extended by these banks are short-term, unsupervised, and consumption-oriented.

6. Government Agencies

Credit is also provided under special government programs and agencies. The channels regional development authorities (i.e., Ghazvin and Khuzesbun), ACBI and Rural Cooperatives a special organization concerned with individual crops (such as tobbacco, sugarbeets, and cotton), and government agencies in charge of the distribution of farm machinery and fertilizer the programs for which credit is provided aim generally for improved productive practices of special crops, encouragement in the use of modern inputs, and enhancement of the general development of agriculture in special areas.

7. Processers of Agricultural Products

These are the processers of agricultural raw material such as cotton, oil, seeds, fruits, vegetables, and sugarbeets. The processing firms generally provide advances in kind. This type of credit is production-oriented and accompanied by some extension and marketing services.

B. THE SMALL FARMER PROBLEM

During the past decade the Iranian land tenurial system has undergone significant changes. Consequently, at present, there are three major categories of land ownership. First, there are the individual owner-operators who have gained land reform program, Second, there are commercial farms which are mechanized and operated by the use of agricultural laborers. And finally, there are the large scale farming enterprises such as farm corporations or agri-business complexes. The first category, i.e., the small owner-operators, comprise the largest part of Iranian agriculture in terms of area under cultivation, volume, and value of agricultural production. There are about 1.2 million farm families included in this category. Their farms are mostly below five hectares in size and their production efficiency (yields per unit of land area) is obtained, in most cases, by about half that of the experimental stations. Usually only 50 percent of such land is cultivated and 50 percent is left fallow. Given

an increase in water resources and/or efficiency of water use and use of inputs through extension of credit and proper technical guidance, the area under cultivation can be raised by about 50 percent and productivity by about 25 percent within a decade or so.

Of course, since the start of the land reform program the Agricultural Cooperative Bank of Iran has tremendously increased its lending activities to small farmers (by (a) extension of more loans to coops -- with almost 90% of their members being small farmers -- and (b) expansion of loans with lower tangible security requirements). Most such loans lack the required supervision and technical assistance. It can hardly be concluded that these, aside from meeting the urgent consumptive needs of the small farmers, have any significant effect in terms of expansion of agricultural production. It seems inevitable, therefore, that extension of loans to the small farmer segment of the Iranian agriculture, should be (1) based on economic grounds (2) supervised and (3) combined with marketing services.

The Supervised Credit Program, introduced only recently, seems to have the prospects for achievement of this ideal, given full concentration of the agencies, departments, etc., related and the needed government support. It could mean an integrated effort by the Plan Organization, the ACBI amd the various departments concerned with agriculture to enhance the productivity of the small farmer (through a cooperative approach or an individual approach).

This paper is specifically directed towards the Supervised Credit Program financed by the Plan Organization.

II. PROGRAM CHARACTERISTICS

A. BACKGROUND

1. Historical Summary

The present Agricultural Cooperative Bank of Iran was first established as an autonomous agency in 1312 (1933) granting loans only to those who could offer any immovable property as a guarantee, i.e., landlords. Along with the start of the Land Reform Program in 1962, basic changes were introduced into the bank's charter. The bank, then, came to be known as the Agricultural Credit and Rural Development Bank of Iran, with the main objective of aiding the expansion of agricultural and livestock output and also raising the farmers' income. Finally, in 1964, because of the rapid expansion of the Rural Cooperatives, the bank's charter was modified and ever since it has been called the Agricultural Cooperative Bank of Iran. Its main objective is to provide credit to the Rural Cooperatives and Cooperative Unions and also persons engaged in agriculture who have not joined any cooperatives. As of 1970-71, a total of 108 cooperative unions held shares in the bank.

In 1969-70, the Plan Organization and the ACBI signed an agreement with the title of "Research on Undertaking Supervised Credit Programs". Upon this agreement 27 of the best bank experts were assigned to 27 different areas of the country to review the situation of the prospective borrower and fill the required forms.

As such, 140 villages were surveyed and the comprehensive report was submitted to the Plan Organization which then allocated a total of 47,000 U.S. Dollars for the program and the program began operations in the same year.

Because of the favourable results obtained in 1969-70, the program was expanded in 1970-71 to a total budget of 771.3 million rials again provided by the Plan Organization. This time 32 of the bank's experts (program supervisors) and 4 appraisors made the necessary surveys which finally resulted in extension of loans to 523 villages in 43 areas of the country.

The policy of the bank is to expand the program and set provisions for those members of cooperative who want to borrow for undertaking the livestock fattening projects individually.

2. Relation to National Credit System

The banking system in Iran is comprised of the Central Bank of Iran, seven specialized banks (including the ACBI) and 20 commercial banks.

The Central Bank was established with an initial capitalization of 3.6 billion rials, to stabilize currency and regulate credit. The bank acts as a repository for government funds, handles transactions with government banks, and acts for the government in international financial transactions. In addition, it is empowered to control foreign exchange, issue currency, buy and sell government bonds and advance loans either to the government or to others with the guarantee of the government.

The supervised credit program is executed by a division of ACBI in accordance with the forms of agreement between the Plan Organization and the ACBI, the Supervised Credit Programs Operational Procedure and the Bank's by-laws.

3. Other Program Activities

The ACBI is strictly carrying out the Supervised Credit Program financed by the Plan Organization and Ministry of Agriculture. A livestock fattening program started in 1968-69, is financed by the Ministry of Agriculture and executed by the Supervised Credit program agency. Table 1 shows the activities of this program.

TABLE 1. NUMBER AND AMOUNT OF LOANS GIVEN BY THE SUPERVISED CREDIT PROGRAM AND AMOUNT OF LOANS GIVEN AS A RECENT OF THE TOTAL AMOUNT OF LOANS OUTSTANDING IN THE ACBI.

Year	Number of Loans	Amount of Loans (U.S. Dollars)	Amount of loans as a percent of total amount of Loans outstanding in the ACBI
1968	Not reported	1,206,766	1.7
1969-70	8924	19,809,641	1.0
1970-71	63	327,226	0.3

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4. Relationship to Pre-existing Local Institutions

The agency developed out of the existing structure of the bank with all the staff coming from within the Bank. It complements the activities of the other credit and extension institutions.

5. Agricultural Patterns and Potentials

According to surveys made by the ACBI : 148 villages (27 areas) selected for the implementation of the 1964-70 Supervised Credit Program, total and average production resources and livestock for 14,354 farm families are as follows:

	Total	Mean Average of 14,354 farm families
Cultivable land (hectares)		
Irrigated	43,206	3.0
Dryland	49,133	3.4
Orchards and nurseries (hectares)	5,525	0.4
Livestock (head)		
Sheep	242,146	16.0
Cattle	46,013	3.0
Poultry	92,995	6.0

Six out of 148 villages utilized three irrigation water resources (wells or springs, rivers and qanats). Fifty-two out of 148 villages utilized only wells. Sixty-three out of 148 villages utilized only qanats. Forty-three out of 148 villages utilized only river water.

In the same survey wheat (8100 hectares) followed by cotton (2604) were the crops covering the largest land area in the 27 villages surveyed (Table 2).

No data assessing the potential of these areas are available. It can, however, safely be said that the area under cultivation can be increased 20 percent and yields 25 percent within the next decade.

B. OBJECTIVES

1. General Objectives

a. Announced

The objectives of the supervised credit program are:

i. To provide credit to those farmers (cooperative members and non-members) who want to participate in a collective development project (like expansion of the water resources) or an individual project towards a set of categorized objectives (like livestock fattening, crop promotion, and poultry production).

ii. To provide supervision and technical guidance in discovering the areas of potential, setting farm plans, and determining priorities in the use of resources.

TABLE 2. AREA AND YIELD OF THE PREDOMINANT CROPS IN 27 VILLAGES IN 27 AREAS OF IRAN.

Crop	Number of villages in which the crop predominates	Total area in the specified number of villages (Hectares)	Average area per (Hectares)	Average yield per village (Tons per Hectare)
Wheat				
Irrigated	20	3500	175	1.3
Dryland	15	4600	307	0.83
Barley				
Irrigated	9	283	87	1.2
Dryland	12	962	80	0.75
Alfalfa (Irrigated	13	590	45	5
Rice (Irrigated)	8	496	62	2.3
Sugarbeet (Irrigated)	8	296	37	20.0
Cotton				
Irrigated	3	252	84	1.9
Dryland	4	2352	588	0.6
Sunflower (Irrigated)	4	280	70	0.7
Citrus fruits (Dryland)	2	46	23	3
Pistachios (Irrigated)	1	800	800	4 kgs/tree

b. Apparent

Since the program is new it is hard to assess the achievements of these objectives. So far the program has been executed very closely along the same lines.

2. Terms of Loans

a. Purpose

Short term loans and credit in the current account should be used for the following purposes: soil preparation, cleaning of canals and qanats, payment for irrigation water, seed, seedlings, fertilizer, weeding, purchase of work tools, pesticides, spraying equipment, wage payments, provision of power and maintainance for the machinery and pumps, harvesting, storage, packing, grading, sorting, transportation costs, and other variable costs.

Short-term credit is also extended for purchase of fattening sheep, purchase of feed and equipment for livestock production, bee keeping, fish and silk worm raising, purchase of equipment for rural handicrafts, and finally variable costs and operating capital of the firms, corporations and companies dealing with agriculture.

Medium-term loans are paid for the following purposes.

(1) Improvement of qanats
(2) Establishment of shallow semi-days and deep wells, improvement of such wells, construction of water reservoirs, and irrigation canals in accordance with the law of nationalization of water resources.
(3) Fencing and rural construction activities.
(4) Soil conservation and bringing waste land under cultivation.
(5) Improvement and rejuvination of existing orchards and nurseries.
(6) Establishment of orchards, nurseries and forests.
(7) Establishment and improvement of pasture and exploitation of forests in accordance with the law of nationalization of forests.
(8) Purchase of agricultural machinery and farm implements.
(9) Purchase of irrigation pumps, electric pumps and the relevant construction.
(10) Purchase of improved livestock breeds, working cows and construction of the relevant facilities.
(11) Purchase of bee hives and construction of bee keeping facilities.
(12) Purchase of fishing equipment, and construction of cold storage and facilities related to cold storage.
(13) Establishment of marketing service centers and construction of relevant facilities.
(14) Establishment of repair and pumps for agricultural machinery and equipment.
(15) Establishment of seed improvement and multiplication stations.

b. Period

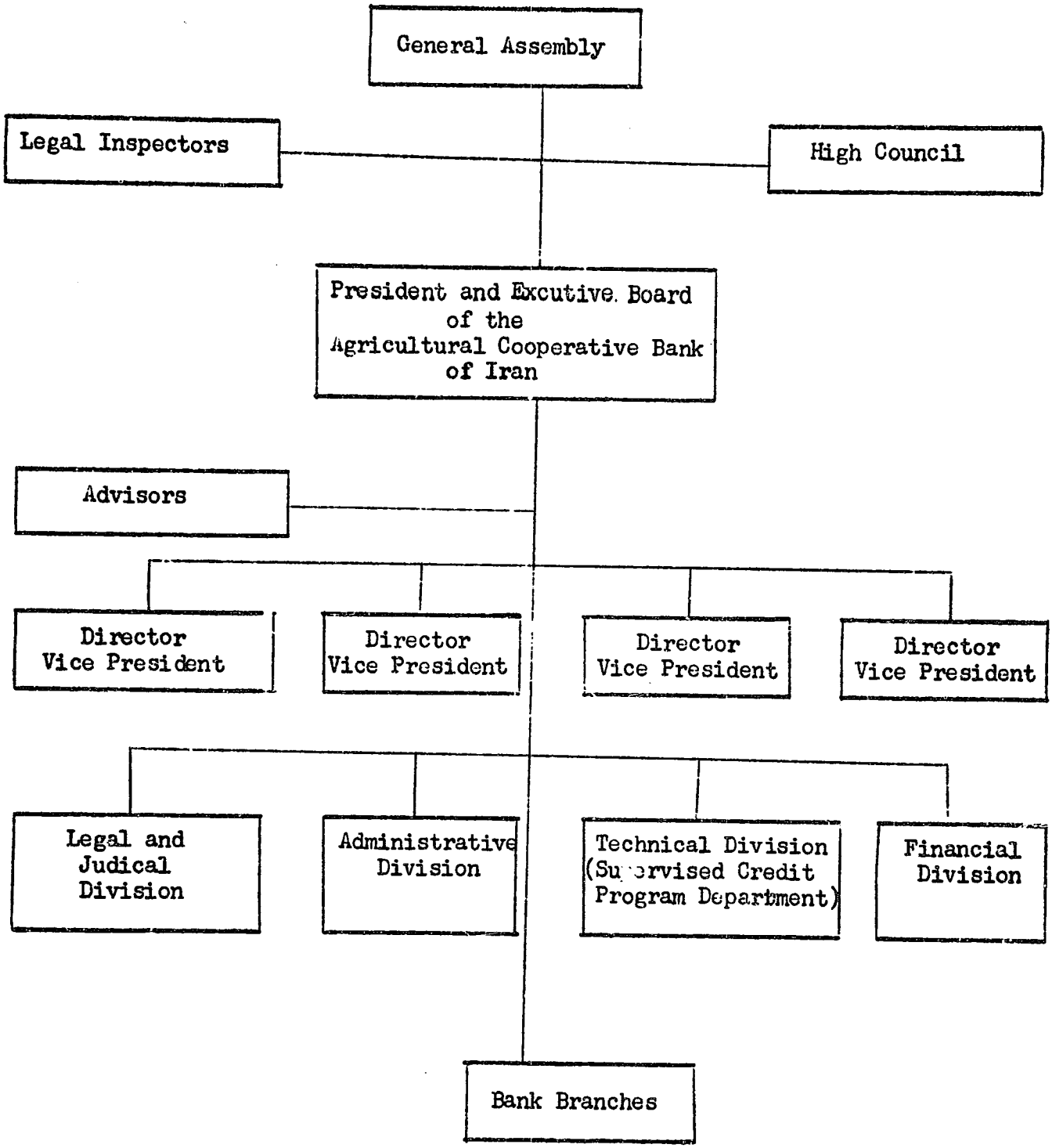
The loans extended by the ACBI are divided into short-term (and credit in the current account), medium-term and long-term. Only the first two types pertain to the supervised credit programs. Short-term loans are usually extended for a period of one year, unless they are extended for the following purposes in which case the duration could be a maximum of two years: cleaning of canals and qanats, purchase of work tools and pest control equipment and purchase of equipment for livestock and poultry production, fishing and fish raising and bee and silk worm keeping. The duration of the medium-term loans varies between 3 and 10 years depending on the purposes for which they are intended.

C. ORGANIZATION

230 1. General Structure

At the time of writing this paper an up-to-date organizational chart was not available. The following chart, however, was tentatively constructed to represent the situation. The Supervised Credit Program as seen from the chart is a department within the Technical Division.

CHART 1. ORGANIZATIONAL CHART OF THE AGRICULTURAL COOPERATIVE BANK OF IRAN.



2. Local Structure

The agricultural cooperative bank of Iran has about 160 branches and 20 supervisors in the various parts of the country. The supervised credit program is carried out by these branches and supervisors. The program's supervisors are more active at the local level than at the headquarters. The other staffs which also contribute to the execution of the program are mentioned in the section on Selection Criteria (II.D.1.).

D. BENEFICIARIES

1. Selection Criteria

Under the Supervised Credit Program loans are extended for two types of production activities. The first type pertains to cases where all the farmer participants in a village have a common interest in the loan use, e.g., development of a water resource. The second type consists of cases where the farmers of a village have varying interests in loan use, e.g., crop production, livestock production, fruit growing and the like. In this case individual volunteers participate in their respective group according to their loan interests. In any case the procedure followed is the same:

a. Choice of the Village

The village subject to the Supervised Credit Program should have the following qualifications:

i. The prevailing land tenure system must be approved by the Ministry of Land Reform and Rural Cooperatives.
ii. The village must have good accessibility in terms of roads.
iii. The village should have good agricultural potentials.
iv. Farmers of the village should have willingness to accept instructions on the programs.
v The repayment record of the farmers must be good.

A first choice of such a village is made by a committee composed of the branch director, the project supervisor, the director of the credit section and sometimes an appraiser. Supplementary information on the village chosen is obtained from the other local institutions such as Extension Department.

b. Project Identification

To determine when projects are economically feasible and what funds are necessary the following steps are taken: (i.) Village survey, (ii.) Project preperation, and (iii.) Approval and implementation of the project.

i. Village survey

In a preliminary village survey general information on the following features of the villages chosen is obtained:

(1) Geographic location
(2) The transportation network
(3) The village accessibility.
(4) The ownership pattern.
(5) The land use and cropping pattern (including fruits).
(6) The levels of production (including yields/unit of area).
(7) The livestock situation.
(8) The local handicrafts.
(9) Existing water resources.
(10) Agricultural machinery and implants.
(11) The various government agencies residing in village.
(12) The potential plans.

The survey is carried out by the branch program supervisor (sometimes together with an appraiser). In a first contact with the village head, the village council members, the local leaders, the existing corpsmen, and the village intellectual, the objectives of the program are explained. These people are asked to carry the message to the farmers. In a second visit individual volunteer farmers are directly contacted and asked to provide the following information:

(1) Personal data
(2) Asset and liability situation
(3) Production data.
(4) Data on indebtedness
(5) Income data
(6) Credit demanded (by type of activity and duration).

This information is obtained in the presence of the village leaders, the village head and the White Revolution Corpsmen.

The following institutions are also contacted to acquire the general information about the areas, the village and the farmers:

Department of Cooperative and Rural Affairs.
Department of Agriculture (Extension, Livestock and Veterinary).
Department of Irrigation.
Department of Soils.
Meteorology Stations.
Consulting Firms.
Agro-industrial Establishments.

ii. Project preparation

From information obtained in the village survey the economically feasible projects which are contributing most in terms of expansion of agricultural and livestock output are identified. The type of project (i.e., either projects in which all the farmers with a common interest participate or projects in which farmers with varying interests participate). is also specified.

The above information is entered into a special form confirmed and signed by the farmer applicant, the local leaders and the program supervisor.

The supervisor then proceeds to propose the credit need of each farmer broken down by various types of activities, i.e., livestock, buildings, fruit growing, irrigation and local handicrafts.

To compensate for the 6 percent interest of the first year and the 1 percent overhead costs charged to the borrower, a 10 percent margin is added to the cost estimates. This makes credit extended just enough to cover the various costs of production as determined.

iii. Approval and implementation of the project.

All the information obtained so far is general information about the village and the farmer. Application for loan and the report of appraisal goes into the Bank (filing department) where any available records about the farmers and their local leaders are attached. The completed file is then sent to the Loan Approval Committee (composed of the Branch Director, the Program Supervisor, the Credit Section Director and sometimes the Branch Appraiser). The final decision on the loan to be extended to each individual is made by this committee.

The amount of loan approved for each project member (farmer borrowers) broken down by type of activity is then determined. A record of the anticipated needs (cash or kind), the dates needed, and expected benefits are kept with the bank.

After investigation and approval by the Loan Approval Committee the files are sent to the credit section in order to make necessary arrangements for the payment of the credits due.

At this stage the farmer participants in the program write a collective application which contains personal data about each farmer, amount of loan broken down by short and medium-term, and the loan use (collective or individual). By signing this form the farmers also promise to obey all the regulations set by the program. The signatures are certified by the local leaders, the White Revolution corpsmen, the village head, and finally the Bank's appraiser or expert.

An additional step is for the farmer to choose 3 to 5 financial representatives among themselves. These representatives guarantee to undertake supervision of the loan's use as reflected in the relevant forms and according to regulations set forth by the program.

Once the farmer's application form and the letter of guarantee of the representatives is received by the credit section of the bank, the payment schedule is established and the necessary agreements are signed. To provide convenience for the farmers, the supervisor or the bank agent cooperating with the supervisor is authorized to sign contracts at the local level.

In case of a collective project, the village account is credited with the payable amount and only the farmers representatives together with the program supervisor can utilize the funds for purchase of material, equipment, and services (by priority).

In case of an individual project, the payable funds are credited with the Novin Saving Account of the beneficiaries and can be utilized under the supervision of the program supervisor.

To eleminate the possibility of utilizing the funds for consumptive purposes in case of the individual borrowing, care is taken to make the payment to the order of the suppliers of materials, equipment and services, directly. To assure proper use of credit in case of collective projects, the beneficiaries present a receipt of the materials, equipment, and services used collectively. Those receipts are also confirmed by the program supervisor.

2. Graduation Policy

The supervised credit program does not have a graduation policy.

3. Number and Types

The following table shows the loan payments under the supervised credit program in 1964-70 and 1970-71.

TABLE 3. NUMBER AND AMOUNT OF SUPERVISED CREDIT LOANS GIVEN FOR SHORT-TERM PURPOSES (1969-71).

Term of Loans	Number of Loans		Amount of Loans (U.S. Dollars)	
	1969-70	1970-71	1969-70	1970-71
Short-term	3567	6,858	1,166,288	2,052,496
Medium-term	4707	13,785	2,053,354	5,299,481
Total	8274	20,643	3,219,642	7,351,977

The 1969-70 loans covered a total of 140 villages located in 27 different areas of the country but the 1970-71 loans covered a total of 523 villages located in 43 different areas of the country.

The beneficiaries have almost uniform farm sizes and the data by crop is not available.

4. Other Sources of Credit

The sources of credit available to the farmers in general were discussed before. Table 4 shows the level of prior indebtdness of 6423 borrowers surveyed before the implementation of the 1969-70 program.

TABLE 4. PRIOR INDEBTEDNESS (TOTAL AND AVERAGE) OF 6,423 SUPERVISED CREDIT PROGRAM BORROWERS BEFORE THE 1969-70 PROGRAM.

Source of Prior Indebtedness	Total indebtedness (U.S. Dollars)	Average indebtedness Per farmer (U.S. Dollars)
ACBI	989,958	154
Cooperatives	505,024	78
Other sources	2583,322	402

5. Profile of Farm Community

The data on farm size in the community in which beneficiaries live is available in the Supervised Credit Department of the ACBI. But this data has still not been tabulated in a manner to be used for analytical purposes. This program benefits mostly the farmers who have become through the process of land reform and such farmers necessarily have small farms.

E. LENDING POLICIES AND PROCEDURES

1. Portfolio

The only data available at the time of writing this paper on the breakdown of loans by purpose are the following.

A breakdown of the 1969-70 loans according to purpose is shown in Table 5.

TABLE 5. AMOUNT LOANED FOR DIFFERENT PURPOSES FROM THE SUPERVISED CREDIT PROGRAM IN 1969-70.

Purposes (both short-term and long-term purposes)	Amount of Loan (U.S. Dollars)
Current Agricultural expenses	900,293
Irrigation	197,921
Establishment of orchards and nurseries	322,433
Livestock production (including poultry)	1,602,981
Public Rural Construction work	40,713
Total	3,064,341

Purposes for which the 1970-71 loans were actually extended were as follows: Short-term loans were extended to cover (1) current expenses of the cultivation of 15,388 hectares of wheat barley, alfalfa, cotton, rice, sugarbeet and pulse crops, (2) the costs of purchase of 9,370 fattening sheep and (3) the current expenses of 884 rural carpet cottage industries. Medium-term loans were extended for the purchase of 61,626 head of sheep, the purchase of 6,504 head of cows, the construction of 17,409 square meters of animal barns, 11,732 square meters of feed storage space and 205 rural houses, the construction of 35 deep, 40 semi-deep and 85 ordinary wells, the purchase of 180 irrigation pumps and 202 sets of farm machinery and other implements, the construction of 43 water reservoir and 7,177,100 meters of irrigation canals, and the establishment of 2,172 hectares of orchards and repair of 5 "qanats" (a water resource in Iran).

2. Interest Rate

The official interest rate charged by the Agricultural Cooperative Bank of Iran is 6 percent. There has not been any change in this rate during the past decade. The main policy behind changing this rate has been to bid away borrowers from non-institutional sources. It is very unlikely that such an interest rate can cover the various costs of lending. Some of the costs are borne by the government. In general, for processing the loan application, appraising and the supervision provided before extending the loan, a one percent deposit is paid to the Bank at the time of loan application. For short term loans up to 666 dollars, one percent of the approved amount is deducted from the principle at the time of payment. Aside from these, there are no payments made to the Bank. Based upon a survey carried out by the authors in the Kerman Province of Iran the real cost of the loans (interest and accessory costs) obtained from the ACBI averaged 8 percent (Hosseini-Nasab, 1971).

3. Collateral

The beneficiaries of the Supervised Credit Program can obtain loans under any of the following terms:

a. Short-term loans

i. Offering an official written contract for loans up to $ 1333.
ii. Introducing a recognized co-signer with an official contract.[3]
iii. Offering different kinds of immovable property, promisory notes with two signatures, and the various chattels up to a certain percentage of the value of security as determined in the bylaws.

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3. The duration of all the loans extended against an account should not exceed 6 years.

b. Medium-term Loans

i. Offering securities as described above with the exception of promisory, notes and the various debertures.

ii. Introducing a co-signer for loans up to $ 2666 per farmer provided the purpose of it is to undertake a collective project, e.g., development of a water resource or purchase of agricultural machinery in which cases all the farmers concerned participate or the individual borrower does not have any possibility of pledging any immovable property.

4. Other Subsidy

As far as is known to the authors no other form of subsidy except "subsidized interest" rates in the form of provision of free supervision (technical advice) is provided by the agency and associated public institutions.

5. Appraisal Techniques

Appraisal techniques were discussed fully in section II.D.1. on "Selection Criteria" (operational procedure of supervised credit).

F. COLLECTION

1. Repayment Record

The repayment record of loans due in 1971-72 shows a promising result. According to the calculations made from the original data, on the average 65 percent of the total number of loans due in 1971-72 were repaid. Table 6 shows the distribution of repayment percentages[4] in 24 different areas of the country.

TABLE 6. FREQUENCY DISTRIBUTION OF NUMBER OF AREAS IN IRAN WITH DIFFERENT RATES OF REPAYMENT OF SUPERVISED CREDIT LOANS.

Percent Repayment Intervals	Number of Areas in Each Interval
100	2
89-99	2
79-89	5
69-79	3
59-69	2
49-59	4
39-49	1
29-39	1
19-29	3
18 or less	1
Total	24

4. Repayment percentage = $\frac{\text{Number of 1971-72 due loans repaid}}{\text{Total Number of 1971-72 loans due}} \times 100$

The percent repayments for the same year for all the loans made by the ACBI were as shown in Table 7.

TABLE 7. REPAYMENT RATES OF LOANS FOR ALL PURPOSES AND IN ALL PROGRAMS OF THE ACBI IN 1971-72.

Type of Loan	Repayment Percentage (Principal)	Repayment Percentage (Interest)
Short-term	71.4	51.3
Medium-term	47.6	56.3
Long-term	40.3	57.5

It is interesting to note in Table 7 that the rate of repayment of the principal on short-term loans (71.4 percent) was higher than that for medium-term and long-term loans (47.6 percent and 40.3 percent, respectively).

2. Methods

Repayment is in cash and the amounts repaid are credited to the borrowers account at the ACBI branchs throughout the country.

3. Special Enforcement Procedures

The production obligation of the beneficiaries (purpose of loan) are specified and dictated in the contract signed by the two parties (creditor and debtor) at the time of loan payment. If for unjustifiable reasons funds are not spent according to the specifications made, the beneficiary is asked to return the unspent or extravagently spent amount plus a 12 percent penalty rate on such amounts.

On the other hand aside from the borrower himself, other people (i.e., other borrowers, village head, other government agents, and village elders) as discussed in the operational procedures in the selection (criteria part, section II.D.1) are also involved in the process. Obviously there is a great deal of grou anction involved.

Aside from all these the bank can use judicial procedure to sue the delinquents or their co-signers in court.

4. Rescheduling

If non-repayment was for any of the reasons accepted by the bank (serious insects or flood damage) repayment of due loans can be rescheduled in the judgement of the bank experts.

G. COSTS AND FINANCE

1. Portfolio Profits and Losses

As discussed before, the funds appropriated for the supervised credit program are provided by the Plan Organization on an annual basis. In the two years of the execution of the program in 1969-1970 and 1970-1971, a total of about 5 and 10 million dollars were allocated, respectively. The amounts of loans actually extended during these two years was about 3 and 8 million dollars covering a total of 8274 and 10,643 beneficiaries, respectively.

The profit and loss account of the program is integrated into the bank's portfolio and no separate information was available for the Supervised Credit Program. Considering the ACBI as a whole, the situation which prevailed with respect to the loan payments and repayments, and year-end balances between 1962 and 1971 is shown in Table 8.

TABLE 8. GROWTH OF SUPERVISED CREDIT PROGRAM, AMOUNT REPAID, AND YEAR-END BALANCE (1963-71)

Year	Loans Extended		Percent increase or decrease in the amount of loans extended		Amount repaid (U.S. dollars)	Year-end balance (U.S. dollars)
	Number	Amount (U.S.Dollars)	Relative to the previous year	Relative to 1963		
1963	319,570	45,698,897	+148.2	-	19,557,960	- n.a. -
1964	603,454	55,085,032	+ 20.5	+ 20.5	2,784,529	- n.a. -
1965	547,432	73,060,026	+ 32.6	+ 59.9	48,100,116	- n.a. -
1966	249,567	68,900,079	- 5.7	+ 50.8	45,902,945	68,900,07
1967	327,233	69,177,932	+ 0.4	+ 51.4	67,069,199	69,177,93
1968	351,946	70,531,656	+ 2.0	+ 54.3	60,281,479	70,531,65
1969	349,988	72,194,788	+ 2.4	+ 58.0	67,814,322	72,194,78
1970	211,626	118,789,422	+ 64.5	+159.9	103,534,916	118,789,42
1971	232,685	127,755,720	+ 7.5	+179.6	126,032,822	127,755,71

2. Administration Costs

It is impossible to deduct the costs of the supervised credit program from the available data since such data only show the aggregate costs of the ACBI. The costs of ACBI are discussed in II.G.4. (Institutional solvency).

3. Beneficiaries Savings

As discussed before in the section on Selection Criteria (II.D.1.) the net amount of loans approved is deposited in the village project account or the beneficiary's saving account from which funds can be drawn only according to the calendar of farm activities determined at the time of loan approval.

4. External Finance

The program has been totally financed by Plan Organization.

5. Institutional Solvency

Since the Supervised Credit Program is executed by a mission within the ACBI it is only possible to present evidence of institutional solvency for the bank. For this, see Figures 1 and 2. below.

6. Foreign Exchange Balance

At this stage it is too early to assess anything about the impact of the program on the foreign exchange balance.

H. COMPLEMENTARY FACTORS

1. Technology

a. Directing, Tying and Packaging

As discussed in the section on "Selection Criteria" the loans approved are credited either to the village project account or to the beneficiaries' Novin Savings accounts, depending on the type of farm activity in question. In the case of collective activities, only the farmers' representatives are authorized to write checks to the order of owners of materials, goods and services. In the latter case, however, the beneficiary is authorized to cash the necessary amounts for payments of cash costs, e.g., wages. In both cases the program supervisor has to be consulted.

b. Program Extension and Supervision

This technical supervisory service provided by the program is of a rather peculiar nature. The details are discussed in the section on Selection Criteria (II.D.1.). A brief exposition, however, is also made here. The number of the branch experts involved in provision of technical supervisory services is very small (one or two). To economize on the scarce time of the agents, therefore, supervision is most often provided collectively (through the farmers' representative). It is in the terms of contract between the bank and the beneficiaries that various expenditures should be made according to the calendar of activities approved and signed by the program supervisor. More specifically, everytime the beneficiaries or their representative want to utilize their credit for undertaking an activity the supervisors should be consulted. Therefore, technical supervision is provided in: setting up farm plans, choice of alternatives, using the right inputs, and proper use of the loan.

That means, by necessity, the beneficiaries or their representatives have to be in contact with one of the bank's experts as frequently as the calendar of activities necessitates. The program supervisors are selected from the bank's best experts and are obviously keen in injecting the new technology into the various production processes financed by the loan.

Figure 1. AUTHORIZED AND PAID CAPITAL OF THE ACBI (1933-1971)

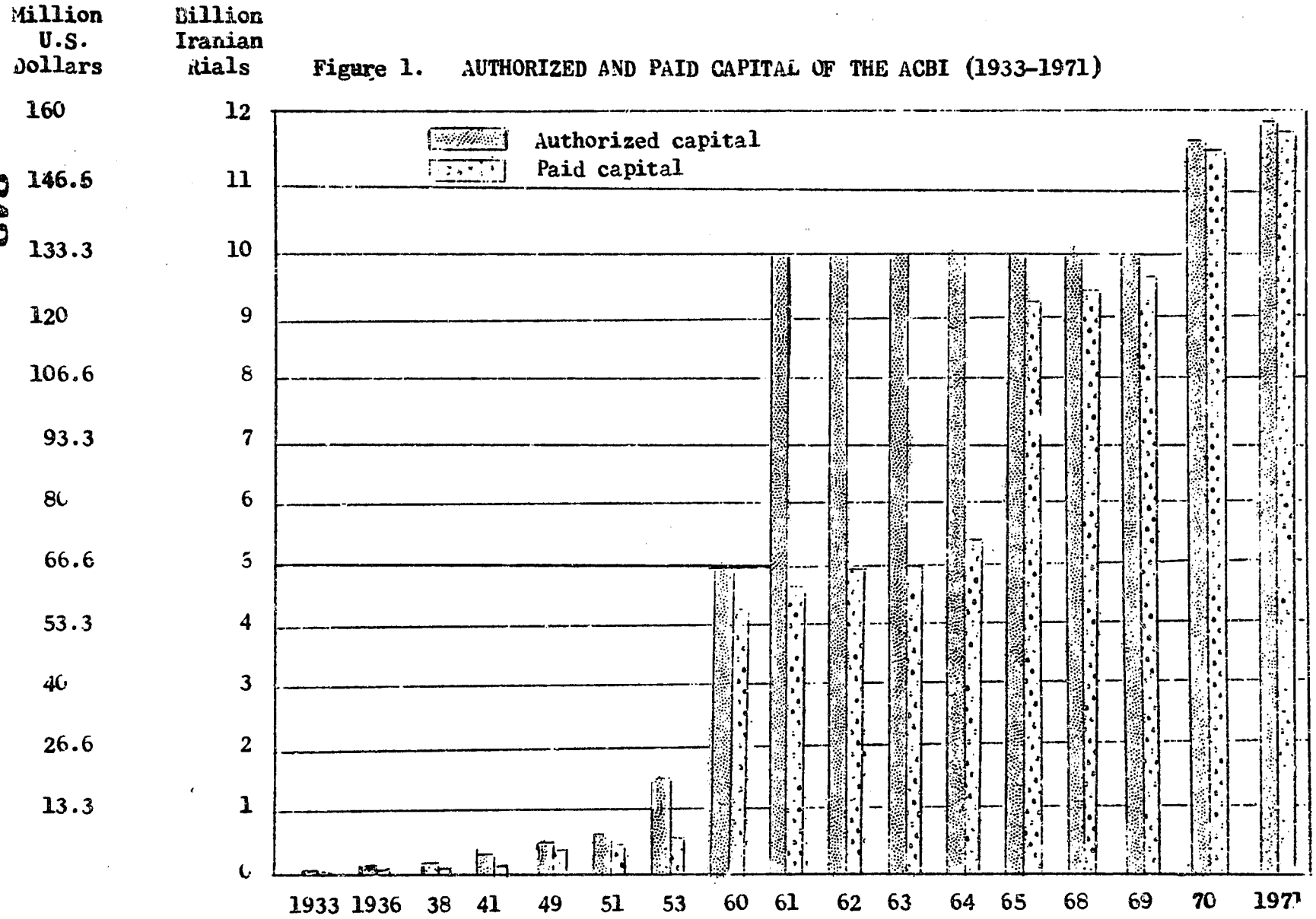
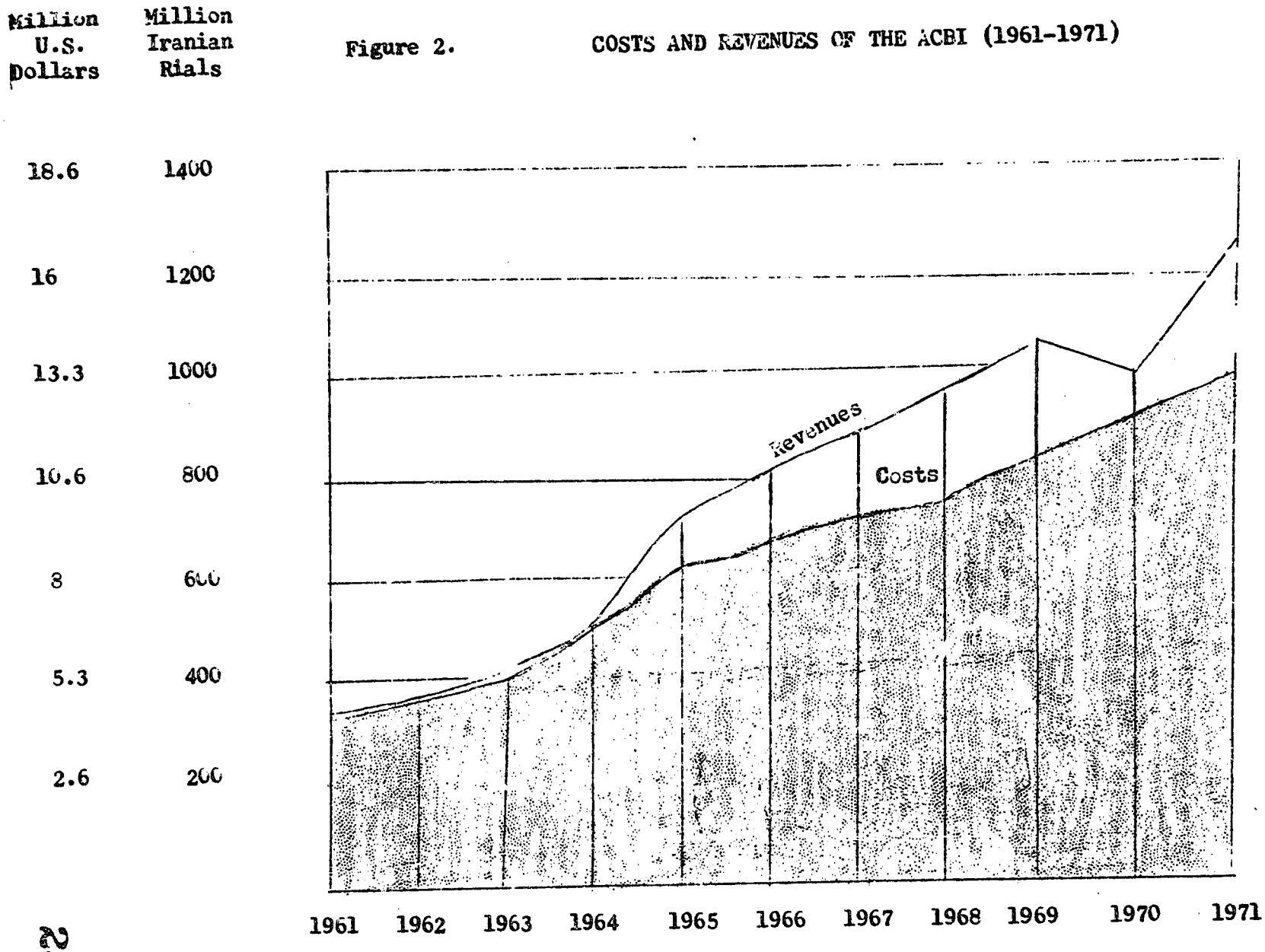


Figure 2. COSTS AND REVENUES OF THE ACBI (1961-1971)



c. Other Arrangements for Technical Transfer

Aside from the Program's integrated technical supervisory characteristics, program areas often benefit from the traditional extension services provided by the extension organization of the Ministry of Agriculture.

At present, two types of agents serve agriculture: The Extension Agents and the Extension and Developments Corps. At the farm level these consist, respectively, of (1) the high school graduates with 1-2 years of training in general agriculture, recruited on a permanent basis by the Extension Organization of the Ministry of Agriculture and (2) the high school graduates drafted for a period of about 2 years and receiving a condensed training in general agriculture and rural development along with their military training. The latter serve in their military uniform in villages with over 3000 families. There are about 600 extension agents and extension and development corpsmen serving the country as a whole.

As far as the program area is concerned, on the basis of the sample survey in 140 villages included in the 1969-70 implementation of the program, the number of villages which have either an extension agent and/or an agent of the Extension and Development Corps was 35.

The only step taken towards integration of the usual extension services was a preliminary attempt by the bank's experts to choose villages which already have access to the regular extension service provided by the agents mentioned above. There is no doubt that the extension service has contributed a lot to the adoption of innovations but it still remains true that efforts between the integration of extension and credit both at the local level and at the headquarters level has been poorly demonstrated. It is also suspected that the present number of extension agents with their present level of training cannot efficiently handle the problems of the small farmer sector in Iranian agriculture. The present number of extension agents has to be supplemented by an equal number of graduating extension and development corps, recruited on a permanent basis so that the ratio of the permanent agents to the total farm families will exceed 1:2000.

d. Nature of Technology

The Supervised Credit Program does not have a direct bearing on provision of new technology. It has, however, an active role in advertising the use of it to the extent that it is available.

In general, new technology is provided by either private or governmental sources. The following technologiese are provided by either of the two (but mostly government) sources: new seed and seedlings, improved breeds of livestock and poultry, agricultural machinery, fertilizer, irrigation pumps, management skills, and pest and disease control.

In connection to the projects carried out with the cooperation of the Ministry of Agriculture, credit has also been provided as a part of a crop campaign. These projects cover wheat, forage, cotton, rice, oil seeds and sugarbeet impact projects. Table 9 shows the cash loans paid by the bank from 1967-68 to 1970-71.

TABLE 9. CASH LOANS PAID BY THE ACBI FOR SPECIFIC CROPS (1967-68 to 1970-71)

Project	Cash Loans (U.S. Dollars)			
	1967-1968	1968-1969	1969-170	1970-1971
1. Wheat	539,008	47,666	732,974	451,197
2. Forage	-	193,426	411,246	353,520
3. Cotton	73,133	386,118	128,365	362,661
4. Rice	905,609	1803,017	1654,109	966,708
5. Oil seeds	99,012	183,807	-	-
6. Sugarbeet	891,273	153,780	-	-
Total	2,508,035	2,767,814	2,926,694	2,134,086

For illustration, the procedure of operation for the wheat project is cited here:

First: The seeds provided are Mexican (Panjano 62 and Inia 66) for the tropical and subtropical regions, and Bezostaia or the locally improved seeds for the colder regions.

Second: The farmer contractors, whether engaged in seed multiplication or production increase, would receive the following quantities of wheat seeds and fertilizer per hectare of any cultivated land:

	Mexican	Bez staia (irrigated land)	Local
Wheat seed (kilograms	100 to 150	180 - 200	About 150
Urea (kilograms)	100 to 185	About 150	About 100
Ammonium phosphate (kilograms)	100 to 125	About 120	60

The activities carried out for operating the wheat impact project are:

- Training the personnel engaged in operating the project (extension and development corps).

- Selection of suitable lands with the cooperation of the Plant and Seed Improvement Department, the Extension Service Organization and the Soil Institute.

- Transportation of seeds to pertinent sites and seed treatment.

- Agreement of contractors with the members of coops, farm corporations, and the farmers who operate mechanized agriculture for a maximum plot of 500 hectares for one farm institute or organization. Based on the terms of agreement concluded, seeds and fertilizer will be provided as loans in kind and these contractor farmers will undertake to carry out the technical innovations of the experts and the extensionists (including those from the extension corps) through the course of cultivation, maintenance and harvesting.

- Visiting and supervising the farms by experts, technical agents and extension corpsmen.

In 1971 the total area cultivated with Mexican, Bezostaia and the locally improved seeds was 200,000, 5,000,000 and 100,000 hectares, respectively. The average yield of Mexican and Bezostaia was about 2.5 tons per hectare.

The fertilizer and seeds provided to the farmers contracting such projects bear a lower cost than the market price.

As far as the level of mechanization in the Supervised Credit Program area is concerned, the following estimates were made with respect to the 140 villages included in the 1969-1970 programs.

Number of villages having no machinery:	25
Number of villages having no tractors :	40
Number of villages having 1-3 tractors:	30
Number of villages having 3-5 tractors:	25
Number of villages having 7-5 tractors:	30
Number of villages having both tractors and combines:	20

It is doubtful that the present extension agents are trained to the point where they can adequately transmit these technologies to the beneficiaries. At least a college level of training in agriculture should be a prerequisite for engagement in extension work.

2. Supplies and Sales

a. Program Supplies

Aside from the procedure discussed above, i.e., provision of seed and fertilizer for the various impact projects associated with the ACBI, the agricultural supplies are provided by the cooperative societies and the private dealers.

Out of the total of 140 villages included in the 1969-70 Supervised Credit Program, 114 had cooperative societies. Therefore, the marketing function of these cooperatives has a direct bearing on the program areas.

Cooperatives provide the following agricultural supplies to their members: fertilizer, insecticides and pesticides, and agricultural machinery.

No information on prices and imports was available at the time of writing this paper.

b. Program infrastructure

The supervised credit program includes infrastructure to the extent specified in the section on purpose of loans (II.B.2.a.). In addition, if after undertaking the planned expenditures some funds are still available in the project accounts, the representatives of the beneficiaries are authorized to spend such supplies for construction and improvement of infrastructure provided the program supervisors also confirm that.

c. General Access and Availability

As discussed in the section on selection criteria (II.D.1.), villages selected for the execution of the supervised credit program are relatively well-off in terms of access and availability of inputs, but the input availability may suffer for the following reasons:

i. The Iranian villages are in general scattered and the transportation network connecting villages to each other and to the bigger centers of supplies is rather underdeveloped.

ii. In the colder regions, like the northwest and northeast, also some parts of the south, winter rain and snow often hamper the transportation activities and marketing performances.

iii. The private sector is not expanding enough to cover the smaller villages, simply because of the dispersion of the areas and the transportation problems.

These are serious problems prevailing throughout the country and expansion of any credit program to cover most or all of the small farmers will likely encounter general access and availability limitations at the present time.

d. Guaranteed Sales and Price Supports

Markets are guaranteed for certain coops which provide the raw material for certain agro-industries like sugarbeets, various oilseeds, grapes, etc. Factories concerned with processing of these raw materials are usually working under capacity and stand ready to buy all the available produce. Sugarbeets, for example, have a 100 percent guaranteed market, cotton has almost a 100 percent guaranteed market and the same is true of other products which provide the raw materials for the available agro-industries. Actually, the owners of these factories in most cases buy the crop ahead of time. This holds true for the supervised credit program area and the other areas in the country. Generally speaking, the expansion of the agro-industrial plants has been faster than the expansion of the raw materials going into them.

In addition, as mentioned before, cooperative societies also perform some functions in collecting, transporting and selling the produce. According to general observations made, these cooperatives have not developed enough yet to perform full marketing services for their members, but they have the basic organizational set-up. It takes more trained managers, an amalgamation of smaller cooperatives into bigger ones and more government support for improved efficiency in performing marketing functions.

As far as prices are concerned, a price support system for sugarbeets and the commodities produced under the various impact projects (wheat, etc., discussed before) is available to all those producing sugarbeets and participating in the impact projects. Beyond that, the authors are not familiar with the price support system.

e. Insurance

An insurance scheme is under study but its implementation starts sometime in the future.

f. Other Program Marketing Arrangements

Besides those discussed before, the authors are not familiar with other program Marketing Arrangements.

g. General Marketing Conditions

Since the program has started only recently, it is difficult to assess anything about the achievement of its goals and the marketing conditions hindering production expansion. But, the following shortcomings have had a backwash effect on expansion of production and rural income:

- lack of proper grades and standards,
- lack of good transportation facilities,
- involvement of too many middlemen,
- price fluctuations,
- lack of proper storage and warehouse facilities,
- lack of a proper market information system,
- supply fluctuations, and
- existence of imperfect markets in agriculture.

h. Profits and Risks

Very limited information is available on the profitability of the new technology in the program areas. Referring to the wheat impact projects discussed before, the situation may be summarized in the following manner: the economic value of the wheat impact projects is determined by the fact that an increase in the production of an additional 525,000 tons valued at about 31,306,524 U.S. Dollars (after deducting the cost of fertilizers, running charges, 10 percent discount on seeds, and 5 percent banking charges).

In more general terms, wherever improved seeds have been used in combination with the right amount of fertilizer and water, average yields per hectare have increased at least 50%. It is the authors' judgement that if provision of a sufficient amount of water does not require long term investments, and if new seeds and fertilizer are used, incomes will be sufficiently beyond the various costs of operation including the risk factor.

III. EVALUATION

A. PERFORMANCE

1. Apparent Uses of Credit

The intended purposes of the supervised loans were already specified in other sections. It was also mentioned befor that the loans approved can only be cashed when the loan purpose is for payment of cash costs. Otherwise, checks are made to the order of the owners of raw materials, goods and services needed in the production or marketing processes. Such tight supervision means that the chance of spending the loan for consumptive purposes (like weddings, purchase of radios and the like) is very small. Therefore, with the lack of quantitative information it can only be arbitrarily estimated that almost 90 percent of the loans have been used for the purposes for which they were intended.

2. Effects

Unfortunately, no data on the socio-economic impact of the program is available. There are two reasons for this. First, the program was started recently, the piecemeal evaluation studies done have not yet been finalized and therefore the officials are reluctant to release any information in this respect. Second, in general, most of the programs planned and executed in Iran suffer from the lack of quantitative performance evaluation research even in the long run.

Nevertheless, the following is an attempt to assess the impact of the program-- over the long run -- on the various socio-economic conditions of the beneficiaries.

a. Production

The program seems very likely to have had a positive effect on production except where counteracted by exceptional climatic fluctuations. Furthermore, there is no doubt that any program which provides the credit necessary for the purchase of more fertilizer, improved seeds and more water through a collective approach will increase the production.

The increase in production can happen either through bringing more land under cultivation or by more intensive cultivation of the existing land or both.

b. Farm Income

Considering the sharp weather fluctuations from year to year and the short time (about 2 years) since the start of the program, it is hard to assess the changes in the networth of the beneficiaries, particularly since such information is not available yet. But, there is no doubt that an addition to income will accrue directly to beneficiaries.

c. Technology

Adoption of some new technologies like utilizing irrigation pumps or purchasing combines require a heavy investment which an individual small farmer may not be able to afford. The supervised credit program is basically involved in extension of loans for collective activities and, therefore, has some effect on the farmers' choice of technology. Referring to the data presented earlier in this paper, the rate of diffusion of tubewells has increased noticeably.

d. Savings and other Sources of Finance

It is difficult to assess anything about the impact of this program on the level of farmers' savings. But the program has done a lot in terms of familiarizing the farmers with savings and the benefits resulting from that.

With respect to competing effectively with other sources of credit (particularly since the terms of the supervised loans are adjusted to the conditions of the small farmers) the agency seems to have been successful.

e. Employment

It is very likely that the program has a positive effect on the use of the beneficiary's time and on the wage his labor earns. Significant improvement in the national employment problem has not yet been realized.

f. Political and Social Structure

There does not seem to have been any change in unit farm size, but the small farmers have very likely increased their leverage against large farmers and village merchants.

3. Progress Towards Other Objectives

No information on progress towards other objectives is available at the present time.

4. Image

a. Farmer Attitudes

Generally farmers view favorably the program after its first two years of operation.

b. General Image of Program

So far, the observers in the Plan Organization and the ACBI have been very much impressed by the program. Aside from these, no declaration of success or failure has been made.

B. EVALUATION PROCEDURES AND FEEDBACK

1. Program Evaluation and Feedback

As indicated in the previous sections, there was first a base line survey made to determine the feasible projects and the necessary credit for their implementation. In addition, the expected production broken down from these projects by type of produce both in physical and monetary terms, was recorded so that afterwards, results attained and the expected results could be compared.

2. Feedback and Changes in the Program

There has not been any change in the program, except that the program was expanded in 1970-71, compared to 1969-70, as illustrated before.

C. PROBLEMS

1. Government Level

The basic problems at the government level seems to be lack of a sound agricultural credit policy and lack of coordination between the various departments dealing with agriculture.

2. Agency Level

The basic problems at the agency level seem to be lack of sufficient trained personnel, and emphasis on a system of central authority rather than a decentralized one.

3. Farm Level

The main problems at the farm level are lack of crop insurance, poor access to farm supplies, price fluctuations, income fluctuations, poor extension services and confusion about the various departments in agriculture.

D. CONCLUSIONS ABOUT SMALL CREDIT

1. Major Problems of Small Farmers

At the outset it should be noted that there are around 605,000 hectares of land belonging to 240,000 farm families located in villages with less than 50 families and less than three hectares of land per farm. Such holdings are (first) too small to be economically used and (second) too sparsely scattered to be efficiently provided with the services needed. Therefore, these lands should be consolidated or else released from production of crops and developed as grazing land.

There still remains about one million farm families in possession of farms averaging about 6 hectares per holding. This group is faced with the following basic problems:

- Lack of sufficient irrigation water and inefficiency in the use of the available water.

- Lack of good feeder and main roads in most areas.

- Insufficiency of agricultural supplies at the local level.

- Lack of an efficient system of price discrimination and price control policies.

- Lack of sufficient storage facilities and proper grading, sorting, packing and processing services.

- Lack of a crop insurance program.

- Confusion arising from the duplication of efforts demonstrated by some government departments related to agriculture and also confusion arising from the Land Reform Program.

- Insufficiency of the present institutional credit extended to small farms.

- Complicated loan payment fromalities which arise from the poorly decentralized authority in the institutional credit.

- Poor extension services.

2. Role of Credit in Meeting these Problems

The planned credit programs have made minor contributions toward the solution of several of the problems discussed above except those which actually relate to a general government decision such as price policies, crop insurance, duplication of efforts by some government department, and confusion arising from the Land Reform Program.

The credit extended by the Bank directly or by the cooperative societies have no doubt helped in the development of water resources, provision of farm supplies, marketing services and the like. But, there still remains a lot to be done in solving the problems of the small farmers in Iran.

3. Credit and New Technology

a. Triggering Small Farmer Development

For the small farmers in Iran to get to move to an improved level of technology the present institutional credit system should be first more expanded and regionalized, loan formalities should be reduced to a minimum and supervision in the use of the new technology should be greatly expanded.

b. Sustaining Small Farmer Development

Credit is a factor limiting the ability of farmers to buy new inputs, but also the incomplete access to these inputs has a bearing on the purchase of these. If the Supervised Credit Program is continued and improved as recommend (in Section III.D.5.) it will strengthen this weakness and sustain small farmer development.

4. Conditions for Success or Failure

The Supervised Credit Program has done well if not better than any other program. Meanwhile, the program seems not be have been effective in introducing profitable technologies, for such tasks have been assumed to be the function of other departments.

5. How could the Program be Improved?

The program could be improved in the following ways:

a. Expansion of the program's activities systematically to cover about one million small farm families in the next decade.

b. Regionalization of the program's executive network, i.e., the country should be divided into as many regions as there are climatic and accessability variations and each region should be given almost full authority to recruit experts, approve loans and make the other necessary decisions.

c. Emphasizing the water and land resource development credit.

d. Undertaking the supervision of the cooperative societies and expansion of loans to cooperatives for provision of agricultural supplies and setting up marketing facilities according to the anticipated supply and marketing needs.

e. Setting up regional applied research centers closely coordinatinated with the Supervised Credit Program.

f. Integration of all the extension and credit activities or coordinating them very closely.

g. Setting up a systematic, evaluation procedure and making the minor modifications necessary in the Supervised Credit Program.

h. Devising a proper price and insurance policy by the government to help small farmers.

IV. ROLE OF TECHNICAL ASSISTANCE

A. A.I.D. INPUTS

A.I.D. has never participated in this Supervised Credit Program in any way.

B. OTHER DONOR INPUTS

No international organization has been involved in this program in any way.

C. EFFECTS

None

D. RECOMMENDATIONS

A.I.D. should rest assured that of all the programs in Iran that are supposed to serve the needs, of small farmers, the Supervised Credit Program is potentially the most effective. The authors would give unqualified endorsement to any A.I.D. support to this program. Particularly, it would be recommended that A.I.D. may:

1. Provide training programs for both administrative and field level staff.

2. Assist the ACBI in an evaluation study of the Supervised Credit Program to determine the extent to which it has been successful in reaching small farmers and serving their most urgent credit needs.

3. Encourage a more effective coordination between existing government agencies whose purpos is to serve the needs of small farmers.

SOURCES OF DATA

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COUNTRY STUDY

AGRICULTURAL CREDIT IN AFGHANISTAN: A REVIEW OF PROGRESS AND PROBLEMS FROM 1954 UNTIL 1972

by:
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Kabul
November, 1972

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List of Abreviations and Equivalents

ACIB = Agricultural and Cottage Industries Bank

FAO = Food and Agricultural Organization of the United Nations

IBRD = International Bank for Reconstruction and Development

RGA = Royal Government of Afghanistan

IDA = International Development Association

AFA = Agricultural Finance Agency

PACCA = Program for Agricultural Credit and Cooperatives

SIDA = Swedish International Development Authority

UNDP = United Nations Development Program

80 Afghanis = $1.00 (approximate free-market rate, winter of 1972)

1 seer = 7.066 kilograms

SUMMARY

This paper was prepared for the spring review of small farmer credit conducted by the United States Agency for International Development. The purpose of the review was to investigate Agency and other experience to see if it (1) indicates the conditions under which credit can play an important role; and (2) suggests a preferred set of institutional and policy instruments for rationing, delivering, supervising, collecting and refinancing small farmer credit, using a traditional or new system. Because small farmers have not been the focus of Afghanistan's agricultural credit programs, this study has limited application for the purposes of the spring review. Nevertheless, it is a useful review of the progress and problems of agricultural credit in Afghanistan from 1954 until 1972.

The Agricultural Development Bank (AgBank) of Afghanistan is the principal form of institutional credit serving Afghan farmers. Commercial banks and the urban money bazaars do not normally make loans for agricultural purposes. The agribusiness conglomerates, the Baghlan Sugar Company and the Spinzar Company make some loans to farmers, but even when their loans are combined with AgBank's, still less than 1 per cent of Afghanistan's farmers are reached by institutional credit.

The principal sources of credit available to Afghan farmers are other family members, bazaar merchants and clandestine money lenders. An examination of past studies and a brief field investigation revealed that:

1. Capital plays an important part in farmers' productive processes;

2. Farmers have a high rate of indebtedness, but loans are usually used for consumption purposes, such as weddings or a pilgrimage to Mecca;

3. Loans are usually made within family units at zero interest rate in keeping with Islamic doctrine;

4. Loans outside family units are obtained in secret from other villagers and nomadic money lenders;

5. A large amount of credit in kind is extended by rural merchants, who permit customers to pay for merchandise after harvest.

The institutional credit system began with the establishment of the Agricultural and Cottage Industries Bank in 1333 (1954/1955). The ACIB was established to promote agricultural development and to help reduce the extent of farmer indebtedness and mortgaging of land. While it probably accomplished the latter, the ACIB did little to insure its own longevity. Between 1333 (1954/55) and 1347 (1968/69) the ACIB lent out most of its initial capital subscription, but failed to collect repayments. The ACIB remained solvent through the meager collections and profits from supply operations, but had virtually stopped lending by the time it was rechartered as the AgBank in 1348 (1969/70.

AgBank was started with the remants of the ACIB accounts, a $5-million credit from IDA and a German management team sponsored by the UNDP. Forecful and competent, the team occupies senior management positions in AgBank and makes decisions in conjunction with their Afghan counterparts. Since their tour began, the team has helped AgBank to:

(1) Reorganize the loan portfolio (writing off loans totaling Afs. 100 million in the process),

(2) Renew lending activities and sharply increase the number and volume of loans,

(3) Reorganize the personnel system and initiate training activities,

(4) Develop a loan application and appraisal process,

(5) Revitalize the supply organization by selling tractors and water pumps,

(6) Coordinate activities with bilateral assistance programs. The latter has resulted in AgBank's assuming of extended duties, which include participation in a private sector fertilizer distribution system.

AgBank supplies credit to the Program for Agricultural Credit and Cooperatives (PACCA), and is a parent to the Agricultural Finance Agency (AFA). PACCA is a successfully integrated operation supplying credit, technical assistance and marketing advice to grape farmers. AFA operates in the Helmand Valley with U.S. technical assistance. Since 1350, AFA has had a vigorous lending history, a high rate of loan repayment, and has helped finance a substantial number of tractors.

AgBank has some problems at the government, agency and farm level. Problems at the government level are:

1. A lack of credit instruments, particularly the chattel mortgage,

2. A lack of discounting mechanisms that would permit the central bank to expand (or contract) the amount of credit available from AgBank,

3. Interference from the legislative branch of the government,

4. Limited cooperation from the Ministries of Agriculture and Finance.

Problems at the agency level are predominantly in the supply of competent personnel, which is a foreseeable situation in a less developed country. Farmers' problems are mostly in understanding the mechanics of apply for, and accepting the responsibility of loans.

In the immediate future, AgBank appears to be meeting the goal of efficiency, but the goal of equity remains to be pursued. Largely because of the German management team, AgBank has become much more efficient in lending, collecting and its supply operations. However, almost all of the lending is to large farmers detracting from the goal of equity. If and when AgBank decides to include medium and small farmers as targets of opportunity, it will need to (1) decentralize by strengthening branch offices, (2) institute flexible lending policies and (3) implement farmer education programs.

INTRODUCTION

The institutional agricultural credit system of Afghanistan is largely composed of the Agricultural Development Bank and its affiliates. Commercial banks give little or no direct credit to farmers, and lending by the urban money bazaars is predominantly to traders. Two agribusiness conglomerates, the Baghlan Sugar Company and the Spinzar Company also extend a limited number of loans to farmers in the form of physical inputs such as seed, fertilizer, and agricultural chemicals. The first of these conglomerates is scheduled to be studied under an A.I.D. contract to an Afghan research firm, and neither will be covered in this paper.

The Agricultural Development Bank reaches very few small farmers, although its lending activities are rapidly increasing. Most of these loans were to large farmers and as reported in the Asian Development Bank Planning Study, "AgBank's channels to reach small farmers are very limited" (12, p.168).

The small farmer problem in Afghanistan is critical to the country's progress. About 90 percent of the population is in agriculture, and 42 percent of the total number of farms are less than .38 hectares in size. Recent surveys have established that decision-makers on Afghan farms are typically in their mid-forties, heads of large households, and uneducated (but not unintelligent). The land that they own represents their major wealth and as in most economies capital inputs play an important part in production. As in most less-developed nations, Afghan farmers have limited access to purchased farm inputs.

While AgBank's activity among small farmers has been limited,it is a potential vehicle for development. The pertinent Ministries--Agriculture and Finance--as well as the president of the central bank, sit on the board of directors and policy formulation is coordinated with other developmental programs. Also, an IBRD financed team of foreign technicians actively participates in management and maintains liaison with bilateral assistance agencies. Finally, AgBank has played an innovative role in promoting new technology by importing farm machinery, water pumps, fertilizers and agricultural chemicals. As will be discussed, the AgBank's wide range of activities are gaining in momentum.

PROGRAM CHARACTERISTICS

Historical Summary

The first government effort to institutionalize agricultural credit was the establishment of the Agricultural and Cottage Industries Bank (ACIB) in 1333 (1954/55). The ACIB was established with an authorized share capital of Afs. 150 million, which was paid up as follows:

Shareholders	Afs. (millions)
Da Afghanistan Bank	76.6
Ministry of Finance	.9
Karakul Institute	.5
Government Monopoly	5.0
Bank-i-Melli Afghan	2.0
Others	1.0
Total Afs.	86.0

The Da Afghanistan Bank is the central bank, the Karakul Institute is a cooperative marketing organization for the export of lambskins, the Government Monopoly was a state trading agency that marketed certain industrial goods imported under bilateral agreements, and the Bank-i-Melli Afghan is a private bank and holding company.

The objective of the ACIB was to develop agriculture throughout Afghanistan by making available credit facilities to farmers and herdsmen, to protect farmers from land mortgages with excessive interest charges, and to acquaint farmers with the credit system. In order to promote these objectives, the bank established 11 branches throughout Afghanistan.

Up to 1337 (1958/59), the ACIB gave assistance to the establishment of 5 agricultural cooperatives, a number of small industries like silkworm raising, carpentry and blacksmith works, sewing and knitting, pottery, wood work, concrete blocks, etc. Additionally, the ACIB imported farm and industrial equipment, but between 1338 and 1348 (1959/60-1969/70), emphasis was given to financing irrigation projects. However, between 1344 (1965/66) and 1348 (1969/70) the ACIB also imported Afs 102 million worth of fertilizer, sulphur, DDT and other chemicals, as well as 70 water pumps, 400 tractors and spare parts (2).

From 1333 (1954/55) through 1347 (1968/69), the predecessor to the Agricultural Development Bank made loans totaling about Afs. 225 million. However, its lending rate progressively declined and in the year 1347 (1968/69) loans totaled only Afs 5,760,000 (see table 1). In 1348 (1969/70), the total was even less and the activities of the bank virtually came to a halt (12).

The unsound lending, and collection policies followed by ACIB and the lack of organized local credit outlets to farmers were the principal causes of the limited effectiveness of the bank. There was a notable lack of administrative expertise, even to the extent that volumes of loan records were unavailable when the bank was rechartered.

A report by Johnson in 1959 delineated the problems of ACIB when it stated, "The loan program of the bank has not been satisfactory..." and, "the bank has failed to achieve the purpose for which it was established, to help improve the production of the small farmers in the country..." and, "...a large proportion of the loans were made to individuals who are large landowners." The report also cited weaknesses in the procedures to control the use of the loan proceeds and stated, "It seems that a substantial part of the funds advanced were used for commercial and consumptive purposes and did not result in any marked improvement in agriculture..." (14,p.6). Following the criticism was a plan for strengthening the bank's program.

The plan designed by Johnson was to be implemented by Roberts, an A.I.D. agricultural credit advisor, by beginning a pilot project in Kabul in 1960. Capital for the project was to be made available from PL-480 funds assigned to the Ministry of Agriculture. Afs. 3,254,000 were earmarked for this purpose although only a small percentage of this was ever turned over to the ACIB by the Ministry. In 1961, the A.I.D. Mission made the decision to postpone the projects on the grounds that the country was not ready for a credit and cooperative program (14).

In 1966, an FAO/IBRD cooperative mission arrived in Kabul "to assist the Afghan Authorities in reorganizing and strenthening the Agricultural and Cottage Industries Bank for the effective implementation of Agricultural Credit Projects" (27). The mission recommended that the bank not engage in furnishing credit to cottage industries, nor import agricultural equipment. Further, it suggested that the role of the Ministry of Agriculture be limited to advice, rather than consent. With respect to lending policies, the report noted that the ACIB was charging interest rates that were unreasonably low, and it was suggested that the bank charge the following rates:

10 percent per annum for loans up to 1 year

9 percent per annum for loans from 1 to 5 years

8 percent per annum for loans of more than 5 years

With this and other recommendations, the report set the stage for a loan agreement between the RGA and the IDA and the organization of the Agricultural Development Bank.

The second effort to institutionalize agricultural credit was the rechartering of the Agricultural and Cottage Industries Bank in 1348 (1969/70) as the Agricultural Development Bank. As a condition for the approval of a $5.0 million credit from the IDA, the Government requested and received from the UNDP the services of four expatriate technical experts who are presently occupying senior positions in the AgBank.

The Agricultural Development Bank was established on February 11, 1970 by Royal Decree as a joint stock company in accordance with the private, commercial law. At the same date, it took over the assets and liabilities of the former Agriculture and Cottage Industries Bank (2).

When the AgBank took over the assets and liabilities of its predecessor, it was in satisfactory financial condition although lending had virtually ceased. Liquid assets of Afs. 29 million represented 18% of total assets (Afs. 162 Million) and covered current liabilities 1.1 times. The debt to net equity ratio was o.5. Overall results remained positive considering the build-up of reserves to Afs. 14.2 million after adjustment for losses to be written off (Afs. 28.4 million). These results were achieved partly because revenues were generated from loan operations in preceding years and partly because proceeds from loan collections were deposits in banks where deposits earned 6% per annum instead of being re-lent. Also, there were some earnings from commercial transactions

On June 24, 1970, RGA and the IDA agreed upon a Development Credit Agreement (Agricultural Development Bank Project), for which AgBank became executing agency. The total amount of US$ 5 million was to be allocated as follows:

CATEGORY		US$ or Equivalent
I.	Imported farm equipment, e.g. tractors and attachments	2,225,000
11.	Pump sets	480,000
III.	Locally-made farm equipment, including animal-drawn implements and stationary threshers	111,000
IV.	Minor irrigation rehabilitation schemes	840,000
V.	Vehicles, office equipment, construction and design equipment, and an initial set of spare parts for imported equipment	620,000
VI.	Technical services and fellowships	666,000
VII.	Local extension services	58,000
	TOTAL	5,000,000

RGA will have to repay the total loan, with the exception of that part of Category V which will represent the equivalent for the purchase of vehicles and office equipment for the use by AgBank.

The allocation out of Categories I-IV (US$ 3,656,000) will become RGA's participation in AgBank, actually held on behalf of RGA by the Da Afghanistan Bank.

AgBank is entitled to grant loans to farmers, to farmers' associations (if legally established), and to agri-business establishments. As agreed upon between RGA and IDA, AgBank will disburse loans only if the expected net return will enable the client to repay the loan and will simultaneously increase his cash income (2).

Along with the lending activities, AgBank continues to import and sell agricultural equipment through a supply organization, contrary to the recommendations of the 1966 FAO/IBRD team. However, the suppy organization is designed to operate only in sectors where private firms are unwilling or unable to give the necessary service to farmers.

The organs of AgBank are:

- The General Assembly of Shareholders;
- The Supreme Council as the Board of Directors in charge of deciding on the basic policy of the Bank;
- The Board of Auditors, which, according to the Charter, will transfer most of its power to a firm of chartered accountants elected by the Executive Board;
- The executive Board as the Board of Managing Directors, which is entrusted with all duties and authorities not assigned explicitly to other organs of the Bank by the Charter.

Shareholders as of Hoot 30, 1350 (March 20, 1972) were:

Da Afghanistan Bank	Af	156,661,103	=	72.9 %
Ministry of Finance	Af	54,766,000	=	25.5 %
RGA	Af	211,427,103	=	98.4 %
828 other shareholders	Af	3,418,900	=	1.6 %
830 shareholders	Af	214,846,003	=	100.0 %

In 1349 (1970/7/), AgBank, out of funds provided for by RGA out of the allocation of a United States loan, took over 100% of the paid-up share capital of Afs. 50 million of the Helmand-Arghandab Agricultural Finance Agency (AFA), which represents AgBank in the area of the Helmand Valley Development Projects.

The Afghan Finance Agency (AFA) was chartered for the purpose of providing, on a self-sustaining basis, financing and related services to the agricultural sector in Helmand and Kandahar Provinces. AFA is a wholly owned subsidiary of the AgBank and operates as an autonomous agent subject to the general policy direction of the Bank's Executive Board. The authorized capital is Afs. 100 million, of which Afs. 50 million are subscribed, representing about Afs. 49 million in contributions from FL 480 local currency funds and Afs. 1 million from AgBank's own funds. In addition, AFA is authorized to accept savings deposits.

AFA has had a short, but vigourous history of lending activities. A U.S. advisor who works full time in an active management advisory capacity helped AFA to loan the funds for 7 tractors and 7 pumps in 1350 (1971/72), and then 81 tractors and 9 pumps in the first six months of 1351. Although AFA lends independently, it sells tractors and water pumps as an agent of AgBank. In the brief time span of its operation, AFA reports an extremely low delinquency rate on its outstanding loans.

The Program for Agricultural Cooperation and Credit (PACCA) is a customer of AgBank that was initiated in 1968 under an agreement between the RGA, the Swedish International Development Authority (SIDA), and the Food and Agriculture Organization (FAO). The main purpose of the program is to demonstrate in pilot areas how a coordinated and integrated approach to agricultural credit and cooperatives can lead to the development of agriculture, and especially to the improvement of farmers' living standards. Like AFA, the PACCA credit program is conducted through the AgBank and will be included in the description of AgBank's lending activities (12).

There is another integrated agricultural development program that was started in Paktia Province by a German Technical Group in 1966 with funds from the Federal Republic of Germany. Among the many projects that are being carried out successfully, an effort is being made to organize an association of farmers to serve as a channel for credit to small farmers through the AgBank.

Relation to the National Credit System

Afghanistan has what has been described by Maxwell Fry as a "supressed financial sector." At the end of 1350 (1971/72), the official data on total claims against the private sector listed 3,486,303,000 Afghanis. Of this amount, 2,477,000,000 was carried by the country's two commercial banks, the Bank-i-Melli and the Pashtany Tejarity Bank. Another 927,000,000

was carried by the Da Afghanistan Bank and 82,313,000 Afs. by the Agricultural Development Bank.

The AgBank is the predominant institutional source of credit extended to farmers by private enterprises and the commercial banks only reac a very small number of large farmers. However, both the Baghlan Sugar Company and the Spinzar Company cotton operations extend credit to their raw material suppliers. Typically, these companies extend credit in kind composed of fertilizer, seed and agricultural chemicals. Payment in kind is made at harvest time. There is a paucity of information on these operations.

Agricultural Patterns and Potentials

The AgBank program area is potentially all of rural Afghanistan, which contains about 14 million people including 2 million nomads. Wheat is by far the most important crop. Food grains account for 90 percent of the area under crops in any one year, but annual deficits have been experienced in recent years and have led to a substantial decrease in food consumption in some isolated rural areas. Productivity levels are low and irrigated land yields an average of 1.8 metric tons per hectare. The other main crops are fruit and vegetables, cotton, sugar beets and oil seeds. Present exports are modest and hampered by inefficiency in government administrative offices.

Public expenditures on agriculture have been dominated by investment in large-scale irrigation facilities. There has been a historical tendency to implement grandiose schemes with bilateral assistance, such as the United States' involvement in the Helmand Valley and the Russian project in Nangrhar Province. Both these and other large-scale irrigation projects have been costly, slow-yielding and have guided government planners to consider other types of projects. However, as late as 1970-71 (1349), nearly 45 percent of the public expenditure for agriculture and closely-related sectors was for large-scale irrigation works. The predominance of investment in irrigation facilities has constrained the development of other inputs.

The typical Afghan farmer lives on a small irrigated farm where fertilizers, pure seed, mechanical power and credit have historically been difficult to obtain. Although the rate of technological diffusion appears to be accelerating, the absolute number of farmers that have access to modern inputs is still probably less than 20% of the total.

General Objectives

The announced objectives of the rechartering of AgBank programs were to finance farmers' investment in farm mechanization, shallow-well pumps and improvement of small traditional irrigation facilities. Aside from financial support from the lending program, it aimed at institution building: to enable AgBank to meet Afghan farmers' credit needs and to assist the Ministry of Agriculture and Irrigation in minor irrigation improvement and ground-water development. In 1971, the scope of the program was broadened to include a one-year program of loans for fertilizer, in conjunction with a crash food increase program.

Except for the one-year fertilizer program in 1971, AgBank has not reached small farmers in any significant amounts. This has been mainly due to the fact that land is the only collateral that can be used to secure loans under Afghan law. However, with its anticipated participation in Afghan Fertilizer Company, described in Appendix II, AgBank will indirectly reach a large number of small farmers.

AgBank is initiating a savings program to build confidence in the bank among farmers, as well as to accumulate loan funds. However, the growth of savings deposits is expected to be very slow. Without access to a well-developed commercial banking system and without the facilities for discounting loans, AgBank acts primarily as an institution which administers revolving funds.

For the longer-range future, the Management Team expects to (1) establish a small Foreign Relations Department which would handle marketing loans for export business as well as finance imports; (2) establish a service section for dealing with clients requiring advice on such matters as savings accounts and agribusiness problems; and (3) strengthen existing branches and establish new branches at appropriate locations to which authority would be delegated to make loan decisions. No time schedule can be provided for the accomplishment of these activities, but it will be several years in the future (12).

Terms of Loans

Of the IDA credit of 5.0 million dollars, about 69 percent of the $3.7 million earmarked for lending purposes is for tractors, attachments, and spare parts, stationary threshers, and animal-drawn implements. Another 18 percent is for rehabilitation of small traditional irrigation systems, and 13 percent is for pumps, engines, and pipes. Other types of loans can be made with the funds that were transferred to the AgBank by the AEIB.

The period that loans can be extended by AgBank is flexible, in keeping with the bank's general policy of evaluating loans on a case-by-case basis. The bank makes the following kinds of loans:

1. Farm-operating loans for short-term credit needs related to the production of crops and livestock with repayment scheduled from product sales. The maturities of these loans are related to the length of the production and marketing periods, with collection due in full before the end of the marketing period. Farm operating loans may be made for the purchase of fertilizer, seed, pesticides, livestock medication, and other required production inputs.

2. Farm-marketing loans. Although the bank is authorized to make these loans, they have not been active in this area.

3. Intermediate-term loans to farmers for the purchase of farm tractors, machines and equipment, on-farm irrigation improvements, draft-oxen, livestock, and other farm production inputs having an extended life in excess of 1 year. Loans are reviewed at least annually with the borrower.

4. Long-term loans to farmers for purposes requiring a payment period in excess of 5 years. These purposes include construction of irrigation systems, purchase of pump sets, construction of deep wells and tube wells, purchase of breeding animals, construction of farm buildings, planting of new orchards and vineyards, and purchase of heavy equipment for harvesting and processing agricultural products.

Organization of the Bank

The general structure of AgBank is described in Appendix Table 2. The four central positions: President, Credit Manager, Accounts Manager, and supply Managers are occupied by German National members of the management team and their counterparts share responsibility. However, in setting policy, the executive board is controlled by the management team which occupies four of the seven positions. The small farmer activities are not a special function and are incorporated into the bank's general activities. The bank's activities are centralized. All loans are approved in the central offices.

Beneficiaries

Loan applications are solicited from the farm community at large and are evaluated on the criteria of incremental returns on a case-by-case basis. There is no functioning graduation policy to absorb borrowers into the banking system, and continuance is on a case-by-case basis. Loans are almost all medium term. To date, the AgBank has made less than 10 short- and long-term loans, with the exception of the fertiliz loans described in Appendix 11.

Other sources of Credit

Traditional credit mechanisms have served to keep a substantial amount of credit flowing to Afghan farmers. A vast majority of the credit mobilized for production and consumption occurs within family groups. Lending that occurs outside family groups is usually clandestine and often at a high interest rates, reflecting the Muslim taboos against receiving interest payments. Because of this factor, it is extremely difficult to obtain accurate quantitative information about individual transactions, although a series of studies has developed some information about the supply and demand for loanable funds between landowners-cum moneylenders, farmers and shopkeepers.

The supply of credit outside of family transactions originates from nomadic Koochies, village leaders, other farmers, and shopkeepers. In describing the economy of the nomadic Koochies, Kakar (15) reported that the nomadic Koochies come from Peshawar, Pakistan, loaded with fabrics and other goods, take them into the highlands of the Hazarajat, sell on credit and return to collect payment in kind the next year. The payment in kind was often composed of land and Kakar concluded, "that in the Hazarajat...half of the agricultural land belongs to the nomads" (15, p.11). Another report of Koochi money lending was cited by Senzai and Harlan (29) in Nangrahar. They reported that, "Most of the farmers borrowed money from village people, but some borrowed from Koochi and Momand people (Momand is the name of a tribe)" (29, p.13).

In addition to the "village people," "supplying credit" cited by Senzai and Harlan (29), the Kunduz-Khanabad Survey (16) mention "farmers" and Tarzi-Stevens (31) noted "village chiefs or other leaders" as sources of credit (31, p.31). However, the "farmers" mentioned in the Kunduz-Khanabad study "turned out to be tribe or clan members who were not closely related and thus not classified as relatives." (16, p.III-5). Also the relationship described by Tarzi-Stevens was not a loan in the strict sense, but a situation where, "due to a lack of capital, most of these settlers work together with a village chief or other leader who has capital. The leader puts up the money to buy the sheep, the settler furnishes the labor and management, and any profits after the sale of the sheep are divided equally" (30, p.28).

Shopkeepers and other merchants provide a major source of credit. Scott mentioned credit sales by mill owners in the Helmand Valley (28) and Baranabas (6) said that in Baghlan the major source of credit was from lenders within the village or shopkeepers in Mehterlam, shopkeepers provide credit to farmers in the form of delayed payment (23), and in the Kodaman Valley, cloth sellers who were recently surveyed by the writer had extended substantial amounts of credit (see table 7).

The extension of credit by shopkeepers is referred to as, "Salam," and "Sud." Basically, "Salam" credit is interest free and "Sud" is where a higher price is charged to buyers who wish to delay payment. Although the Tarzi-Stevens report stated that "Salam" is looked upon with disfavor by Islam" (31, p.51), it is cited without disfavor in the dictionary of Islam (13). However, "Sud" is against the principles of Islamism and shopkeepers often avoid the issue by using the terms interchangeably. In conversations with shopkeepers and religious leaders in the Kodaman Vally, the writer found that delayed payment was an accepted practice. In fact, in the event of a bad harvest, debtors are not required to make payment and as discussed elsewhere, (21) it is one of a series of mechanisms that insulate rural poor from the shock of economic catastrophes.

A notable lack in the supply of credit to farmers in Afghanistan is the absence of rotating credit associations. As described by Ardener (4) a rotating credit association is a device whereby individuals in a group contribute funds at a specified interval, and then the collected funds are allocated to a member of the group by means of a lottery. Ardener found evidences of rotating credit associations in most of the less-developed nations, and her observations were supplemented by the writer's research in the Dominican Republic (22) and Miracle's (18) reports from Africa. In either the literature on Afghanistan, or in field research, the writer can find no evidence of this credit mobilizing device that is prevalent in other traditional societies.

Capital, as a productive input plays an important role, and the extent of farmer indebtedness is high in Afghanistan. Senzai and Harlan reported a 45 percent of indebtedness among farmers in Nangarhar (29, p.13), the Kunduz-Khanabad study reported 50 percent (16), and in the Marga area, Tarzi and Stevens reported that "Most of the settlers work together with a village chief or other leader who has capital" (30, p.28).

The available evidence cites a high use of credit for consumption purposes by farmers. The Kunduz-Khanabad study (16) found that 88% of the loans received by farmers were used for consumption purposes. Also, the Tarzi-Stevens study (31) reported that borrowing was most often for the Haj (a pilgrimage to Mecca) or to buy a wife for a son.

Most loans are obtained interest-free from family members and when farmers pay interest, it is high but not exhorbitant. In the Nangrahar study (29), farmers paid 33 percent for loans that averaged 6,024 Afs. in size. However, in addition to money, interest was paid in the form of corn or wheat and in land under the "Garaw" system at the rate of 5,000 to 10,000 Afs per jerib. The "Garaw" system is a device where the lender retains use of the borrower's land until the debt is repaid. Interestingly, the Kunduz-Khanabad (16) study also reported that interest rates averaged 33% and Barnabas reported rates between 21 and 50 percent. Also, the practice of "Salam" credit usually involves raising the purchase price about 10 percent. In the "Salam" credit, the loan may be repaid in one month, 6 months, or 2 years so the real interest rate is difficult to compute, although it probably approaches the levels

cited above. It should be noted that these interest rates are historical and may be lower than present rates, which are reported to be rising.

Most of the loans received by farmers appear to be unsecured. The Kunduz-Khanabad study reported that few farmers had to provide security for their loans. Also in Mehterlam, the shopkeepers provided credit to "people we know" (23). In the Kodaman Valley interpersonal relations play an important role in determing credit reliability and a bad debtor is widely known (22). The protracted role of interpersonal relations is not surprising as social sanctions are the only recourse due to a lender except in the case of "Garaw." Even in urban areas, the commercial code only permits loans to be secured by land and not by other assets. As a final descriptive note, loans do not appear to be inherited and do default with the death of the debtor.

Profile of the Farm Community

Afghan farmers are predominantly small-scale subsistence farmers. Table 5 gives a breakdown of Afghan farms by size in 1962. This is the country. However, a cadastral survey is in progress.

An excellent survey of Afghan farmers was conducted by Whiting and Hughes (34). The survey covered 733 farmers who represent advantaged hamlets whthin those provinces. They also represent irrigated cultivation only, not livestock or dryland operations. In the study the researchers found that:

1. Farm decision-makers typically were in their mid-forties, heads of large households, illiterate and uneducated infrequently exposed to both print and broadcast mass media, infrequently contacted by extension agents, and potentially but not presently mobile.

2. The majority tilled relatively small plots of irrigated crops. The land they owned represented their major wealth. Their net agricultural income and their expenses for outside labor were both low.

3. Six of 10 farmers owned most of the land they cultivated, while three of 10 obtained most of their land as sharecroppers or renters, and one of 10 functioned principally as a landlord.

4. Landlords tended to be more advantaged on all variables measured, both economic and noneconomic. Owner-operators were second and sharecroppers and renters last. The largest differences among the groups for noneconomic measures were found in the areas of community influence (landlords two and a half times more influential than owner-operators and nearly five times more influential than sharecroppers) and in contacts with the outside world.

5. In economic characteristics, landlords owned more and especially better quality land than the other groups, enjoyed both more agricultural income and more income from sources outside agriculture, and appeared to be less involved in farm decision-making than the other types.

6. Farmers differed from region to region in both economic and noneconomic variables. Farmers in the north owned relatively large and valuable farms, enjoyed moderate extension contact levels, were relatively high in other types of contacts and appeared to be, perhaps, less cohesive in their community life. Eastern farmers reported the smallest and least valuable farms, the smallest incomes, the most contact with extension agents, more social cohesion, and a large amount of nonagricultural income. Farmers in areas near Kabul were older, more exposed to print sources, had the lowest level of agent contacts, the lowest nonagricultural income, and the smallest levels of labor, both family and hired. Farmers in the south made more visits to large cities, were relatively cohesive and less exposed to radio and print, and worked relatively valuable land holdings.

7. Landlords in the northern region appeared to be different from landlords elsewhere in that they were (a) inferior on many variables to landlords elsewhere, and (b) inferior on many variables to owner-operators in their own region. This interaction may be attributable to the selection of an atypical hamlet as one of the two hamlets comprising the northern sample.

8. The researchers sought to determine the relative importance to net agricultural income of capital, family labor, management excellence, and chance; we also sought to explain the causes of difference in management excellence. They found:

a. Capital, as measured, accounted for from 16 to 38 percent of the variance in income, depending on the region; the average percentage was 26.

b. Family labor, as measured, accounted for from 0 to 11 percent of income, depending on region; the average was 5 percent.

c. The remaining two-thirds of the variance in net income did not appear to be closely related to any variables that might index management excellence. The researchers did find that the sharecroppers were significantly better managers than our two other types of farmers, perhaps due to the necessity of their obtaining minimum subsistence incomes from very limited resources.

d. Situational factors beyond the farmer's control were probably the most important determinants of net income. There is no evidence that psychological characteristics are important.

9. Innovativeness can scarcely be measured in Afghanistan because of a paucity of opportunities to respond to innovations; nevertheless, such innovativeness as exists:

a. Was unrelated to net agricultural income.

b. Appeared to be situationally determined more than psychologically determined (regional differences were strong but tenurial and psychological differences weak).

c. Had its closest psychic correlates in knowledge of the innovations themselves.

10. About half of the farmers who had not tried the innovations and to whom they were relevant said they had not tried them because supplies could not be obtained. Another quarter gave as the reason for nontrial a lack of money or credit to purchase the innovation. A final quarter indicated they were not convinced of the innovation's value or had not heard of it. Again, situational constraints appeared to exercise more control over innovativeness than psychological characteristics.

11. The distribution of capital, income, innovativeness, and control over laborers appeared, in comparison with other under-developed countries, to be relatively egalitarian in the sample. Perhaps this is due to (a) the selection of irrigated cultivators, (b) the preponderance of owner-operators in the sample, (c) traditions of independence and violence among Afghans, or (d) patterns of inheritance within family units (34, p.5-10).

Although, the Whiting-Hughes study represents a sample that is biased toward advantaged farmers, it is most appropriate for immediate developmental purposes. The type of farmer portrayed is the one that will likely be reached first by credit programs as well as the private sector distribution system for agricultural inputs.

Lending Practices and Policies of AgBank

Data about the amount of lending by AgBank is contained in Table 1. As previously noted, the lending activities of the agricultural and Cottage Industries Bank had almost ceased in 1348 (1969/70). However, in 1349 (1970/71) and 1350 (1971/72) the lending activities were gaining momentum. Lending activities in the current year are expected to increase sharply.

Table 8 shows detailed changes in the loan portfolio during 1349 (1970/71) and 1350, which were the years after the reorganization. As part of the new program Afs. 41,244,000 were written off as bad debts in 1349 and Afs 51,835,000 were written off in 1350.

Information on the extent of repeated beneficiaries is not available at this time. The only restriction is that loans to one individual or group may not exceed 5% of the value of the paid-up share capital. This rule is to insure that the agribusiness conglomerates do not gain an oligopsony position on the bank's funds. Aside from the 5% rule, other loans are evaluated on a case-by-case basis.

Interest Rates

From 1333 (1954/55) to 1347 (1968/69) the interest rates charged by the Agricultural and Cottage Industries Bank were:

4 percent per annum for loans less than 1 year,

5 percent per annum for loans from 1 to 2 years,

6 percent per annum for loans from 3 to 5 years,

8 percent per annum for loans from 5 to 10 years.

It is interesting that the interest charges were directly, rather than inversely, related to the length of the loan.

From 1348 (1969/70), to the present interest rates are:

10 percent for 1 year or less,

8 percent for loans from 1 to 5 years,

8 percent for loans greater than 5 years.

Commercial banks charge about 10 percent per annum on loans. Lending in the money bazaar is usually done at rates of one and one-half percent per month. Inflation does not appear to affect interest rates.

Collateral

Land, excluding homesteads, is the only legal collateral for loans in Afghanistan. The AgBank normally requires that borrowers provide a legal description of the land along with written assurances from neighbors that they stand ready to buy the land in case the borrower defaults on the loan. The AgBank usually requires that the value of the land is twice the amount of the loan. One problem with collateral has been obtaining titles to land. In day-to-day operations, minor government officials normally expect a small fee for services rendered. However, in some cases where officials know that land titles were being obtained for AgBank loans, prohibitive amounts of "Baksheesh" were solicited, and the loan attempts were abandoned.

Appraisal Steps

As noted above, each loan is evaluated on the basis of incremental returns on a case-by-case basis. The following steps are followed:

Step I. The application form is filled out.

Step II. The pre-investment costs and returns are calculated.

Step III. The post-investment costs and returns are calculated.

Step IV. The incremental returns are evaluated. At present, costs and production data from secondary sources are used so the relevant variable are the size of the farm, crops under cultivation, and tenure relationships. Particular attention is paid to the latter, as they differ substantially from one area of the country to another.

In the future, AgBank hopes to refine the appraisal process and use primary data from the farms of the applicants. Also, two supervision visits to each farm are envisioned.

Collection

Prior to the 1970 reorganization, data on the repayments is available only in the aggregate figures displayed in Table 1. Since the reorganization, the aggregate repayments have been greater (see Tables 8, 10 and 11). Repayment is made in cash. The collection methods are as follows. One month ahead of the due date a written reminder is sent to the lendee. If the loan is not paid on the due date, a surcharge of 2 percent of the total loan is charged and collectors are sent. When the collectors are sent out, they first inform the local administrator--called a woleswal or sub-governor--who sends the police to arrest the debtor, who is then placed in jail until the repayment is made. While in jail, the debtor must pay the costs of his internment.

The AgBank's policy on rescheduling is as follows: Of the loans that are delinquent, a fixed percentage are written off each year. The percentages are:

2% of the loans less than 1 year overdue

5% of the loans from one to less than 2 years overdue

25% of the loans from 2 to less than 3 years overdue

50% of the loans from 3 to less than 4 years overdue

75% of the loans from 4 to less than 5 years overdue

100% of the loans more than 5 years overdue.

Costs and Finance

The changes in the loan portfolio of AgBank are shown in Table 1 and Table 8. As indicated, the loan portfolio grew steadily under the Agricultural and Cottage Instustries Bank 1344 (1965/66) through 1348 (1969/70). The loan portfolio then decreased under the AgBank because of write-offs of bad debts and is increasing again.

The administrative costs of AgBank are displayed in Table 12. Again, the short time span prohibits conclusions.

The external finance for ACIB began in 1333 (1954), when an authorized share capital of Afs. 150 million was paid up as follows:

Shareholders	Afs (000)
Da Afghanistan Bank	76,000
Ministry of Finance	900
Karakul Institute	500
Government Monopoly	5,000
Bank-i-Melli Afghan	200
Others	1,000
	86,000

After the reorganization in 1970, the composition of ownership was changed to:

Shareholders	Afs (000)
Da Afghanistan Bank	156,600
Ministry of Finance	54,700
Others	3,400
	214,700

External finance to the AgBank has consisted of a $5,000,000 IDA credit described above. At this writing, $2,700,000 have been drawn. Also, a contribution of Afs. 50,000,000 was made by U.S.A.I.D. to finance the Helmand-Arghandab Finance Agency.

The Agricultural and Cottage Industries Bank fared well with respect to internal finances, as has the AgBank. The profit and loss statement for years 1344 (1965/66) to 1346 (1967/68) is contained in Table 9. However, it must be remembered that the ACIB was not lending substantial amounts during its later years. It was simply paying expenses with its income from money on deposit and profits from trading operations. AgBank has also fared well financially, largely because of profits from its supply operations, which are used to offset administrative expenses of the rest of AgBank. The profit and loss statement for the last two years of AgBank's operations are included in Table 13. Like other businesses, AgBank is required to pay the turnover tax of 5 percent on interest earning and 2 percent on sales.

It is difficult to assess the impact of the ACIB on the foreign exchange balance. However, the AgBank has likely contributed to foreign exchange earnings. The funds used to finance imports were obtained with IDA credit, and at least some of the production has been exported or served to substitute for imports. On the other hand, fuel, tires and other inputs have been imported, but likely in amounts less than the value of the increased production.

Complementary Factors and the Nature of Technology

Most of the credit extended by AgBank has been provided in kind in the form of tractors, pumps, fertilizers and other farm inputs. There has been little attempt to promote "packages" of inputs. Due to a lack of personnel, AgBank does not provide on-farm supervision, although it is envisioned in the near future. At present, Afghanistan has an extensive extension service and services are available in many rural areas. At the local and regional levels extension services are not formally coordinated, but the Minister of Agriculture is a member of AgBank's board of directors and serves to coordinate policy. For the most part, the technical transfer is taken for granted. As farmers must come to the bank with specific proposals, i.e. for a tractor or water pump, it is assumed that he is willing and able to put it to good use. Also, the exhaustive appraisal tehcnique helps to verify this assumption.

It is extremely difficult to accurately assess the profits and risks involved in the technologies provided by AgBank because records were not kept in the earlier years, and the costs and returns studies conducted for the IDA request did not take into account risk factors. The loan request for the IDA project quoted a 40 percent return on a tractor on a 700 jerib farm and a 50 percent return on water pumps on a 200 jerib farm (24). However, the same report predicted that the annual costs of farm operation would fall from Afs. 40 to Afs. 1,228 if a polycultor instead of a stick plough (kolba) were employed.

The polycultor is an interesting example of new technology that failed in production. A polycultor is a drawbar to which improved ploughing and cultivating devices can be attached and employed with draft animals. AgBank tested locally produced polycultors and found them to be unsuitable because: (1) the construction was poor (when a ploughshare hit a stone it would often bend), (2) Afghan animals were not sufficiently strong to pull the implement, and (3) the design was faulty, principally because the ploughshare was too broad. Even though about 300 polycultors were distributed free by the Ministry of Agriculture, they are reported to be idle.

It may be possible to conclude that tractors and water pumps are profitable investments because of their sharply increasing use. Moreover, the risk has been diminished by high prices for food grains in the past two years when drought conditions prevailed in the country. In the near future, when the effects of the "green revolution" begin in Afghanistan, the prices of food grains will likely decrease sharply and detract from the profitability of on-farm investment. This is an area that needs careful study, particularly as to how farmers might minimize risk by diversifying into high-value crops designed for export markets.

The risk associated with using new technologies would be substantially reduced by a price stabilization program for food grains in Afghanistan. Theoretically, wheat prices are supported at 35 afs per seer, but, because of the recent high prices, the mechanisms have been inactive. U.S.A.I.D. is presently encouraging the government to refurbish the price support program.

General Marketing Conditions

In the private sector, the general marketing conditions for basic food grains do not appear to be disadvantageous to farmers. Although there are sporadic impediments to the flow of agricultural products in the form of interference of wheat shipment by provincial governors and closing of transport routes by snowfall, the writer has observed that

spatial price differences of wheat between the major trading areas of Afghanistan tend to approximate costs of transportation.

The normally efficient flow of food grains is due to an adequate supply of motor transports and highly developed traditional marketing organizations. Afghanistan has about 20,000 trucks, most of which have a capacity of about 10 metric tons of product. Many of the trucks are closely tied to the grain trade through leasing or standby arrangements with traditional grain traders. These traditional traders have networks of associates in major areas in the country and ship products back and forth on a regular basis.

Because foodgrains move efficiently in Afghanistan, farmers tend to get a substantial share of the total revenues of their produce. Recently, wheat farmers in Samangan were receiving approximately 75 percent of the Kabul wholesale price of flour. The 25 percent in the marketing margin paid for 300 kilometers of transportation, milling and bagging, as well as the trader's profits.

Supplies and Sales

The agricultural supplies imported by AgBank are delivered to farmers at the branches. As indicated in Table 15, a wide variety of supplies have been imported, but most recently tractors and water pumps have predominated. Neither the tractors nor the water pumps are subsidized and in fact AgBank makes a gross profit of about 10% on the sales. As mentioned above, the profits from the supply organization are used to offset other expenses.

The tractors are predominantly Byelarus (Russian) and Massey-Ferguson (multi-national). The Byelarus cost Afs. 287,000 with attachments and has a 60 H.P. diesel engine. It is sturdy and strong, but lacks a depth control, consumes 8 to 10 litres of fuel per hour and maintenance facilities are poorly organized. The Massey-Ferguson costs more than the Byelarus (Afs. 407,000) with attachments, is smaller (45 H.P.), but uses less fuel and has a depth control device. Conclusions about the cost-effectiveness of the two units are often related to the national origins of the observer and again a comparative economic analysis is needed.

The tractors are serviced by workshops located in the provinces. North of the Hindu Kush, Byelarus tractors are delivered and serviced by Tractorexport (a Soveit trade agency), which has workshops at Mazar-i-Sharif and Kunduz. South of the Hindu Kush, Massey-Ferguson tractors are sold and serviced by Indamer (a private corporation) at Kabul and Kandahar.

The water pumps sold by AgBank are manufactured by Jangalak and powered by Pakistani or Czechoslovakian diesel engines. A pump set that delivers 120 cubic meters per hour (maximum) costs Afs. 57,000. The line of pumps is expected to be expanded to include engines from 5.0 H.P. to 30 H.P. and pumps from three to six inches (delivery and suction). All of the present pumps are centrifugal but turbine pumps are being considered.

The supply organization of AgBank is a progressive entity. Although past excursions into other agricultural technology have been short-lived, the division expects to handle sprayers, agricultural chemicals and other equipment in the near future. It is alert for opportunities.

Although, AgBank supply secion is ambitious, it has not supplanted activities carried out by the private sector. In the past, most of the private sector business has been in the form of tractors and fertilizers being smuggled in from Pakistan. However, a private sector fertilizer company has been launched with AgBank as a major shareholder. In this manner, AgBank is encouraging the development of an agricultural supply industry.

EVALUATION

Performance

Again the lack of data and short history of AgBank makes an evaluation difficult. There is simply no objective and easily available means to measure the impact of the effects of the agricultural credit program on production, farm income, technology, savings and other sources of finance, employment or the political and social structure of the country.

It is possible to say that the credit appears to have generally been used for the intended purposes. As it is extended in kind, it could only be converted to consumption credit by reselling the tractor or pump.

To obtain an idea of the general image of the program, the writer conducted several interviews with U.S. development workers (one has been in the country 8 years, another 5 and the other 3) the following conclusions were offered. The ACIB was a totally inept operation bound by traditional governmental practices. At one of the branches, a technician recalls that 15 or 20 tractor loans were obtained by laborers using hypothetical farm data. As the branch of the bank had no field staff, the loans were extended on the basis of the data presented and verification of residence on the basis of tazquera (identification) numbers. When the loans fell due, the laborers had disappeared and the tractors had ostensibly become the property of a large agribusiness conglomerate. At present, the AgBank is becoming a viable institution. The German management team is composed of diligent technicians, who although conservative are making progress in spite of difficult working conditions.

Program Evaluation and Procedures

An evaluation system has been designed by AgBank and is being implemented on the basis of data included in the loan application forms. An attempt is made to measure the net income per jerib before and after the loan. A base-line survey was not made and the increases in production are assumed to conform to observations taken from other farm production studies. In the same calculations, the amount of income per jerib above production costs plus family expenditures is computed. As will be discussed later, the writer has difficulty understanding the rationality of this approach.

Problems Faced by AgBank

One of the problems faced by AgBank at the government level is the lack of a flexible credit expansion mechanism. AgBank does not discount its loans to the central bank. Therefore its lending capacity is limited by its amount of paid up capital. The paid up capital can only be expanded by additional subscriptions, and the authorized capital can only be expanded by amending the Charter. Other means, such as attracting savings accounts from farmers are not presently feasible. The profits from the supply operations are not enough to generate capital, as they are used to offset administrative expenses.

Another major problem is the lack of basic credit instruments. As noted above, there is no legal collateral other than land. Chattel mortgages are not provided for in the commercial code of Afghanistan. Therefore, it is not possible to offer crop liens or farm assets as security. This restricts loans to landowners, thus serving to redistribute income in favor of existing landowners. However, this may serve the goal of efficiency, if not equity.

In the past, the Afghan parliament has interferred with the operations of the AgBank on occasions. Larger farmers, who had loan applications rejected, have gone to their representatives who in turn applied political pressure on AgBank, sometimes resulting in compromises on the part of AgBank officials. The parliament can apply pressure to AgBank by means of calling for an inspection, whereby an appointed team sits in AgBank for an extended period of time to investigate some phase of the operation. Such "inspections" may be applied punitively and can be costly in terms of time and effort.

AgBank could likely operate more effectively if the development of suitable technology occurred within the government-owned Jangalak Industries. Jangalak Industries is faced with its own problems and has turned out inferior agricultural equipment from time to time. The most notable example was the polycultor, described above. Other failures have been threshers, sprayers and in some cases, pumps. At least some of Jangalak's difficulties can be attributed to misguided technical assistance, along with the usual numerous problems facing an ambitious enterprise in a developing nation.

Although AgBank imports agricultural equipment duty-free, the Ministry of Agriculture must certify that an import is in fact agricultural equipment. This has resulted in delays. For example, AgBank recently imported a device to measure the running time for tractors. After several rounds at attempting certification, AgBank gave up and paid the duty.

The principal problem of AgBank at the agency level seems to be a lack of trained personnel, both absolutely and relative to the potential of the organization. As there is not sufficient staff to provide on farm appraisal visits (much less for supervision), the personnel constraint appears to be the most serious. The technical assistance team also points out the inadequacy of their numbers. Although this complaint is probably voiced by technical assistance teams everywhere, it seems reasonable that additional advisors to AgBank could be provided to function at the top management levels.

At least part of the problem of trained personnel for the AgBank lies in the educational system of Afghanistan. University education in Afghanistan is highly abstract and members of the technical assistance team have found university graduates ill-equipped to cope with day-to-day problems of a very simple nature. Extensive training is required before new personnel can perform simple tasks such as assisting farmers in filling out loan applications.

Another part of AgBank's personnel problem must be attributed to the prevailing low salaries among government workers. In AgBank, college graduates start out at Afs. 1,500 per month (U.S.$18.75). plus Afs. 1,000 for"maintanance." The president earns Afs. 7,500 (U.S.$93.75) per month. Low salaries inevitably lead to low incentive, as well as efforts to obtain supplementary income.

There are several problms of agricultural credit in Afghanistan at the farm level. First is the farmers' difficulty in coping with the loan process and understanding the ideas of coupling acquired technology to his existing traditional processes. For example, the writer sat in on the review of a loan application for a water pump that a farmer was submitting. The farmer had already begun a well to which the pump was to be fitted. The well was located in a location that would not provide sufficient water supply through the soil strata. At best, the diameter of the well would have to be increased to allow sufficient seepage into the shaft, an expensive process. Had the farmer been aware, he could have obtained assistance in locating the well from Ministry of Agriculture personnel. In the final analysis, the loan application was rejected as infeasible. Another farmer problem has been in understanding maintenance procedures for farm machinery, particularly tractors which require daily preventive practices.

Farmers also have reported difficulties in acquireing downpayments and more acutely clear titles to their land. Reports include incidences where disproportionately large incentive payments have been requested by local officials responsible for verifying land titles.

Conclusions About Small Farmer Credit

The principal economic problems of small farmers are that they are faced with situational constraints that prevent them from obtaining productive inputs, particularly those of an innovative nature. Institutional credit has not reached small farmers in Afghanistan in any appreciable amounts and it is likely that their economic problems could be solved partially by the infusion of credit. According to the available evidence, the marketing system of Afghanistan could provide farmers with purchased inputs, if farmers had the means to pay. The bazaar credit mechanisms serve mainly to provide consumption, rather than production credit, hence need to be supplemented by institutional credit.

How the Agricultural Credit Program Can be Improved

Most of AgBank's problems appear to be exogenous and unrelated to internal policy. Following the list of problems cited above, appropriate courses of action might be:

1. Development of a functioning rediscount mechanism between AgBank and the Central Bank.

2. Development of credit instruments, particularly chattel mortgages.

3. More than one kind of technical assistance. The German management team is probably the most efficient developmental group that the writer (with limited exposure) has encountered. They make few mistakes, but then again seem to take few chances. Could it be that AgBank lacks an innovator? Perhaps the AgBank has been brought out of the chaos of ACIB with a strong dose of Tuetonic precision and now needs an innovative group to complement the German team. The programmatic difficulties of supplying a team of innovators are formidable.

One possibility for an innovative role could be with an internal research group designed to point up targets of opportunity. The German team has found ample work in just restructuring the organization and implementing sane banking practices. Perhaps someone should be considering (1) How can small farmers be reached more effectively. (2) How can the extension service be used to help AgBank in its endeavors. (3) How AgBank could utilize Afghanistan's recently ordered computers. Perhaps AgBank could computerize its operations such as international accounting, loan monitoring and loan evaluation? Is it dangerous to computerize given the limited capability of local hire employees to understand the analyses?

Another area where AgBank could improve is in the procedures to evaluate the impact of loans. The evaluation being carried out by AgBank is lacking in several respects. While a French management specialist has been hired to examine the available data, the writer found that the research was being held up for lack of a calculator. Moreover, the research design was questionable. As noted above, the researcher was calculating net farm income per jerib and net income above family expenses (disposable income) per jerib before and after farmers received an AgBank loan. The data is then broken down into regions to guide AgBank planners. The writer feels that disposable income should be computed on a farm rather than on a jerib basis. Presumably the calculation of disposable income seeks to measure: (1) the welfare effect of the loans, (2) the increase in spending and/or saving. Both of these would be better described on a per-farm basis. Jeribs do not experience welfare effects, neither do they spend or save. In AgBank's calculus of its impact, it would be well to document the impact of the loans for mechanized farm equipment on employment. As some observers believe that Afghanistan is heading toward a critical unemployment problem, it would be useful to be able to ascertain the effects of promoting capital-intensive farm inputs.

With these conclusions, the present study is completed. Perhaps the lessons taken from the history of agricultural credit in Afghanistan will be valuable in planning for the future.

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Appendix I.

Table 1 Lending activities of the Agricultural Development Bank and its predecessor from 1344 (1965/66) to 1350 (1971/72). Taken from the Loan Request of the RGA and AgBank Annual Report.

Year	Loans outstanding at the beginning of the year	Loans issued during the year 1/	Repayments during the year	Loans outstanding at the end of the year
	Afs. (000)	Afs. (000)	Afs. (000)	Afs. (000)
1344 1965/66	68,830	1,740	11,270	59,300
1345 1966/67	59,300	26,030	11,750	73,590
1346 1967/68	73,590	68,780	12,470	129,900
1347 1968/69	129,900	5,760	3,540	132,120
1348 1969/70	131,730	2,600	20,063	59,656 2/
1349 1970/71	59,651	27,855	16,900	70,754 3/
1350 1971/72	70,754	42,326	20,206	82,313

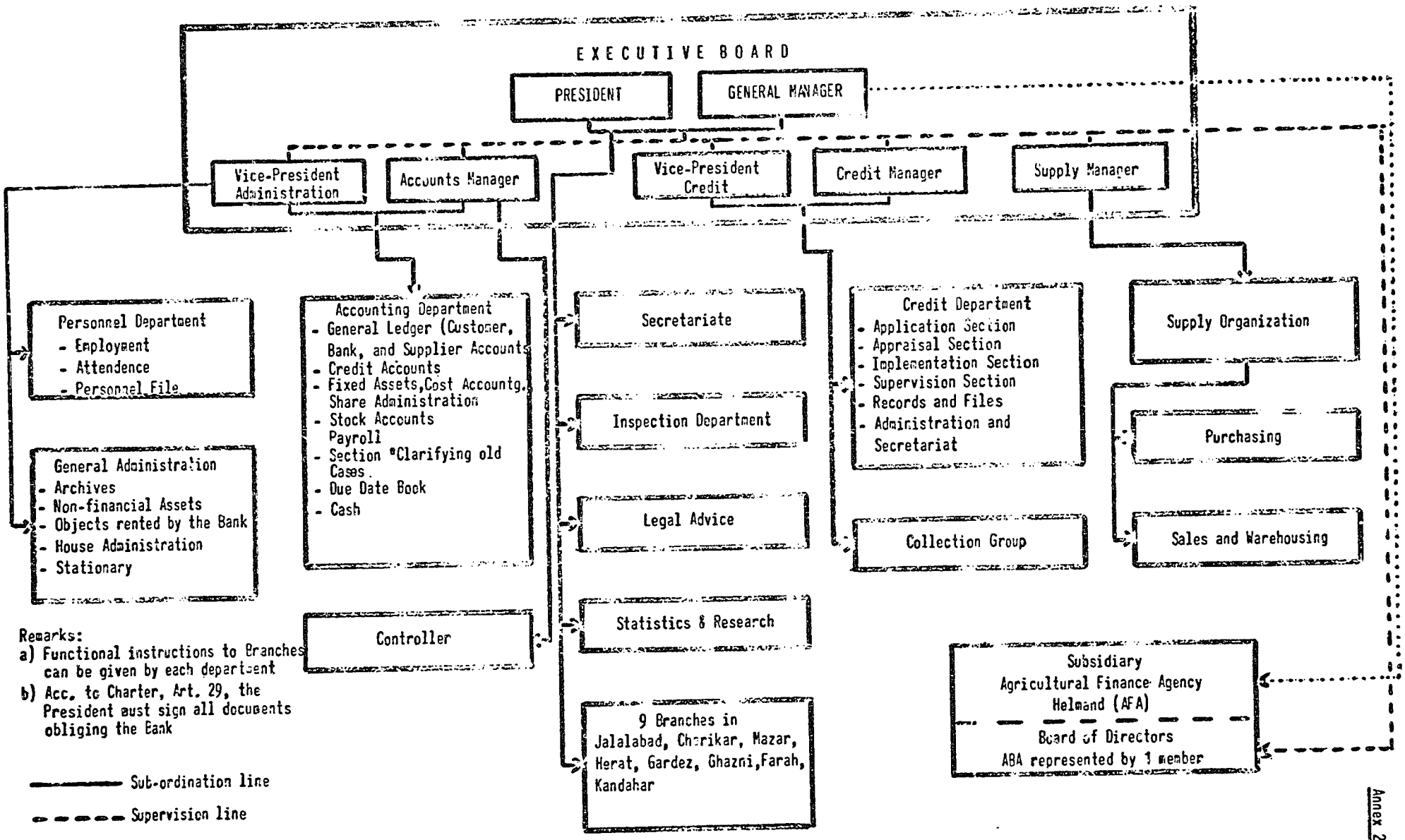
1/ Includes capitalized interest

2/ This was the year of rechartering. Afs. 41,274 were written off and Afs. 22,000 were added.

3/ Another Afs. 51,835 were written off at this time.

AGRICULTURAL DEVELOPMENT BANK OF AFGHANISTAN

Functional Organization Chart
for 1350 (1971/72)



Remarks:
a) Functional instructions to Branches can be given by each department
b) Acc. to Charter, Art. 29, the President must sign all documents obliging the Bank

——— Sub-ordination line

- - - - Supervision line

····· Special veto right line

Annex 2

Table 3 Agricultural Development Bank of Afghanistan staffing patterns on October 15, 1971 February 18, 1971, and September 1, 1969 (based upon data from Quarterly Reports of the Hendrickson Team).

Position	Date: Oct. 15, 1971 Officials Number	Oct. 15, 1971 Employees Number	Feb. 18, 1971 Officials Number	Feb. 18, 1971 Employees Number	Sept. 1, 1969 Officials Number	Sept. 1, 1969 Employees Number
President of the Bank	1	2	1	2	1	2
Vice President Credit	1	2	1	2	1	2
Technical Vice President						
Vice President Administration	1	2	1	2	1	2
Secretariate (incl. translation service and drivers for the managers)	2	11	2	9	2	
(of which part-time)		(1)		(1)		
Training Officers		2		1		
(of which part-time)		(1)				
Technicians					8	7
(of which part-time)					(2)	(3)
Trainees	11					
Inspection	4	1	4	1	4	
Personnel Department	6	4	8	3	10	10
(of which part-time)		(1)		(1)	(1)	
General Administration	15	20	12	20		
Archives (1971 incl. to Gen.Adm.)					4	5
Accounting Department	27	11	25	11	17	10
(of which part-time)		(4)		(1)		
Supply Department	12	19	9	20	6	1
(of which part-time)		(1)				
Credit Department	21	14	21	8	6	3
(of which part-time)				(1)		
Control					5	
(of which part-time)					(1)	
	101	88	84	79	65	42
		(8)		(4)	(4)	(3)

Table 4 Agricultural Development Bank of Afghanistan staffing patterns on October 15, 1971, February 18, 1971 and September 1, 1969 in the branch offices (based upon data from Quarterly Reports of the Hendrickson Team)

	Date					
	October 15, 1971		February 18,1971		September 1,1969	
	Officials Number	Employees Number	Officials Number	Employees Number	Officials Number	Employees Number
Branch Offices						
Charikar	2	3	2	2	2	2
Farah	4	3	4	2	2	2
Gardez	2	2	2	2	2	2
Herat	4	3	4	3	5	2
Jalalabad	2	3	2	3	2	3
Kandahar	5	6	5	5	5	2
Ghazni	3	3	4	2	6	2
Kunduz	8	8	7	4	6	2
Mazar-i-Sharif	5	8	7	8	7	1
Maimana					1	1
	35	39	37	31	37	24

Table 5 Number and types of loans disbursed in 1348, 1349 and 1350 (March 21, 1969--March 20, 1972), based upon the Annual Report.

	Year							
	1348		1349		1350		Total	
	Number	Afs.(000)	Number	Afs.(000)	Number	Afs.(000)	Number	Afs.(000)
1. Tractors and implements	2	378	57	16,164	30	7,725	89	24,267
2. Water pumps	37	1,898	96	4,760	332	18,869	465	25,527
3. Rice mills	4	229	4	273	30	1,789	38	2,631
4. Karezes and Trellizing	-	-	5	410	3	550	8	960
5. Fertilizer marketing and packaging	1	25	1	100	9	3,713	11	3,838
6. Spare parts	-	-	-	-	1	1,631	1	1,631
Total	44	2,600	163	21,707	405	34,277	612	58,584

Table 6 Distribution of landed property in Afghanistan by size of holdings (based upon A.K. Dawidow, The Development of Kapitalism in Afghanistan.

Size of holding						
Hectares	Area	Number	Percent	Hectares (Million)	Percent	Average Hectares
0.0000	.3872	257,872	42.0	.0580	1.6	.208
0.5808	3.8720	265,243	43.0	.5808	15.8	2.189
4.0656	5.8080	32,344	5.0	.1548	4.2	4.768
6.0016	9.6800	26.240	4.0	.1936	5.3	7.378
9.8736	19.3600	22,484	3.6	.2904	7.9	12.915
19.5536	98.8000	13,832	2.2	.5614	15.2	40.587
96.9936	2923.3600	1,208	0.2	1.839	50.0	1522.350
Total		619,223	100.0	3.678	100.0	

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Table 7 Pre-harvest credits extended by cloth sellers in the Quarabaugh market (based upon a survey).

Size of Loan (Afs.)	Number	Percent
0 - 10,000	4	15.4
11,000 - 20,000	9	34.6
21,000 - 30,000	2	7.7
31,000 - 40,000	4	15.4
41,000 - 50,000	2	7.7
51,000 - 60,000	2	7.7
61,000 - 70,000	2	7.7
71,000 - 80,000	0	0
81,000 - 90,000	0	0
91,000 - 100,000	1	3.8
Total	26	100.00

Table 8 Agricultural Development Bank of Afghanistan. Changes of Loan Portfolio in 1349 and 1350 (March 21, 1970 - March 20, 1972) based upon the Annual Report.

	Principal Afs.(000)	Interest Afs.(000)	Total Afs.(000)	Principal Afs.(000)	Interest Afs.(000)	Total Afs.(000)
1. Loan Portfolio at beginning of year	77,146	23,968	101,114	85,994	26,034	112,028
2. Provisions on doubtful debts and suspended interest (in %)	21,900 (28)	19,558 (81)	41,458 (41)	20,216 (24)	21,058 (81)	41,274 (37)
3. Net loan portfolio as at beginning of year	55,246	4,410	59,656	65,778	4,976	70,754
4. Loans disbursed during the year and interest charged incl. interest accured	27,706	6,149	27,855	34,278	8,048	42,326
5. Collected amounts	12,858	4,083	16,941	15,839	4,367	20,206
6. Increase of loan portfolio	8,848	2,066	10,914	18,439	3,681	22,120
7. Increase (Decrease) of provisions for doubtful debts and suspended interest	(1,684)	1,500	(184)	7,563	2,998	10,561
8. Loan portfolio as of at end of year	85,994	26,034	112,028	104,433	29,715	134,148
9. Provisions on doubtful debts and suspended interest (in%)	20,216 (24)	21,058 (81)	41,274 (37)	27,779 (27)	24,056 (81)	51,835 (39)
Net Loan Portfolio as at end of year	65,778	4,976	70,754	76,654	5,659	82,313

Table 9 Profit and Loss Account of the Agricultural and Cottage Industries Bank from 1344 (1965/66) to 1346 (1967/68) based upon the Loan Request of the RGA to the IDA.

	Year		
	1344	1345	1346
	Afs.(000)	Afs.(000)	Afs.(000)
Revenues			
Interest from deposits with banks	1,848	1,083 1/	1,588 2/
Revenue from participations	356	3,822	3,446
Interest receivable from debtors		2,901	5,162
Net income receivable from trading operations	3,783	3,746	6,341
Other revenues		292	325
	5,987	11,844	16,862 3/
Expenditures			
Interest for loans from Da Afghanistan Bank	2/	2/	3/
Interest for deposits	2/	2/	3/
Administration expenditure) Other expenditure)	4,347	3,690	4,661
Profit	1,640	7,726	10,875
	5,987	11,844	16,862 4/

1/ Figures from Bank's official balance sheets

2/ Interest receivable and interest payable are balanced in the Bank's books

3/ For 1967/68 interest receivable and interest payable have been separated on the individual accounts for the purpose of this table by the German Economic Advisory Group.

4/ The official total of 16,268 has been increased by separating debit and credit interest of Afs. 594,000.

Table 10 Agricultural Development Bank of Afghanistan. Loan recoveries and maturity extensions granted in 1350 (March 21, 1971 - March 20, 1972) based on the Annual Report.

Category	Kinds of Loans (Afs.000)			
	Short-term Afghanis	Medium-term Afghanis	Long-term Afghanis	Total Afghanis
1. Loans overdue at beginning of year	7,230	16,131	9,379	32,740
2. Loans fallen due in 1350	3,192	21,804	330	25,326
3. Recoveries:				
a) of loans overdue at beginning of year	4	3,200		3,282
b) of loans fallen due in 1350	2,769	9,430	2	12,201
4. Extensions granted to:				
a) Loans overdue at beginning of year	0	504	64	568
b) Loans fallen due in 1350	0	1,271	0	1,271
5. Loans overdue at end of year	7,649	23,530	9,565	40,744

Table 11. Agricultural Development Bank of Afghanistan. Loans overdue in 1350 (March 21, 1971 -- March 20, 1972) based on the Annual Report.

Term of Loan	Uses	Amount of Loan Afs. (000)	Percent
1. Short-term	General	7,205	22.13
2. Short-term	Fertilizer	25	.01
3. Medium-term	General	1,744	5.32
4. Medium-term	Tractors	7,246	22.61
5. Medium-term	Pumps	2,227	6.80
6. Medium-term	Other machinery	329	.10
7. Medium-term	Irrigation	4,585	14.00
8. Long-term	General	9,146	28.93
9. Long-term	Karez	233	.10
Total		32,740	100.00

Table 12 Administrative costs of Agricultural Development Bank of Afghanistan in 1348, 1349 and 1350

Overhead Expenses	Year 1348 Afs.(000)	1349 Afs.(000)	1350 Afs.(000)
1. Employee costs	3,993	4,045	11,157
2. Bonus payments	623	-	-
3. Travel costs	193	276	-
4. Rent and service	519	732	-
5. Consultants	-	536	-
6. Audit fees	300	450	-
7. Furniture and write-off on acquisition	374	-	-
8. Depreciation on buildings	60	56	747
9. Depreciation on furniture and equipment	-	170	-
10. Other costs	195	275	3,799
Total	6,257	6,540	15,703
Number of loans distributed	44	163	405
Cost per loan	142	41	38
Average size of loan	59	133	84

Table 13 Profit and Loss statements for the Agricultural Development Bank of Afghanistan in 1349 (1970/71) and 1350 (1971/72) based upon the Annual Report

Item	Year 1350 Afs.(000)		Year 1349 Afs.(000)	
Interest and banking charges receivable		14,246,352.66		11,680
Supply operations				
Sale of merchandise	28,216,128.96		30,052	
Cost of merchandise sold	22,548,581.70		22,768	
	5,667,547.26		7,284	
Commissions received from Supply operations	903,602.10	6,571,149.36	291	7,575
Other revenues				
Dividends earned	300,000.00		250	
Revenues from leasing equipment	108,965.00			
Rental income	16,640.00		14	
Services rendered to RGA	977,491.50			
Neutral and extraordinary revenues	648,986.49	2,052,082.99	2,746	3,010
		22,869,585,01		22,265
Expenses				
Provision for losses	11,498,170.24		2,214	
Interest and banking charges	3,774,421.00		2,945	
Personnel costs	11,157,600.42		6,125	
Other administration costs	3,407,657.41		2,682	
Depreciation	747,153.00		404	
Neutral and extraordinary expenses	392,019.80		6,041	
Turnover tax	1,224,918.00	32,201,939.87	629	21,040
(Loss)/Profit before taxation		(9,332,354.86		1,225
Taxation				
(Loss)/Profit after taxation		(9,332,354.86)		1,225

Table 14 Agricultural Development Bank of Afghanistan. Statement of changes in working capital for the year ended March 20, 1972

Item		Afs.(000)	
SOURCE OF FUNDS			
Loss for the year		(9,332)	
Deduct:			
Increase in loan provisions during the year	10,561		
Depreciation	747		
Increase in funds for employees charged to profit and loss	789	12,097	
Net source of funds from operations		2,765	
Borrowing from Ministry of Finance under IDA loan agreement		6,329	
Increase in paid-up share capital		31,129	40,223
USE OF FUNDS			
Increase in estimated non-current portion of loans including interest receivable		19,851	
Fixed assests purchased		2,338	
Decrease in non-current portion of liabilities to creditors payable in foreign currency		2,999	
Net loss on foreign currency exchange charged to reserve		2,182	
Dividends paid		208	
Employees' benefits distributed from last year's profit		441	28,019
INCREASE IN WORKING CAPITAL DURING THE YEAR			12,204
WORKING CAPITAL-END OF YEAR			
Current Assets		226,646	
less: Current Liabilities		119,457	107,189
WORKING CAPITAL-BEGINNING OF YEAR			
Current Assets		183,910	94,985
less: Current Liabilities			
INCREASE			12,204

Table 15 Sales of agricultural equipment by the Agricultural Development Bank of Afghanistan (1344-1350)

	Sales per year (000 Afs.)							
	1344	1345	1346	1347	1348	1349	1350	Total
1. Tractors and spare parts 1/	206	24,229	72,886	0	560	24,416	17,471	139,768
2. Water pumps and spare parts 2/	141	1,566	17,431	98	2,002	914	2,700	24,852
3. Fertilizer	1,772	12,790	272	325	NA	4	5	15,168
4. Plant protection	1,550	1,678	2,060	2,864	NA	2,613	4,596	15,361
5. Veterinary medicine	154	579	133	274	NA	51	32	1,214
6. Miscellaneous	39 3/	488	9	12	268	2,050	3,412	6,278
Total	3,862	41,321	92,791	3,573	2,830	30,048	28,216	202,641

1/ Tractors are Byelarus (Russian at about 262,000 Afs. each and Massey-Ferguson at 368,000 Afs. each

2/ Water pumps are about 80,000 Afs each

3/ Includes 1 rain-making machine

Appendix II.

The Fertilizer Campaign of 1971

In 1971, a severe drought threatened the food supply of Afghanistan and a deficit of from 300,000 to 500,000 MT's of wheat was anticipated. In an effort to partially alleviate the shortage, an emergency program, especially for the distribution of fertilizer and improved seed was mounted by the RGA.

On request, AgBank assisted the RGA in the implementation of this program by recording a loan amount of approximately Afs. 250 million, disbursed to approximately 60,000 farmers, accounting for approximately 45,000 tons of fertilizer.

This necessitated the development of an "easy-to-handle system" for the distribution, recording, and checking of each fertilizer disbursement. A collective security document was introduced, based on joint and individual liability of groups of farmers.

For the collection, controlled lists of farmers in each village had to be compiled, and collection itself has been started combined with a coupon system in order to insure that only those farmers who repaid their previous loan will be entitled to get a new loan. The same system is envisioned for the fall distribution in 1351, although fertilizer on hand is less than adequate.

To insure an adequate supply of fertilizer in the future, the RGA and U.S.A.I.D. are negotiating a $16.5 million loan to be used for procurement of fertilizer eqlipment and technical assistance in establishing a fertilizer distribution system. After thorough discussions of the problem involved, the RGA, AgBank and private enterprise agreed to handle in the future the fertilizer import, storage, and distribution through the private sector. For this purpose, AgBank and private wholesalers are establishing a joint-stock company, the AFC, with AgBank keeping the majority of initially authorized share of capital of Afs. 50 million at the first stage.

In order to use the credit facilities already established by the local dealers for farmers, it is intended to channel production loans to the farmers through the supply as far as the wholesaler.

According to estimations, AFS shall distribute in the seasons 1352-1353 (1973/74) approximately 150,000 tons of fertilizer (UREA and DAP) at a cost price c.i.f. warehouse of approximately Afs. 1.2 billion. Although the subsidy on fertilizer is about $40 per metric ton, it is planned to phase out over a four-year period.

An interesting facet of the fertilizer campaign was that in order to receive a loan, a farmer was required to be part of a group of 10 certified by the Malik, or village leader. The groups were then required to agree to be mutually responsible for the others repayment. Also, the sub-governors were offered .005 of the total amounts of loans collected in their districts, along with a bonus of Afs. 5,000 for a 100 percent collection rate.

Appendix III.

Application and Appraisal Form

Agricultural Development Bank Loan Application Form
(Effective October, 1972)

Translation

1. Number of the loan
2. Number of the application form
3. Approving date
4. Date
5. Village
6. Age
7. Father's name
8. Date of identification card
9. Number of identification card
10. Province
11. Sub-province
12. Place where identification card was obtained

13. I (We) fill our application form to the Agricultural Development Bank for the following purposes

14. I (We) have __X__ jeribs of land, which is written in the financial department. The deeds number or the financial receipt, sub-province, equal to __X__ jeribs. These properties have been guaranteed for getting a loan.

15. I (We) have accepted all the principles which are written by the Bank and all of the information which are written are accurate, and that we will coordinate the management of the Bank with the farm and will give all information that is requested.

16. I (We) have written a loan application to be used for the following purposes.

17. I (We) guarantee that any change in my economic situation will be reported immediately.

18. I (we) assert that we are the owner(s) of the land and that our share after harvest is __X__ percent.

20. Signatures

21. This application has been prepared by me.

22. This application has been prepared by X and read to the applicant.

23 Draw a sketch map of how to get to the farm.

Appendix IV.

Training Assistance

A substantial part of the AgBank's activities are in internal training. $666,000 of the IDA credit is earmarked for "technical services and fellowships." The UNDP also provides about $160,000 per annum for training, which is administered by the management. The training grant is expected to run concurrently with the management team's contract and increase to $258,600 per annum by 1979.

The management team estimates that they spend 50% of their time in training. The Annual Report (2) described the training activities as follows:

"High priority was given, during 1350 to the training of personnel.

A system has been elaborated distinguishing between a basic training, which shall be granted to all employees of the Bank, and special training courses we are offering to eligible employees in order to enable them to cope with more specialized work. Means of training are the training-on-the-job, classroom-type training courses within the Bank, and fellowships.

To achieve the training goal, we got assistance from UNDP providing one instructor for the credit activities. During 1350, we succeeded in employing one instructor each for the accounts and supply activities. At present, they are acquainting themselves with their new tasks.

During 1350, we had employed 20 employees under a training programme for graduates of high schools and/or the Kabul University, out of whom 5 trainees passed the examination successfully in 1351.

Since English is the banking language all over the world, we try to give our employees the possibility to take English language courses. For beginners, we arranged courses within the Bank. Organized by UNDP/Kabul, advanced courses are conducted by the British Council.

After having obtained a full training within the Bank, qualified employees will have the advantage to complete their training on fellowship with similar institutions abroad."

Appendix V.

Fertilizer Distribution for the RGA
In the Helmand-Arghandab Valley Authority
by Carroll Berry

The introduction of fertilizer to farming techniques in Afghanistan, and especially the Helmand-Arghandab (HAVA) region, created a demand which far exceeded the supply, within less than five years. The lack of any distribution system by the private sector made it necessary for the Royal Government of Afghanistan (RGA) to import and distribute fertilizer starting in 1349 (1969/70). Due to a lack of any infrastructure within the RGA to carry out such a program, several agencies within the RGA were asked to cooperate in the fertilizer distribution. The Agricultural Finance Agency (AFA) having been established in 1970 was asked to cooperate with this program in the HAVA region. Planning and coordination of the program was done through the office of the President of HAVA which mobilized not only AFA but also the Extension and Agricultural staff of HAVA. Farmer "groups" were established within the framework of family and tribal groupings. These "groups" were formed to create a mutual security for the fertilizer given to each individual which would be paid for within a twelve-month period at a price established at the time of distribution. It was hoped that groups would not exceed thirty farmers, but some groups had more than one hundred. When the fertilizer was distributed, it was explained that if even one member of the group did not pay for his fertilizer, no other member would be eligible for fertilizer credit until such a delinquency was corrected.

CORN AND WHEAT FERTILIZER DISTRIBUTION FOR
1350 and 1351 HAVA

Year	Amount of Corn Fertilizer Distributed Afs.	Value of Corn Fertilizer Afs.	Amount Collected Afs.	Percent Collected	Amount of Wheat/Fert. Distributed Bags	Value of Wheat/Fert. Distributed Afs.	Amount Collected Afs.	Percent Collected
1350	Urea 10,251 DAP 4,133	4,685,290	3,750,000	80%	Urea 155,586 DAP 88,805	86,977,100	56,812,596	64%
1351	Urea 19,984 DAP 8,478	10,385,600	313,050	04%	Urea 95,679 DAP 102,453	84,375,450	Due Date August 23, 1973	

The first year record (1350) for corn/fertilizer repayment was 80 percent which was an indicator that the group concept and mutual liability was probably the best means for collecting the fertilizer loans in a country which is only now creating an institutionalized banking system. It should also be noted that there are no legal documents which could be used as negotiable instruments, such as the note, chattel, mortgage, lien, etc.

The field work and administration of the fertilizer distribution and collections was done by committees of three people made up of representatives of AFA, an extension agent and a representative from the Sub-Governor's office. The inclusion of the Sub-Governor's representative was to add an RGA representative who could assign officials for collections from any delinquent borrowers.

The poor collection record for the 1350 wheat/fertilizer (64%) which came due in August, 1972 can be attributed to the late date which collections were started and the policy decision made by the RGA to stop collections and concentrate on wheat/fertilizer distribution prior to planting in the months of November and December. (See Chart). Collections have again resumed and the committees expect to collect over 75% of loans outstanding.

Corn/fertilizer collections for 1351 are not due, which accounts for only 4% repayment.

SPECIAL PAPER

AGRICULTURAL CREDIT FOR SMALL FARMERS IN THE MIDDLE EAST

by:
Thomas Stickley, Raja Mouracade
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Faculty of Agricultural Sciences
American University of Beirut

Beirut
November 1972
revised

AGRICULTURAL CREDIT FOR SMALL FARMERS IN THE MIDDLE EAST

By

Thomas Stickle [1], Raja Mouracadé[2], and Yusuf Kashshu[3]

INTRODUCTION

Farmers in the Middle East face many problems in financing their farming operations. This paper discusses some of the more important of these problems of agricultural credit. Though they are not mutually exclusive, the questions discussed are:

1. What is exploitation and who is exploiting the small farmer?

2. Do private moneylenders deserve their label of "enemies of the farmer"?

3. Are the farmers irrational who choose the services of private moneylenders?

4. Is there any way of simplifying the lending procedures followed by agricultural banks?

5. Is an interest rate ceiling to the advantage of the small farmers?

6. Is the policy of requiring tangible securities from small farmers a sound one?

7. Who should pay for technical information?

8. How can low-income (and usually high-risk) farmers be served by the lender whose objective is to be self-supporting?

The paper is the culmination of several separate but related studies conducted on credit in the Middle East by Master of Science graduate students of Agricultural Economics at the American University of Beirut in recent years.

The fact that answers to some of the questions raised here are inconclusive helps to illustrate the complexity of the problem of agricultural credit as it exists in the Middle East today.

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3. Mr. Kashshu received his Bachelor of Science degree from the FAS at AUB in 1972.

1. WHAT IS EXPLOITATION AND WHO IS EXPLOITING THE SMALL FARMERS?

Mr. Anthony Bottomley[7] has argued that there are four determinants to the rate of interest charged by lenders in the rural sector of developing economies. These determinants are:

A. The Opportunity Cost of the Funds

When a lender invests his money by lending to a specific farmer, he foregoes an income he could earn by investing his money elsewhere. Thus, a bank could deposit its money with the central bank and earn an interest determined by the discount rate of the central bank; a private money lender and a merchant could deposit their money with a bank and earn interest on it. By lending their money to farmers, the lenders forego such an income and it is only fair that they charge the borrower an interest sufficient to compensate for this loss.

The opportunity costs per unit loaned would vary with two factors:

(1) The rate of discount of the Central Bank; this rate is determined by the forces of demand and supply in the money market, and is beyond the control of the lender.

(2) The ratio (k) of the funds loaned per annum to the operating funds.[3] The opportunity cost per unit is lower when this ratio is higher. For example, assume a lender has operating funds amounting to U.S.$ 100,000; that his opportunity costs are eight percent per annum, i.e., $ 8,000. If he lends only 10,000 out of the initial 100,000, he has to charge an interest of 80% to cover the 8,000 opportunity cost (k = 1/10). But on the other hand, he lends 100,000 an interest of only eight percent would be enough to cover the opportunity costs that (k = 1). We should note, however, that a lender may lend his total operating funds for only three months; this would amount to lending 1/4 (3/12) of his total funds for the whole year.

The opportunity cost of the fund is, therefore, lower when the lender is efficient enough to invest his total funds throughout the year.

B. The Administrative Costs

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These are: The rent for the premises
The cost of the equipment
The wages and the salaries of all employees (including opportunity costs for managers and entrepreneurs)
Any other cost incurred in administrating the loans (e.g., travel costs)

We shall note that these costs would be higher when the source is an institution; a bank will probably have higher administration costs than a private money lender. We shall also note that these costs are fixed in nature, i.e. they are not likely to change in the short run.

Because of the fixed nature of these costs a lender who wants to minimize the costs per unit loaned has to lend more. This is arrived at by either:

1. increasing the number of loans per borrower per annum,
2. increasing the number of borrowers, or
3. increasing the size of the loans.[13]

It was also found by Mr. A. Lewis[11] that the cost of lending to small farmers can be greatly reduced by the institution of village cooperatives which:

1. acquire information about the borrowers' credit status,
2. collect installments, and
3. keep an eye on the farmer's operations.

And this reduces the cost of administering the loan.

C. The Premium for Risk as a Determinant of the Interest Rate

A lender incurs losses due to bad debts and is justified in adding a premium to his interest that will allow him to cover his losses. Thus, if a lender knows that out of $ 100,000 of outstanding loans he will lose $ 10,000, he is justified to add a premium of $\frac{10,000}{100,000}$ (or 10%) to cover this risk. The more efficient a lender is in avoiding bad debts, the lower are his costs.

D. Monopoly Profits

Any share of the interest charged by lenders that is above the costs described above, can be attributed to a situation of monopoly the lender enjoys whereby he can make "abnormal profits". Such a situation arises under the following conditions:[5]

(1) Lender's lack of knowledge of borrowers. If some lenders are not aware of the existence of the needs of borrowers, or of their situation, while other lenders are, the latter have an advantage over the former and can, therefore, make monopoly profits.

(2) Borrower's lack of knowledge of lenders. Some borrowers do not know of the existence of sources of credit other than the one from which they are borrowing and this situation reduces the degree of competition and allows for the existence of monopoly profits.

(3) Lender's hold over borrowers. For some socio-economic reasons lenders can force borrowers to resort to their services. Thus, a borrower who is indebted to one lender may be forced to borrow again from this lender who otherwise would require the immediate repayment of his loans, which the borrower cannot afford.

Hence, the most exploitive source is not necessarily the most expensive one, but rather the one that is making the highest monopoly profits. The question asked then, is: What is the most exploitive source of credit?

In Lebanon[14] it was found that banks, merchants, and moneylenders had the following real costs of lending:

	Banks (%)	Merchants (%)	Money lenders (%)
Opportunity cost	6.0	8	7.0
Administration cost	3.0	2	1.5
Risk	0.5	6	3.5
Total real cost	9.5	16	12.0
Total interest rate being charged	10.0	10*	16.0

These sources were charging interest rates of 10%, 10%, and 16%, respectively. It follows, then, that the most exploitive sources of credit, in this specific case, are the private moneylenders who are making a monopoly profit of 4%.

We should note here that farmers may be exploited in a less direct way. When a government subsidizes an agricultural bank, the small farmers, as tax payers, may be paying part of the subsidy. Because the bank is subsidized, an interest rate ceiling may be enforced. This ceiling often prevents the small high-risk farmers from being served by the bank. They are forced to resort to the services of non-institutional sources which often exploit them. The small farmers end up being exploited twice: by the non-institutional lenders and by the government, which is charging them (through taxes) for a service they are not getting.

2. DO PRIVATE MONEYLENDERS DESERVE THEIR LABEL OF "ENEMIES OF THE FARMER"?

Private money lenders are often referred to as the enemy of the poor farmers whom, supposedly, they exploit. But do they? Are they the enemies of the poor farmer?

Private moneylenders are enemies of the farmers in as much as they try to give them risky loans so that ultimately they can seize the lands offered as the guarantee. Also, they act as enemies of the farmers when they charge them "exploitive" rates.

Bottomley[5] had already stated that "the rural moneylender will either be a monopolist or an imperfect competitor", and it is the conviction of the authors that interest rates charged by private moneylenders contain an element of monopoly profit. In Lebanon, as noted above, it was found that private moneylenders are exploiting farmers.

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* The fact that merchants are making a loss may look surprising; However if we keep in mind that they are making high profits on their commercial activities, a (-) loss on their lending activities will be less surprising and more acceptable.

Let us note here that private moneylenders are generally viewed as the enemies of the farmers because they charge high interest rates.

However, high interest rates do not necessarily mean there is exploitation. It may be that the cost of lending is higher to private moneylenders than it is to institutional sources. It is Stitzlein's suggestion that: "there exists justification for the cost of non-institutional credit to exceed that of institutional credit"[1] In Lebanon, Mouracade[14] found that the cost of lending for private moneylenders is higher than that for institutional sources and that private moneylenders are justified in charging rates higher than the ones charged by banks and other institutional sources.

But, how can one consider the private moneylenders as the friends of small farmers? One should keep in mind that private moneylenders are often the only source of credit to such farmers who are denied credit by banks. Moreover, private moneylenders offer, together with credit, technical assistance and other forms of help which are greatly appreciated by the farmers. Finally, it often may be that although the rate charged by them is high, the real cost of borrowing from private moneylenders is lower than the cost of borrowing from other sources. This situation was found to be true in Lebanon:

	Private moneylender	Commercial banks	Merchants
Nominal cost (percent)*	20	12.5	25
Real cost (percent)	25	37	36

For the reasons listed above, as well as for others, the farmers may consider the private moneylenders as their friends.

Our conclusion is that there is no definite answer to our question. However, it is sure that if the degree of competition among private moneylenders is increased, a situation would be created where the private moneylenders would act more as friends than as enemies.

3. ARE THE FARMERS IRRATIONAL WHO CHOOSE THE SERVICES OF PRIVATE MONEYLENDERS?

It is often found that a majority of farmers use the service of non-institutional sources which are reputed to be "expensive". The question, then, can be asked: Are the farmers who choose a private moneylender with a high nominal rate of interest, making an irrational choice?

The reasons why rational farmers would use the services of private moneylenders over those of institutional sources can be classified in three categories:

1. A difference in the quality of services offered by private moneylenders on one hand and by institutional sources on another hand.

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* This is inconsistent with the data on page 4. The inconsistency is accounted for by the fact that data on page 4 were collected in a lendors' survey while data appearing on this page were collected in a farmers' survey.

2. A difference in the real cost of obtaining funds from private moneylenders and from institutional sources.

3. The unavailability of a choice between the services of moneylenders versus those of institutional sources.

These points are expanded as follows:

1. There is a difference in the quality of the services offered by private moneylenders and those offered by institutional sources. Of course, both sources give the farmer financial assistance. But, (i) the terms on which this assistance is given differ; (ii) the procedures through which the farmers have to go before the financial assistance is obtained also differ; and (iii) the services and financial assistance offered by the lenders also differ.

"An Evaluation of Agricultural Credit in Kerman, Iran" by Hosseini[16] led to the conclusions that:

(a) Institutional sources have rigid repayment policies, and defaulters are penalized severly whereas private moneylenders are often, if not always, willing to extend or to renew the loan.

(b) Non-institutional sources provide more supervision and marketing services than institutional ones.

(c) Institutional sources require more time and more formalities for loan approval than private moneylenders.

The authors have found that a minimum of 36 days is needed to obtain a loan from the Lebanese Credit Bank for Agricultural and Industrial Development (BCAIF) whereas this is only a matter of a few hours or a few days in the case of moneylenders. (See Figure 3 in the Appendix).

Furthermore, the quality of the treatment that the farmers get from the bank employees is quite different from the one they get from a private moneylender. Bank employees often look down on farmers who sense this while the moneylender is often a friend or a relative of theirs.

Because of the differences in the quality of the services offered the farmers may be justified in choosing the services of the private moneylenders.

(2) It can be shown that the allegedly expensive sources of credit are not, in reality, more expensive than the again allegedly inexpensive sources. When it is said that the private moneylenders are more expensive than the institutional sources, it is meant that they charge higher interest rates. But interest rates are only one part of the real cost of credit which also includes all different costs incurred in order to obtain the loan. Examples of such costs are the cost of preparing the legal documents needed by the institutional sources, the cost of travelling from the village to the city where such sources are located, the cost of spending a few days in the city and other such costs. (in Lebanon it was found that an average of 12 days was actually spent from the farmers own time in order to obtain a loan from commercial banks). We also may have to include the bribes farmers have to pay to bank employees in order to obtain the credit. The comparison should therefore be made between the real costs and not between the interest rates which are only nominal costs.

This comparison was made in Lebanon[14], where, from a sample of 120 borrowers, it was found that the average real cost of borrowing from banks was 37% which is about three times the nominal cost of 12%, the real cost of borrowing from merchant nearly twice the nominal one and equals 36%, while for the private moneylender, the real cost is only 26% and amounts to little more than the nominal cost. We shall note that the highest real cost is from banks and the cheaper one is associated with the private moneylenders.

The difference between the nominal and the real cost is accounted for by the time requirements as well as by the procedures ("red-tape") -- the more these requirements are, the higher the difference.

This is a second reason why farmers would favor the services of private moneylenders.

(3) Farmers often do not have the choice between institutional sources and private moneylenders. They have to resort to the services of private moneylenders. Two reasons may be given for such a situation:

(a) The private moneylender may have some kind of socio-economic hold over the farmer and force him to use his services. Thus, a moneylender may threaten the farmer to demand immediate repayment of a previous loan if the farmer tries to get a new loan from another source.

(b) More often it is the security requirements of the institutional sources that prevent the farmer from resorting to the services of such sources. Institutional sources require solid tangible guarantees and the small farmers cannot afford offering such securities. Private moneylenders, on the other hand, may require no security and they are, ultimately, the only source of credit to the small farmers.

Then, is a farmer who chooses the services of a private moneylender making an irrational choice. If such a farmer has the choice of another source, if this source is really cheaper and if the quality of the services offered is the same or better, then he is irrational. But to what extent do these conditions exist?

4. IS THERE ANY WAY OF SIMPLIFYING THE LENDING PROCEDURES FOLLOWED BY AGRICULTURAL BANKS?

The procedures followed by government banks to extend credit to farmers is very complex. The diagrams attached to this paper (Appendix) show the complexity of getting loans from government banks in Jordan (Figure 1), Iran (Figure 2), Lebanon (Figure 3), and Turkey (Figure 4). It is to be noted that these procedures are long and time consuming. In Lebanon, for instance, a minimum of 36 days is required before the loan application is approved and the loaned money cashed by the farmer. Thirty-one operations are necessary to do this. In Jordan, the time requirement is 26 days on the average. In Turkey, in the case of loans exceeding 1,700 U.S. Dollars, three weeks are required before the loan is cashed by the farmer.

The procedures followed by private moneylenders are much simpler. Only a few hours, or a few days are required before payment to the farmer is made.

One question arises here: Why is it that the procedures followed by the banks are so complex? In an interview with a manager in Lebanon's BCAIF an answer to this question was suggested. The banks want to be sure that the money loaned will be repaid. They have, therefore, to ensure that the farmer has assets to offer as a guarantee, that the assets have the value the farmer claims they have, that the farmer is honest and will use the money for the purpose applied for, that he will know how to use the money, and that he really needs it. All this requires some time and procedures to ensure that the money will be repaid.

Such requirements are not necessary in the case of private moneylenders. These live in the village of their borrowers and know all about them. They can therefore decide immediately on the loan application. In this way, the private moneylenders have an advantage over the agricultural banks. Because of this, small farmers prefer the services of the moneylenders, and give the moneylenders some monopoly powers. In Lebanon, it was found that a majority of borrowers would rather use the services of moneylenders and merchants. It was also found that the private moneylenders are the most exploitive source of credit.[14]

But, isn't there some way of reducing the complex procedures of the banks? We have seen that the main advantage of the private moneylenders is that they know the borrowers, their characters, their reputation and their repayment capacities. The banks, on the other hand, have to find out about these characteristics of the borrower; hence, the complex procedures. Yet, these procedures will be greatly reduced if we can create a situation whereby the banks have available the same information that the private moneylenders have.

Such a situation would require that the banks have many small branches scattered in the villages. The managers of such branches would probably live among the farmers and would know their financial situation, their character, and their management capacities. The managers would have the power to decide on a loan application within certain limits. A branch manager would not, as an example, have the power to decide on applications for loans exceeding some amount, let us say, $US 1,000; larger amounts would be approved by higher authorities in the main offices of the bank. To avoid the danger of having the small branches giving too much credit (or too little) some schemes could be used to increase the efficiency of the branch managers. Perhaps, a percentage of the loans collected could be given to the branch managers. This would induce him to: (i) maximize the amount loaned by the bank, and (ii) minimize the delinquency rates.

If such a situation were created, the procedures followed by the banks would be simplified and more credit would be available to small farmers.

[4]This is the case in Turkey where loan applications for amounts less than $US 1,700 are approved by the branch authorities and require only seven days (Figure 4, Appendix). Loans of amounts exceeding $US 1,700 but less than $US 7,100 are decided upon by the Regional Office and require 21 days. Larger loans are processed by the main office and require even more time.

5. IS AN INTEREST RATE CEILING TO THE ADVANTAGE OF THE SMALL FARMERS?

In order to ensure that cheap credit is available to low income farmers, several governments have resorted to the establishment of a ceiling on interest rates. Thus, in Brazil[3], until 1967, an interest ceiling of 12% was enforced on agricultural loans. In Lebanon[14] a 12% ceiling is enforced on all kinds of loans and any loan bearing a rate higher than this is illegal. The question asked is the following: How successful are interest rate ceilings in making cheap credit available to low income farmers and encouraging them to invest more?

The answer to the question is negative. The following reasons are given for this:

1) Although a legal ceiling exists that prevents lenders from charging high rates, numerous devices can be used to circumvent effectively the ceilings. Such devices were used in Brazil[3] and in Lebanon[14]. They consist of additional charges in forms other than interest, such as a service charge or commission charge.

2) Low ceilings often prevent lenders from covering all their costs. These are: the opportunity cost of the money loaned, administration expenses and a premium for risks. It follows that the lenders are faced with the following alternatives:

   a. The banks may depend on the government's subsidies in order to be able to continue operations, i.e., depend on the tax payers for their survival. It follows that the governments have to raise more taxes and it may be that the farmers will pay some of those taxes[15]. Thus, government intervention will likely create a network of transfers among sectors and groups, which lacks any economic rationality and, in the extreme cases, degenerates into a system of expediency if not of outright fraud[16].

   b. The other alternative is for the banks to reduce their costs and (in order to do so) minimize the risks incurred. This is done by requiring solid guarantees which low income farmers cannot afford. These farmers are thus denied credit by institutional sources and the only alternative left open to them is to resort to non-institutional sources.[14]

3) An interest ceiling which was instituted in order to encourage the use of credit is based on the assumption that the demand for agricultural credit is interest elastic. It was found[14] that in the rural sector of Lebanon the demand for credit is highly inelastic. It was found that the farmers are more sensitive to changes in factors other than the interest rate such as convenience in obtaining loans, freedom from complicated procedures, distance from lender, time in getting a loan approved, etc.

Besides the fact that it is often ineffective, the institution of low interest rates has unfavorable effects on the economy.[17] By artificially keeping down the price of an important resource like credit, one limits the supply of this resource. When interest rates are low, individuals are not encouraged to save since the reward for doing so is low. Interest rate ceilings also reduce the mobility of credit use and distort the allocation of this scarce resource. Finally, when such a measure lasts for a long time, the resistance to a return to market rates grows stronger.

An alternative to such a measure, which will probably be more effective and less harmful would be to offer the farmers good terms (repayment patterns, flexibility in loan use, etc) and supervisory services compatible with their needs.[16] These services come at a cost to the lender but, in the absence of an interest rate ceiling, the lender may charge an interest rate high enough to cover these costs. If the demand of credit is interest inelastic and if the potential borrowers are already paying higher rates of interest from other sources, then they would not hesitate to accept the additional services offered by the bank and pay its full cost.

6. IS THE POLICY OF REQUIRING TANGIBLE SECURITIES FROM SMALL FARMERS A SOUND ONE?

In order to overcome their risks of losses, institutional sources often require solid tangible guarantees for securing the loans they extend to farmers. Thus, in Lebanon,[14] only land mortgages are accepted by both the semi-official development bank (BCAIF) and the commercial banks. Commercial banks sometimes accept the guarantee of a co-signer, but this is rarely the case. In Iran,[16] it was found that 65.2% of the loans extended by institutional sources were secured by a co-signature, 12% by a land mortgage, 3.3% by a well mortgage, 5.4% by a legal contract, and 14.1% by a legally notorized signature. No personal signature was accepted by an institutional source. In Jordan[11], mortgages of assets or co-signatures are required before credit is extended by the Agricultural Credit Corporation.

Such requirements lead to a situation where farmers are dissatisfied with the services of the credit institutions where they are denied credit by these institutions. Thus, in Jordan, Mr. Kanaan[12] found that 63% of the borrowers thought of the security requirement of the Agricultural Credit Corporation as unsatisfactory. In Lebanon[14], it was found that a majority of small farmers with few assets to offer as securities resort to the services of non-institutional sources, where the security requirements are easier to satisfy.

Another negative aspect of the security requirements policy of the institutional sources is that the size of the loan is ultimately determined by the size of the security offered and not by the need of the farmer. In Lebanon, as an example, if a farmer has land worth LL 100,000 he can get a loan of LL 30,000 regardless of his needs. Thus, a farmer might end up investing too large or too small an amount and the returns to the investment are not maximized. This is why farmers feel that they are not getting the right amount of credit. In Jordan[11], 52% of the borrowers had such a feeling. Also, loans which are too small may make it necessary for the borrower to resort to other sources of credit.

One observation is that the security requirements of the institutional sources are not preventing them from having a high delinquency rate. This rate is estimated to be 40% in Lebanon[1] and in Jordan the rate is around 60%.

Given: (i) the effect of the security requirement on the availability of credit to small farmers, (ii) the interrelation between the size of the guarantee and the size of the loan, and (iii) the high delinquency rates institutional sources experiences in spite of the securities they require, we feel that the requirements for tangible securities by the institutional sources are not sound.

Abdallah[1], analyzing the effects of tangible security on farm credit in the Shendi district of Sudan arrived at the conclusions that "tangible security had limited the number of farmers that can be served (by the banks) and deprived the landless class which needs it most. It did not achieve the goals of increasing productivity, neither could it secure repayment of loans". Abdallah also found that "it was the repayment capacity and the non-tangible capacities of the borrower that lead to repayment of loans more than the tangible asset mortgaged". Abdallah therefore, recommends that "tangible securities should not be the only criterion according to which a loan application will be accepted or rejected". He feels that, in some cases, where non-tangible qualities (such as reputation of the borrower, repayment capacity, sound farm management practices)are strong, tangible security requirements should be reduced or even totally relaxed. Abdallah also recommends that the loan size not be related to the value of the mortgage but rather to the actual needs of the farmers.

We feel, with Abdallah, that the adoption of such recommendations would lead to a situation where: (i) small, landless farmers are able to get cheap credit, (ii) the size of the loan is determined on sound economic basis, and (iii) the delinquency rate is reduced.

7. WHO SHOULD PAY FOR TECHNICAL INFORMATION?

Financial help, i.e. credit, is ineffective by itself. The farmers of the developing nations often do not know how to take advantage of such help. They need someone to tell them how to use the credit extended to them; what seeds to buy, what crop to grow, what fertilizer to use, what machinery to acquire and to whom and through what channel to sell the produce of the crop. The question is, who should provide such services to the borrowers?

It is often argued that the development banks should provide (together with the financial help) technical guidance. Those who give such an argument are very much in favor of a supervised credit plan which would look like the Farmers' Home Administration scheme in the United States. Supervised credit has, of course, positive aspects. Yet, it is felt that, in many countries, it is undesirable and uneconomic, for a majority of developing nations already have an extension system; it is thus feared that a supervised credit plan might duplicate the work of the extension system without bringing anything to the farmer. But the main problem of the countries where an extension system and an agricultural bank exist is that they often are operating side by side,

paralleled, without any coordination between their activities. The result is that the extension agent is giving the technical guidance to the farmer without giving him the financial means that would allow him to apply the new technology he introduces and the bank is giving the financial help without being able to ensure that it is properly used. This is why some agencies feel that they have to extend both services, financial and technical, at the same time. This is the case of the "Green Plan" in Lebanon which has been established primarily to help in the reclamation of land and which was obliged to operate as a lender because no other source of credit for financing land reclamation was available to the farmers the Green Plan was supposed to help. The result is that the Green Plan is duplicating the work of the BCAIF (the agricultural bank).

A strong coordination between the source of technical assistance and the source of financial help is needed if the problem of duplication is to be solved. Instead of having an extension system operating as a lender and a lender performing the role of an extension agent, coordination between the two should exist so that the farmer who received the technical assistance of an extension agent can be sure that he will also have the financial means to follow the new method of production he has learned. Different schemes of coordination can be thought of.

For example, an agricultural bank may adopt a policy whereby no farmer can get a loan if he is not recommended by an extension agent. The bank will ensure thus, that the farmer has the technical knowledge that will help him profit from the loan. The extension agent will know that the farmer will have the financial means to adopt the new technology he is introducing; and finally, the farmer will have both financial and technical assistance.

In Afghanistan, a new supervised credit system was introduced in 1968 which can be used as an illustration of good coordination between the lending agency and the extension system. Each year the extension agency gets a loan from the development bank. This loan is distributed by the extension agency among the farmers (all of whom should be cooperative members). The extension agent decides on the amount that should be loaned to a specific farmer according to the needs of this farmer. No tangible security is required, but the extension agent knows the farmers well enough to be able to assess the risk the farmer represents.

Strong coordination between the extension agency and the lender, such as the ones described above, is the best way of providing the farmer with both technical and financial assistance.

Another question which arises here is, who should pay for the technical assistance given to the farmer?

One principle of fiscal policy is that any service provided by a government agency should be paid for by those who benefit from this service. Let us apply this principle to our problem. We should then ask who is benefiting from the services (other than the financial ones) offered by the lenders? Many people are, such as:

i) The farmers themselves who are able to improve their method of production, their productivity, and thus their income.

ii) The lenders who, given the fact that the farmer's productivity and his income are improving because of their help, are taking less risk when lending to a farmer with a good capacity to repay.

iii) The economy of the whole nation in general because of the increased productivity in the rural sector.

Is it fair then to ask the farmers alone to pay for services from which they are not the sole beneficiaries? Furthermore, agricultural banks, which often are subsidized by the government, do not offer any technical and marketing services although many farmers feel that such institutions should do so. As an illustration, 80% of the farmers interviewed in the course of a study conducted in Jordan were in favor of having the bank (The Agricultural Credit Corporation) help in the preparation of the farm plan, 72% were in favor of its providing technical guidance, 65% were in favor of its examining the financial position of the farmer, 51% felt that the bank should control the loan expenditure, and, 46% thought that the bank should provide marketing services[12]

Such complete services are seldom rendered by agricultural banks. It is argued by bank officials that providing such services would push up the costs of administering the loans and, as a consequence, the cost of extending credit. And, since the interest charged by government banks is often limited by law, the increased costs will put the bank into a loss. Is such an argument valid?

If a bank extends such technical services to the farmers, the risks faced by the bank will go down as a result of the improved productivity of the farmers. This decreased risk will compensate for the increase in the costs of administration. But, even if it does not, we can argue that, since the whole economy benefits from such services, all the tax payers should pay for them through government subsidies to the bank.

Thus, the answer to the question: "Who should pay for the technical assistance given to the farmers?" is that the burden of this assistance should go to the farmers, the bank and the tax payers jointly. Let us note however, that if the bank wanted to put this burden on the farmers, we feel that a farmer would be glad to be able to get (i) financial help and (ii) technical assistance at the same time, even if he has to pay a relatively higher interest rate. Data exist[12], in Jordan, which indicate that farmers are asking for more technical serviceson the part of the institutional lenders. And it is only logical to assume that they would be willing to pay relatively higher rates (12-15%) in order to obtain such services. Of course this is true if and only if the real cost of borrowing from such institutions does not differ very much from the nominal cost; i.e., if the procedures are simple and the security requirements not too difficult to satisfy. If this is the case, institutional sources would be able to compete with the private moneylenders and farmers would be willing to pay a real cost of, let us say, 15%, since they are, in the present conditions, paying more than that. The bank, on the other hand, would be willing to give them the loan without requiring tangible securities since, because of the technical assistance it is offering them, it is ensured that the loan will be properly used and ultimately repaid.

8. HOW CAN LOW-INCOME (AND USUALLY HIGH-RISK) FARMERS BE SERVED BY THE LENDER WHOSE OBJECTIVE IS TO BE SELF-SUPPORTING?

In our discussion of the seven previous questions, we have tried to distinguish between each point. The interrelated nature of these points makes this a very difficult task. For example, how can a separation be made between the requirement of tangible securities and the provision of technical assistance; between the complexity of the procedures followed to obtain a loan and the real cost of borrowing; and between the monopoly powers private moneylenders enjoy and the enforcement of ceiling to the interest rates charged by institutional sources?

The discussion of this final question, "How can low-income (and usually high-risk) farmers be served by the lender whose objective is to be self-supporting?", is likewise one which is related to the previous seven. The solutions to the different aspects of this problem should be contained in one "package deal".

The "Package Deal"

A. The Nature of the Package Deal

What sort of a package deal can be suggested? The nature of the deal may vary greatly according to (i) the goals we want to achieve, (ii) the political and economical convictions of the policy makers, and (iii) the particular characteristics of the economy of each nation. These points are expanded as follows:

(i) The assumption underlying the subsequent analysis is that we want to make credit available to the small (and usually high-risk) farmers. This, of course, is not necessarily a top-priority objective in all economies. In economies where a rapid rural-to-urban migration is desired, the opposite would be wanted. Likewise, this may not be a top-priority objective if the aggregate agricultural production is to be increased, regardless of the distribution of income to the farmers.

(ii) The policy-makers may be very much in favor of interventionist measures and would encourage governmental schemes to solve the problems discussed above. On the other hand, if the policy makers are of a more conservative type they may let the forces of a free economy and private entrepreneurship solve the problem.

(iii) Finally, a solution that is valid in, let's say, Lebanon, where a well established banking system already exists, is not necessarily valid in another country where the banking system is poor.

B. Its Goals

Whatever the political and economical convictions of the policy makers are, or whatever the particular situation of the country is, and, given the assumption that we want to financially help the small farmers, the goals we want

to attain are the following: (a) to make it possible for small farmers without tangible securities to be eligible for credit from institutional sources, (b) to simplify the complexity of the procedures followed by these sources when extending credit, (c) to reduce the cost of borrowing from such sources (i.e., to enable lenders to be self-supporting), (d) to make it possible (technically and financially) for the farmers to repay and (e) to minimize the exploitation of the small farmers, by moneylenders. How can we attain a situation where all the above conditions are satisfied? We have suggested that the approaches to this problem can differ widely and that there is no one solution that is valid for all places and at all times. Let us, however, present here two extreme alternatives: the simple banking operation and the integrationist approach.

C. Simple Banking Operation

In such an alternative, the lending agency, whether it be a governmental agency or a private institution, would follow the principles of commercial banking with the goal of maximizing profits. Measures on the part of the government would be taken to encourage the lending agencies to enter the high-risk markets for agricultural credit. One such measure is the removal of interest rate ceilings that would allow the commercial banks to enter the high-risk market for agricultural credit. In a country like Lebanon, where a well-established banking system has excess deposits, such a solution can be contemplated without any fear of experiencing an increased exploitation of the farmers as a result of the removal of the interest rate ceiling, for it is thought that the excess deposits in the banking system would lead to a keen competition among the banks to invest their funds in the rural sector, thus, keeping the interest rates down.

D. The "Integrationist" Approach

In such an approach, the lending agency, probably a development bank, would offer different services to the farmer, such as technical assistance, marketing services, land reclamation, land reform, and insurance. Such an "integrated" approach is very much favored in countries where such services are lacking. Examples of such an approach are the Comilla project in Bengladesh or the Program on Agricultural Credit and Cooperatives (PACAC) in Afghanistan.

Between the two extremes, there are different compromises. Any such compromise would feature:

a. A strong and active coordination between the Agricultural bank, which provides mainly credit, and other government agencies which are providing different services to the farmers. Thus, other agencies might be providing the technical assistance, the infrastructural framework (storage facilities, roads, processing plants, dams and irrigation networks), marketing services, land reclamation and land reform (farm corporations, collectives, tenure reform, and consolidation) and insurance.

b. The establishment of an agricultural bank which, while providing credit would also supplement any deficiency in the above services to the small farmers. It would do so by:

(i) introducing a supervised credit system whereby it improves the farmer's management of the farm, budgets its farm and home expenses and plans his activities for a long term,

(ii) offering loans in kind so that it ensures that the loans are properly used,

(iii) paying the loan in installments,

(iv) providing crop insurance to the small farmers,

(v) offering marketing connections for both guaranteeing collection of the loan and assisting farmers in finding good prices.

c. The goal of having the bank to be self-sufficient. This would be reached by:

(i) allowing the bank to charge interest rates high enough to cover its costs, including the risk element represented by high risk farmers.

(ii) simplifying its lending procedures so that it reduces its costs and increases the number of farmers it serves, and

(iii) increasing the efficiency of employees. This is arrived at by increasing the motivation of the employees through various incentive techniques. One can think of a situation where all the managers of small village agencies would receive a percentage of the amount advanced and recollected, or a certain bonus on the basis of the number of loans processed; in such a situation, a manager in a village society would try to give a maximum amount of loans and to minimize the losses, thus increasing efficiency, A promotion scheme or a scheme for increases in salary according to the performance of the managers, whereby the managers have more motivation in their work can also be adapted to increase their efficiency. Another way of increasing efficiency of the managers of the bank branches is to let them participate in the profits of the branch.

(iv) decreasing the rate of delinquency repayment through an incentive plan. In order to encourage the farmers to repay on time and to deter them from defaulting, a "rewards and punishment" system could be used. Under such a system the farmers would be classified into three categories: low risk, moderate-risk, and high-risk farmers. A new farmer, borrowing from the institution for the first time would be given the benefit of the doubt and classified in the moderate-risk category. Later, this classification would be changed in the light of his performance. Different interest rates, terms of loans, sizes of loans, loan approval procedures and security requirements are associated with each category and in the case of a high-risk farmer, higher rates are charged, more securities are required, procedures of loan approval are more complex and the purposes for which the loan may be used are more limited. It can be hoped that such a system will help the farmers know the advantages they have in repaying on time.

(v) increasing the number of farmers served and the volume of the business by increasing the number of small branches These need not be branches with a large number of employees but could be small branches with one person who acts as manager, clerk and driver. This one person will be responsible for the whole operation of this small branch of the bank.

CONCLUSION

We have suggested two different "package deals" to solve the credit problems of the small farmers, the simple banking operation approach and the "integrationist" approach. We have noted that there are two extreme approaches to the problem. Different "blends" of these approaches can be developed and implemented according to the needs of each country and the preferences of the policy-makers.

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APPENDIX

Figure 1. Loan approval procedures in the Agricultural Credit Corporation, Jordan.

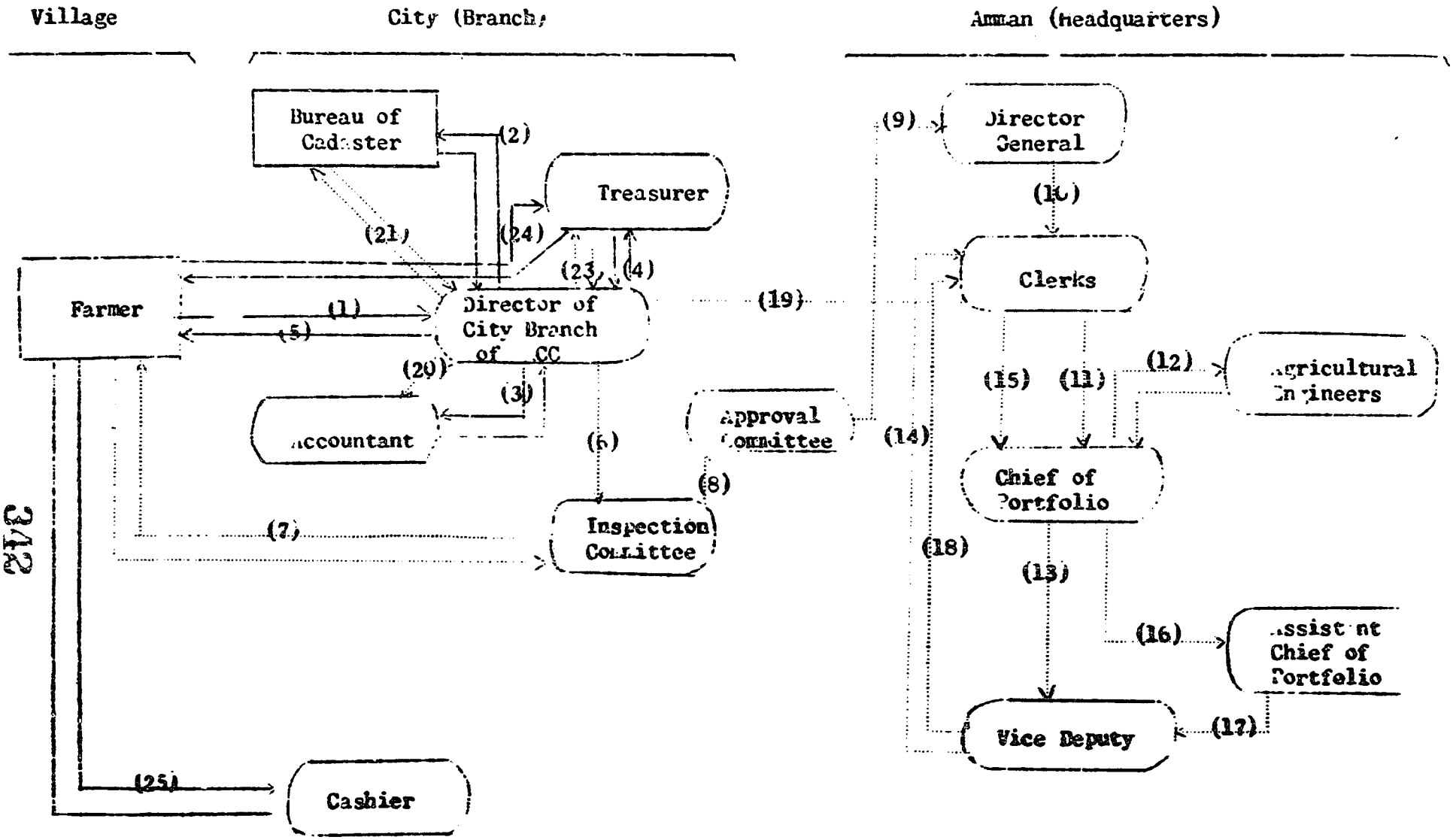
Figure 2. Diagramatic procedures of approval, repayment and renewal of a loan in the Agricultural Cooperative Bank of Iran.

Figure 3. Procedure for obtaining an agricultural loan from BCAIF, Lebanon.

Figure 4. Loan approval procedures in the Supervised Credit Program of the Turkish Republican Agricultural Bank.

Note: These figures were drawn by the authors on the basis of information collected in personal interviews with the authorities of the different banks.

FIGURE 1. LOAN APPROVAL PROCEDURES IN THE AGRICULTURAL CREDIT CORPORATION, JORDAN (FOR LOAN SIZES LESS THAN $ 1400)



NOTES:

Solid lines mean that the presence of the farmer is required.
Dotted lines mean that the presence of the farmer is not required.
Boxes with rounded corners designate departments within the Bank.

STEPS FOLLOWED IN OBTAINING AN AGRICULTURAL LOAN FROM ACC, JORDAN

(See Figure 1)

Farmer: Goes to the city branch and gets an appointment with the Director.

The Director: Fills in an application form for the farmer and sends him to the Bureau of Cadaster.

The Bureau of Cadaster: Issues a certificate saying that the land offered as guarantee is not mortgaged and is owned by the farmer.

The Director: Sends the farmer to the accountant.

Accountant: Checks to see if the farmer owes anything to the bank.

The Director: Sends the farmer to the treasurer

The Treasurer: Receives payment of the inspection fees.

The Director: Tells the farmer the date on which the inspectors will visit his farm and sends the file to the inspection committee.

The Inspection Committee: Visits the farm and writes an inspection report. The report is sent to the approval committee.

The Approval Committee: Analyses the application. If approved, the file is sent to Amman.

Director General: Receives the file and gives it to his clerks.

Clerks: Register the file and send it to the chief of portfolio.

Chief of Portfolio: Sends the file to the agricultural engineers for analysis.

Agricultural Engineers: Analyse the file and send it back to the chief of portfolio with recommendation.

Chief of Portfolio: Sends the file the vice-deputy of the bank.

Vice-Deputy: Decides on the loan. If approved, sends the file back to the clerks.

Clerks: Register the file as approved and send it to the chief of portfolio.

Chief of Portfolio: Signs the file.

Vice-Deputy: Signs the file.

If the loan is less than 2,500

Central Committee : Approves the loan

If the loan size is less than 15,000

Board of Directors: Approve the loan

World Bank will approve the loan if it is more than 15,000

Clerks: Register the file as approved and send it to the chief of portfolio

Chief of Portfolio: Signs the file.

Vice-Deputy: Signs the file.

Clerks: Send the file back to the city-branch.

The Director of City Branch: Receives the file and sends it to the accountant.

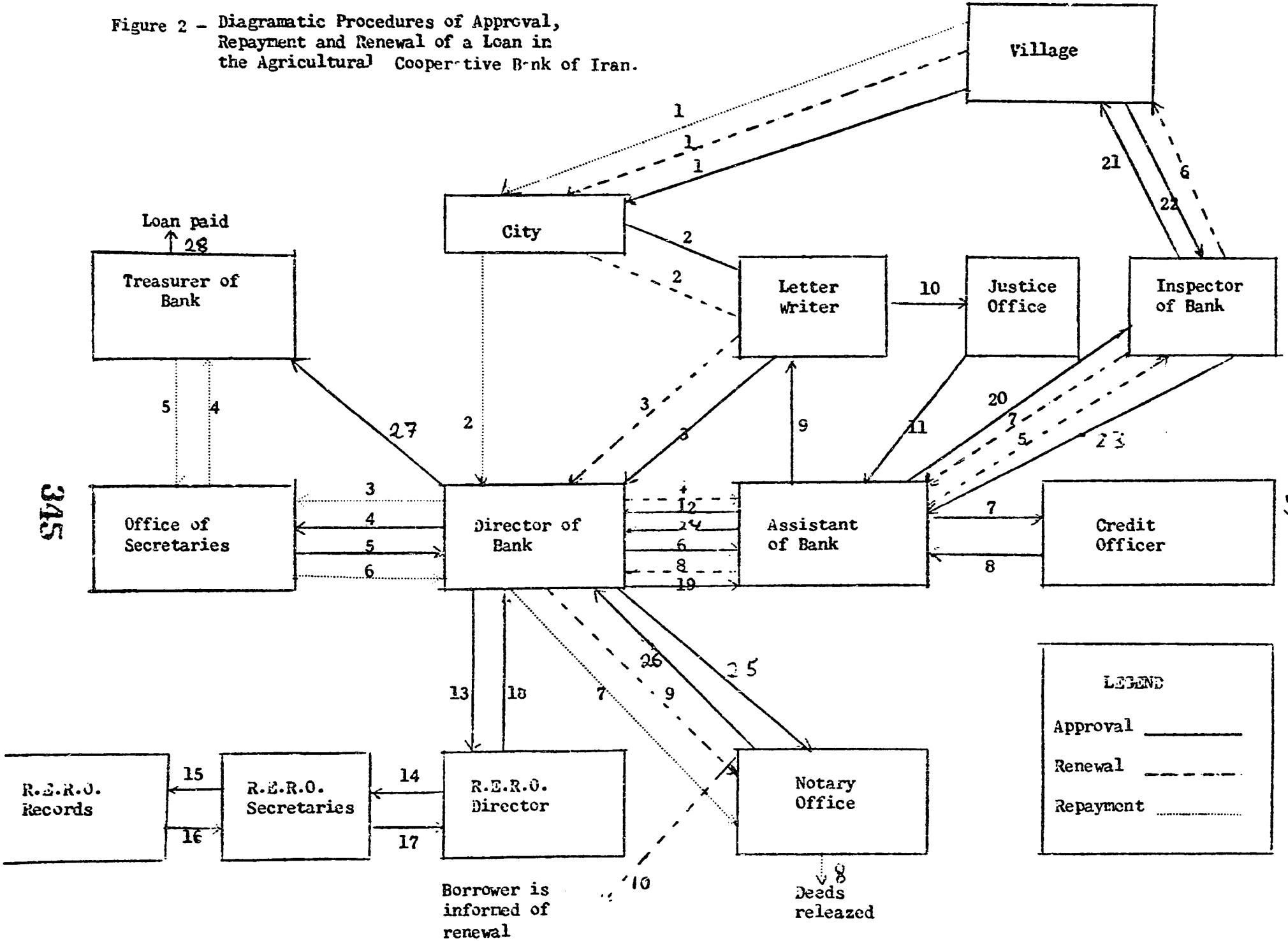
The Accountant: Writes repayment notes

The Bureau of Cadaster: Registers the mortgage on the land.

The Treasurer: Writes a check in favor of the farmer.

The Cashier: Pays the check.

Figure 2 – Diagramatic Procedures of Approval, Repayment and Renewal of a Loan in the Agricultural Cooperative Bank of Iran.



AGRICULTURAL COOPERATIVE BANK OF IRAN

(See Figure 2)

A. STEPS INVOLVED IN APPROVAL OF A LOAN IN AGRICULTURAL BANK

1, 2, 3, 4, 5	General Office of the Bank:	Receives the applicant's letter and records it in the Indicator Book. The date and a serial number will be stamped on the letter.
6	Director:	Will read the letter; writes instructions on it, and refers it to the assistant.
7	Assistant:	Will read it and refers it to the credit secretary.
8	Credit Secretary:	Checks the credit books to see if credit is available.
9	Assistant:	If credit is available, he will hand in an application form to the applicant.
10, 11	Applicant:	In the application form gives full information about his identity, his location, the purpose of the loan and his farming situation. For the security, if he has a mortgage, copies of the deeds should be attached to the application form (to do these, the borrower has to pass through the steps 9, 10, and 11 in Figure 2).
13	Assistant:	Receives the application and the attached deeds. Then, writes the draft of a letter to the Real Estate Registration Office (R.E.R.O.) and asks the correctness of the deeds.
12, 13	Director:	Reads the application and signs the draft.
13	Typist:	Types the draft.
13	Director of the Assistant:	Signs the letter to the R.E.R.O.
14, 15	Director of the R.E.R.O.:	Reads the letter and refers it to one of the staffs.
16, 17	The R.E.R.O. Staff Member :	Will check the file and prepare the answer.
18	The R.E.R.O. Director:	Signs the letter.
19, 20	Assistant of the Banks:	Receives the answer; if positive, he will refer the application to the Bank's Inspector.
21, 22	The Bank's Inspector:	Will visit the land and estimates the value of the mortgage and prepares a report.

23 Assistant: After receiving the estimation report of the Inspector, with consultation with the director, will decide upon the size of the loan.

24 Director: Will write a letter to the Notary Office and asks them to prepare the documents for the loan.

25 Head of the Notary Office: Reads it and with the help of the members prepares the documents.

25, 26 Bank's Representative and the Applicant: Will refer to the Notary Office and sign the documents.

27, 28 Bank's Treasurer: Pays the loan.

B. STEPS INVOLVED IN REPAYING A LOAN TO THE AGRICULTURAL BANK

1, 2 Applicant: Refers to the Bank with the money in cash and loan documents in hand.

3 Assistant: Checks the loan documents and asks the secretary to find the borrower's file.

4, 5 Treasurer: Receives the file and checks the amount of the loan and due date and, if on time, will receive the money, and the Bank asks the Notary Office to release the deeds.

C. STEPS INVOLVED IN RENEWING A LOAN FROM THE AGRICULTURAL BANK

1, 2, 3 Applicant (Borrower): Writes a detailed letter to the director of the Bank and presents his reasons requesting to renew the loan.

4 Director: Reads the letter and refers it to the assistant.

5 Assistant: Receives the letter and begins to discuss the reasons with the borrower. If he is not convinced with what the borrower tries to prove, he will refer the case to the Inspector to review the case.

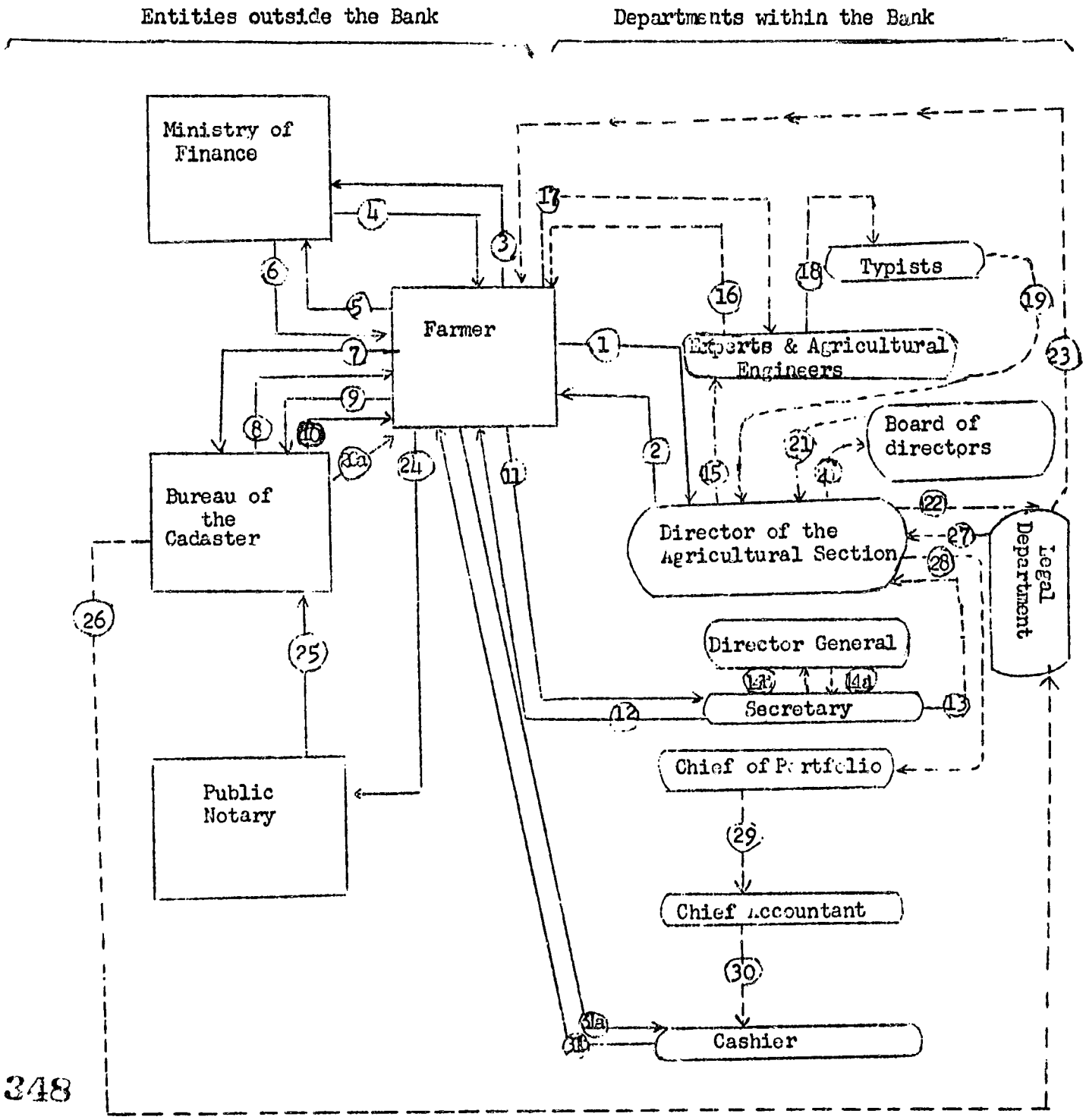
6, 7 Inspector: Will go the land and will examine the borrower's farming situation, and then reports the result to the assistant.

8, 9, 10 Assistant: If convinced by the report, will write a letter to the Notary Office and they will renew the documents for one more year.

Figure 3.

PROCEDURE FOR OBTAINING AN AGRICULTURAL LOAN FROM BCAIF, LEBANON

Procedure followed in BCAIF (Banque de Credit Agricole, Industriel et Foncier) to open a new credit account.



Notes

1. Solid lines mean that the presence of the farmer is required.
2. Broken lines mean that the presence of the farmer is not required.
3. Boxes with rounded corners designate departments within the bank.

STEPS FOLLOWED IN OBTAINING AN AGRICULTURAL LOAN FROM BCAIF, LEBANON

(See Figure 3)

The Farmer: Goes to the Director of the Agricultural Section where he is instructed to go to:

(1) The Bureau of the Cadaster to get:

(a) The titles to the land offered in guarantee
(b) A statement of area owned
(c) Maps of the lands owned
(d) A statement of boundaries

(2) The Ministry of Finance to get:

A clearance bill stating that the applicant owes nothing to the former development bank.

The Farmer: Goes back to the Director of the Agricultural Section.

The Director of the Agricultural Section: Fills in the application and sends the file to the Director General.

The Director General: Gives his approval to the application. Without this approval, the application cannot be processed.

The Experts and Agricultural Engineers: Receive the file from the office of the director of the Agricultural section, go to the farmer's place where they appraise the value of the land offered in guarantee.

The Typists: Type the experts' findings and recommendations.

The Director of Agricultural Section: Fills in a request for a loan addressed to the Board of Directors.

The Board of Directors: Approves the loan request, and sends the file to the Director of the Agricultural Section.

The Director of the Agricultural Section: Sends the file to the legal department.

The Legal Department: Notifies the farmer to go to:

(1) The Public Notary: To legalize the mortgage of the lands in favor of the Bank.

(2) The Bureau of Cadaster: To register the mortgage.

The legal department then, sends the file to the Director of the Agricultural Section.

The Director of the Agricultural Section: Instructs the chief of portfolio to open a credit account in favor of the farmer.

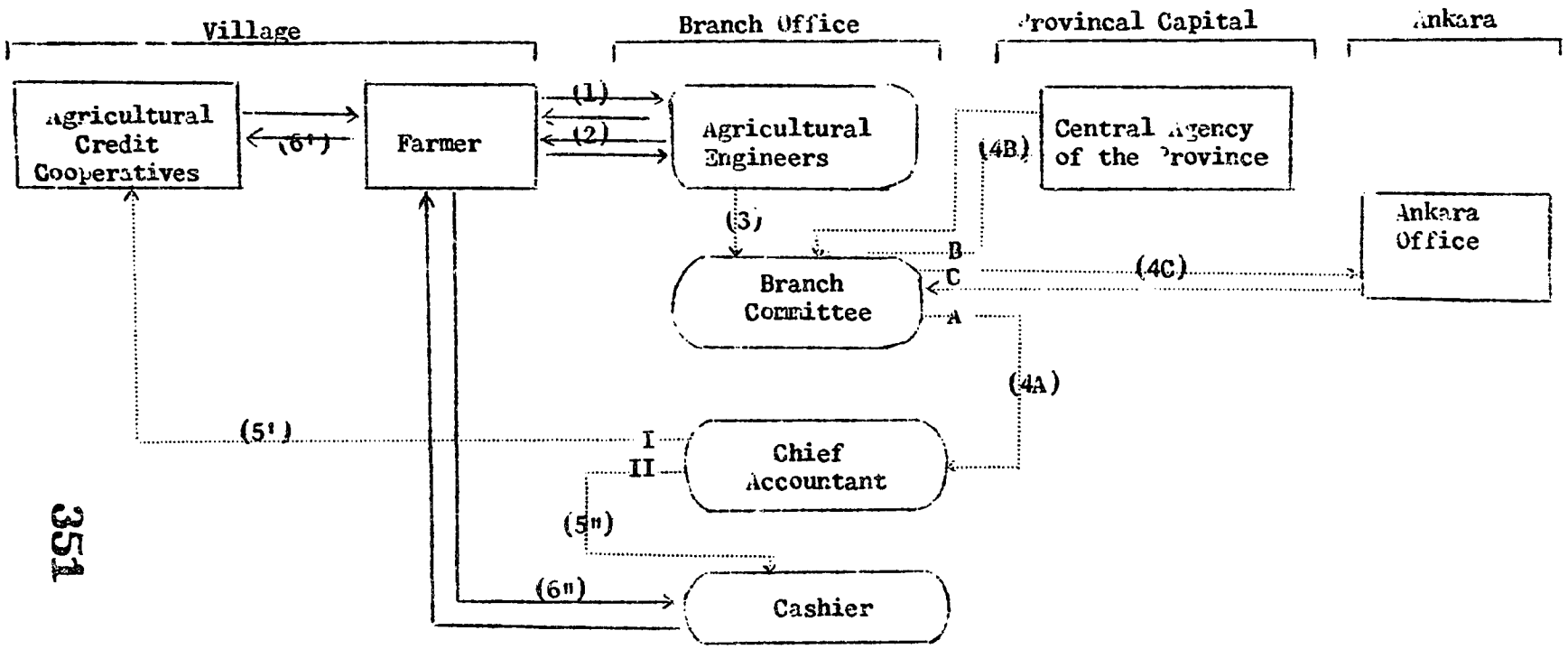
The Chief of Portfolio: Sends instructions to the chief accountant to open a credit account.

The Chief Accountant: Opens the credit account.

The Cashier: Gives the cash to the farmer.

Requirements: Total of: 31 operations (See Figure 3).
Minimum of: 36 days for loan approval.
Normal time for loan approval: 45-50 days.

Figure 4. Loan approval Producers in the Supervised Credit Program of the Turkish Republican Agricultural Bank.



NOTES:

Solid lines mean that the presence of the farmer is required.
Dotted lines mean that the presence of the farmer is not required.
Boxes with rounded corners designate departments within the Bank

A: Loan size less than 25,000 LT
B: Loan size greater than 25,000 LT but less than 50,000 LT.
C. Loan size greater than 50,000 LT

'I : Loans for current operations
"II: Loans for investment

LOAN APPROVAL PROCEDURES IN THE SUPERVISED CREDIT PROGRAM OF THE TURKISH REPUBLICAN AGRICULTURAL BANK

(See Figure 4)

Three Cases:

Case A: Loan size less than LT 25,000 ($ 1,785)
Case B: Loan size more than LT 25,000 ($ 1,785) but less than LT 100,000 ($ 7,143)
Case C: Loan size more than LT 100,000 ($ 7,143)

CASE A: Loan size less than LT 25,000 ($1,785)

Farmer: Goes to the branch office where he meets the agricultural engineer and fills an application form.

The Agricultural Engineer: Helps the farmer fill in an application form and prepares, together with the farmer, a farm plan and a repayment plan.

- Visits the farm for control.
- Sends the file with his comments to the branch committee.

The Branch Committee: Analyses the file, gives its approval and sends it to the chief accountant.

Chief Accountant: I. If the loan is for investment purposes, the chief accountant opens a credit account in favor of the farmer in the branch office

II. If the loan is for current operations, the chief accountant opens a credit account in favor of the Agricultural Credit Cooperative of the farmer's village.

The Farmer: I. Cashes his loan from the cashier of the branch office if the loan is for an investment purpose.

II. Cashes his loan from the Agricultural Credit Cooperative of his village if the loan is for current operations.

CASE B: Loan size more than LT 25,000 ($1,485) but less than LT 100,000 ($ 7,143)

Farmer: Goes to the branch office where he meets the agricultural engineer and fills an application form.

The Agricultural Engineer: Helps the farmer fill in an application form and prepares, together with the farmer, a farm plan and a repayment plan.

- Visits the farm for control.
- Sends the file with his comments to the branch committee.

The Branch Committee: Analyses the file, gives its approval and sends the file to the central agency of the province.

The Province Agency: Analyses the file. If the loan is approved, the file is sent back to the branch committee.

The Branch Committee: Sends the approved file to the chief accountant.

Chief Accountant: I. If the loan is for investment purposes, the chief accountant opens a credit account in favor of the farmer in the branch office.

II. If the loan is for current operations, the chief accountant opens a credit account in favor of the Agricultural Credit Cooperative of the farmer's village.

The Farmer: I. Cashes his loan from the cashier of the branch office if the loan is for an investment purpose.

II. Cashes his loan from the Agricultural Credit Cooperative of his village if the loan is for current operations.

CASE 6: Loan size more than LT 100,000 ($ 7,143)

Farmer: Goes to the branch office where he meets the agricultural engineer and fills an application form.

The Agricultural Engineer: Helps the farmer fill in an application form and prepares, together with the farmer, a farm plan and a repayment plan.

- Visits the farm for control.
- Sends the file with his comments to the branch committee.

The Branch Committee: Analyses the file, gives its approval and sends the file to the Ankara Office.

The Ankara Office: Analyses the file. If the loan is approved, it is sent back to the branch committee.

The Branch Committee: Sends the approved file to the chief accountant.

Chief Accountant: I. If the loan is for investment purposes, the chief accountant opens a credit account in favor of the farmer in the branch office.

II. If the loan is for current operations, the chief accountant opens a credit account in favor of the Agricultural Credit Cooperative of the farmer's village.

The Farmer: I. Cashes his loan from the cashier of the branch office if the loan is for an investment purpose.

II. Cashes his loan from the Agricultural Credit Cooperative of his village if the loan is for current operations.